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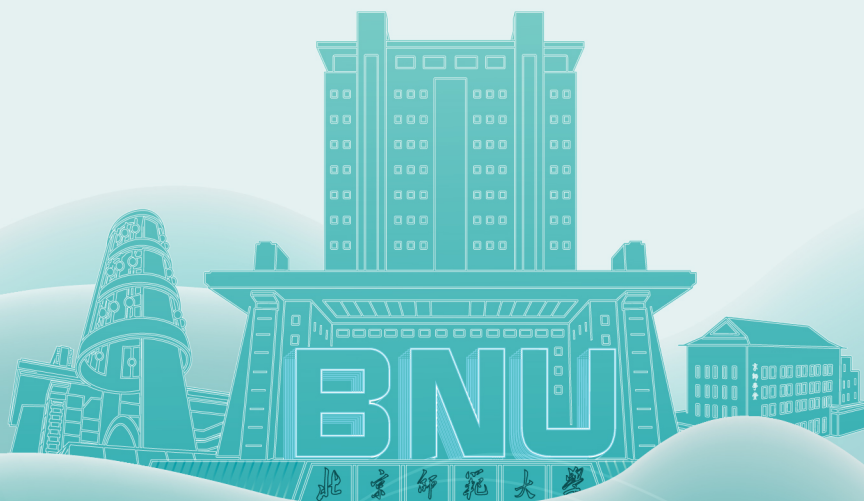
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第五屆全球教師教育峰會

THE FIFTH GLOBAL TEACHER EDUCATION SUMMIT

ABSTRACTS BOOK

论文摘要集



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(Institute of Teacher Education, Faculty of Education, Beijing Normal University)

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## **KEYNOTE AND INVITED SPEECH**

(in the order of reporting)

### **KEYNOTE SPEECH**

#### **Contextual challenges and opportunities for global reconnection for teachers and teacher education**

Leslie N.K. Lo Beijing Normal University

As teachers and teacher educators of the world emerged from the trenches of fighting COVID, education functionaries and researchers in different societies were quick to tabulate the losses of learning among their students and to prescribe remedies that could confront the threats of knowledge deficit. However, teachers and teacher education are not the key targets of the suggested remedies for healing. The purpose of this presentation is to depict the challenges that confront teachers and teacher educators as they attempt to recover the losses in student learning, on the one hand, and to grasp new opportunities for their further development, on the other. Four noteworthy educational phenomena -- loss of learning during the pandemic, demographic change, upsurge of generative artificial intelligence (AI), and slowdown of international interaction -- will be discussed and their impact on the work of teachers and teacher educators delineated. Firstly, teaching and learning in schools was gravely affected by Covid. The range of losses is wide and concerning. Western research findings released in 2023 suggested one-third of learning loss (Oxford) to half a year of learning loss in Math and 0.25 year learning loss in Reading for 3rd to 8th graders (Harvard & Stanford) during the pandemic years. For those education systems that are trying to retrieve such losses, the teachers and students have to work extra hard during holidays and at home in order to catch up. Given the current state of "loss-recovery", teachers and school managers work with different sorts of assumptions and tools in the absence of a coherent instructional guidance for dealing with the deficit problems of learning at hand. The pronounced partition between teacher education, professional development, and curriculum improvement has been a historic impediment to teaching improvement in school. It is still a major hindrance today. Given the uncertainties that surround schooling in the post-Covid age, the re-emphasis on certain markers of school quality, such as student test scores, teacher educational levels, teacher certification rates, licensure, prizes and honors, etc., reflects the shared anxiety of teachers and principals who have been steered back to the "deficit model of teaching". The implication for teacher education is more than the simple increase in instructional modes that can be used in future catastrophes. Secondly,

the effects of demographic change is felt deeply by the school systems and teaching professions of this and other parts of the world. Declining birth rates, which follow the peaking of population growth, will mean that the size of the school system will shrink significantly. The fair deployment of surplus teachers will test the wisdom of policymakers. Such population decline will also pose an immediate problem for teacher educators as the shrinking demand for teachers at different levels, and its implications on curriculum and teaching, will require urgent attention. Thus far, precautionary advice such as adopting the small-class model, turning surplus schools into community centers, and introducing flexible system for teacher retirement and re-entry have been circulated. Yet the analysis of the impact of demographic change on the schools and teachers will have to be aligned with that of other equally important changes, such as the aging population. Relevant policies will have to examine closely the long-term costs and benefits of sustaining a system that attempts to assure prosperity for all. Thirdly, the spectacular emergence of generative AI systems is of central importance to teaching and learning in schools and universities, and to the curricular design and delivery of teacher education. Its rapid and widespread adoption around the world have planted teachers and teacher educators on uncharted territories where the work of teachers and the functioning of schools and universities will undergo transformation without the necessary understanding of how it works and the full control of its direction. To its supporters, AI will have the capabilities to provide timely and efficient intervention for learners of all kinds, and become a tutor to students and a teaching assistant to teachers. To the doubters, AI's varied stock of information and possible technological glitch, if unchecked, would make it an unreliable tool. Its misuse in cheating and aggressive actions, its potential to cause job loss, and the absence of new legal frameworks to keep pace with its advancement, have worried even the staunch supporters of AI. Disagreement notwithstanding, the deployment of AI in teaching and learning is an established fact. Its advancement will be responsive to and led by young people, who will be seen as "experts" that can inform us not only on technological matters, but also on ways of changing our approach to teaching and learning. Finally, the lengthy slowdown of international collaborative activities has undermined cross-border endeavors in professional development, curricular experimentation, quality assurance, student and faculty mobility, and research partnership. All these are efforts that enhance global interconnectedness and international understanding for participating countries. During the Covid hiatus, human interaction had relied on technological means to enable online learning, operate virtual classrooms, and sustain access of students worldwide. But for certain types of learning that rely on the practice of teaching, and research that requires on-site observation and experimentation, human contact is still necessary. Cross-border collaboration in teaching, research and exchange activities has been hampered by the pandemic, geopolitical tensions, visa regulations, and inequitable distribution of wealth and learning opportunities. It should the labor of educators to strive for the revival of international collaborative activities that can bring mutual benefits and advancement. The problems

described above are complex in nature and far-ranging in scope. Taken together, they present a host of challenges that can only be addressed by having educators with different areas of expertise and cultural backgrounds to work together. These collaborative efforts can take the form of partnership, network, or community. No matter the form, it is important that such efforts begin with a constructive conversation on the way forward. Truly, such is the purpose of this conference.

### **How to Become and Remain a ‘Good’ Professional in Challenging Times**

Christopher Day University of Nottingham, England

There can be little doubt that teachers’ worlds and work have become more complex and demanding, especially with the long-term effects of the pandemic, rapid developments of technology and changing expectations of policy, parents and students. Much research by academics suggests that teacher professionalism is being eroded for many teachers as demands on their expertise and energy multiply. Yet, whilst the spotlight of attention in many countries has been on the negative effects of national policy shifts on teacher morale, there is less focus on identifying who ‘good’ teachers are, how they can become and remain a good professional in challenging times, and what is needed to support their professional expertise and personal capital. Drawing upon research-informed evidence internationally, this lecture will examine what they do, how they do it and in what circumstances – and what is needed if they are to grow and sustain their motivation, commitment and capacity for resilience as they strive to teach well and to their best.

### **Possibilities of future-oriented and future ready teacher: Global and national perspectives**

Lee, John Chi-Kin The Education University of Hong Kong

Against the backdrop of VUCA and technological innovations, the uncertain and unpredictable futures have created many challenges for teacher education and teachers' work. The post-COVID 19 era has also brought increased attention to teacher well-being, while the advent of AI and AI-generated tools has begun to raise deep questions about the future roles of teachers as well as possible scenarios for schools and schooling (OECD, 2020). Hicks (2003) proposes some important aspects of a future dimension in the school curriculum that remain insightful today, such as student motivation, critical thinking, anticipating change, decision-making, clarifying values, imaginative creativity, responsible citizenship and a better world (pp.56-57).

On the other hand, UNESCO's (2021) document has advocated the importance of sustainability as one of the principal goals of education, which resonates with the realization of the Sustainable Development Goals (SDGs) globally, particularly in higher education (Nordén, 2024) and in teacher education (Almazroa, Alotaibi, and Alrwaythi, 2022).



In Chinese mainland and Hong Kong Special Administrative Region (SAR), China, the advocacy of fostering virtues [立德樹人] and patriotic education (Education Bureau, 2024) emphasizes the importance of morality, moral education, and national education for cultivating teachers.

Amidst these complicated global and national discourses, there are demands for future-oriented pedagogies and education (e.g., Bound, Tan & Lim, 2022; Bound, 2024; Pawlak S, and Moustafa, 2023; Sachyani, et al. 2023), as well as future-ready teachers who are lifelong learners. Bound (2024, pp. 08 & p.12) introduces the concept of "dynamic generative knowing (DGK)" where learners are expected to handle complex situations or cases, test possible solutions, refine needed skills, develop critical thinking to consider questions and issues from a variety of perspectives.

Ng and Chua (2023, p.634) suggest that being future-ready implies that learning outcomes are relevant and aligned with emerging new realities over time, while also being context-dependent and context-situated. Nonetheless, how could we consider possible foci and changes for teacher education, teacher development and teacher's work for such dynamic contexts? From the Finnish perspective, Niemi, Kangas and Kõngäs (2024) emphasize the 21st century skills or transversal competencies such as collaboration and critical thinking. Li (2020) proposes a FUTURE literacy-oriented approach to teacher education, integrating flexibility, transnational and cross-sector cooperation, and highlights 21st century skills or core competencies as well as research-based, reflective and practical learning. Regardless of the directions of change for teacher education, it depends to some extent on how teachers perceive and identify themselves as teachers for the future (Muchnik-Rozanov & Tsybulsky, 2021). Schilling and Leiss (2019) suggest that combining theory and practice is essential for cultivating teachers' competence.

Further insights come from life and values education (Lee & Kennedy, 2024), as well as Chinese classical thoughts of Confucianism and neo-Confucianism, such as Zhongyong's "Doctrine of the Mean" and EPH Wang Yangming's (1472—1529) Unity of Knowledge and Action (Chan, 10 May 2024), which might shed light on the qualities needed for future teachers.

### **Generative artificial intelligence, activated "World 3" and teacher education reform**

Cai Chun Vice President of Capital Normal University

Popper divided the world into three worlds: the physical world(world 1), the spiritual world (world 2), and the objective world of ideological content(world 3), and believed that "world 3" can only affect world 1 through the inventive subject of human beings. The fundamental value of generative artificial intelligence lies in activating the silent world3 and making it a "living" world. A world that has come back to world 3 has had a profound impact on education and has put forward profound demands for changes in teacher education.

## **Teacher Education in and for Uncertainty**

Lynn Paine Michigan State University

It is not news that teacher education is in the midst of criticism, debate and reform. This is true today in many countries, as in fact it has been for many years. Rather than consider the current moment alone, a historical view suggests that teacher education has been a persistent subject of criticism, in part due to the perennial challenges that are inevitably at the heart of teacher education curricula and practice. At this period of global demands for educational change and intensified ties between policy makers, researchers, and teacher educators across the world, teacher education today is in an unprecedented period of uncertainty. Much of that uncertainty is propelled by external pressures related to shifts and upheavals in higher education, a more diverse and competitive market of teacher education providers, and changes in K-12 schools, curriculum, and students. Teacher education, for decades, has been asked to change. Today's demands are sharp expressions of that. At the same time, uncertainty is not only about the future of teacher education. Uncertainty also reflects a vision of teaching and learning for which teacher education must prepare future teachers. What does it mean for teacher education to help teachers and students be able to live and thrive in a world we can not predict? What different teacher competences are needed? How must teacher education change to make these central to its work? Drawing on OECD discussions of future-oriented teaching and teacher learning, as well as cases of teacher education reforms in the US and other countries, this presentation considers how teacher education curricula and pedagogy can support teachers to help students navigate an uncertain world.

### **Why we must keep talking about teacher professionalism!**

Martin Mills QUT & UCL

In 2015 Judyth Sachs asked: 'Teacher professionalism, why are we still talking about it?' In this paper I will claim that we need to keep talking about teacher professionalism to ensure that it is kept front and centre of educational policies. I will tie my argument to the global teacher shortage crisis, to recognising teachers as curriculum workers and to the need for education systems to support teachers' engagement with research. The global teacher shortage affecting multiple countries is causing governments to consider ways of fast-tracking teachers into the profession and ways of lightening their workloads through pre-prepared curriculum materials. In both instances, I will suggest, there is a danger of undermining teacher professionalism. Failing to recognise teachers as curriculum workers and teaching as an intellectual endeavour will reduce teachers' professional autonomy, essential for supporting learners of all kinds. Further, it has been argued that a self-improving education system requires research literate teachers. Such teachers have the intellectual backgrounds and capabilities to undertake their own research and to critically engage with that of others. They cannot simply

be the implementer of others' decisions about what is best for their classes, nor can they be 'fast-tracked' without exposure to core aspects of educational disciplines. Consequently, we have to talk about teacher professionalism and what that means for teachers' work specifically and education systems generally.

**Dead ideas, missing ideas, and enduring idea(I)s:  
Perspectives for transforming teacher education**

A. Lin Goodwin Thomas More Brennan Professor of Education, Boston College

The events of the past few years, dominated by the COVID-19 pandemic—and its aftermath—have had an indelible effect on just about every aspect of our lives, especially teaching and learning for our children. It is not surprising then that just about everyone, including educators themselves, has rekindled the conversation about improving teaching and teachers, which in turn means re-imagining teacher preparation. Internationally, teacher development has become a central focus. There is a renewed call for teachers to be equipped with knowledges and skills demanded by the “new normal”. Teacher educators are re-tackling the question of what teachers should know and be able to do in the face of current imperatives—digital divides and numerous inequities, vast economic upheaval, racism and social unrest, political disorder, and more. At the same time, teacher preparation must also be forward looking, nurturing teachers who are ready to support students who can navigate the unknown and create a better and more inclusive future.

In her talk, Professor A. Lin Goodwin offers three perspectives teacher educators can use, regardless of their unique contexts, to examine the familiar, that is teacher education as they know (and do) it, in order to imagine the strange—teacher education as it might possibly be. To ignite re-thinking, she suggests teacher educators look for: 1) Dead ideas—cherished practices and assumptions that may have long outlived their utility but remain cemented in place and so block fresh thinking; 2) Missing ideas—content, viewpoints, actions, histories or narratives that should be front and center in teacher preparation but are either absent or marginalized and therefore perpetuate the status quo; and 3) Unrealized ideas and ideals—goals and intentions we highlight as important and strive to enact, when in reality our talk and walk as teacher educators remain far apart. Undoubtedly, envisioning the future of teacher education is a weighty and complicated challenge. But it is a challenge we can as a profession undertake if we can un-see the taken-for-granted, ask new questions, andre-commit to our aspirations to transform education.

## **Embracing Change through Organisational Learning: Where Teachers Stay and How They Thrive**

Qing Gu University College London

Investing in teachers' career-long professional development has been regarded by policy makers as a cost-effective approach to retaining committed and capable teachers. However, teacher retention remains a real challenge for England despite concerted effort. In this talk, I will examine the meaning of organisational learning (as opposed to teachers' individual learning and development) and explore how organisational learning can be achieved through regenerating collaborative cultures that enable all teachers to learn, to reflect, and to renew their practice through practice-informed evidence.

This presentation draws upon case studies and large-scale surveys from a four-year mixed methods study on the impact of the government-funded Early Career Framework (ECF) programme on retention. Evidence shows that the ECF teacher induction programme alone is unable to 'transform' the desired learning as envisaged in the reform strategy. School leadership that prioritises and enables collaborative teacher development is a necessary condition for securing early career teachers' learning, development and retention. How satisfied teachers feel about their job (i.e. job satisfaction), how well they teach (i.e., teacher efficacy), and how they perceive the quality of their lives in school (i.e., teacher wellbeing) are dependent upon the quality of professional learning cultures that are created and sustained by school leadership.

## **Exploring Possibilities of a Global Teacher Educator Education Community: Its Professionalism, Ethico-aesthetics, and Community of Practice**

Yasushi Maruyama Hiroshima University

## **Do normal universities produce more effective teachers? Evidence from comparative analysis with comprehensive universities in China**

Li Qiong Beijing Normal University

As China's teacher education system becomes increasingly open and diverse, it is imperative to evaluate the effectiveness of the various teacher preparation programs. This study compares the professional competencies of graduates from government-funded normal universities with those from high-level comprehensive universities. Data was collected through questionnaires and interviews with school principals and teachers to assess differences in teaching competence between these two cohorts. Results indicate that graduates from government-funded normal universities possess a strong professional identity and a steadfast commitment to teaching. They demonstrate exceptional skills in classroom instruction and in fostering student development. Their well-defined career planning enables them to quickly assume leadership and exemplary roles. However, some of these graduates show a lack of willingness to work in remote rural schools. In contrast, graduates from comprehensive

universities are distinguished by their profound subject matter expertise and robust research competencies, coupled with a notable capacity for autonomous professional development. However, their motivation to teach is often externally driven, and their commitment to the teaching profession is insufficient. Based on these findings, the study offers targeted recommendations aimed at enhancing the quality of teacher preparation and promoting professional development for both groups of educators.

## **PLENARY SPEECH**

### **Parallel Forum 1**

#### **Navigating uncertain futures in education: The crucial role of teacher adaptive expertise**

Amanda Berry Royal Melbourne Institute of Technology University

Teaching is an inherently complex and unpredictable enterprise. Teachers are confronted with highly variable situations from student to student and from class to class (Lin, Schwartz, & Hatano, 2005). Navigating such diversity is further complicated by the volatility, uncertainty, complexity, and ambiguity that characterize the contemporary educational landscape (Hadar et al., 2020). Adaptive expertise has been regarded as an important idea in teacher education as a critical component of quality teaching that can address the diverse needs of students and ever-changing challenges of the classroom context. Adaptive experts are not only able to use specific classroom strategies efficiently and effectively but can also go beyond existing routines. They can re-examine their practices, beliefs and values, and develop new strategies when existing approaches do not work. While the notion of adaptive expertise is not new (Hatano & Inagaki, 1986), it remains an under-researched area in education. In this presentation, I will share my research investigating the characteristics and development of teachers' adaptive expertise and discuss the opportunities and challenges in researching and documenting this important idea.

#### **Professional Learning Through Collaborative Curriculum Design Work**

Gillian Roehrig University of Minnesota System

This talk explores the role of curriculum in transformative teacher professional learning. Rather than treating curriculum as a static entity to be implemented with fidelity, our work treats curriculum as a dynamic entity that positions teachers as expertise to curriculum design. Within the context of a year-long professional learning focused on integrated STEM (Science Technology Engineering Mathematics) for elementary and middle school teachers, teachers worked in collaborative teams with the support of a coach to iteratively develop and implement integrated STEM curriculum. Teachers' professional learning was explored through pedagogical design capacity (PDC), which refers to a teacher's ability to interpret and use curricular resources (e.g., lesson plans, instructional materials, etc.) and personal resources (e.g., pedagogical strategies, beliefs, etc.) to craft instruction. Specifically, this talk extends work on

PDC to include the collaborative nature of teacher design teams and shares the collaborative resources supported through on-going, collaborative professional learning grounded in iterative curriculum design and implementation. Findings show that individual teachers' spontaneous curriculum modifications became collective resources for ongoing redesign and improving their design capacity. Teachers effectively used each other as resources to address unexpected challenges in the implementation of integrated STEM and refine their collaborative curriculum. These collaborative efforts were facilitated through the use of a coach and carefully structured protocols designed to elicit and promote STEM PDC.

### **The Role of Educational Sciences in Teacher Training**

Carlota Boto Universidade de São Paulo

The pedagogical debate usually takes place based on certain divisions, including the border between the so-called educational sciences and classroom practices. This is the ancient opposition between theory and practice, between questions of a technical nature and questions relating to disinterested science. Hence the need to think about the dynamics that may come to articulate educational sciences and empirical research. In this communication, we will seek to discuss the implications of this debate, seeking to present some trace of the academic debate on the issue, as well as pointing out some alternatives for articulation between scientific theory in the pedagogical field and empirical research.

### **Preparing Future-ready Language Teachers**

Icy Lee National Institute of Education, Nanyang Technological University

In an era of ever-evolving educational transformation, there is a critical need to explore how language teacher preparation programs can be designed and adapted to meet the challenges arising from the dynamic educational landscape. To address this crucial question, I delve into the notion of language teacher expertise to examine its multifaceted dimensions, unravelling the specific competencies and qualities that characterize expert language teaching in today's diverse and dynamic educational environment. I begin by taking stock of existing knowledge of expertise in language teaching, examining the why, what, and how of expertise. Drawing upon scholarship on teacher expertise, language teacher expertise, and growing research on writing teacher expertise, I provide an evolving, quadruple framework of language teacher expertise, and conclude with implications for language teacher education with a view to preparing future-ready language teachers.

## **Parallel Forum 2**

### **Looking through the glass: Mentors as adaptive experts in the digital age**

Lily Orland Barak University of Haifa

“Then she began looking about, and noticed that what could be seen from the old room was quite common and uninteresting, but that all the rest was as different as possible. For instance, the pictures on the wall next the fire seemed to be all alive, and the very clock on the chimney-piece (you know you can only see the back of it in the Looking-glass) had got the face of a little old man, and grinned at her.” (Looking through the Glass- Alice in Wonderland)

The rapidly changing world of work and learning, characterized by immigration, increased mobility of persons and ideas, globalization, and digitalization have fundamentally altered the processes of learning and teaching in the professions. In particular, the dynamic shifts to digital and hybrid teaching-learning environments that professional education institutions have undergone since the pandemic have opened numerous challenges of having to reconstruct and adapt traditional, familiar mentoring roles and practices to support teacher learning in both pre and in-service education. Metaphorically, for many educational practitioners (i.e. teachers, mentors, policy makers and curriculum designers), having to see the new in light of the old and having to rethink their practices anew resonate with the above quote from Alice’s insightful contemplations in ‘Looking through the Glass’.

Given the centrality attributed to mentoring in professional education, this talk focuses on the new roles and practices that school mentors as adaptive experts need to develop in order to address the above changes. Drawing on illustrative evidence-based examples of mentoring practices in diverse teacher education contexts, I focus on what mentors-as-adaptive experts might need to learn to adjust and develop in their practices as they transition to mentoring in new professional learning spaces, in order to address the challenges of this new era. Conceptually, I propose considering a New Turn in mentoring, which incorporates the concept of ‘mentoring-as-adaptive expertise in a changing reality of practice’, by integrating socio-cultural perspectives on teacher learning and knowledge development with tenets from Practice Theory and Adaptive Expertise. These ideas will be elaborated during the talk.

### **Rethinking teacher education in uncertain times**

Maria Assunção Flores Universidade do Minho

We are living in exceptional times, which challenge our educational systems, and teacher education in particular, as we seek to meet the demands of a rapidly changing world. Conflicts, migration, climate change, digitalisation and artificial intelligence are just some of the key issues pressing researchers and teacher educators to rethink the future of teacher education. Responding to these various global challenges requires well-prepared teachers who are capable of understanding and making sense of the complex settings in which they have to operate given

the increasing importance of diversity, equity and inclusion. Meeting the demands of a rapidly changing world is complex and challenges us to question not only the form but also the content of teacher education and its purpose. In this talk I look at the challenges and possibilities of teacher education in such challenging times.

### **Adaptive Competence in Teacher Education Futures: Preparing teachers for the known unknowns**

David Kirk University of Strathclyde, Glasgow, Scotland

The notion of adaptive competence in teaching and its development through teacher education programs identifies an emerging line of educational research in physical education teacher education and other subject areas. De Corte (2017) defines adaptive competence broadly as ‘the ability to apply knowledge and skills flexibly in different contexts’. For the most part, adaptive competence refers to teachers’ planning and their ability to adapt plans in the moment, in the act of teaching, when circumstances require this. This micro focus, on adaptations of planned lessons in the moment, is clearly a fundamental teaching competence. In this paper, I argue that also important is the development of teachers’ adaptive competence in a longer durée, over years and, indeed, throughout careers. This is important because we know teachers increasingly are likely to encounter curriculum reform from local to national levels in the course of their careers. But also important are the future known unknowns, the various crises that beset societies at an increasing rate, as evidence from experiences over the recent past, which we can characterise as forms of social turbulence.

A theme running through the research literature on adaptive competence in the micro context is that the ability to apply knowledge and skills flexibly is not something some teachers have ‘naturally’ while others do not. Teachers can learn to become more adaptive, but that this competence requires particular approaches to teacher education. This same understanding of adaptive competence holds for the macro situation. Teachers can learn skills for better handling change, for working with the unfamiliar and unexpected, and preparing for the known knowns, but also for the known unknowns.

In this paper I provide a brief overview of selected recent research in physical education on adaptive competence at the micro context. I then explore this concept in the macro context, drawing on what we have learned from the large critical pedagogy literature in physical education. In this context, I propose the addition of temporal alongside spatial sensitivity in the preparation of adaptive competence, which teachers study the temporal relationships between the present, past and future. Within this theoretical framework, I provide two examples of known unknowns, pandemic-related lockdowns and the rise of precarity, and physical educators’ responses in each case, as means of exploring the pedagogical possibilities within the notion of adaptive competence in the macro setting. I conclude with some general principles



for the development of adaptive competence in relation to uncertain futures for teachers and teacher educators.

### **Teacher Collaboration and professional learning: Current issues and initiatives**

Despina Potari National and Kapodistrian University of Athens

The presentation will focus on research on teacher collaboration that takes place the last years in the field of mathematics education. First, a summary of the state of the art as it has been reported in the current ICMI -25 Study will be presented focusing on four main areas a) theoretical perspectives b) contexts, forms and outcomes c) roles of participants and d) tools and resources for and from teacher collaboration. Second, I will provide examples from my own research and participation in international projects to highlight two issues that have not been addressed extensively in research in mathematics teacher collaboration: the collaboration of teachers from different disciplines and the role of teacher educator; online collaboration of teachers from different cultures.

## **INVITED SPEECH**

### **The Active Ingredients of School-Based Teacher Education**

Tony Loughland UNSW Sydney

School-based teacher education is not a new phenomenon. Normal, demonstration (or teaching) schools existed long before teacher education programs were established in the university. This long history of practice provides a rich evidence base of strategies that current school-based teacher educators can draw upon.

This presentation evaluates this 200-year-old practice repertoire of teaching schools against what is currently considered as the best evidence-base for what constitutes the active ingredients of effective teacher learning. The results of this evaluation have clear implications for the chefs and kitchens of this new teaching school movement in independent schools across Australia.

### **Understanding and Enhancing Teacher Buoyancy: A Study of Chinese Mainland Teachers**

CHENG May Hung May The Education University of Hong Kong

The teaching profession has become increasingly demanding, particularly after the global pandemic. With the enactment of the Double Reduction Policy in 2021, the job characteristics of K12 school teachers in the Chinese Mainland have undergone various changes, resulting in detrimental effects on teachers' well-being due to overwhelming demands. Scholars have recognized the concept of "Teacher Buoyancy," which refers to how teachers harness personal and contextual resources to effectively navigate the challenges and difficulties they encounter in their daily work. The study investigates the major components of teacher buoyancy of teachers in the Chinese Mainland, with a specific focus on early career teachers (ECTs) who tend to be particularly susceptible to the pressures associated with their role. A mixed-method design was adopted. Data were collected through survey questionnaires and semi-structured interviews with primary and secondary school teachers voluntarily, to examine the major components of teacher buoyancy and to elucidate the features of teacher buoyancy of the ECTs. Accordingly, quantitative data from 356 teachers was first analyzed through Exploratory Factor Analysis (EFA) with a novel factor found specific to Chinese mainland teachers. Next, qualitative analysis of the interviews with ECTs was conducted. Results further revealed a dynamic interaction between teachers' professional growth and personal attributes such as perseverance and positive emotions within the Chinese educational context. The findings offer valuable insights into how teachers can leverage available resources to address the challenges in their daily work and provide support to Chinese mainland teachers in cultivating buoyancy.

Additionally, the discussion of the findings sheds light on strategies to enhance teacher buoyancy qualities within a broader educational context.

### **Building a “Research Interchange” for Regional Education To Support the Development of Teachers**

Li Baiyan Dean of the Education Development Research Institute in Pudong, Shanghai

The modernization of teacher education is an important support for the modernization of regional elementary education. The regional promotion of teacher education reform is not only an urgent need to implement the strategic plan for strengthening teachers, but also an important measure to innovate the ecology of teacher education. Furthermore, it is an effective method for coordinated governance of teacher education. Pudong in Shanghai, which stands at the strategic height of building a leading zone for Socialist Modernization Construction and a demonstration zone for Comprehensive Education Reform, has focused on the hot spots, difficulties, bottlenecks and key issues of major policy transformation in the reform and development of elementary education. From the perspective of holistic governance, regional teacher education has been considered and promoted into the framework of modernization of education governance system and governance capability. With co-construction, co-governance and sharing as the fundamental approach, we have devoted to build a “Research Interchange” for Regional Education which is the integration of teaching, research, training, and evaluation with full coverage, rich levels, mutual integration, convenient and orderly, wisdom and openness, and strong power. The new “Research Interchange” is able to promote regional teacher education transferred gradually from cooperative governance and overall intelligent governance to good legal governance. And also, it fundamentally guarantees the optimization and development of regional teacher education reform to achieve the goal of building a high-quality teacher’s group.

### **Birds, Zullo and emotion...**

#### **How to teach children to read picture books? -- A comparative study of teaching tools in China and Switzerland**

Christophe Ronveaux University of Geneva

Nikolajeva and Scott (2006) as an ‘ironic counterpoint to a verbal and visual text’. The story is told by weaving together two semiotic systems, verbal and iconic. It is by exploiting the complementary linearity of each of these systems and their specific plasticity that the reader ‘makes the story sing’ as a coherent whole. Yet school textbooks and ordinary classroom practice continue to work with iconotexts exclusively in their verbal dimension. Furthermore, models of reading multimodal texts (Mayer, 2014; Désiron, Bétrancourt and De Vries, 2021) continue to ignore the specific aesthetic features of children's literature picturebooks.

Integrating images into the systematic teaching of how to understand fictional narratives seems to pose new problems for teachers. As some teachers report (Schaer, 2023), images are less likely to stimulate pupils' imagination. Does the album make it more difficult to teach pupils to read texts (Abchi, De Pietro and Conti, 2021)? These two questions raise the issue of teaching tools, particularly those that involve the writer-subject.

We raise the question of tools on the basis of a new pedagogical theory of development thought by a Soviet researcher, Lev Vygotskij. Our presentation is based on the Ms Hong Zhao's dissertation. It is a quasi-experimental device that contrasts the use of the same story by two teachers from different cultures and languages. We compare two teaching sequences based on the same picturebook, *Les oiseaux* (小鸟, 已有中文译本, 此书也是 2020 年安徒生奖获奖者作品) d'Albertine and Germano Zullo (La joie de lire, 2012). A Swiss teacher and a Chinese teacher discuss and draw up a plan, then agree on a few reading and writing tasks. They then carry out the sequence in their respective classes and evaluate their tools. A comparison of the actual sequences should provide us with information about the instrumental genesis of the teaching of reading iconotexts. Using the synopsis to reconstruct the movements of the object to be taught and the imaginative activity involved in the writing tasks, in particular, would give us a better understanding of how pupils' imaginations are gradually constructed through the written word as they receive a work of fiction.

### **To Be Determined**

Andreas Schleicher OECD Directorate for Education and Skills

## **TIN KA PING LECTURE**

### **Grasping First and Acting Later:**

#### **A Self-Research Framework Envisioned through Systemic Thinking**

Huang Jiali Beijing Normal University

Reflecting on over 20 years of academic development with a focus on teacher education, this journey has revealed the contours of a research system that serves as a reference for younger scholars embarking on academic research to build their own research frameworks. The academic career can be divided into three stages: the foundational period, the construction period, and the innovation period. The first stage, the foundational period, spans about 10 years before becoming a professor, primarily laying the foundation for teacher education research through theories related to sociology, philosophy, and history. The second stage, the construction period, refers to the approximately 10 years as a professor at Taiwan Normal University, focusing mainly on advancing reforms in teacher education policy. The third stage, the innovation period, is the 4 years as a professor at Beijing Normal University, characterized by combining concepts from different disciplines to develop new perspectives in teacher education research. These academic experiences have accumulated into a self-research system encompassing the theory, practice, and innovation of teacher education. The experiences suggest that one should genuinely explore topics of interest, thoroughly analyze collected data, sensitively uncover valuable ideas, patiently wait for opportunities with competence, sincerely listen to others' voices, and manage one's time efficiently—wisdom captured in the saying 'A horse's strength is known after a long journey; a person's heart is seen over time.'

#### **Crossing Boundaries for Academic Growth: A Teacher Educator's Reflections**

Yuan Rui University of Macau

The realm of higher education is characterized by increasing complexity and diversity. Academics are continually expected to engage in boundary crossing within and across different communities to seek personal and professional growth at all career stages. In this presentation, I retrospectively and critically track and examine my boundary-crossing practices from my doctoral studies to the present, detailing how such engagements have contributed to my academic growth and identity development over time. Specifically, by traversing diverse academic fields—such as language education, teacher education, and higher education—and across different geographical contexts, including the Chinese mainland, Hong Kong, and Macau, my identities as a teacher educator and researcher have been shaped and solidified, metacognitively illuminating my continuing practices and career aspirations. The presentation provides practical implications and recommendations for early-career researchers to actively plan and engage in boundary crossing as an integral part of their academic training and career progression.

# **TIN KA PING TEACHER EDUCATION RESEARCH FORUM FOR YOUNG SCHOLARS**

## **Group 1: Teacher Learning and Development Empowered by Digital Technology**

### **Developing Teacher Professional Knowledge in Technology-enhanced Teaching and Learning: The Potential of Cross-school Teacher Learning Community**

Wu Yuhang The University of Hong Kong

In response to the digital age, there has been a growing emphasis on the integration of technology in classroom teaching and learning. Teacher learning community, as a significant context for teachers to develop and share their professional knowledge, is pivotal in bringing about changes in educational practices. While previous studies have explored the development of teacher professional knowledge within school-based contexts, there has been a lack of attention to teachers' experience in cross-school communities, making it challenging for the design and implementation of regional professional learning projects. Therefore, this study aims to characterise teachers' participation in a cross-school teacher learning community and its impact on the development of their professional knowledge in technology-enhanced teaching and learning. A case study approach was employed to uncover the experiences of six secondary mathematics teachers from different schools who participated in a professional learning project in Shenzhen. The findings demonstrated that the cross-school community contributed to the development of teachers' professional knowledge in technology-enhanced teaching and learning. Specifically, their content knowledge, pedagogical knowledge, and knowledge of student learning were enhanced. Furthermore, several elements that contributed to this process were also identified, including teachers' initiative participation, alignment of the community's objectives with the participating teachers' professional goals, external support, availability of learning resources, and high-quality interaction within the community.

### **A Phenomenological Analysis of Teachers' Experiences, Perceptions, and Expectations with Generative Artificial Intelligence**

Liu Yu Peking University

Dai Zihan Peking University

Shang Junjie The Chinese University of Hongkong

At present, generative artificial intelligence is increasingly being integrated into the educational sector, making teachers' direct experiences and perceptions crucial for understanding its impacts. This research adopts a phenomenological approach and conducts thorough interviews with 53 frontline teachers. Analysis of thematic content was performed

using MaxQDA software to uncover teachers' experiences, perceptions, and demands concerning generative artificial intelligence. The research process is infused with core phenomenological concepts including intuition, epoché, description, and subjectivity, which illustrate the teachers' direct experiences. The findings indicate that generative artificial intelligence, from the teachers' perspective, enhances performance through its convenience and practicality but may also introduce potential challenges such as increased technological learning costs, higher work standards, and greater complexity in educational contexts. Teachers articulated their needs regarding the application of generative artificial intelligence in education, which include enhancing personalized teaching capabilities, strengthening human-machine collaboration, and refining training mechanisms. By interpreting and describing teachers' direct experiences from a phenomenological standpoint, the study reveals their authentic perceptions and inherent demands of generative artificial intelligence, offering valuable insights for educational policymakers and AI technology developers.

### **AI-TPACK in Teacher Professional Development: Policy Reform, Historical Evolution and Connotation Transformation**

Yu Qingchun Beijing Normal University

In the age of digital intelligence, the integration and empowerment of artificial intelligence (AI) and teacher professional development, which have sprung up serial discussions on AI-TPACK in teacher professional development. Based on top-level design, development implementation and empirical research, this study has systematically explored the policy reform, historical evolution and connotation transformation of AI-TPACK in teacher professional development, and deeply analyzed the structural framework and practical application of AI-TPACK. These have provided policy basis and literature support for the creative transformation and innovative development of AI-TPACK for Chinese teachers, and served the professional development and construction of teaching staff with Chinese characteristics from an international perspective. Based on the realistic problem of weak knowledge of intelligent ethics, lagging knowledge of intelligent technology and insufficient knowledge of intelligent practice, the practical dilemmas of AI-TPACK in teacher professional development have reconsidered. Focusing on the three aspects of emphasizing on leading, promotion and optimization, implementation suggestions to strengthen AI-TPACK for the construction of teaching staff have been made.

### **From Linearity to Complexity: The Times Value and Practice Approach of AI-Enabled International Chinese Teacher Talent Training from the Perspective of Interdisciplinary Research**

Huang Xiuwen Macau University of Science and Technology

In the context of digital artificial intelligence-enabled higher education, China has continued to pursue a strategy of comprehensive digitisation of the education system, and has launched an initiative to integrate AI into the educational process. International Chinese language education, as a pivotal field for disseminating China's narrative, amplifying China's voice, and fostering global exchanges and collaboration, has assumed the pivotal role of "digital education at sea" in the context of the new era. The historical mission of international Chinese

education is to disseminate digital education across the globe, particularly in the context of the new era. In response to the opportunities and challenges presented by the advent of artificial intelligence, the training of international Chinese language teachers has undergone a gradual transition from a linear, single-disciplinary approach to a more interdisciplinary and complex model. This study employs an interdisciplinary research approach, with technical support, education and training, and language and culture as the axes. It systematically reviews the literature on international Chinese language teachers' digital talent training, adopting a rooted theory approach and combining top-down and bottom-up methods to synthesise and refine the results of linguistic, pedagogical, and linguistic research. The basic cultivation contents of the three core fields of linguistics, pedagogy and educational psychology, and computer science should be refined, and a basic framework for the cultivation of international Chinese language teachers' digital talents in the era of digital intelligence should be constructed. The structure of the framework should be elaborated in detail, and the construction of the domestic digital intelligence teaching and learning practice platform should be accelerated. Furthermore, the exploration of cross-border cooperation digital intelligence teaching and learning practice platforms should be encouraged.

### **Reconstructing the Relationship between Technology and Teacher Education**

Li Yangjie Hangzhou Normal University

As more and more new technologies are applied to the field of teacher education, it is crucial to clarify the relationship between technology and teacher education. This paper reviews two kinds of important related concepts and their practical dilemmas, criticizes the current practice of applying technology directly to teacher education in a one-way way based on the traditional Chinese culture and recent changes. Nudged teacher education focuses on the subtle two-way influence between technology and teacher education, and it builds a triangular nudged network based on the principle of purposiveness and the principle of non-mandatory and it contains teacher educators, teachers and technology. Its' practical path mainly includes the following three aspects: Clarify the dual way of nudge, remove the shackles of one-way; Adopt diverse nudged modes and apply them to the triangle nudged network; Build a nudged platform for teacher education and form an evidence system.



## **Group 2: Teacher Burnout and Job Stress Within Multiple Times and Spaces**

### **From Aesthetic Fatigue to Aesthetic Experience: Aesthetic Reflection on Teacher Burnout**

Zhang Xianlu Tsinghua University

Zhou Lingyi Tsinghua University

Regarding teacher burnout, existing studies have discussed the causes and solution paths of teacher burnout from the theoretical perspectives of psychology, sociology, philosophy, pedagogy and other disciplines. From the perspective of aesthetics, one of the important reasons for teacher burnout is aesthetic fatigue of the teaching profession. This includes the difficulty of feeling the beauty of teaching due to the mechanical repetition of teaching behaviors, the difficulty of feeling the beauty of teachers due to the one-sided understanding of the teaching profession, and the difficulty of feeling the beauty of education due to the limitations of the understanding of the educational cause. Thus, enhancing teachers' aesthetic experience is another new idea to solve the problem of teacher burnout. Teachers should be encouraged to enhance their aesthetic experience in terms of innovative teaching behaviors, improving the professional identity of the teaching profession, and enhancing the awareness of the significance of the education, so that they can feel and create the beauty of the teaching behaviors, the beauty of the teaching profession, and the beauty of the education in the pursuit of the meaning of aesthetics.

### **The Relationship between Teachers' Role Pressure and Affective Commitment: The Mediating Role of Job Burnout and the Moderating Role of Organizational Support**

Wang Heng Jiangsu Normal University

Due to the different expectations among various roles, teachers often find themselves in situations with role ambiguity, role conflict, and role burden, which results in a certain degree of role pressure. This study used data from a questionnaire survey of 24 provinces to explore the relationship between teachers' role pressure and their affective commitment. The results show that: teachers' role pressure not only has a direct negative effect on their affective commitment, but also has an indirect effect through the mediation of job burnout; organizational support has a significant moderating effect on the relationship between teachers' role pressure and affective commitment, effectively reducing the negative impact of role pressure on affective commitment. The implication of this result is that helping teachers reconcile multiple roles is an important direction for their professional development, and schools and education administrative departments should create a supportive environment for teachers to alleviate the negative effects of their role pressure.

## **Spatial Understanding on the Origins of Teachers' Work Burden: The Modern Formation of Labor Space Order in Chinese Teachers' Offices**

Liu Cheng Nanjing University

Lu Xingyan Jiangsu Normal University

The office space serves as a key symbol of teachers' non-teaching work burdens. By shifting the focus from time to space and from the classroom to the office, new insights emerge regarding the understanding of these burdens. The interplay between space, history, and power is crucial; employing the framework of spatial sociology allows for a deeper exploration of the historical emergence of the teachers' office, thereby illuminating the origins of teachers' work burdens. Historical analysis indicates that the office space first appeared during the late Qing reforms, gradually evolving toward spatial independence. Initially, this independence was often uncertain, but it eventually solidified into a distinct entity. The full independence of the teachers' office is noteworthy; it not only transforms the sources of teachers' authority and enhances their sense of empowerment, but also introduces a new spatial order characterized by standardization and organization, which signifies the establishment of control over teachers' labor. Theoretical analysis reveals that the spatial production of the teachers' office exemplifies a mechanism of modernity that contrasts with Giddens' concept of "disembedding," reflecting the idea of "spatial control of time." This mechanism represents the spatial origin of current teachers' work time burdens. Although these burdens primarily relate to time structure, their historical roots are realized through spatial dynamics, highlighting that spatial control underpins temporal control. This research offers fresh perspectives on alleviating teachers' burdens from a spatial viewpoint while also contributing to the growing body of knowledge in educational spatial history.

## **Research on the Policy Analysis and Mechanism Construction of Teachers' Withdrawal in Primary and Secondary Schools in China**

Zheng Jie Zhejiang Normal University

China has previously implemented a series of policies pertaining to the withdrawal of teachers from primary and secondary schools. This can be attributed to a confluence of factors, including political, policy, and problem-specific considerations. The analysis of China's teacher withdrawal policies has enabled us to elucidate the historical and contemporary aspects of this phenomenon, as well as the modalities and categories of primary and secondary school teachers' withdrawal and the target groups. The study then proceeds to examine the implementation challenges associated with China's primary and secondary school teacher exit policy. It identifies several key issues, including the difficulty in identifying unqualified teachers. This is due to the fact that the standard for qualification is relatively vague, the evidence required for identification is not readily available, the process of identifying the target situation is complex, and the evaluation of outcomes in the context of "favourable circumstances" is challenging. The primary responsibility for teacher exit is unclear, indicating that primary and secondary schools face challenges in regulating teacher personnel. The education department's ability to exercise teacher dismissal is constrained. The teacher withdrawal procedure is imperfect, as evidenced by the absence of a standardized teacher withdrawal procedure and the lack of a

systematic remedial system. In order to construct a logical and effective withdrawal mechanism for primary and secondary school teachers, it is essential to refine the evaluation criteria for teacher withdrawal, ensuring that the results are fair and just. Furthermore, the main body responsible for teacher withdrawal must be clarified, allowing for a diversified and diverse range of stakeholders. Finally, the procedures for teacher withdrawal must be improved, guaranteeing that the withdrawal mechanism is comprehensive and effective.

### **Institutional Timescapes, Sense-Giving, and Temporal Activism:**

#### **A Temporal Examination of Teachers' Educational Lives**

Zhang Li Northeast Normal University

Temporality is the essential scale of an inner time. Examining the temporality of teachers' educational lives implies the inclusion of events and experiences corresponding to teachers' time in the discursive realm. The "time disciplining techniques" prevalent in the school institutional timescapes create a "time mechanism" for teachers' educational life, and make the temporal structure of teachers' educational life embedded, layered and synchronized. The sense-giving mechanisms of institutional timescapes shape teachers' temporal scripts and meaning situations in their educational lives. In response, teachers have also constructed multiple timescapes belonging to their own selves by utilizing their own temporal agency. Based on this, this study proposes a time-matching structure and a meaning-matching model of "school-teacher" as a typical temporal structure of teachers' educational life. In this matching process, the school organization is able to effectively manage and shape the meaning system and time of individual teachers. At the same time, teachers can also realize the "limited reconciliation" of educational life by exerting their time dynamics, thus realizing the integration of multiple timescapes in educational life.

### **Group 3: Career Adaptation and Retention of Rural Teachers**

#### **The Effect of Mission Valence on the Professional Well-being of Rural Young Teachers in Northwest Ethnic Regions: The Mediating Role of Emotional Exhaustion and the Moderating Role of Public Service Motivation**

Zhang Jiwei Xinjiang Normal University

Mao Ju Xinjiang Normal University

The enhancement of education is fundamentally rooted in the strengthening of teachers, and the establishment of a high-quality rural teaching workforce is pivotal for revitalizing rural education. In the context of 'Never forgetting one's original aspiration and mission,' this study examines the mediating mechanism through which mission efficacy influences job satisfaction among young rural teachers, utilizing a sample of 1,226 individuals from ethnic regions in northwest China. The findings indicate that mission efficacy significantly boosts job satisfaction among these educators; emotional exhaustion serves as a partial mediator, whereby mission efficacy enhances job satisfaction by mitigating emotional exhaustion. Furthermore, public service motivation acts as a moderating variable between mission efficacy and emotional exhaustion; specifically, when young rural teachers possess high levels of public service motivation, the positive impact of mission efficacy on reducing emotional exhaustion and enhancing job satisfaction is amplified. To effectively improve job satisfaction among young rural teachers in ethnically diverse areas of northwest China, it is essential to prioritize the promotion of organizational missions through education and awareness initiatives. Strengthening the bond between these educators and their school organizations while fostering an understanding and appreciation for organizational missions will facilitate psychological relief for rural teachers, ultimately attracting them to establish long-term commitments within their communities.

#### **Exploring Government-Organized Volunteer Teachers' Leadership Practices in Extreme Poverty Regions: A Chinese Case**

Liu Miao University of Edinburgh

Educational poverty is a severe problem in many countries (e.g., China). Specifically, lack of schooling is one of the manifestations of educational poverty. A group of school-age children have difficulty engaging in schooling due to low income, gender bias, disability, etc. Volunteer teachers are one of the key groups in alleviating educational poverty. Existing research focuses more on volunteer teachers from non-governmental programs than government-organized programs. Volunteer teacher programs initiated by the government, such as in the Chinese government, have become a critical form of alleviating educational poverty and have achieved relatively remarkable results. Such research could provide different ideas for reducing education poverty in other countries and regions worldwide, namely, supporting government-organized volunteer teachers' leadership. Therefore, this study explored the work of

government-organized volunteer teachers by generating data from four volunteer teachers. It revealed a series of strategies government-organized volunteer teachers used to advance educational development in extreme poverty regions when crossing multiple boundaries (e.g., political, cultural, economic, and individual).

### **A Study on the Emotional Resilience of Rural Young Teachers under the Role Identity Interaction Model**

Sun Xiaohong Qingdao University

The emotional resilience of rural young teachers is the embodiment of their good psychological state, which directly affects whether the rural young teachers who can "stay" and "teach well". Based on the Role Identity Interaction Model, the study took ten rural young teachers as the research objects, collected and analyzed data through interviews, participatory observation and physical collection methods, and found that the construction of emotional resilience of rural young teachers was often confined to the contradictory tension of role identity in the three dimensions of personal role, teacher role and role within the organization. The tension relationship between these three dimensions of role identity constitutes the continuum between "role identity separation" and "role identity integration" of rural young teachers. In this continuum, "escapers", "hesitators" and "enthusiasts" respectively represent the emotional resilience of rural young teachers at three levels: low, medium and high. Among them, personal, relationship and environment are linked, which jointly affect the emotional resilience of young rural teachers.

### **Does Teaching and Research Participation Enhance Career Adaptability in Primary and Secondary Teachers? -- A Large Scale Study from China**

Yan Ziluo Nanjing University

The career adaptability of teachers is not only a key psychological resource that promotes their active development, helping them effectively handle difficulties, solve problems, and smoothly transition in their careers, but also a crucial driving force for ensuring teachers can "stay and perform well," improve teaching quality, and achieve professional growth and personal value enhancement. However, existing research lacks in focusing on the teacher community, constructing scientific frameworks, conducting large-scale surveys, and considering the impact factors of the educational context for teachers. This study, based on Career Construction Theory, Social Cognitive Career Theory, and the Interconnected Model of Teacher Professional Growth, employs a multi-stage mixed-methods design and conducts a comprehensive analysis of the structure of career adaptability and the impact mechanisms of teaching and research participation among 18,777 teachers nationwide. The results reveal that the career adaptability of primary and secondary school teachers is a logically coherent triangular wheel-like structure comprising four dimensions: career resilience, career professional growth, career relational coordination, and career psychological monitoring. Participation in teaching and research activities has a direct and positive impact on the career adaptability of primary and secondary school teachers. Whether it is regional research, school-based research, or collaborative research activities between different levels of schools, all significantly enhance teachers' career adaptability. In contrast, teachers' independent research

does not affect their career adaptability, with regional and school-based research having the most significant enhancement effects. These findings not only theoretically provide a comprehensive framework that includes the structure and impact mechanisms of career adaptability for primary and secondary school teachers but also offer practical insights for designing systemic strategies to support ongoing learning and development for teachers.

### **Mobius band: Causes and Breakthroughs of the Inner Circulation Dilemma of Subject Knowledge for Science Teachers**

Zhang Jun Southwest University

Subject knowledge is the in-depth understanding formed by teachers of the subject they are teaching, and it is the foundation of subject comprehension ability. The scientific subject knowledge of science teachers in primary and secondary schools in our country is not optimistic. Many science teachers' subject knowledge level remains at the level of primary and secondary school knowledge, and there is an internal cycle phenomenon of primary and secondary school teachers normal students primary and secondary school teachers. The main causes of the internal circulation of subject knowledge among science teachers are the existence of exam oriented subject knowledge paradigms in primary and secondary schools, the disconnection between pre service science teacher education subject courses and primary and secondary schools, the lack of subject knowledge in post service teacher training courses, and the low requirements for subject knowledge in qualification certification. In order to break through the internal cycle of subject knowledge for science teachers, it is necessary to explore a primary and secondary school evaluation mechanism based on the origin of subject knowledge, improve teacher education subject curriculum from the perspective of subject knowledge advancement, carry out subject training for teachers from practical teaching problems, and improve teacher qualification and certification system from the perspective of enhancing teacher subject knowledge.

## **Group 4: Dilemma and Breakthroughs in Developing Rural Teacher**

### **Institutional Causes and Strategies to Address the Lack of Backbone Teachers in Rural Schools in District Areas**

Qin Xinxin Jiangsu University

Backbone teachers are the core of the rural teaching force and are the main force for training young rural teachers and improving the quality of rural education. Based on a mixed study of public compulsory education schools in a county in the central part of China, it is found that the proportion of backbone teachers in county schools, township schools and rural schools is 52.2%, 28.3% and 19.5% respectively, and there is a ‘quantitative potential difference’ among backbone teachers in county, township and rural schools, with the phenomenon of the pile-up of high-level backbone teachers being more obvious. The blind expansion of county schools, the over-concentration of educational resources in the county, the tilted policy of initial and secondary allocation of teachers, and the restriction of professional development platforms and development opportunities are the systemic root causes of the lack of backbone teachers in rural schools. Based on the above findings, we discuss how to promote the rational allocation of urban and rural backbone teachers.

### **Research on Factors Influencing Rural Teachers' Collaborative Behavior in the Dual-Teacher Classrooms: A Mixed Method Approach Using Structural Equation Modeling and Necessary Condition Analysis**

Wang Jingxian Southwest University

Guo Jiang Southwest University

Sun Zhengling Southwest University

There is a widespread consensus on the importance of establishing a cohesive community for urban-rural compulsory education and transforming the flow of high-quality educational resources from urban to rural areas, creating a more integrated approach. Collaborations between urban and rural teachers within the framework of dual-teacher classrooms are seen as crucial for addressing educational disparities in rural regions. This study aimed to investigate the factors influencing rural teachers' collaborative behaviors in the dual-teacher classroom model. Using an integrated model of behavioral prediction, a survey was conducted among rural teachers in Western China, employing a mixed-method approach that combined Structural Equation Modeling (SEM) and Necessary Condition Analysis (NCA). The results highlighted that both attitude and self-efficacy significantly and positively influenced collaborative intentions. Additionally, collaborative intentions, principal's information leadership, platform and resource quality, and other factors also played significant and positive roles in shaping collaborative behaviors. Attitude emerged as the sole necessary condition for fostering collaborative intentions, while the combination of principal's information leadership and platform/resource quality was identified as the fundamental necessary condition for encouraging collaborative behaviors. Based on the findings, the study proposed promoting the

shift from "weak connections" to "strong connections" among urban and rural teachers, fully leveraging the strengths of rural teachers, avoiding excessive collaboration demands, and emphasizing the reusability of digital teaching resources.

### **Where does the Heart of Urban-Born Rural Teachers "Belong"?**

Li Juan Guizhou Normal University

The "heart" of rural teachers from the city is the collection of their intrinsic pursuit and value orientation, covering individual career development, education quality improvement and rural community construction. Based on the theory of human capital specificity and spatial perspective, this study takes rural teachers from the city as the research object to explore the transformation of human capital specificity in their in-service learning process, and analyzes it from the perspectives of physical, social and meaning space. It is found that teachers are faced with three difficulties in the process of in-service learning, such as lack of social capital, accumulation of individual human capital and decision-making capital, and insufficient reproduction capacity of professional capital in the community of practice. On this basis, this study takes the construction of the cultural identity of rural teachers as the key research point, and discusses the effect of human capital specificity on the placement of this heart from the spatial perspective.

### **Fragile Balance: A Cultural Sociological Study on the Career Action Strategies of "Migratory Bird" Rural Teachers**

Wu Dengyue Nanjing Normal University

Yang Yue Nanjing Normal University

With the development of China's new urbanization, it has become inevitable for rural teachers to shift their living fields to cities. The mismatch between the migration to the city and the return to the hometown to teach has led to the emergence of "migratory bird" rural teachers. With the help of the "cultural toolbox" theory, this study analyzes the cultural representation and path construction process behind a series of professional actions of "migratory birds", such as career choice, employment and occupation. "Migratory birds" adapt to the rural environment, resist the occupational regulations in the process of wear and tear, and form discursive representations with "self-consciousness" as the core when they transfer rights and responsibilities, all of which reach a fragile balance among various expedient measures. The dilemma of this group in terms of the contingency of entering the field, the utilitarianism of staying, and the absence of education poses new challenges to the construction of a rural teacher team that can "go down, stay still, and teach well".

### **Research on the Professional Literacy Development Dilemma and Enhancement Paths of Science Teachers in Ethnic Rural Primary Schools**

Long Huan Minzu Normal University of Xingyi

Science education in rural primary schools in ethnic regions is an important means to cultivate students' scientific literacy, improve the quality of rural talents, and achieve rural modernization. It is related to the balanced development of urban and rural education and



crucial for the effective implementation of rural revitalization strategies. However, in reality, science education remains a weak link in rural primary education in ethnic regions, and rural science teachers are considered as a marginalized group among rural educators. In order to gain a deeper understanding of the current status of the professional literacy of science teachers in ethnic rural primary schools, a literacy assessment tool for primary science teachers was developed. Science teachers from all primary schools in a certain ethnic region in the southwest were selected as participants for the assessment. Through literacy assessments and field surveys, it was found that science teachers in ethnic rural primary schools generally lack a high degree of professionalism, have insufficient subject knowledge, lack experimental design and operation skills, possess weak understanding and mastery of the new curriculum standards, and use outdated teaching methods, among many other issues. Consequently, it is proposed that ethnic rural primary schools should increase their emphasis on the science curriculum, prioritize the hiring of professional science teachers, allocate teaching positions reasonably to favor science teachers in rural primary schools, adjust the student-teacher ratio appropriately to relieve the pressure of lacking science teachers, help teachers establish self-development awareness, actively build teaching research platforms, incline title evaluations moderately towards science teachers in rural primary schools, and enhance reasonable mobility of science teachers in rural primary schools among different counties in ethnic regions as paths to enhancement.

## **Group 5: Practice and Professional Development of Teacher**

### **Educators**

#### **Mismatches in University-Based Teacher Educator's Professional Learning: Case Study from Mainland China**

Zhou Jingtian The Chinese University of Hong Kong

University-based teacher educators' (hereafter UBTEs') learning is a growing research field receiving increasing scholarly attention. However, few studies have provided an in-depth analysis of the inner complexity of UBTEs' learning from a situated perspective. This case study applies Cultural Historical Activity Theory (CHAT) to unpack contradictions in six UBTEs' learning needs and challenges situated in a normal university in mainland China. We initially identified a first-level contradiction between the subjects' dual learning needs – learning about subject-based teacher education and learning about academic publishing. With the changes of teacher educator pathways and performance assessment rules, two second-level contradictions arose as challenges to fulfil their learning needs – 1) for novices, a contradiction between supporting tools and their teacher education objects; 2) for all teacher educators, a contradiction between the unidimensional, paralyzing rules and the multidimensional, unequal division of labour. Together, they revealed how UBTEs' development is double bound by the nested challenges in the system. Through historical analysis, we further argue that these challenges /mismatches stem from a third-level contradiction between higher education's academic publishing activity system and teacher education's teaching activity system. The case study therefore contributes to the global discussion of how to facilitate teacher educators' expansive learning and the development of their professionalism.

#### **A Case Study of a Novice Government-affiliated Teacher Educator's Cross-boundary Learning Experience**

Jin Wei Beijing Institute of Education

Novice government-affiliated teacher educators' professional development is highly attached to their professional learning in primary and secondary school field. Many scholars have paid attention to the identity transformation from a school teacher to a university teacher educator, but little attention has been paid to government-affiliated teacher educators' professional learning in school field and its feedback to the teacher education. This case study is based on the data from a novice government-affiliated teacher educator's cross-boundary learning in the middle branch of a 12-year basic education school, focusing on the learning content, learning approaches and the tensions in the learning. The learning content is negotiated between the teacher educator and the key gatekeeper in the school, including classroom teaching and learning, teachers' school-based learning and the school organization, and so on. The learning approaches include classroom observation and feedback, voluntary observation, and participatory observation of school life. The learning tensions lie between the teacher educator's autonomy and school's openness of the school life, the teacher educator's role as a guide and as a learner, the teacher educator's identity's vagueness and its marginal position in

the organizational context. This study may be of great importance for the design and implementation of the government-affiliated teacher educators and university teacher educators' cross-boundary learning in basic education context.

### **I used to think... and now I think... : A self-study of learning self-study (S-STTEP)**

Wu Yutong University of Cambridge

Song Huan Beijing Normal University

Self-study of teaching and teacher education practice (S-STTEP, hereafter referred to as self-study) is an emerging research methodology in teacher education that has been recently introduced to China. Many Chinese scholars are eager to learn how to conduct self-study, but there is little discussion of this in the existing literature. This article uses a personal history self-study to narrate and explain how a novice learns self-study. By writing and analyzing personal history stories, the study presents four main findings: 1) Learning self-study involves understanding and grasping its underlying philosophical perspectives; 2) The importance of informal learning in this process should be emphasized; 3) It is essential to recognize that researchers are always in the process of "becoming" researchers; 4) The guidance of a supervisor plays a crucial role in these processes. At this early stage of introducing self-study to Chinese academia, this research aims to provide more confidence, serve as a reference for the process, and offer a more diverse and dynamic understanding of this research methodology.

### **Mentoring Leads to Student Teachers' Perception of Self-efficacy: The Role of Theory-Practice Integration and Internship Duration**

He Wenjie Capital Normal University

Huang Jiali Beijing Normal University

Zhou Jingtian Chinese University of Hong Kong

This study aims to examine the dynamic interplay between mentoring, theory-practice integration, internship duration and their collective influence on student teachers' self-efficacy using a mixed-methods approach with convergent parallel design. Engaging 611 student teachers from 15 faculties of education across China and complemented by in-depth semi-structured interviews with 9 selected participants, this study employs specialized scales to measure mentoring, Theory-practice Integration, internship duration and Self-efficacy levels using PROCESS in SPSS 22.0. The findings indicate that Theory-practice Integration plays a mediating role between Mentoring and Self-efficacy and this mediating effect is moderated by internship duration. Specifically, this study indicates that the effect of mentoring to student teachers' Self-efficacy and to Theory-practice integration is maximized when the internship duration was 91.74 days. When the internship duration exceeds 91.74 days, the effect of mentoring reduces, while the impact of Theory-practice Integration on Self-efficacy increases. This study highlights the importance of tailored mentoring approaches within varying practicum timeframes to bolster student teachers' efficacy in their professional capabilities.

## **Using Metaphors to Make Sense of Facilitating Beginning Teachers' Professional Learning: A Qualitative Case Study in China**

Dang Qian The Chinese University of Hong Kong

Metaphors can clarify meaning in complexity. While a large number of studies about teachers' metaphors have proven productive as researchers seek to understand the complex processes of teaching and working in classrooms and their professional identities, limited studies have examined that metaphors can act as a tool to promote teachers' professional learning. The purpose of this study is to examine the ways that metaphors constructed by a teacher educator could help describe and make sense of facilitation practices of beginning teachers' professional learning. Drawing on transcribed audio recordings from a teacher training program, interviews with the teacher educator and beginning teachers, and reflective assignments, the analysis identifies two predominant categories of metaphors: organism and non-organism metaphors. Organism metaphors assume the process of beginning teachers' professional learning as growth, while non-organism metaphors employ functional objects such as bridges and lenses to elucidate specific aspects of their professional learning. Findings underscore the multifaceted contributions of metaphors to beginning teachers' professional learning: firstly, by elucidating the dynamic nature of professional learning and rendering abstract concepts tangible; secondly, by fostering the articulation of personal knowledge and the evolution of professional beliefs; and thirdly, by cultivating a community of discourse between educators and novice teachers. This study enhances our understanding of the pedagogical potential of metaphors in teacher education and offers valuable insights for future research in the field.

## **Group 6: Emotion and Identity of Pre-service Teachers**

### **"The Rise and Fall of the Sea of Energy": A Case Study of Emotional Labor for Student Teachers**

Chen Lin Hainan Normal University

Yao Suyun Hainan Normal University

There is a contradiction between the Internal emotional rules based on "espoused theory" and the external emotional rules represented by "theory in-use" among student teachers, which triggers emotional labor among student teachers. Using four student teachers as research subjects, this study explores the emotional labor process and characteristics, emotional labor strategies, and main motivations of student teachers. Research has found that the emotional labor of student teachers has personalized representations, such as "consistently full of energy", and "cold retreat after multiple emotional blends". The pre-conceptions, important others in organizational contexts, and the emotional expression rules of traditional teacher ethics collectively constitute the multidimensional motivational system of emotional labor for student teachers, and induce emotional labor strategies such as surface acting, deep acting, and genuine performance. To achieve this, it is necessary to provide emotional support from universities, offer courses related to emotional labor, and other aspects to encourage student teachers to form a positive emotional experience.

### **The Conceptual Framework and Unique Connotation of Teachers' Social-Emotional Competence: Based on the Perspective of Three Types of Teachers in China**

Guo Rong Hangzhou Normal University

The social-emotional competence of teachers is a social-emotional competence that is endowed with professional attributes. It is not only a key competence related to the comprehensive development and lifelong well-being of teachers as "human beings", but also a professional competence that "teachers" need to acquire to cope with complex teaching challenges, maintain their professional happiness, and cultivate students' social-emotional competence. However, there is a lack of evidence-based responses to the question "What is the social-emotional competence of teachers?". This study constructs a conceptual framework of teachers' social-emotional competence, which consists of 3 sub-abilities and 13 categories, by extracting the local understanding of the social-emotional competence of teachers in Chinese cultural context from three categories of 25 respondents via a grounded theory approach of qualitative research paradigm. According to this framework, the social-emotional competence of teachers is considered as the multidimensional composite competence that integrates emotional competence, social competence, and responsibility ethics, the relational competence that involves three-dimensional interaction between "me and me", "me and people", and "me and tasks", and the professional competence that involves the professionalization of teachers' emotional competence, interpersonal communication, and responsibility ethics. And it contains the Chinese cultural genes of "relationship orientation", "benevolence", "liang-xin, liang-zhi,

liang-neng", as well as the unique mission of "learning to be a teacher". This framework not only provides new perspectives for understanding the teachers' social-emotional competence, but also provides a unique and new perspective for cultivating a "holistic teacher" with comprehensive emotional, social, and ethical development to realize the goal of educating "holistic child" with a "holistic teacher"..

### **A Study on the Influences of Pre-service English Teachers' Teacher Education Curriculum Learning Engagement on Professional Identity**

Liu Yujiao KU Leuven

This study is based on identity theory and learning engagement theory to investigate the impact of learning engagement on professional identity in pre-service English teacher education curriculum. A questionnaire survey was conducted on 404 pre-service English teachers from normal and comprehensive universities. The finding reveals that (1) pre-service English teachers in comprehensive universities are moderately biased in all dimensions of learning engagement and professional identity; (2) Pre-service English teachers from schools of education have a significantly higher learning engagement and professional identity than pre-service English teachers from non-educational colleges; (3) Pre-service English teachers from schools of education in comprehensive universities have a significantly higher learning engagement and professional identity than pre-service English teachers from non-educational colleges in normal universities; (4) There are significant differences in the engagement of different categories and a number of teacher education curriculum, but no significant differences in professional identity; (5) Learning engagement has a significant predictive effect on professional identity. Therefore, the basic recommendations of this study are as follows: (1) The main position and key role of normal colleges and universities should be strengthened, and the process of "re-normalization" in teacher education II colleges ought to be speeded up; (2) Comprehensive universities must fully demonstrate, find the right positioning and strengthen their characteristics before building teacher education majors; (3) Strengthen the construction of the teaching force to attract more outstanding talents to accept teacher education and to work as teachers; (4) Teacher education curriculum shall focus on normal students, increase the proportion of practical teaching courses and pay attention to the training of pre-service English teachers' practical skills; (5) Teacher education curriculum should adopt a teaching mode of flexible lectures, observation and practice, reflective self-learning, innovative assignments, and diversified evaluation.

### **Insights into Future Teaching for All: Investigating Chinese Pre-service Educators' Perceptions of personalized Learning**

Xu Fangjie Capital Normal University

In recent years, research investigating the design and implementation of personalised learning (PL) as an educational innovation to support the diverse learning needs of all learners in K-12 educational settings has been increasing. However, there is a lack of studies investigating PL from the perspectives of pre-service educators. In this study, therefore, we investigated Chinese pre-service educators' perceptions of PL, aiming to unveil factors that might impact the adaptation of PL in the Chinese education system. We employed qualitative

approaches, which include document analysis and semi-structured interviews, to investigate pre-service educators' perceptions of PL. We identified five themes associated with perceived facilitators of PL implementation, including innovative and flexible teaching methods, the role of technology, positive teacher-student relationships, and educators' prior PL experience as learners during K-12 education. Additionally, there were four challenges of PL implementation, including existing instructional and physical learning environment structures, lack of resources to support students' participation, conflicting assessment systems, and unpreparedness of educators for PL implementation. Our findings provide insights and implications for teacher preparation programs in developing appropriate supports for pre-service educators to cultivate knowledge, skills, and dispositions toward PL implementation when they enter the profession.

### **How Pre-Service Teacher with Different Motivational Factors Self-Regulate Their Identities**

Zhou Shenji Beijing Normal University;

Xu Xingzi Shanghai Normal University

The career choice motivation of student teachers has become increasingly complex due to evolving economic, social, and cultural contexts, warranting extensive research. This study used a person-centred approach, based on the FIT-Choice model, to identify motivation profiles among Chinese primary education student teachers. Five profiles were identified: "unenthusiastic" (8.19%), "moderate" (38.86%), "motivated" (32.00%), "loyal" (11.81%), and "utility-oriented" (9.14%). Most profiles exhibited a hierarchical characteristic, progressing from low to high influences from motivators, while fallback consideration showed the opposite pattern. The "utility-oriented" profile added complexity, driven by personal and social value, perceived ability, subject interest, and fallback considerations, but less strongly by intrinsic career value. The "loyal" profile was significantly influenced by all motivators, albeit to varying extents, with fallback being the weakest. This profile viewed teachers more as knowledgeable authorities, reflecting "conservative secularism" in career choices and pedagogical preferences. These findings suggest the need for tailored approaches in teacher education to address diverse motivational profiles and support professional identity development among student teachers.

## **Group 7: Pre-service Teachers' Learning Experiences in Different Settings**

### **On The Paradoxical Growth of Pre-service Teachers' "Learn to Teach" Experience**

Guo Zijun Nanjing Normal University

Yang Yue Nanjing Normal University

It is key to promote the training of pre-service teachers to explore the growth of pre-service teachers' "learn to teach" experience. In the process of teacher education, the growth of pre-service teachers' "learn to teach" experience is a paradoxical growth in a risky, chaotic and marginal learning situation, which shows the characteristics of "balance in sovereignty imbalance" "reconstruct in cognitive deconstruction" and "speak in response mute". It is precisely in the process of abandoning blindly defending their own views, daring to reconstruct cognitive biases, and clarifying the language gap in the dialogue that the existing experiences of both sides can be revealed, clarified and further transformed, and the "learn to teach" experience of pre-service teachers can continue to grow. Therefore, the so-called "imbalance" "deconstruction" and "mute" seem to be contrary to "growth", but in fact they are the beginning of pre-service teachers learn to teach.

### **The Reality Shock of Prospective Teachers: Critique, Interpretation, and Application Based on Experiential Naturalism**

Xu Miao Beijing Normal University

When prospective teachers embark on their teaching journey as interns or newcomers, they often confront what is known as reality shock or praxis shock. Previous studies tended to regard reality shock as novices' collapse of the ideals or expectations formed during teacher preparation after contacting with reality. This opinion encapsulates the clash between theory and practice, the discrepancy between cognition and action, and the imbalance between emotion and reason. However, by overemphasizing its negative repercussions and overshadowing its potential for growth, reality shock has been unjustly portrayed as a hindrance. Additionally, this perspective fosters a simplistic dichotomy. Drawing upon Dewey's empirical naturalism, reality shock can be reframed as a problematic situation, embodying the perplexities, puzzles, confusion and doubt faced by prospective teachers amidst a dynamic and unpredictable environment. Viewed as a starting point and a fundamental experience, reality shock presents opportunities for the revision of beliefs (especially prejudices), the cultivation of reflective experiences and an aesthetic experience, and the generation of practical knowledge through a process of contemplation, exploration, validation, or experimentation. Furthermore, prospective teachers learn to cherish their experiences through an artistic or aesthetic lens, coupled with rational contemplation, thereby enabling them to attain genuine fulfillment and completeness in their teaching careers. This paper delves into the application process and mechanism of reality shock from various angles, elucidating each aspect with a tangible example. It offers innovative insights into the project design, curriculum development, and practical arrangements within teacher education.



## **The Construction and Implementation of Educational practice Course: A Case Study of Teachers Development School in Zhejiang Province**

Yu Xiangjun Zhejiang Normal University

As an important part of pre-service teacher training, educational practice aims to transform the professional knowledge, skills and affection learned into teaching practice. This study focus on the collaborative participation of teacher development schools in the construction and implementation of educational practice courses, and finds that there are three common models from taking Zhejiang Teacher Development School as an example, : Closely integrated, discrete, "assistant" type. Based on this, the study analyzes the current situation and dilemma of the construction of educational practice curriculum, and puts forward some suggestions to promote the construction of teacher education practice curriculum from the perspective of educational practice curriculum itself.

## **Redesigning Educational Internship: A Formative Interventionist Study Based in An Online Change Laboratory**

Wei Ge Capital Normal University

The new era of high-quality teacher development requires the redesigning of teacher education, especially to improve the professionalization and collaboration of educational internships. This paper is based on cultural-historical activity theory and adopts the methodology of formative interventions to conduct an online change laboratory. After a three-phase and 15-month research process, including preliminary research, online workshops and follow-up sessions, a collaborative community was established among multiple participants, including university mentors, elementary school mentors, student teachers, university administrators, and elementary school leaders, to improve educational internships from the bottom up. A thick description of the process of the online change laboratory reveals that the reform of teacher education with a focus on educational internships is essentially a collective expansive learning process among multiple stakeholders, catalyzed by indispensable formative interventions. This paper finally distills the theoretical elements of online collective learning alongside a locally rooted methodological path for technology-assisted teacher education reform.

## **A Study on Teaching Practices of Virtual Reality Technology Integration into Pre-service Teacher Education Programs**

Wu Jiaying Taitung University

Virtual reality (VR) technology has become a trend in recent years. It is an interactive medium that tracks users' movements and positions, using computer simulation to create highly realistic three dimensional spaces, providing users with immersive experiences and allowing them to apply acquired knowledge to the real world. "Utilizing diverse teaching media, information technology, and resources to assist teaching" is one of the professional performance indicators for teachers in Taiwan. However, from interviews with numerous prospective teachers, it was found that many have never experienced virtual reality. Therefore, this study aims to integrate virtual reality technology into pre-service teacher education courses to effectively enhance the technological literacy of prospective teachers. The research methodology proposes to use a questionnaire survey to assess the impact of integrating virtual

reality technology into pre-service teacher education courses on the learning effectiveness of prospective teachers, in order to promote their innovation and research abilities.

## **Group 8: Teacher Engagement, Learning and Action in the Context of Change**

### **How do Elementary School Teachers Perceive Educational Reform?**

#### **-- A Mixed Research Based on the Theory of Change Focus**

Ye Bixin Zhuhai Wenyuan Middle School

To address the challenges posed by the expanding global knowledge society, it is imperative to cultivate future talents with core competencies and global competitiveness through educational reform. To ensure the successful implementation and deepening of curriculum reform, significant efforts must be focused on transforming teaching practices. This study adopts a mixed-methods research approach, guided by the theory of concerns about change, to investigate the levels of concern and intentions for change among primary school teachers in China. The findings indicate that elementary school teachers are currently focusing on several educational transformations, including disciplinary practices, large-unit teaching, project-based learning, interdisciplinary teaching, and smart teaching. Although teachers express a desire for collaboration in the process of change and are open to optimizing and adjusting ongoing transformations, some of their intentions for change are constrained by standardized norms, revealing a lack of agency among teachers during the transformation process. In the context of the "Double New" initiative (referencing new curriculum standards and new textbooks), most teachers are actively seeking to understand and reflect on the teaching philosophies and trends advocated by the new curriculum standards. They are gradually transitioning from a stage of identifying actions to a stage of integrating and renewing actions, demonstrating a proactive approach to educational reform.

### **Teacher Agency in Response to the 'Double-Reduction' Policy in China: A Social Realist Perspective**

Wu Yuchen The Chinese University of Hong Kong

Song Huan Beijing Normal University

Teacher agency has emerged as a significant construct in the literature on educational change. Scholars argue that teachers are not merely pawns in the reform process but rather active agents who have the potential to exercise agency in response to various manifestations of change. However, agency has remained underexamined and undertheorized, especially in developing settings. This qualitative case study investigates how teachers exercise their agency in response to the "Double Reduction" policy in China through Margaret Archer's realist social theory. Although the policy aims to reduce academic burdens, the high-stakes exam system persists, influencing teacher performance evaluations and increasing their workloads. While accountability pressure may induce emotional strain among teachers, they still uphold their moral commitment to students. Teachers' responses to the policy are multifaceted,

individualized, and dynamic, making it challenging to classify these responses into distinct categories such as compliance or resistance. The relationship between their different concerns is complex and nuanced, transcending Archer's simplistic prioritization approach, and is mainly manifested in three trends: irreconcilable, mutually blended, and coexisting in stages.

### **Teachers' Participation in Professional Development: Exploring a Typology of Teachers' Attributions in Chinese Context**

Liu Mengting University of Melbourne

Huang Jiali Beijing Normal University

It is increasingly recognised that teachers play an important role in fostering effective student learning and thus improving the quality of education. Increasing studies as follow-ups further prove the impact of professional development (PD) on teachers' understanding and teaching practices, then on student learning outcomes and school performance. However, it is surprising that there is always a varying degree of teachers' performance in well-designed PD initiatives that should have made effects, which means that teachers' participation in PD does not necessarily lead to desirable outcomes. It is thus suggested to analyze teachers' participation from a significant perspective of what motivates teachers to engage in PD activities. One internal factor that plays a key role but is often neglected by these studies is attribution. According to attribution theory, people intend to make sense of their environment by ascribing causality to their behavior and the behavior of others and these attributions impact their future behavior. However, though attribution is an important mediator for teachers to their motivation to act, there are seldom studies that research teachers' attributions for their PD behaviors, thus explaining their participation in PD. It raises a question about whether attribution influences teachers' certain PD behavior, thus displaying differing participation in PD initiatives. To answer the research questions, a qualitative study was conducted as part of a one-year PD initiative by educational design research methodology, reporting the periodic findings on the perceptions and practices of teachers from the first phase (October 2023 - January 2024). In the Finding section, four types of behaviour were analysed, which can be constructed as a preliminary model regarding the typology of teacher attributions to their participation in PD. This study has a pioneering look at the role of attribution in teacher participation in PD, thus further conceptualising effective PD from a motivational perspective.

### **The Constituent Elements and Generation Mechanism of Practical Knowledge for Preschool Teachers' Home-preschool Collaborative Education**

Li Xiangyu Capital Normal University

Zhang Minghui Capital Normal University

The practical knowledge of home-preschool collaborative education (PKHPCE) is formed by teachers' reflection and refinement of their own relevant experiences, representing by their own action and understanding. Using qualitative research methods, 12 teachers from five preschools in different regions of city B were selected as the research subjects purposefully. Data was collected through interview, observation, and content analysis methods. And thematic analysis and situational analysis were used to probe its composition and generation mechanism.

It found that PKHPCE consists of six elements: collaborative educational belief, reasoning of situation, the law of communication, self-efficacy, critical reflection, and ideal expectations, among which the law of communication as the core category. Among these, "the law of communication" is the core category, and through matrix analysis, four types were identified: willing and capable, willing but incapable, capable but unwilling, and neither capable nor willing. The generation of PKHPCE is the dynamic correlation and cyclic development process between the six constituent elements mentioned above. By focusing on two typical situations, two types of generation mechanism were explored, namely "positive and stable cycle" and "negative and vicious cycle." Implications: starting with "attribution of problems" to enhance teachers' critical reflection, using "situational reasoning" as an opportunity to awaken and engage with the teacher's repertoire of skills, focusing on "the law of communication" as the core to facilitate the dual-path development of beliefs and strategies, and taking mindset as an engine to focus on the transformation of teachers' positive emotions.

### **Reconstructing The Preschool Teacher Education System: A Professional Sociology Perspective**

Wang Jun Beijing Institute of Education

A high-quality preschool teacher education system serves as the fundamental guarantee for building an excellent teaching workforce during the foundational stage of the national education system. Preschool teacher education possesses triple attributes: stage-based teacher education, interdisciplinary teacher education, and compound professional education. The reconstruction of the preschool teacher education system not only contributes to relieving preschool teachers from the predicament of lacking professional status, but also provides insights for the construction of the systems for primary and secondary school teacher education. The preschool teacher education system comprises a harmonious and mutually supportive unity of governance system, academic system, teacher preparation and training system. From the perspective of sociology of professions and based on comparisons with mature professional education fields such as engineering education and medical education, this paper proposes a profession reconstruction of the preschool teacher occupation, a professional education reconstruction of preschool teacher education philosophy and knowledge, and a professional personnel reconstruction of preschool teacher education talent cultivation. Accordingly, specific paths for reconstructing the preschool teacher education governance system, academic system, teacher preparation and training system are outlined.

## **Group 9: Strengthening Education and the Ethos of Educators**

### **Research on the Path of Improving the Competence in Inclusive Education of Teachers in Ordinary Schools under the Background of Building a Powerful Country in Education**

Fei Maomao Nanjing Normal University of Special Education

To strengthen teachers, we must first strengthen teachers. Strengthening the construction of teachers in ordinary schools is the core essence of the construction of a powerful country in education. The competence in inclusive education of teachers in ordinary schools is an important factor affecting the improvement of the quality of inclusive education in ordinary schools, but they face many challenges in the practice of school education. We should optimize the creation of the integrated symbiotic education environment in ordinary schools from the perspective of the ecology of development. Because teachers in ordinary schools have a higher sense of self-efficacy and a stronger sense of professional development identity in an inclusive and supportive educational environment; Through integrating the key elements of the development of the competence in inclusive education of teachers in ordinary schools and integrating educational concepts, knowledge and capabilities systematically, and clarifying the responsibility and obligations of teachers in ordinary schools are both crucial; We should also improve the integration path of pre-service and post-service development of the competence in inclusive education of teachers in ordinary schools, and embed the core values of inclusive education into the novice stage, skilled, competency stage, business proficiency and expert stage of the professional development of teachers in ordinary schools organically.

### **A Study of Changes in China's Teacher Literacy Policies from the Perspective of Policy Instruments: An Analysis Based on 125 Policy Texts from 1978 to 2022**

Reziwanguli·Abasi Xinjiang Normal University

Wang Xuechun Xinjiang Normal University

Teacher literacy policy is closely related to the quality of talent training, and it is also an important part of the construction of Chinese teachers. Based on the theory of policy tools, this study constructs a two-dimensional analysis framework from the two dimensions of the type of policy tools and the content of teacher literacy. Nvivo12 software is used to conduct a quantitative research on 125 texts of teacher literacy policies from 1978 to 2022, and analyzes the characteristics of the use of policy tools in the system of teacher literacy policies and the content that can be strengthened. It is found that in the dimension of policy tools, authoritative tools have the highest frequency of use, the internal structure of capacity building tools and incentive tools needs to be optimized, and the frequency of use of symbols and exhortation and learning tools is low. In the content dimension of teacher accomplishment, the policy focus is mainly on the practice of teacher ethics and teaching practice, and there is still much room for improvement in the comprehensive education and independent development of teachers. Based on the above, the study suggests to optimize the combination of literacy policy tools and enhance the synergy of policy tools; Strengthen the policy guidance and support of teachers' comprehensive education and self-development literacy; Promote the coordination and

cooperation of relevant parties to ensure that the implementation of teacher literacy policies is effective.

### **The Living Cultural Transmission of the Educator's Spirit: An Analysis Based on the Biographies of 88 Educators**

Meng Yu Central China Normal University

Mao Qiming Central China Normal University

This research explores the "living traditions" of teacher ethos, bridging the gap between symbolic representations and actual practices within the predominantly symbolic and historical framework of Chinese pedagogical ethos analysis. By immersing itself in the autobiographies of 88 eminent educators, this study sheds light on how the cultural transmission of educational spirit intertwines with its practical manifestation. The findings highlight that the "unique spirit of Chinese educators" and their personal practices, recognized as "living traditions," are characterized by a unifying theme of "unity amidst diversity." Despite a considerable degree of consistency between these two aspects, the prevailing practices tend to emphasize professional mentorship and the learning culture of teachers, often sidelining discussions on the moral dimensions of teaching. Moreover, the study applies thematic coding to the behavioral practices of educators to delineate the nuanced aspects of each quality within the educators' spirit and how these qualities are tangibly expressed in practice. The virtuous conduct of educators in practice is profoundly rooted in the Confucian learning culture and perpetuates the legacy of the "exemplary teacher", thereby setting a standard for evaluating teaching practices. On the flip side, the shortcomings observed in practice highlight an urgent need for teacher training to bridge the gap between pedagogical methods and moral education, as well as to harmonize the professional and societal facets of the teaching profession.

### **The Connotation and Cultivation Path of Chinese Educationalist Teachers -- Based on the Research on General Secretary Xi Jinping's Important Exposition on the Educationalist Teachers**

Huang Lanzi Hunan First Normal University

"Educationalist Teachers" is a concept with Chinese characteristics. On Teacher's Day 2023, General Secretary Xi Jinping proposed that China's unique "educator spirit" is of great significance for teachers' independent training, building an education powerhouse, and achieving Chinese style modernization. This study is based on General Secretary Xi Jinping's important exposition on Chinese Educationalist Teachers. Firstly, it interprets and constructs the ontological connotation of Chinese Educationalist Teachers from value theory, role theory, and standard theory; Secondly, analyze the generation mechanism of cultivating Chinese Educationalist Teachers from the perspectives of historical inheritance and theoretical continuity, and clarify the value implications of Chinese Educationalist Teachers. Finally, explore possible paths for cultivating Chinese Educationalist Teachers.

## **Integrated Construction of the Ranks of Preschool and Primary School Teachers under the Bidirectional Coordination Vision: What Should Be Done, What Is Difficult to Do, and What Could Be Done**

Zhang Sheng Wenzhou University

Advancing the integrated construction of the ranks of preschool and primary school teachers under the bidirectional coordination vision is the rightful principle to implement relevant policies and laws, the key measure to promote the continuous and progressive development of children, and the long-term plan to form a good ecology of scientific coordination between preschool and primary school. It is constrained by objective factors such as relevant policies and laws, the actual state of teacher education, and the software and hardware facilities of preschools and primary schools. Also, it is influenced by subjective factors such as stakeholders' views and beliefs on the coordination between preschool and primary school. In the future, supporting guidelines for relevant policies and laws could be established and improved to guide it. According to local and school conditions, pertinent institutions of universities, preschools, and primary schools could be built to improve institutional support and facilitate it in the three stages of pre-service, onboarding, and in-service. By offering pre-service early childhood transition courses, consolidating onboarding and in-service early childhood transition training, transforming preschool and primary school teachers' views and beliefs, strengthening the construction of preschool and primary school teachers' capabilities to support children's transition from preschools to primary schools, and enhancing the effectiveness of it.

## **Group 10: Emerging Models/Systems of Teacher Education in Global Context**

### **Ethics and Morality in Teacher Education Textbooks in the United States**

Zhao Di Tsinghua University

Ethics and moral knowledge in teacher education textbooks in United States presents both the technical rational perspective of professional standards and the reflective practical experience perspective. It has the value of meeting the social expectation; constructing the moral and ethical ideal teaching persona; and constructing the "disposition" framework of teachers' morality and ethics. By presenting legal aspect of ethics and morality; practical moral dilemma cases; and theoretical knowledge of children's moral and ethical development, teacher education textbooks in the U.S. helps pre-service teachers build an extensive framework for moral and ethical development. At the practical level, the professional discourse power of the National Education Association and teacher educators' reflective practical experience is also fully reflected in teacher education textbooks. However, ethics and moral knowledge in American teacher education textbooks also have their limitations. So far, the field lacks systematical analysis the connotation and principles of teacher ethics from the perspective of educational philosophy and ethics. Though, moral and ethical knowledge meets the daily practical needs of pre-service teachers and novice teachers. However, excessive attention to practice outweighs the emphasis on philosophical epistemology and ethics at a deeper level.

In sum, teacher education programs from the National Education Association, the state governments, and micro-level teacher education programs and schools form a rigorous network of moral and ethical knowledge, but its function is essentially preventive education. When pre-service teachers and teachers or their students violate the norms in the field of education, the consequences they face are not uniform. Therefore, moral and ethics education for teachers in the United States focuses more on constructions of ideal morales while lacks constraint in knowledge application and practice.

### **Exploring The Predictors of Teachers' Teaching Autonomy: A Three-Level International Study**

Lin Qi Hangzhou Normal University

Concerning the critical function of teachers' teaching autonomy in instructional practice and professional development, this study explores the relative importance of three predictive mechanisms: a. professionalism of teachers, b. complexity of teaching practice, and c. culture of individualism. Using the sample of 118,347 teachers from 8262 schools in 27 countries derived from the 2018 Teaching and Learning International Survey (TALIS), we applied a three-level hierarchical linear model (HLM) for analysis. We found that teachers' teaching autonomy was mainly predicted by the professionalism of teachers and the culture of individualism rather than the complexity of teaching practice. Implications for individual teachers, school leaders, and policymakers are discussed.



## **Building Foundations: An Analysis of Teacher Training in Australia's VET System**

Zhou Yan Victoria University

Australia is recognised both in the Asia-Pacific region and globally for its robust vocational education and training (VET) system, which cultivates a highly skilled workforce to support the country's economic growth. Much like in any other education sector, teachers in VET play a crucial role for achieving positive educational outcomes. It is fair to say that the success of Australia's VET system would not be possible without the quality training provided to the teachers. Since the inception of the modern VET framework in the 1990s, Australia has introduced pre-service training for VET teachers and maintained this requirement to this date. Teachers in Australia are expected to complete a minimum of Certificate IV in Training and Assessment before they can independently carry out any educational task in a vocational college, commonly referred to as Registered Training Organisation (RTO) and/or Technical and Further Education (TAFE) institute. Over the past decades, Australia has refined its teacher training system for VET practitioners, including updates in subject content, tiered training levels, and the incorporation of specialisations. The various training programs made available for VET teachers not only qualify them for teaching, but also create opportunities for them to pursue diverse career paths in the broader field of VET and be adequately rewarded for their expertise. Recognising the significant impact of teacher quality on VET outcomes, this paper explores the teacher training framework within Australian VET and discusses its advantages and areas for further improvement. Hopefully, this paper will spark critical discussions and offer insights into VET teacher training on a global scale.

## **Reconstruction of Major Teacher Education Model in China from the Perspective of Coupling**

Luo Renjie Tsinghua University

Major teacher education (MTE) is a new concept and research field in teacher education that needs to be explored in China, and MTE model is its core element and implementation carrier. MTE model is the mutual influence and operation mode of core elements of MTE that teacher education institutions use to cultivate primary and secondary school subject teachers, consisting of academic discipline-based education, professional education (includes professional education of Education & Psychology, and school subject-based education), and general education. Meanwhile, the coupling theory is highly suitable for reshaping the relationships among the core elements of MTE and reconstructing MTE model. In recent years, a series of MTE policies have been released in China, which urgently need to be implemented by reforming MTE model. However, the relevant research is still relatively scarce and has some prominent problems, such as mainly focusing on the general teacher education model rather than MTE model, the mixed-use of similar concepts about MTE model, the conceptual expression ways of MTE model mainly focuses on its denotations, and the inconsistent use of numerous elements of MTE. At the same time, the current Chinese practices of MTE in undergraduate and postgraduate education present the coupling model with "strong autonomy" and "weak response", which still stagnate at school subject-based teacher education level. With

regard to these, construct the horizontal and vertical MTE theoretical model. As for the horizontal aspect, general education, academic discipline and education discipline are loosely coupled. As for the vertical aspect, academic discipline-based education and school subject-based education are tightly coupled. On this basis, both are further tightly coupled with professional education and form the academic discipline-based teacher education as the main body of MTE theoretical model, which also includes school subject-based teacher education.

### **Professional Development of Novice STEM Teachers: Key Elements and Pathways Exploration**

Wu Qian East China Normal University

The rapid development of STEM education and the deepening of curriculum reform place new demands on teachers, prompting a re-examining of how to provide them with more effective instructional preparation. The research first identifies the professional competencies required for high-quality STEM teaching, including identity, beliefs, knowledge, and practice, and emphasizes that these elements can be cultivated through well-designed professional learning opportunities. Through a systematic analysis of existing literature, the study investigates pathways for the professional growth of novice teachers, covering the learning of science content courses, science methods courses, and the accumulation of field experiences. The research particularly highlights the importance of a holistic programmatic approach to ensure the coherence and consistency of teacher education programs, thereby providing novice teachers with a clear and coordinated pathway for professional growth.

## **SYMPOSIUMS**

### **Symposium1: Boundary-crossing Endeavors in Education**

#### **The Active Ingredients of School-Based Teacher Education**

Tony Loughland UNSW Sydney

School-based teacher education is not a new phenomenon. Normal, demonstration (or teaching) schools existed long before teacher education programs were established in the university. This long history of practice provides a rich evidence base of strategies that current school-based teacher educators can draw upon.

This presentation evaluates this 200-year-old practice repertoire of teaching schools against what is currently considered as the best evidence-base for what constitutes the active ingredients of effective teacher learning. The results of this evaluation have clear implications for the chefs and kitchens of this new teaching school movement in independent schools across Australia.

#### **New Exploration of Cooperation between Universities with Primary and Secondary Schools-- Taking "Nanjing Normal University Cooperative School Community" as an Example**

Cheng Xiaoqiao Nanjing Normal University

The cooperation between Nanjing Normal University (NNU) with primary and secondary schools began in 1987, and by 2023, 39 cooperative schools have been established, covering kindergartens, elementary school, middle schools and high schools. Prior to 2021, the cooperation schools were mainly established in the form of university-licensed and government-trusted schools, which played an important role in improving the quality of local education and promoting the development of local socio-economic, but there were problems such as a single form of cooperation, dispersal of professional resources, and uneven quality of education. For this reason, Nanjing Normal University established the "Cooperative School Community" in 2022, which coordinates and manages all cooperative schools and explores new mechanisms for cooperative school running. It combines trusteeship schools services and specialized education services, manages the principals and guidance experts of cooperative schools, coordinates the deployment of school resources of cooperative schools, uniformly trains key teachers of cooperative schools, promotes exchanges and interactions among cooperative schools, and independently evaluates the quality of cooperative schools through third-party organizations. In the process of building the "Cooperative School Community", we draw on the international experience and path of "evidence-based education and reform", attach great importance to the acquisition and application of scientific evidence, and establish the improvement of school quality on the basis of solid scientific evidence. It is hoped that through the construction of the "Cooperative School Community", a new model of cooperation between NNU with primary and secondary schools will be formed in terms of school management, classroom teaching, teacher development and student development.

## **"Low Achievement" and "High Achievement": Organizational Learning Across Boundaries in the Implementation Process of the "National Excellence Plan"**

Cao Taisheng Nanjing University

The implementation of the "National Excellence Plan" has led to the participation of a group of high-level comprehensive universities in teacher education. Although there is a consensus on the advantages of their disciplines, faculty, and student resources, they have not yet established solid practice bases due to a lack of prior experience in teacher training, not to mention close university-school partnerships. Therefore, it is necessary to pay special attention to these key elements of teacher training. This study takes the first batch of pilot colleges and universities of the "National Excellence Plan" as the object of research, and investigates their concepts of teacher education and training methods, especially the part of practical training, including the nature, methods, types, and effects of the "partnership" established between universities and schools, in order to understand the mentality of participating universities in terms of "low achievement" and "high achievement", and determine the "uniqueness" of their teaching professionalism. Based on theories related to cross-border learning and learning organizations, the study explores the path of partnership between high-level comprehensive universities and schools in terms of building an ecosystem for cross-border learning, promoting knowledge production in cross-border learning, promoting individual cross-border learning through cross-border learning, and creating a learning organization for teacher education.

### **Strange Fields: The "Space" Dilemma of Pre-service Teachers' Practical Competence Development**

Shen Wei East China Normal University

It has become a consensus in the academic community to improve the system and mechanism of the U-S partnership, and promote the development of the competency of pre-service teachers. Based on the theoretical perspective of the third space, this study conducted a systematic study on the educational internship of pre-service teachers in two normal colleges in the western region from the three dimensions: horizontal expertise, boundary crossing, and knot-working. It is found that the practical knowledge of pre-service teachers cannot form an effective dialogue with the knowledge in the community; The spatial division between university teacher educators and practical educators weakens the practical participation of pre-service teachers; The existing learning methods and tools have limited impact on the construction of new knowledge for pre-service teachers after internships. Therefore, the research concludes that the development of practical abilities of pre-service teachers requires educators of all types to break the dualistic thinking, achieve equal dialogue on multidimensional knowledge, and develop a variety of reflective learning tools to deepen learning between boundary.

## **Embarrassment and Transcendence: A Qualitative Inquiry into Identity Construction of Western Teaching Volunteers from the U-D-S Perspective**

Zhang Jiawei Soochow University

Yin Jia Soochow University

The process of identity construction for volunteers in cross-cultural teaching practice is fraught with predicaments of marginalization and alienation, while simultaneously embodying tensions of transcendence and boundary-spanning. These predicaments and tensions primarily stem from the identity perplexity caused by cultural differences, the contradictory tension in role positioning, and the institutional environment's impediment and support for identity recognition. Grounded in the U-D-S (University-District-Aided School) partnership perspective, this study aims to explore the identity construction of western teaching volunteers during their volunteering practice and its influencing factors. Adopting a case study approach of University S, semi-structured interviews were conducted with 10 western teaching volunteers. The findings reveal that under the influences of U-D-S, volunteers constructed diversified identity positions such as "dedicators," "teachers," "outsiders," "boundary-spanners," and "marginalizers," reflecting the complexity and dynamism of identity construction in their teaching practice. The study proposes suggestions to alleviate tensions and promote continuous identity construction: drawing on the "teacher empowerment" concept to enhance volunteers' subjectivity; establishing a "democratic consultation" mechanism to create a supportive environment for identity reconstruction; and building a "mutually beneficial" partnership to facilitate the sustainable development of identity recognition.

## **Enabling Conditions for Successful Institute-University-School Partnership to Enhance Middle Level Leadership: A Chinese Case Study**

Ye Juyan Beijing Normal University

Bi Yan Tianjin Industrial University

This paper examines a 3-year partnership between a regional institute (partly represent the regional government), university, and six schools to strengthen middle-level leadership. The project focused on developing middle-level leaders (vice presidents, department directors) in these schools, who were selected based on their relevance to reform implementation. Workshops, training, and on-site guidance supported their reform efforts. The two authors mentored two schools and found differing middle-level leadership statuses under the same guiding philosophy, which ultimately affected the reform effects of the two schools. Analyzing survey, interview, and observation data, this paper traces back the reform stories of the two schools in partnership collaboration, and attempt to explore the conditions for successful middle-level leadership development for school reform through this partnership. The study reveals that principal support is crucial for leveraging middle-level leadership to drive school teaching reform in partnership settings. Administrative power, while facilitating university-school partnerships, can hinder true trust between scholars and schools, impacting principal support and middle leader selection. The trust relationship directly affects reform decisions and leader responsibilities, which are vital for reform implementation. Without principal support and the selection of the right people, this partnership is ineffective. The study also provides insights for university-school partnerships to enhance middle-level leadership in schools.

## **Symposium2: Boundary-crossing Endeavors in Education**

### **Exploring the Effectiveness and Influencing Mechanism of Interdisciplinary Research Collaboration of University Teachers: A Mixed Analysis Based on SEM and fsQCA**

Zhang Jia Zhejiang University

Yao Yuhan Zhejiang University

Interdisciplinary research collaboration has gradually become an important way for scholarly production among university professors, playing a key role in promoting knowledge integration and innovation, facilitating the transition of scientific and technological achievements, and guiding national innovative development. Grounded in social cognitive theory, this study utilized a hybrid methodology combining Structural Equation Modeling (SEM) and Fuzzy Set Qualitative Comparative Analysis (fsQCA), investigating the effectiveness and mechanisms of interdisciplinary collaboration among 704 professors at University Z, a research-intensive institution.

The research found that, firstly, organizational support and individual cognition were important antecedents in enhancing the outcomes of interdisciplinary research collaboration. These elements exert different levels of influence on collaboration effectiveness through interdependence, newly created professional activities, collective ownership of goals, flexibility and reflective retrospection in the collaborative process. Secondly, these preconditions exhibited distinct characteristics at different stages of the collaboration, leading to the formation of three practice models, namely "project-connection," "entity-organization" and "free-exploration", which subsequently fostered the enhancement of professors' innovative capabilities and academic publication.

The research results provide a profound insight into the current status of interdisciplinary research collaboration effectiveness among university professors, bearing significant theoretical and practical value for promoting interdisciplinary research, enhancing the productivity of interdisciplinary research as well as deeply implementing strategies of innovation-driven development.

### **Becoming a Teacher Educator -- Multiple Boundary-Crossing in the Construction of Teacher Educators' Professional Identity**

Zeng Yan Shanghai Normal University

Teacher education involves the integration of various kinds of knowledge, theory and practice, and requires the cooperation of teachers and educators from different departments to provide students with a coherent curriculum experience. Teacher educators who meet the above professional requirements are considered to be "boundary crossers". To become a professional teacher educator means to cross the epistemological boundary, boundary between theory and practice, and organizational boundary in teacher education practice, and to complete the reconstruction and renewal of professional identity through boundary work in these different fields.

This study examines the practice of teacher educators in University S, who collaborate in curriculum and teaching improvement in various fields to respond to the challenges of professional curriculum reform. It focuses on the process of these teacher educators'

reconstruction of professional identity, and discusses the challenges and dilemmas faced by the professional development of teacher educators in China under the current background of high-quality teacher education construction. The possibility of teacher educators rebuilding professional identity is also discussed.

### **Cross Boundary Learning as a Motivation of Teacher Learning or a Disposition: An Oral History Study of Young Pioneer Counselors**

Wang Xiaoli South China Normal University

Young Pioneer counselors are an important and special part of the teacher group. However, influenced by the historical shift of the focus of social and educational development, the Young Pioneers' education is facing the dilemma of ambiguous positioning and unclear way out. Among them, the most prominent problem is that the functional roles of Young Pioneer counselors and class teachers intersect and lack boundaries, which hinders the formation of the independence of Young Pioneer education. How to change from a teacher to a Young Pioneer counselor, and how the responsibilities of the Young Pioneer counselor and the class teacher are related, need to be explored and confirmed from the specific tradition of experience. Through the oral history study of three Young Pioneer counselors who worked in different eras, this study reveals that the crossover from subject teachers to counselors provides a realistic driving force for learning, and then the different requirements of Young Pioneer education and school education promote counselor teachers to continuously engaged in cross boundary learning. And during this process, the cross boundary learning becomes into a disposition as the connotation of their work.

### **Generative AI as a Catalyst for Reshaping Communication and Collaboration Among Teachers: Insights from a Qualitative Study in a WeChat Group**

Qiao Xuefeng Nanjing Normal University

The conventional paradigms of teacher collaboration are frequently hindered by the barriers of disciplinary and grade distinctions, thereby complicating the establishment and sustenance of enduring interdisciplinary and cross-field collaborations. Predominantly, educators focus on the relevance of their specific disciplinary content to pedagogical practices, often overlooking the significance of interdisciplinary dialogue and cooperation. The advent of generative artificial intelligence (AI) introduces an innovative approach to addressing this predicament. This research is anchored in an analysis of a WeChat group comprising 426 educators, aiming to elucidate how generative AI can redefine the dynamics within the teacher community. The investigation unveils that generative AI serves as a pivotal facilitator for interdisciplinary communication among teachers, enhancing interactions and collaborations across various subjects. Educators are observed to transcend disciplinary confines, actively engaging in discussions and sharing insights on the potential integrations of AI within their teaching domains, thus fostering a milieu of inspiration and knowledge acquisition. Furthermore, the teacher community exhibits a pronounced self-organizing capability, diminishing the dependence on formal management and structuring, which paves the way for innovative strategies conducive to the community's sustainable evolution.

## **Facilitating Interdisciplinary Thematic Teaching through Boundary Spanning Leadership**

Zheng Xin Southwest University

Jiang Chenxi Southwest University

LuoShiying Southwest University

The 2022 curriculum reform in China emphasizes interdisciplinary thematic learning (ITL) as a key aspect of promoting students' integrated learning, ultimately nurturing students' core competencies. However, teachers face challenges in implementing interdisciplinary thematic teaching (ITT), such as the traditional subject-based teaching approach in Chinese schools. This qualitative study tracked a primary school for two years and explored the role of multiple school leaders, particularly principals and subject leaders, in promoting ITT activities. The results showed that principals act as steering and driving forces for ITT, employing strategies such as understanding the essence of ITT and leading teachers in the right direction, providing diverse support based on teachers' needs, reforming school structures and institutions to support interdisciplinary teaching and research, and seeking external support and feedback. Subject leaders serve as pioneers, demonstrators, and bridges in implementing ITT, utilizing strategies such as developing school-based ITT lessons and tools, leading by example and demonstration, and bridging the gap between ITT theory and practice. Principals and subject leaders play distinct yet important roles in embracing this new curriculum reform concept, and their collaborative efforts can sustainably promote ITT and advance students' integrated learning.



## **Symposium3: A "Chinese Program" for Building a High-Quality**

### **Teacher Education System in the New Era**

#### **A Study on the Path of Basic Education Teacher Development in Teacher Training Colleges in Collaboration with Local Communities**

Wang Hong South China Normal University

Zhang Yunting South China Normal University

The collaboration between normal universities and local governments (&schools) is the inexorable trend of improving the teacher education system with Chinese characteristics. As a whole, normal universities and local governments show "One-way cooperation", which focus on the pre-service teacher education rather than the post-service development of basic education teachers. There are some problems such as poor connection between normal universities and local governments, poor sense of local gain, low stickiness degree of school-local relationship, and insufficient support for the high-quality development of basic education. Based on the Path Dependence Theory and the Synergy Theory as the analytical framework, aiming at the key factors affecting the relationship between school and local coordination and stability, the status and responsibilities of normal colleges and local teachers in the development stage of basic education teachers are defined, explore the establishment of a collaborative mechanism between schools and localities with the joint construction platform as the relationship hub, with talent co-education, project cooperation and achievement cultivation as the starting point. The effect evaluation model of school-local coordination to promote teacher development is constructed. Plan S leads the group of 7 universities and 7 cities as the evaluation objects, and the effective path of school-local bidirectional acquisition to promote teacher development is proposed based on the evaluation results.

#### **Participation of High-level Comprehensive Universities in Basic Education Teacher Training in the Context of Accelerating the Development of New Quality Productivity: Value Implications, Basic Strategies**

Zhang Yun Ting South China Normal University

Hu Xiao Qin South China Normal University

Chen Zhi Ning South China Normal University

Wang Hong South China Normal University

The core of developing new productivity lies in original innovation, and top-notch innovative talents are the key to realize original innovation. Basic education is the key stage for cultivating top-notch innovative talents in the early stage, and the quality of teachers plays a key role in the cultivation of top-notch innovative talents. Under the background of new quality productivity, the participation of high-level comprehensive universities in basic education teacher training has become one of the important policy discourses for the reform and development of China's teacher education in the new era in terms of policy logic, "high-level

comprehensive universities carry out teacher education"; in terms of practice logic, high-level comprehensive universities have more complete disciplines and higher cross-fertilization characteristics than teacher training institutions. In terms of practical logic, high-level comprehensive universities are characterized by a complete range of disciplines and a high degree of cross-fertilization compared with teacher training colleges. This requires high-level comprehensive universities to focus on the new round of scientific and technological revolution and industrial change, smooth the path of integrated and articulated cultivation of top-notch innovative talents, carry out in-depth university-enterprise and university-school cooperation, and push forward the in-depth fusion of talent cultivation modes with the education chain, industrial chain, and innovation chain.

### **Building Collaborative Teacher Development Community in Guangdong-Hong Kong-Macao Greater Bay Area: Overview, Predicament and Way Forward**

Zhang Meng South China Normal University

Wang Hong South China Normal University

Teacher collaborative development is a necessary step to promote the integrated development of education in the Greater Bay Area. It also contribute to build a education highland and cultivate talents. However, researchers have not conducted much research on this topic in the educational filed. It is thus necessary to conduct a study to systematically analyse the status quo, predicament and future direction of collaborative teacher development in the Greater Bay Area. Through the qualitative research design, the established literature, policy documents, relevant practice data were collected, selected, and coded, and then the following conclusions are drawn: 1. Teacher collaborative development in the three regions is mainly carried out through the platforms provided by the government (e.g., teacher training programmes), professional associations (e.g., teacher seminars), universities (e.g., joint cultivation programmes), and also primary and secondary schools (e.g., sister-schools). 2. Teachers' collaborative development faces difficulties such as the differences in the social backgrounds and education systems, the complexity and diversity of teachers' developmental needs, as well as the need to rationalise the relationship between the participating parties. 3. Referring to the Synergy Theory , possible paths may include optimising the synergy environment appropriately based on realistic considerations; carrying out demand analysis to pinpoint the synergy development goals; and improving the synergy mechanism through the construction of resource platforms.

## **Symposium4: Generative Artificial Intelligence in the Context of Teacher Education**

### **The Impact of Need Satisfaction on University Students' Artificial Intelligence Literacy: The Role of Self-Regulated Learning Strategies**

Cui Wencheng    Minzu University of China

Artificial intelligence (AI) has had a significant impact on both our work and our lives. To cope with the big changes in the AI era, college students can better adapt to the ever-changing society only if they have basic AI literacy. However, the reasons that affect students AI literacy in the emerging AI education are not yet clear. Self-determination theory (SDT) explains how students' AI literacy may be impacted by the satisfaction of their psychological demands. To improve human capital efficiency and foster better adaptability to the future work environment, this research aims to investigate the mediating function of self-regulated learning strategies (SRLS) between students' needs satisfaction and AI literacy. Five hypotheses were formulated to achieve the purpose of the study. A cross-sectional survey was conducted with 505 university students from diverse study backgrounds. A calculation of the confidence intervals was done to look at the mediating influence. Our research has shown that the frequency with which students use SRLS is directly influenced by their needs satisfaction and that the relationship between needs satisfaction and AI literacy is mediated by SRLS use. The self-directed nature of autonomous learning necessitates extensive cognitive learning, and meeting psychological needs can be more effective in engaging students in such learning processes. We recommend that teachers offer support in AI education to meet students' psychological needs. Furthermore, it is necessary for educators and students to develop guidelines for utilizing SRLS to enhance AI literacy.

### **The Dilemma and Transcendence of Applying Generative Artificial Intelligence in Teacher Education: A Perspective on Value Alignment**

Long Hongyu    Minzu University of China

The widespread use of generative artificial intelligence has facilitated the digital transformation in teacher education. However, upon observing its application process, it is evident that there exists a dilemma regarding value and behavior alignment. Through attribution analysis of this dilemma, it was found that the absence of moral norms, lack of professional corpus, and inadequate literacy among teachers are the primary causes for this issue. To address this problem, it is necessary to deepen understanding about the application of generative artificial intelligence while establishing an institutional guarantee system and improving subject intelligence literacy.

## **Untangling Pre-Service Teachers' Behavioral Intention to Design Generative Artificial Intelligence-Assisted Teaching**

Ruan Qianqian    Minzu University of China

Generative artificial intelligence (GenAI) took the educational settings by storm in the past year due to its transformative ability to impact school education. It is crucial to investigate pre-service teachers' viewpoints to effectively incorporate GenAI tools into their instructional practices. Data gathered from 606 pre-service teachers was analyzed to explore the predictors of behavioral intention to design Gen AI-assisted teaching. Based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model, this research integrates multiple variables such as Technological Pedagogical Content Knowledge (TPACK), GenAI anxiety, and technology self-efficacy. Our findings revealed that GenAI anxiety, social influence, and performance expectancy significantly predicted pre-service teachers' behavioral intention to design GenAI-assisted teaching. However, effort expectancy and facilitating conditions were not statistically associated with pre-service teachers' behavioral intention. These findings offer significant insights into the intricate relationships between predictors that influence pre-service teachers' perspectives and intentions regarding GenAI technology.

## **The More Capability, the Better Behavioral Intention? Empirical Evidence on The Relation Between Institutes' Artificial Intelligence Capability and Pre-Service Teachers' Behavioral Intentions to Design Artificial Intelligence Assisted Teaching**

Shen Lihan    Minzu University of China

The field of education has witnessed a rapid expansion in the utilization of Artificial Intelligence (AI) technologies, fundamentally transforming classroom instruction. Thus, it is critical for pre-service teachers to implement AI-powered technology in their future teaching. To facilitate pre-service teachers readiness for AI assisted teaching and help higher education institute (HEI) administrators develop strategies, this study constructed a partial least squares structural equation model (PLS-SEM) among HEIs' AI capability (AIC), creativity, self-efficacy, TPACK, and pre-service teachers' behavioral intentions toward AI-assisted teaching using SmartPLS 4.0. Data were gathered from 453 pre-service teachers across six public universities within China. The findings revealed that HEIs' AIC significantly predicts pre-service teachers' behavioral intentions to design artificial intelligence assisted teaching, and their creativity, self-efficacy, and TPACK. Further, creativity, self-efficacy, and TPACK mediate associations between HEIs' AIC and pre-service teachers' behavioral intentions. The findings imply that HEIs need to support the development of pre-service teachers in concentrating on AIC, such as resources (data, technology resources) and awareness (reform, innovation).

## **Mapping the Global Evidence Around the Use of Generative Artificial Intelligence (GAI) in Teacher Education: A Systematic Scoping Review**

Dang Qian The Chinese University of Hong Kong

Generative Artificial Intelligence (GAI), exemplified by platforms like ChatGPT, has garnered significant global attention in recent years. The educational potential of GAI is expansive, prompting inquiries into how educators can collaborate with and harness the capabilities of GAI to unlock the technological advancements of the 'human-machine hybrid' intelligence era. This dynamic presents a crucial focal point within teacher education. However, a notable gap exists in understanding the tangible impact of GAI on educators and teacher training. To address this gap, this study employs a systematic literature review methodology, analyzing 40 domestic and international sources on 'GAI & Teacher Education'. Specifically, it delves into the interplay between GAI within educational contexts, exploring its implications for teachers' professional environments and development. By synthesizing various application scenarios of GAI in teaching and teacher education, as well as examining its potential benefits and risks, this research aims to elucidate how GAI can reshape and enhance teachers' professional growth. Ultimately, it seeks to offer both theoretical insights and practical guidance to inform the integration of GAI into teacher education.

## **Application, Challenges, and Future Development of Generative Artificial Intelligence (GAI) in Teacher Education: A Systematic Review Study**

Jin Jianshui Beijing Normal University

With the rapid development of Generative Artificial Intelligence (GAI), the educational area is undergoing a technological revolution. The application of GAI in the field of education is becoming increasingly widespread, greatly changing educational practices and profoundly influencing and altering the field of teacher education. Objective: This study aims to comprehensively review the current state of GAI application in the field of teacher education, analyze existing challenges, and predict future development trends. Method: This study conducted a systematic review by synthesizing relevant literature, case studies, and policy documents to thoroughly examine the application of GAI in teacher education. Key Findings: The study found that AI literacy has become an indispensable part of teacher education. GAI innovates and enriches the forms of teacher education training, and plays a significant role at all stages of teacher education, including pre-service training, induction training, and in-service continuing education. It has a notable promotional effect in aspects such as pedagogical innovation, teacher professional development, practical skill enhancement, and reflective teaching. The introduction of GAI has brought new teaching tools, assessment methods, and management strategies, and has also put forward new requirements for the role positioning, skill requirements, and professional development of teachers. Despite the broad prospects for application, GAI in teacher education also faces many challenges, such as the transformation of the teacher's role, technology acceptance, ethical privacy issues, and the digital divide. Future Development: In response to the above challenges, future research and practice should focus on strengthening teachers' understanding and application ability of GAI technology, promoting

interdisciplinary cooperation, formulating and improving relevant policies and regulations, and continuing research and innovation. Conclusion: GAI technology has brought unprecedented opportunities to the field of teacher education, along with a series of challenges. Future research needs to concentrate on solving these challenges to ensure that GAI technology can be effectively utilized in teacher education and promote the continuous innovation and development of the educational field.

### **Artificial Intelligence in Basic Education: Insights from Chinese School Leaders**

Li Shihua Xidian University

This paper reports on multiple case study that investigated the perspectives of school leaders on artificial intelligence (AI) in China's basic education. It focused on their understanding, vision, and perceptions of AI. Although previous studies have explored teachers' perceptions of AI tools and their use in K-12 classrooms (Yau et al., 2023, Velandar et al., 2023), there is a lack of studies that tap into the views of school leadership. Their views can reveal key concerns about AI's impact on teachers, students, and the overall learning environment (Fullan et al., 2023b). Their perspectives can also inform the development of training programs for teachers. Participants of this study included 13 principals from schools located across China. Semi-structured interviews were conducted to elicit school leaders' perceptions of AI in basic education. Content analysis was conducted to identify the themes from the interview data. Results showed that most principals indicated some knowledge of AI. Not all of them, however, were able to clearly define what AI is. Principals had a positive vision about education in the era of AI. They believed in AI's potential in empowering teaching and learning practices. They highlighted various barriers to implementing AI in education including funding shortage, lack of AI tools, teacher attitude and policy hurdles. Principals also emphasized the need to change teachers' attitude and practice and enhance teachers' AI competence through training. Implications for practices were also discussed.

## **Symposium5: Emerging Productive Force Under the Context of Digitalized Teacher Education**

### **Emerging Productive Forces in Teacher Education: The Role of a Collaborative Educational Platform in Enhancing the Practical Teaching Competence of Pre-service**

Huang Jiali Beijing Normal University

The objective of teacher education is to foster the practical teaching effectiveness of pre-service teachers, thereby increasing their readiness for pedagogical engagement. In the context of digitization, it is imperative that teacher education programs harness technological advancements to bolster the practical teaching competence of pre-service teachers, referred to as the force of emerging productive quality. To this end, Beijing Normal University has implemented a Teacher Education Collaborative Platform, specifically a platform for recording the educational practicum experiences, which not only tracks the practical experiences of pre-service teachers but also enhances the reliability and validity of evaluations under the aegis of targeted education objectives. Analyses of the practicum portfolios reveal that pre-service teachers accumulate and exhibit practical outcomes through platform engagement; the documentation reflects enhanced observational insights, reflective depth, and a clarified sense of personal professional expectations. The findings indicate that the Teacher Education Collaborative Platform is instrumental in effectively fostering the practical teaching abilities of interns.

### **Research on the Reform of Educational Practicum System under the Background of Digitalized Teacher Education**

Li Xiuyun Yili Normal University

The reform of the Educational Practicum System is one of the important propositions for high-quality teacher education. Under the current background of digitalized teacher education, relying on educational practicum resources and platforms, the educational practicum has shown characteristics such as systematic internship programs, customized internship content, humanized internship processes, precise internship evaluation, and efficient internship management. While embracing the changes brought about by digitalization to the educational practicum system, we must also be wary of the risks and challenges it poses, including the risk of instrumentalizing and technologizing educational practicum and the questioning of educational alienation and ethics. In response, we need to firmly adhere to the student-centered philosophy, improve the quality assurance mechanism for educational practicum under the backdrop of digitalized teacher education, and integrate evidence-based practices and artificial intelligence into the entire process of education internships.

## **The Acquisition of Professional Roles by Pre-Service Teachers: A Narrative Inquiry Based on Accounts of "The Most Exemplary Teachers"**

Zhao Ping Beijing Normal University

The professional role acquisition during pre-service teacher socialization is vital for developing an understanding of the teaching profession and for elevating their capability in professional practice. This study gathered and analyzed 40 narratives written by pre-service teachers about their conception of "The Most Exemplary Teacher," probing into the metaphoric representations these individuals hold. It scrutinizes the role model image of "exemplary teachers" as envisioned by pre-service teachers. Integrating interviews with these teachers, the research examines the dynamic between the perceived image of exemplary teachers and the pre-service teachers' professional understanding and identification with their prospective roles. Initial findings reveal that pre-service teachers' ideal of excellence manifests in distinguished professional practice and that the personality traits and moral standards of exemplary teachers mirror pronounced characteristics of the current era, thus broadening the scope of what constitutes a teacher's professional identity.

## **Exploring How Pre-Service Teachers Learn: An Analysis Based on Records from the Teacher Education Collaborative Platform During Educational Practicums**

Song Weiyu Qinghai Normal University

Educational practicums serve as a crucial avenue for pre-service teachers to build their practical pedagogical knowledge. This research aims to elucidate three pivotal questions through an examination of the Teacher Education Collaborative Platform: Firstly, what role does the platform play in nurturing student growth throughout the practicum activities? Secondly, how do practicum experiences address a fundamental aspect of pre-service teacher professional development, specifically the process by which teachers learn to teach? Thirdly, what distinct characteristics and challenges emerge in the site-based learning experiences of pre-service teachers during individualized practicums? The findings suggest that the Teacher Education Collaborative Platform facilitates targeted instructional preparation for pre-service teachers and fosters more focused reflections on their practicum experiences. However, the platform's primary function as a data repository has not yet fully capitalized on its potential for guiding dialogue. The efficacy of the platform could be enhanced by enriching the evaluative criteria, refining the precision of data collection points, and deepening the reflective guidance offered. The study also identifies issues of generalization in pre-service teachers' pedagogical research, noting a lack of integration between teaching methodologies and the facilitation of student developmental processes. The in-situ learning of teacher-trainees is marked by contextuality, randomness, subjectivity, and a lack of preparedness.



## **Symposium6: Case Analysis and Model Construction of Teachers'**

### **Moral Judgment from the Perspective of Moral Intuition**

#### **A Case Study of Teachers' Moral Anomie from the Perspective of Moral Intuition Judgment**

Huang Jianping Beijing Normal University

Teacher ethics is the soul of teachers, and it is very important to strengthen the construction of teacher ethics and teacher style. The purpose of this study is to explore the moral anomie behavior of primary and secondary school teachers from the perspective of moral intuitive judgment. Firstly, through literature review, this paper understands the important role of moral intuition in moral judgment, as well as the manifestations and influencing factors of teachers' moral anomie behavior in primary and secondary schools. On this basis, an analytical framework with moral intuition as the core is constructed to interpret the deep-seated reasons for teachers' moral anomie in primary and secondary schools. Then, a typical case was selected from the cases of teachers' moral anomie published by the Ministry of Education, and the cases were analyzed in depth according to the analytical framework, revealing the moral intuition factors behind teachers' moral anomie behaviors. Finally, the results of this study are summarized and the enlightenment of moral intuition on teachers' moral anomie behavior in primary and secondary schools is discussed. Through this study, we can better understand the nature of teachers' moral anomie behavior, and can also provide a useful reference for improving teachers' professional ethics.

#### **Situational Classification and Questionnaire Development of Teachers' Moral Violations from the Perspective of Moral Intuitive Judgment**

Qian Wanbo Beijing Normal University

In order to solidly promote the implementation of the "Opinions of the Central Committee of the Communist Party of China and the State Council on Comprehensively Deepening the Reform of the Construction and Reform of the Teacher Team in the New Era", further strengthen the professional norms for teachers in the new era of teacher ethics, delineate the basic bottom line, and deepen the construction of teacher ethics, the Ministry of Education regularly exposes typical cases of violations of the Ten Standards of Professional Conduct for Teachers. This paper seeks out the moral situations faced by teachers in typical cases of violating teachers' professional behaviors, and summarizes the common patterns of moral intuition in teachers' moral judgments. On this basis, the common situation of teachers' moral violations questionnaire are formed, and more targeted moral situation and moral dilemmas are selected for the study of teachers' moral judgment. Studying and examining teachers' moral intuition judgments based on teachers' moral violations that violate teachers' professional behaviors can avoid research confusion caused by the situational nature of the cases themselves. Taking teachers as the subject group to study the moral intuition judgment of teachers' moral violations, the research is to explore the effective methods of teacher ethics training that can be used for teacher education.

## **Research on the Theoretical Model of Teachers' Moral Judgment in the Context of Moral Intuition**

Wu Buyun Beijing Normal University

Teacher ethics and style are the concentrated reflection of the values of teacher education, and it is also the top priority of teacher team construction and education development. The choice of moral judgment and its justification tendency can reflect the level of moral development of teachers, but the influencing factors of teachers' moral judgment have not been systematically integrated and studied. In recent years, a large number of empirical studies have shown that moral intuition plays an important role in moral judgments. From the perspective of moral psychology, based on the connotation and extension of teachers' moral judgment in the context of moral intuition, this paper explores the different factors and relationships that affect teachers' moral judgment through the method of literature review, and then constructs and improves the theoretical model of teachers' moral judgment, so as to provide richer arguments and basis for teachers' moral judgment, solve the problems encountered in the theoretical construction and practical behavior of teachers' moral judgment, and lay a theoretical foundation for the cultivation and development of teachers' ethics and style.

## **The Theoretical Logic of Teachers' Moral Judgment and The Construction of Brain Operation Pathways: From the Perspective of Social Intuitionism**

An Longyu Beijing Normal University

Based on the perspective of intuitionism, this study analyzes the theoretical logic of intuitionism for teachers' moral judgment in school scenes, so as to propose a brain operation mechanism for teachers' moral judgment, serving the goal of teachers' moral construction. Intuitionism directly refers to the direct reaction of individuals to the scene, but there is a moral schema in the social culture behind it. When an individual's response to the schema is either self-evident or an intellectual representation, it will affect the cognitive level, speed and adjustment of moral judgment, involving emotional effects. Under the guidance of intuitionism, the brain operation mechanism of moral judgment is constructed, including emotional operation mechanism and empirical operation mechanism. The construction of the brain operation mechanism of teachers' moral judgment process lays a theoretical foundation for the subsequent brain neural laboratory.

## **Symposium7: Oral History and Teacher Development**

### **The Value of Oral History in Teacher Education Research**

Hu Yan Beijing Normal University

In today's widespread application of oral history across various fields, its utilization in research on teacher education is lacking. The main reasons for this are skepticism towards the value of oral history from a scientific rational perspective and unfamiliarity with oral history research. It is argued that oral history has broad application space and value in research on teacher education, manifested in the rescue of live historical materials, enriching and expanding the history of teacher education; expanding the research field of teacher sociology. It constructs contemporary Chinese teacher education characteristics, experiences, and spirits with details; promotes the manifestation of teachers' practical knowledge; outlines the trajectory of teacher growth and its stage characteristics.

### **The Application and Reflection of Oral History in Educational Research at Home and Abroad**

Cui Zhaodi Beijing Normal University

As an important research method in humanities and social sciences, oral history has been paid much attention in educational research. Aimed to explore the research status of oral history in educational research, this study did systematic literature review on education research using oral history as research method, published in the Social Science Citation Index (SSCI) database and the core journal database of CNKI between 2000 and 2022. It was found that oral history had been widely used in education research, mainly focusing on two categories, school education and participants in school education. The former included three themes: the implementation of educational policies in school situation, the history and culture of schools, and the curriculum and teaching method at school; the latter included four themes: school leaders and elite teachers, ordinary teachers, students, parents and community members. Oral history as a method in educational research had three different application paths: mutual evidence of historical materials, reconstruction of history and creation of historical records.

### **The Historical Experience and Practical Path of Primary School Teachers Training in China from the Perspective of Oral History-- Taking the Secondary Normal Education as an Example**

Jiang Siyu Beijing Normal University

Zhang Qingyi Beijing Normal University

Since the founding of the People's Republic of China, secondary normal schools have undertaken the task of training primary school teachers for nearly half a century. They have distinctive school-running characteristics and value of the times, and have made great contributions to the popularization of teacher training and compulsory education in China. The upgrading and transformation of the secondary normal school made the experience of

the secondary normal school die out. This study selected a number of senior representative secondary normal school teachers, through their oral materials, combined with the national education policy, to investigate the historical experience and practical path of secondary normal school teachers training primary school teachers. The research focuses on the training objectives, curriculum setting, teaching methods, student management, community activities and school culture of secondary normal schools. It is found that secondary normal schools pay attention to cultivating students' deep patriotic consciousness and professional emotion in teacher training, highlighting teachers' professional ideological education and teaching skills training, attaching importance to the comprehensive development of Student Teachers' comprehensive quality and cultivating their own specialty, and developing eminent teacher temperament and behavior habits. Although the teacher training mode of secondary normal school has withdrawn from the historical stage, it has important reference value for the current teacher education.

### **A Case Study on the Improvement of Primary School Teacher Training in the 1980s and 1990s: Based on Oral History of Secondary Normal School**

Ye Ruixin Beijing Normal University

Secondary normal school has provided a large number of excellent teachers for primary education in China over the past century. In the 1980s and 1990s, teacher education around the world was undergoing a transformation, while China's secondary teacher education faced a dual demand for training primary school teachers in rural areas to popularize primary education and improving the quality of primary school teacher training in economically developed areas. In economically developed provinces, some principals made great efforts to reform, which made many beneficial explorations to improve the level of primary school teacher training and to the new direction for the development of secondary normal school. This study takes two secondary normal schools in S province as cases, by analyzing the oral materials of their principals and teachers, to examine their reform paths, training models, curriculum structure systems, and training quality for primary school teachers with college degree. This study also compares the different upgrading and transforming paths in the period of adjusting the layout and structure of normal schools between two schools, as well as the current situation, to help us re-examine the teacher education and educational management system in contemporary China.

### **"I Will Never Give Up": Exploring Resilience and Teacher Identity in the Trajectory of ZHIBIAN Teachers' Professional Growth**

Wu Cunxin Beihang University

Ma Wenjing Hebei Normal University Of Science & Technology

As a unique group of teachers in the Chinese teaching community, there is a lack of relevant empirical research on the professional growth trajectories of border-supporting teachers and the relationship between their identities and resilience. Based on a narrative investigation of the 40-year teaching and reform experience of a language teacher (ZHI BIAN Teacher) in Qinghai who was supporting education in China's border areas, this paper reports four stories distilled from multiple "restorying cycles" and knit together as a coherent

narrative of Xu's professional growth trajectory. The first story illustrates the study of Xu's professional knowledge and the establishment of her pre-teacher identity during her school years (1953-1957); the second story illustrates Xu's struggles to carry out language teaching against a backdrop of frustration (1964-1972), and even abandoning her teaching identity for a time; and the third story illustrates Xu's confrontation with the ethos of struggle that had been perpetuated from the previous period in secondary school, and the way in which she put his educational ideals into practice (1972-1982); and the fourth story illustrates Xu's combination of secondary school experience and university theory in university to carry out educational reform and overcome resistance to her work (1982-1997). The findings suggest that teachers need to transform their identities to fit the workplace in which they are located, that the construction of teacher identity is intertwined with the country's trajectory, and that teacher resilience is one of the key factors contributing to the firming up and even reclaiming of identity, an important quality for teachers to overcome the obstacles they face. The findings of the study provide insights for researchers to explore the construction of teachers' identities in difficult contexts and for individual teachers to realize their educational aspirations in the face of adversity.

### **Research on the Growth of Different Generations of Special-Grade Teachers in China from the Perspective of Life Course**

Liu Jia Beijing Normal University

This study takes 17 special-grade teachers of four generations since the founding of the People's Republic of China as the research object, examines the growth of teachers in the context of life course and social history. Special-grade teachers are the product of the institutions. Under the building-models teacher incentive institutions, the honor symbol brings halo effect and causes Matthew effect, which constitutes the system background for the growth of special-grade teachers. The growth of special-grade teachers is the result of the interaction between individuals and the environment. The macro social environment directly affects the extent to which individuals can grow. The more the society with low structural differentiation and rigid system, the deeper and wider the influence on individuals will be. Organizational environment is the buffer or accelerator for teachers to cope with structural shocks, which is determined by the leadership style and culture in the organization. A positive, trusting and cooperative organizational environment is conducive to the healthy growth of teachers. Personal positive qualities help teachers break through environmental restrictions to a certain extent and grow in adversity. Reading, self-reflection, continuous improvement practice, clear career mission and planning are the eternal driving force for teacher growth.

## **Dialogue and Reflection: The Role of Oral History in Promoting Teacher Professional Growth**

Zhang Luyao Beijing Normal University

This paper explores the role of oral history in promoting teacher professional development, analyzing its value as a tool for recording educational practice and self-reflection through interviews with teachers who have participated in oral history projects. The study found that oral history interviews provide teachers with the opportunity to examine their teaching experiences and career trajectories, helping them to revisit their growth paths, extract key events, and critically reflect on their understanding of students, teaching materials, and courses, as well as their adaptation to school culture and their perceptions of teacher-student and parent-school relationships. During this process, teachers are able to identify their strengths and weaknesses in teaching, which fosters the development of their personal teaching skills and educational strategies. Teachers are also able to re-evaluate teaching-related issues in a logical dialogue with researchers, continuously refining their educational concepts; moreover, by sharing their personal teaching stories and career experiences, they enhance their commitment to professional development. This study provides empirical support for understanding the potential contributions of oral history to teacher professional development, demonstrating that the use of oral history has a direct and positive impact on promoting teachers' professional growth.

## **Symposium8: Teacher Education and Development: An Ecological Perspective**

### **Foreign Language Teacher Education and Development Research from an Ecological Perspective: Retrospect and Prospect**

Liu Honggang Soochow University

Foreign language teacher education and development, as an interdisciplinary field of research, has been enriched by theories from various disciplines, with ecological theories being a significant contributor. In recent years, against the backdrop of the "ecological turn" (Peng, 2015, 2019; Liu, 2021), reviewing relevant studies and exploring theoretical perspectives, research methods, and results are of great importance for understanding how to use ecological theories to guide foreign language teacher education research and to expand the research horizons. This current study takes a scoping review approach to systematically analyze the related papers published in high-level domestic and international journals over the past 12 years, focusing on theoretical foundation, research themes, research methods, and participant demographics. Results show that foreign language teacher education and development research from an ecological perspective generally presents characteristics of diverse theoretical applications and themes and rich methodologies, but a relatively limited scope of research participants. Meanwhile, there is still room for enriching the exploration of the ecological characteristics of foreign language teacher education. Specifically, the studies mainly utilize Urie Bronfenbrenner's ecological systems theory, and Priestley et al.'s ecological framework of teacher agency as theoretical underpinnings. Moreover, a range of topics including teachers' survival, working environment, professional competence, and psychological factors were investigated. Qualitative research method is used more frequently than quantitative research methods, and semi-structured interviews, narrative frames, and questionnaires are the main ways of data collection. Finally, this study underscores the need for a more expansive application of ecological theory in the field of foreign language teacher education and development for future research. It advocated for a nuanced understanding of ecological concepts and a deeper exploration of the unique characteristics of the foreign language teacher development environment in China.

### **Construction of an Evidence Ecosystem for Teacher Education Based on Evidence-Based Practices**

Wang Xingzhou Beijing Normal University

Song Huan Beijing Normal University

Evidence-based practice in teacher education emphasizes how the best evidence in teacher education supports teacher education programs and teaching in teacher education. Evidence-based practice from an ecosystem perspective is divided into production evidence, comprehensive evidence, dissemination of evidence, application of evidence, and evaluation and improvement practices, which realizes researchers of original research, researchers of

evidence synthesis, and professional practitioners of evidence dissemination and evidence application. The flexible transformation between them realizes the dynamic cycle of evidence generation, synthesis, dissemination and application process, and at the same time fills the shortcomings of the current best evidence. Based on the concepts of evidence-based practice and evidence ecosystem, this study clarifies the internal levels, operating logic and transformation mechanism of the evidence ecosystem of evidence-based teacher education, so as to provide professional and scientific decision-making basis for improving and developing teacher education, and promote the deep integration of teacher education theory and practice.

### **Research on Senior High School English Teacher Resilience from an Ecological Perspective**

Chu Wenxiu Suzhou University of Science and Technology

Gao Lixiang Fuyang Normal University

Resilience is a newly emerged topic in the field of foreign language teacher psychology. The exploration of this topic contributes to understanding the professional challenges faced by foreign language teachers and analyzing the process in which they cope with setbacks and maintain professional enthusiasm. This study uses a qualitative case study to explore the developmental process of English teacher resilience from the perspective of ecological systems theory. The findings show that English teachers working in the complex teaching environment, actively or passively respond to and deal with teaching challenges and pressures, demonstrating specific resilient characteristics in professional, emotional, social, and cultural dimensions. In addition, as developing persons, English teachers participate in different layers of ecosystems, perceive and utilize the affordance provided by the ecosystem and their favorable resources, and exert resilience to respond to the impact of external challenges. In the process of dealing with teaching challenges, they also affect the construction of the ecology.

### **A Study on University Foreign Language Teacher Resilience from an Ecological Perspective**

Duan Siyu Northeast Normal University

Li Xiaoxue Soochow University

In recent years, teacher resilience has gained certain attention in the fields of psychology and education. However, there is still a lack of research on the resilience of foreign language teachers working in universities, especially in exploring the internal structure and influencing factors of their resilience. Therefore, based on an ecological perspective, this study employs a mixed-methods approach to investigate the structure of resilience and its influencing factors among university foreign language teachers. The results show that the university foreign language teacher resilience is composed of cultural, professional, and social dimensions, and is influenced by factors such as socio-cultural context, policies, and interpersonal relationships. Based on the research findings, this paper proposes insights and future directions for promoting and researching the resilience of university foreign language teachers.



## **Symposium9: Renowned Teacher Professional Development 1**

### **True Physics: Connotation, Value Pursuit, and Practice Strategies**

Cao Hui Suzhou Institute of Education Sciences

True Physics advocates for a classroom approach that aligns with the inherent characteristics of the physical sciences, follows the authentic cognitive process of human understanding of physics knowledge, and empowers students' subjective initiative. This approach aims to return to the comprehensive nurturing instinct of the physical sciences and proposes corresponding value pursuits and practice strategies.

### **Constructing and Implementing a "Wise Chinese Language" Teaching System Centered on Learning in Middle Schools**

Chen Jinhua Fengtai Branch of Beijing Academy of Education

"Wise Chinese Language" in middle schools is based on the theory of "wisdom," student-centered, learning-centered, and competency-focused. It follows the laws of Chinese language learning, selecting wise teaching and learning paths and strategies. It integrates the three aspects of content, principle, and technique, and integrates teaching, learning, and evaluation into a unified system. It scientifically implements the educational goals of Chinese language nurturing. The "Wise Chinese Language" teaching system has a scientific logical relationship and hierarchical structure, with construction principles of integrity, relevance, hierarchy, structure, and practicality. It features purposefulness, objectivity, logic, structuralization, diversity, and developmental nature. The implementation strategies mainly include horizontal teaching strategies and vertical teaching methods.

### **"Four Forces Pioneer, Four-link Drive" – A Study on the Pioneer Action of Integrated Ideological and Political Education Teachers in the East China Normal University Affiliated High School Education Group**

Chen Mingqing No.1 Middle School Attached to East China Normal University

In the context of the new era, the integrated construction of ideological and political education in primary, secondary, and high schools has become a key measure to achieve the fundamental goal of fostering virtue through education. This poses higher requirements on the capabilities of ideological and political education teachers, demanding that they possess the professional ability to integrate the concept of integration into their teaching practice. However, in practical operations, teachers face three main challenges: first, the difficulty in shifting from merely teaching to comprehensive education; second, the difficulty in ascending from knowledge imparting to wisdom enlightenment; and lastly, the difficulty in advancing teaching content from simple statement to a spiral of development. To address these challenges, it is essential to start with pioneer actions that encourage teachers to actively participate in the integrated construction, which requires both clearly defining the specific content of the actions and establishing a flexible and orderly mechanism to effectively promote the integration process of ideological and political education in primary, secondary,

and high schools. To this end, this paper constructs a pioneer action system for teachers that includes four dimensions: conceptual guidance, practical exploration, resource integration, and professional development. The aim is to comprehensively solve the aforementioned problems by strengthening teachers' "Four Forces Pioneer" – the power of integrated concept guidance, the power of teaching practice across educational stages, the power of resource integration in the grand ideological and political education, and the power of multi-stage collaborative training. To ensure that these four capabilities are effectively implemented as the core of the pioneer action for integrated ideological and political education teachers in primary, secondary, and high schools, this paper also proposes the establishment of a sound "Four-link Drive" mechanism, which includes the formation of a subject community alliance, joint teaching of large units, the weaving of a practical resource map, and the linkage of teacher collaborative learning communities, aiming to provide solid support and sustained momentum for the integrated construction of ideological and political education in primary, secondary, and high schools.

### **Research on the Construction of the "Qi Zhi Run De" Moral and Intellectual Nurturing Model in Xinjiang Basic Education**

Ding Zhanjun Urumqi Bayi Middle School

Moral education, as the directional guarantee for the implementation of the five virtues and the prerequisite for cultivating socialist builders and successors, is an indispensable part of education. Moral education requires the use of curriculum to nurture, refining the content of moral education in primary and secondary schools into the teaching objectives of subject courses, integrating and permeating it into the entire process of education and teaching, and deeply excavating the moral education resources in the curriculum for organic integration with subject teaching. This paper expounds the profound content of virtue and conduct, clarifies the educational concept of "teaching with virtue, enlightening and nurturing moral education," constructs an educational system of "teaching with virtue, enlightening and nurturing moral education," and promotes the teaching implementation of "teaching with virtue, enlightening and nurturing moral education."

### **"Share·Create" Teaching Theory and Practice**

Huang Xiangyong Chengdu Education Research Institute

"Share·Create" teaching is a pedagogical form that constructs knowledge systems, nurtures spiritual taste, and enhances life perspectives through the sharing of experiences, achieved through listening, understanding, reflection, and innovation in a multi-subject dialogue. This teaching approach takes role reshaping as the foundation of the learning ecosystem, dialogue and explanation as the basic mode of learning, diverse evaluation as the means to advance learning, and reflection and reconstruction as the intrinsic benefit of learning. "Share·Create" teaching is based on the student's learning as the starting point and the sharing dialogue as the behavioral carrier of teaching activities, focusing on what students "learn," "how they learn," and "how they learn."

## **Research on the Construction of an Advanced Chinese Reading Teaching Model to Enhance the Thinking Quality of High School Students**

Jia Huimin Henan Luyi County Senior High School

This paper aims to explore an advanced model of Chinese reading teaching for high school students. By analyzing the existing reading teaching models, it proposes reading teaching strategies that align with students' cognitive thinking characteristics, with the aim of improving their thinking quality and comprehensive Chinese literacy. Currently, there are issues in high school Chinese reading teaching such as a monotonous approach and a lack of effective thinking guidance. The advanced reading teaching model proposed in this study consists of four stages: plain reading, where students independently read the text; contemplation, where students engage in deep independent thinking about the content; clarification, where group discussions stimulate cognitive collisions; and profound comprehension, where reflection leads to an advanced improvement in thinking quality. This teaching model aims to provide a new path for high school Chinese reading instruction, promote the development of students' thinking and Chinese literacy, and lay a more solid foundation for their comprehensive development.

## **Symposium10: Renowned Teacher Professional Development 2**

### **Action Research on Integrated Teaching Interaction in Senior High School Chinese Language**

Liu Zhijiang Beijing Jingshan School

"Integrated Teaching Interaction in Senior High School Chinese Language" combines the word "teaching" with "integrated" in the front, forming an "integrated teaching" that is online and offline, and with "interaction" in the back, emphasizing the interactive design of "teaching" and "learning." It is not only focused on the design of "teaching" or "learning" alone, but rather an "interactive bidirectional teaching and learning" under the support of information technology, highlighting student-centeredness and teacher-ledness. In the integrated teaching interaction, the interaction includes not only the traditional physical space interaction between teachers and students and among students, but also adds human-machine interaction, allowing the teaching interaction to occur between teachers and students, as well as between teachers, students, and the learning platform in a "three-dimensional space."

#### **Ecological Special Education: Connotation, Basis, and Its Construction**

Ma Shanbo Fo Shan Chan Cheng Qi Zhi School

This paper expounds on the importance and background of ecological special education research, constructs the theoretical system and implementation approaches of ecological special education, clarifies the core concepts and constituent elements of ecological special education, summarizes the research content and logical framework of ecological special education, and proposes strategies and paths to promote the development of ecological special education. It provides specific operational guidelines for front-line practitioners.

#### **How can Core Competencies be Implemented in Science Classrooms**

Sha Qibo Zhejiang Provincial Institute of Education Research

The core competencies that science courses aim to cultivate refer to the correct values, essential character traits, and key abilities that students gradually form during the process of learning science courses, which are necessary for their lifelong development and social development. These competencies are designed to address the challenges of future uncertainty and represent the central educational value of science courses. Based on an analysis of the practical difficulties in implementing core competencies in science classrooms, this paper interprets the essence of core competencies, forming a series of implementation paths and practical strategies to truly implement core competencies in science classrooms. These include focusing on core concepts, emphasizing the structuralization of knowledge sequences, creating authentic situations to promote diverse learning methods, improving the evaluation system for "teaching-learning-evaluation" integration, and integrating support resources to focus on the collaborative development of science education.

## **Research on Evidence-Based Teaching of Primary School Chinese with a Focus on Language Practice**

Wang Linhui Hangzhou Tianchang Primary School

The "New Curriculum Standards for Compulsory Education Chinese Language" (2022 edition) takes the fundamental task of fostering morality and cultivating people as its mission, further refining curriculum objectives, enriching curriculum content, strengthening value guidance, and emphasizing the cultivation of essential character traits and key abilities, highlighting the core competencies that students need for their lifelong development and adaptation to social development.

### **Primary School Chinese Language Teaching: Interpretation of Connotation, Value Pursuit, and Practice Paths**

Wang Tingbo Affiliated Primary School of Northeast Normal University

"Follow the style teaching" emphasizes following the style of the text for teaching. This approach is based on theories such as textology and learning science, rooted in traditional Chinese language education, grounded in classroom practice, and in line with the spirit of curriculum standards. It advocates taking "style" as the core concept, inheriting Chinese culture, strengthening style awareness, and cultivating style thinking. It can be considered as a transformative practice path for implementing curriculum standards. After years of practical exploration, a localized teaching proposition has been gradually constructed, with "following the text's context and structure" as the educational goal and "recognizing the style, preparing for teaching based on the style, and evaluating through the style" as the operational process.

### **Constructing the "PPC Question-Based Teaching" Model for Early Cultivation of Top-Notch Innovative Talent in High School Physics**

Yin Jianguo Mian Yang High School

Early training of top-tier innovative talents is a hot issue in the field of education. In high school physics education, we face numerous challenges. Firstly, traditional teaching models often overly emphasize knowledge transmission, neglecting the cultivation of students' innovative and problem-solving abilities. Secondly, the curriculum and teaching content often lack specificity and flexibility, failing to effectively stimulate students' interest in learning and their practical skills. Moreover, in the teaching process, students' problem-solving awareness and critical thinking skills are not fully exercised and nurtured. Therefore, constructing a new teaching model from the perspectives of schools, teachers, and students has become an urgent issue to be addressed. In summary, the problems in high school physics education require us to re-examine and reform our educational practices. We need to create a new teaching model that is problem-oriented (Problem), emphasizes practice (Practice), and fosters creativity (Creativity) to comprehensively enhance students' innovative and problem-solving abilities.

## **The Concept and Practice of "Mountain and River Aesthetic Education" in Primary School Art Classrooms**

Zhu Guojuan    Chong'an Primary School

This paper explores the concept of "Mountain and River Aesthetic Education" in art classrooms, based on the practice of Chong'an Primary School in Wuyishan City and integrating local mountain and river resources with aesthetic education concepts. The article first analyzes the origin and background of "Mountain and River Aesthetic Education," then defines its conceptual connotation, and further discusses its practical value in art classrooms. Through creating an environment for appreciating beauty, cultivating the eyes to appreciate beauty, engaging in activities to express beauty, and stimulating the thinking to create beauty, the article demonstrates how "Mountain and River Aesthetic Education" enriches students' aesthetic experiences and enhances their aesthetic and humanistic literacy. Finally, the article summarizes the practical significance of "Mountain and River Aesthetic Education" and presents expectations for future teaching practices.

## **Symposium11: Sub-Center Thematic Topics for Center for Teacher**

### **Education Research, Beijing Normal University**

#### **Innovative Construction of Teacher Education Model in Comprehensive Universities: Concept Selection and Practice Path**

Wang Ping Henan University, Zhongyuan Sub-Center

The building of a Powerful Country depends on the construction of high-quality teachers force, and requires the leadership of "hundreds of thousands of excellent teachers and tens of thousands of educator-type teachers".As a useful supplement to normal colleges and universities, and because of its multidisciplinary, comprehensive and research-oriented character, teacher education in comprehensive universities should be research-led, integrated pre-cultivating and post-training, and multidisciplinary and cross-disciplinary in order to cultivate outstanding teachers.The practical path includes the talent cultivation framework of "connecting bachelor's and master's degrees, spanning multiple disciplines, and linking four styles", the "3+1+2" talent cultivation model of integrating bachelor's and master's degrees, the triple tutors system of academic tutors, discipline tutors and front-line teachers, and the institutional setup of integrating research and talent cultivation. The three-mentor system of academic mentor, subject mentor and first-line master teacher, and the institution integrating research and talent cultivation, will ultimately realize the innovation of the comprehensive university teacher education model with three rings and integrated pre-cultivating and post-training integrative .

#### **The Collaborative Development of Teacher Education and Basic Education: The Development Path of the Sichuan Sub-Center**

Jin Tong Sichuan Normal University, Sichuan Sub-Center

Major teacher education has long been a traditional research area in teacher education, while also emerging as a new research field. It is considered "traditional" because, prior to the eighth round of basic education curriculum reform in the early 21st century, scholars of teaching material and method studies in teacher training institutions largely focused on the training of normal university students, which is the core of major teacher education, though they may not have been consciously aware of this focus at the time. It is seen as "newly emerging" because, since the eighth round of basic education curriculum reform, research on subject-specific curriculum and teaching in primary and secondary schools has become a hot topic. With the government's increased emphasis on teacher training in primary and secondary schools, normal universities have become key institutions for national teacher training programs. The departments previously known as "teaching material and method studies" have mostly been renamed as "subject curriculum and teaching studies" departments, with their research focus shifting towards the study of curriculum and teaching in basic education. Therefore, discussions around major teacher education have become a new topic nowadays. This "traditional" and "newly emerging" dynamic indicates the inherent

connection between major teacher education and basic education. In recent years, the Sichuan Sub-Center has followed a path of collaborative development between teacher education and basic education in its discipline construction.

### **Reform of High-Quality Teacher Education System, Institution, Regime and Mechanism in Western China**

Li xiuyun Yili Normal University, Yili Sub-Center

The development of teacher education in the western China is part of the construction of high-quality teacher education system in the country. Constructing high-quality teacher education in the west requires reforming the system, institution, regime and mechanism. In terms of system, reforms are needed in the structure of teacher education institutions, the construction of teacher education disciplines, the construction of teachers, and the cultivation of talents; For institution, reforms need to be carried out on the system of teacher education institutions, the system of governance, and the system of academic innovation; For regime, reforms need to be carried out on the system of teacher qualification, the system of enrollment, and the system of quality assurance and monitoring of teacher education; For mechanism, reforms need to be carried out on the mechanism of policy, the financing In terms of mechanism, reforms should be made to the policy mechanism, funding mechanism, alliance of teacher education institutions and collaborative education mechanism. The reform in teacher education in western China is aimed at efficiency and fairness, balance and quality, precision and strength, aiming to serve the high-quality development of the teacher education system in the west, and to boost the construction of a Chinese-characteristics teacher education system in the new era.

### **Thoughts and Explorations on the G-U-U-I-S Collaborative Innovation Model for Teacher Education in Southwestern Ethnic Regions: Insights Based on a Countywide Teacher Competency Assessment Project in Western China**

Long Huan Minzu Normal University of Xingyi, Research Center for Teacher Education in Ethnic Minority Areas of Southwest China

This study focuses on the exploration and practice of the collaborative innovation model for teacher education in southwestern ethnic regions. Drawing insights from a countywide teacher competency assessment project conducted in a county in western China, it delves into the G-U-U-I-S (Government-University Community-Research Institution-School) comprehensive collaboration framework.

Through in-depth analysis of this project, it is believed that the G-U-U-I-S model holds unique advantages in teacher education within southwestern ethnic regions. This model leverages government policy guidance and resource support to form a teacher education community between high-level universities and local universities in southwestern ethnic regions. Together, they establish scientific research institutions, providing research support, theoretical guidance, academic leadership, and talent cultivation for the development of local teacher education disciplines. Consequently, a multi-dimensional and comprehensive collaborative innovation system for teacher education is formed.



## **Towards "Organized Scientific Research": Exploration of Building Teachers' Academic Community in Local Teacher Education Institutes**

Ma Xueyu Xingtai University, Taihang Sub-Center

Chen Xiaole Xingtai University, Taihang Sub-Center

Zhou Jingtian The Chinese University of Hong Kong

Building academic communities is an important way to facilitate the high-quality development of teaching workforce in local teacher education institutes. Currently, teachers in local teacher education institutes have strong motivations for academic development, but they face difficulties such as a weak research foundation and a lack of collaborative atmosphere. As such, this paper proposes ways to build academic communities including forming shared research goals, connecting effective research resources, establishing diverse collaboration platforms, and motivating teachers' passion for research. Taking the Emerging Scholars' Workshop in Xingtai University as an example, we have further built a model for teacher academic community development in local teacher education institutes that includes "direction leading, task driving, technique training, expert guiding, peer supporting, and resource sharing", which enhanced the research efficacy of teachers and helped the institute move toward "Organized Scientific Research".

## **Education Discipline Development in Local Undergraduate Normal Universities: Current Status, Problems, and Strategies**

Chen Qingwe Yulin Normal Universities, Guangxi Sub-Center

Local undergraduate normal universities are an important component of China's teacher education system, mainly achieving transformation through the popularization of higher education. As the "leading discipline" of local undergraduate normal colleges, education discipline not only determines the training quality of normal student, but also affects the level of school operation. However, under the background of expanding enrollment in higher education and comprehensive development of normal universities, education discipline development in local undergraduate normal universities is facing many difficulties. Based on online research and field investigations of education discipline in 71 local undergraduate normal universities (listed in the 2022 National List of Ordinary Universities), the current development status of education discipline in local undergraduate normal universities is examined from organizational structure, professional settings, faculty team, disciplinary platforms and other aspects by quantitative and qualitative methods. It is found that education discipline development in local undergraduate normal universities exists many problems such as weakened disciplinary status, inadequate institutional settings, weak faculty team, and insufficient funding support. To achieve sustainable and high-quality development of education discipline in local undergraduate normal universities, it is necessary to adhere to the principles of teacher education, locality, and applicability, and make breakthroughs in development planning and design, organizational optimization, faculty construction, and disciplinary and professional settings.

## **Symposium12: Understanding Teachers and Teacher Education through Aesthetic Lens**

### **The Role of Aesthetic Education in Educational Policies since 1949: A Historical Review**

Wu Jingran Beijing Normal University

Wang Mengfei Beijing Normal University

As a formative work of shaping characters and minds of students, aesthetic education is the basis for the all-round development of students. But it is in the marginal position in the current educational practice. Looking back on policies of aesthetic education since the founding of the People's Republic of China in 1949, the development process of aesthetic education can be divided into six stages: the initial emergence of independent status, the loss of independent status, being put into the "forbidden area", hovering forward, the establishment and consolidation of irreplaceable value, and the comprehensive and in-depth development. Therefore, the current marginalized position of aesthetic education can be summarized as: the driving force of development is exogenous; the status fluctuates repeatedly, and the independent value still needs to be consolidated; the construction of teacher training and evaluation system is weak; the connotation of aesthetic education is vague, showing a tendency of subjectification of content and alienation of objectives in practice. Based on the reasons mentioned above, we propose strategic suggestions to alleviate the challenges of aesthetic education development.

### **Pedagogic Understanding of Hannah Arendt's Concept of Plurality – the Film Fight Club as the Example**

Qiao Danju Beijing Normal University

This study discussed the important concept of Plurality, which was put forward by Hannah Arendt in *Human Condition* and other works, in order to answer how teachers carry out the educational practice in the way of cultivate their understanding of Plurality. Firstly, this study traced back to Arendt's related ideas about Plurality, including the origin of this concept – as the basic condition of Action and the connotation of it – men inhabit the world. Accordingly, a kind of education that could develop students' understanding of Plurality should be practiced by teachers in this individualized social background. To further understand Plurality, this study introduced the film *Fight Club* which is highly related to this conceptual context, and analyzed the crisis, condition and possibility of Plurality based on it. Finally, this study discussed the possible practice approaches of the education of Plurality and suggested to turn to Education of Consumption from Education of Seeing.

## **Teacher-student Relationship as a Personal Relationship? – A Study Based on the Novel *The Small Room***

Peng Liting Beijing Normal University

*The Small Room*, written by May Sarton in 1961, describes the conflicts and frictions between teachers and students in Appleton college due to life experiences (marriage, death of relatives), class experience, teaching accidents, etc., and the new realm of life created by love and reflection during this period. This paper tries to discuss whether the teacher-student relationship is a personal relationship under the background of teacher education, and argues that teacher educators and their students (future teachers) should recognize and accept the profound influence of the complexity, swing and blending of each other's life experience on their teaching or learning. This paper advocates that the teacher-student relationship in teacher education should avoid the trend of simplifying life into a mechanism of communication and practice. Instead, teacher education should turn attention to life narrative that accommodates teachers and students' life experience and promotes life reflection. Then, it is possible to promote the growth and transformation of teachers, educators and students with more personal and integrated teacher-student relationship.

## **Symposium13: Extra-Curriculum for International Teacher**

### **Education Doctoral Students: Practice, Evidence, and Impact**

#### **Research Progress on Extracurricular Activities in International Doctoral Education—A Scoping Review of Core Empirical Studies Abroad**

Cheng Qun Beijing Normal University

The construction of international doctoral extracurricular activities plays a crucial role in cultivating high-level talents with a global perspective, cross-cultural communication skills, and academic research literacy. Compared to domestic research, international empirical research in this area is more extensive, and the research methods are more refined. A scoping review of empirical studies on the construction of international doctoral extracurricular activities abroad shows that research in this field is on the rise, primarily focused in countries such as Australia, the UK, and the USA. The research subjects are mostly international doctoral students in humanities and social sciences, and the research methods are predominantly qualitative. The content system of international doctoral extracurricular activities mainly covers four aspects: academic development and research training, interpersonal interaction and social connection, cultural experience and identity perception, personal growth and psychological support. The method and organization of extracurricular activities have four significant characteristics: periodic and sustained learning arrangements, a combination of online and offline participation, a learning environment with diverse interaction and cooperation, and the integration of formal and informal activities. These activities have a positive impact on various aspects, including academic research capabilities, cross-cultural adaptability, social interaction skills, and personal growth. However, there are also some negative effects, such as the potential decline in confidence in seeking help from peers in writing workshops. These findings suggest theoretical, practical, and methodological implications for advancing the field of research and practice in the construction of international doctoral extracurricular activities. Reflecting on the gaps identified in existing research, the study proposes possible directions for further research and practice in the context of China.

#### **On the Construction of International Doctoral Student Extracurricular Activity System**

Fan Shichen Beijing Institution of Education

International doctoral education is of great significance in promoting the internationalization of higher education and enhancing China's international influence. Based on a comprehensive analysis of relevant research on international doctoral education within and beyond China, the current situation of international doctoral education in China, and the practical experience of an international PhD program at Beijing Normal University, this article proposes a framework for constructing extracurricular activities for international doctoral students. The curriculum objective is to cultivate international doctoral talents with RACE literacy. The curriculum content combines academic innovation, cultural integration,

social connection, and self-development. The implementation of the curriculum is solidly promoted according to the principles of student-centered, task-driven, and evidence-based iteration. The curriculum evaluation is a comprehensive assessment focused on RACE literacy, multi-subject participation, and formative tracking evaluation. The proposed framework enriches the theoretical understanding of international doctoral student training paths and has practical values for improving international doctoral talent training in China.

### **How Extracurricular Activities Influence International Doctoral Students' Professional Identities as Teacher Educators: A Qualitative Case Study**

Dang Qian Chinese University of Hong Kong

Scholars emphasize the significance of adequately preparing and guiding teacher educators, not only during induction but also prior to their entry into teacher education. With a growing number of graduate students transitioning into teacher education following higher research degrees, such as PhDs or EdDs, understanding their identity development becomes imperative. While existing research has predominantly examined prospective teacher educators' identities from a program-centric viewpoint, scant attention has been given to their engagement in extracurricular activities during their doctoral studies. This qualitative case study delves into the influence of extracurricular activities on the professional identities of international doctoral students as teacher educators. Focused on the Teacher Education Policy and Practice (TEPP) program at a Chinese Normal University, this study showcases how extracurricular engagements within the program provide a platform for international doctoral students to immerse themselves in diverse forms of teacher education practice and research. Drawing from transcribed audio recordings, post-activity interviews, and reflective assignments, the study reveals how these extracurricular activities shape the internal and external facets of international doctoral students' identities as teacher educators and provide them with crucial knowledge, skills, and attributes as qualified teacher educators. Moreover, it highlights the role of the intercultural context in reinforcing the professional commitment of doctoral students from developing countries to teacher education, as they expressed their intention to use what they had learned to contribute to teacher education in their home countries as teacher educators. This study contributes to advancing insight into prospective teacher educators' identity construction in the extracurricular activities of doctoral teacher education and generates practical implications for both teacher education and higher education in preparing and developing future teacher educators.

### **Leveraging Extracurricular Activities to Advance International Teacher Education Doctoral Students' Holistic Development: An Evidence-Based Exploration**

Liao Wei Beijing Normal University

China's higher education has been significantly expanding by size in the past few decades. However, its quality and reputation have been questioned due to an array of educational, socio-cultural, and geo-political factors, which have led to many unintended or even counteractive consequences. With the purpose of exploring a practical approach to turning this issue around, this study reports on an action research project of using student-

centered, research-informed, and culturally responsive / inclusive extracurricular activities to enhance the professional learning, career advancement, and personal lives of international students in an international teacher education doctoral program in China. Drawing on the results of a reiterative thematic analysis of interview, observational, and survey data, we identify a positive relation between the students' extracurricular course experiences and their multiple facets of development, which further caused a spill-over effect—bettering the international doctoral students' perceptions of Chinese education and society, strengthening their sense of inclusion in and belonging to China, and enhancing their willingness to spread Chinese experiences and stories about teacher education to their home countries and the global communities. This study adds to the literature an empirically testified extracurricular activity system for empowering international doctoral students' holistic development as human beings. It also highlights the institutionally peripheral but potentially powerful roles of extra-, hidden-, and informal-curricular experiences in enhancing the quality and reputation of Chinese higher education in global communities.

**Symposium14: Understanding Self-Understanding, Theorizing  
Theory Construction: Insights from a PD&R Project on Chinese  
Expert Teachers**

**Understanding Chinese *Zhuoyue* (Expert) Teachers' Professional Self-  
Understandings**

Hu Yangbang Beijing Normal University

*Zhuoyue* teachers (卓越教师), roughly translated as expert teachers, refers to a few vital and highly accomplished teachers in the Chinese context. Many previous studies have examined externally mandated expectations, practices, and influences of Chinese *Zhuoyue* teachers. However, little research attention has been paid to how *Zhuoyue* teachers understand their own professional selves and how such self-understandings develop in situated contexts. To close this research gap, this qualitative study empirically investigated 18 Chinese *Zhuoyue* teachers' professional self-understandings guided by Kelchtermans' s personal interpretive framework and grounded on multiple rounds of interview data. Thematic analysis of the research data identified five aspects of the Chinese *Zhuoyue* teachers' professional self-understanding, including 1) the multifaceted self-images; 2) hard-earned self-esteem; 3) inspired job motivation; 4) negotiated duty of job; and 5) reflexive future vision. An array of internal drives (e.g., personal belief, commitment, motivation), external forces (e.g., policy requirements, social expectations), and supportive conditions (e.g., professional awards, learning opportunities) have jointly contributed to the formation of the Chinese *Zhuoyue* teachers' professional self-understandings. These findings add to the literature a conceptualization of Chinese *Zhuoyue* teachers' professional self-understandings and also suggest practical implications for cultivating and leveraging teachers' professional self-understandings for educational improvement in the Chinese context and beyond.

**International Experiences in Teacher Theoretical Construction:**

**A Systematic Literature Review**

Zhang Luyao Beijing Normal University

The discourse gap between theory and practice remains a pervasive challenge within the educational sector. Expert teachers, despite their rich practical experience, face difficulties in abstracting and refining this knowledge into theoretical frameworks. This hinders the wider application and dissemination of their expertise, negatively affecting educational advancement. Hence, it is imperative to consolidate the global experiences of teachers in theoretical construction and to urgently foster the development of teachers' theoretical construction capabilities. This systematic literature review compiles and analyzes the findings from 21 empirical studies on theoretical construction by frontline teachers worldwide from 1956 to 2023. The review initially examines the current state of empirical research on international teacher theoretical construction, exploring aspects such as research

environments, subjects, and methodologies. Subsequently, it delves into key issues concerning teacher theoretical construction, including motivations for theory construction, approaches for theory construction, theoretical content, and the strengths and challenges associated with the "practical" theories formulated. Drawing upon these insights, the review provides recommendations for enhancing teachers' theoretical construction skills, aiming to contribute to the ongoing evolution of the teaching profession globally.

### **On the Construction of Expert Teachers' Personal Practical Theories**

Liu Miao The University of Edinburgh

In the new era, China has put forward the macro development goal in education, namely, building a high-quality education system, and used this as a guide to develop a high-quality teaching workforce. The Chinese government regards expert teachers as a critical minority group that has the potential to promote the achievement of such an educational goal. Also, they are encouraged to enact their leadership in constructing such an education system and teaching staff based on their personal practical theories. Constructing personal practical theories by expert teachers can improve their own theoretical literacy, promote the collaborative development of educational theory and practice, and provide tools for leading the teaching staff construction nationwide. However, due to the lack of systematic academic training, rich theoretical knowledge, and practical theory construction methods, expert teachers' understanding and construction of their own educational practices are often limited to listing technical and loose views. To break through this dilemma, this study took root in the specific practice of expert teachers in constructing personal practical theories, analyzing what, why, and how they build such theories. On this basis, this study proposed strategies, including "observe practice," "abstract concepts," "propose ideas," "build structures," and "polish theory," to facilitate expert teachers' theoretical construction practice.

### **Unpacking Expert Teachers' Theory Construction Experiences: A Deep Learning Perspective**

Liao Wei Beijing Normal University

This study empirically examined how a group of Chinese expert teachers constructed their personal practical theories (PPT) supported by a professional development (PD) project. The PD project consisted of five consecutive workshops respectively focusing on guiding the teachers to (a) identify effective teaching practice, (b) crystalize a core concept from effective teaching, (c) propose theoretical tenets around the core concept, (d) configure the theoretical tenets into a preliminary PPT, and (e) refine the PPT in relevant communities (Liu & Liao, 2024). This study adopts a deep learning perspective (Entwistle, 2000; Nielsen, 2016), which essentially views learning as a process of converting unconscious, discrete, and tacit experiences into deliberate, structured, and explanatory thinking and action to understand these Chinese expert teachers' theory construction experiences. Multiple sources of data, including observations of teachers' performance in the workshops, writings about their theories at different phases, and one-on-one interviews towards the end of the workshops. These data were subject to a combination of deductive and inductive analysis (Fereday & Muir-Cochrane, 2016) to generate thematic findings in response to the overarching research



question. Four thematic findings have emerged from our preliminary analysis of the data, which together constitute a characterization of expert teachers' theory construction experiences as a process of deep learning: (a) externalizing PPT as the learning purpose; (b) theory-related experiences and materials as the learning contents; (c) abductive reasoning as the learning approach; and (d) expanded theoretical competency as the learning outcomes. The research findings add to the literature new empirical evidence regarding expert teachers and theory construction, provide a theorization of teacher theory construction from a deep learning perspective, and suggest practical implications for relevant stakeholders to support teacher theory construction and expert teachers' deep learning and continued development.

## **Symposium15-16: Smart Education, Innovative Quality: Cross-Border and Innovative Approaches to Regional Teacher Education**

### **Investigating Teacher Learning in Professional Learning Communities in China: A Comparison of Two Primary Schools in Shanghai**

Li Baiyan Shanghai Pudong Institute of Education Development

In response to the bottleneck and key issues in educational reform and development, such as teachers' diverse professional development needs and the challenges of precision training, Pudong New Area in Shanghai has designed a high-quality "Teacher Education Interchange" model with a systematic, holistic, open, and efficiently integrated operation mechanism based on the theory of educational ecology. The goal is to contribute a "Pudong Model" for promoting the sustainable development of national education reform and the construction of a robust system for high-quality teacher education.

### **From Experience to Curriculum: Methods and Practices for Enhancing Regional Teachers' Digital Literacy**

Zhang Guanglu Shanghai Pudong Institute of Education Development

In the context of educational digital transformation, improving teachers' digital literacy has become a key issue that needs to be addressed. Pudong has attempted to use the practical logic of "excellent teachers—experience extraction—incubation of digital training courses—synchronized resonance among participating teachers—overall enhancement of regional digital literacy." Through the "course incubation" approach, the district extracts frontline teachers' individualized practical experiences, strategies, and methods in using digital technology and transforms them into "scenario" solutions for educational digital transformation that can be applied by regional teachers, thus achieving an overall improvement in digital literacy for the district's teachers.

### **Theme Guidance and Collaborative Creation: Innovative Practice of Regional Themed School-Based Professional Development Based on Classroom Transformation**

Huang Yousheng Hunan Provincial Teacher Development Center and Secondary Schools

In response to the challenges of localizing the new curriculum plan and standards, Hunan Province, based on theories of systems thinking and learning communities, has collaboratively interacted between off-campus guidance teams and on-campus training teams. Through the synergy of organizational training, team training, and individual training at the school level, the difficult and pain points of classroom transformation have been refined into training themes. Guided by these themes, systematic training activities including diagnosis, learning, research, application, exhibition, and evaluation have been conducted to create a new ecosystem where "teachers change, classrooms change, and schools change."

## **Symposium17: Turning Ideas into Action: Empirical and Practical Experience of Evidence-based Teaching**

### **How Teacher Education Courses Foster Student Teachers' Intention for Evidence-Based Teaching: Structural Equation Modeling Based on Self-Efficacy Theory**

Wu Yuchen The Chinese University of Hong Kong

Zhou Shenji Beijing Normal University

Song Huan Beijing Normal University

One essential objective within the scientification and professionalization agenda of teacher education is to prepare student teachers' intention to use evidence-based teaching practice. However, there is a shortage of relevant empirical studies. This study used data from the "Teacher Training and Development Data Platform" and applied Bandura's social cognitive theory as the theoretical framework to construct a structural equation model. The study aims to investigate the impact of teacher education courses that link theory to practice on student teachers' subjective norms, attitude, self-efficacy, and intention toward evidence-based teaching. The study revealed that the main effect stems from the positive impact of the connection between theory and practice in courses on student teachers' subjective norm of evidence-based teaching practice. The courses' consequences are evident in creating in student teachers a sense of obligation to use evidence-based practices, further in enhancing their attitude, self-efficacy, and intention. In short, it reflects the "norm-oriented mechanism" of promoting evidence-based practice. Therefore, it is necessary to enhance the connection between theory and practice in teacher education courses by offering exemplary practices, which will help to reinforce student teachers' awareness of their role as evidence-based practitioners. Teacher education courses should also pay attention to enhancing the interests and competence of student teachers, so as to effectively transform evidence-based practice from a mere expectation to a tangible ability.

### **The Actor Dimension of Evidence-Based Teaching**

Zhou Shenji Beijing Normal University

Xu Xingzi Shanghai Normal University

Contemporary academic discourse frequently critiques evidence-based teaching practice for its inadequate consideration of the value, context, and complexity of teaching. However, much of this discussion focuses on the "evidence" aspect, with limited attention to how practitioners actually "base" their practice on such evidence. In reality, actors do not simply transfer evidence into practice; rather, they draw inspiration and support from it to inform their unique contexts. This study, drawing upon Margaret Archer's realist social theory, provides a theoretical interpretation of how actors engage in evidence-based practice by transforming their concerns into courses of action through reflexive consideration. Using the

Chinese language and literacy lesson "Rainbow" from the first-grade textbook (under the "Literary Reading and Creative Expression" learning task group) as an example, we propose a broader and more practical pathway for evidence-based teaching.

### **Evidence-Based Practice of Enhancing Middle School Students' Critical Thinking Through Literature Circles in A Middle School in Hebei**

Xu Shanshan Beijing Normal University

Critical thinking has been incorporated into the core educational objectives at the national, local and school levels. In addition, the New Curriculum emphasizes the importance of the development of critical thinking skills. However, the current situation of students' critical thinking ability in China is not optimistic, and there are dilemmas like students' lack of critical thinking tendency, students' lack of knowledge and language ability related to critical thinking ability, etc. Therefore, this research aims to conduct literature circles for the second-grade students of a middle school in Hebei, to figure out the feasibility and effectiveness of literature circles in cultivating students' critical thinking ability based on evidence, following the process of asking, obtaining, selecting, applying and evaluating evidence. This research reviews the definition, characteristics and previous studies on literature circles in English language teaching, as well as the definition, the framework, the cultivation path and assessment of critical thinking, the relationship between literature circles and critical thinking. In this research, evidence like quantitative data has been used to analyze the differences between students' critical thinking's pre-test and post-test. Students' performance and works have been evaluated and scored by the researcher and an experienced teaching-research staff according to the clear rubric. For the evidence like qualitative data, the researcher has analyzed the class script, self-reflection, teaching journals and figured out whether the students' critical thinking will develop and what their developments are. Through literature circles, the researcher comes to a conclusion that the participants' critical thinking develops in such ways. Students can think with more open-mindedness and visualize logic by using graphic organizers. Under questioning from all aspects, their students' cognitive maturity, intellectual curiosity and critical thinking confidence have increased.

### **Research on Teaching Strategies to Enhance Junior High School Students' Logical Thinking Ability from An Evidence-Based Perspective—Illustrated by The Teaching of Expository Texts in The Second Unit of The Eighth-Grade Chinese Textbook**

Mao Siyu Dongguan Songshan Lake Future School

Yang Yue Beijing Bayi School

Wang Yaxin Beijing Normal University

This study is based on the principles of evidence-based teaching and the developmental characteristics of logical thinking in junior high school students. It focuses on exploring effective approaches to enhance the logical thinking abilities of junior high school students during explicit text instruction, using the second unit of the eighth-grade textbook as a case study. The primary research question revolves around identifying which instructional

strategies are most effective in enhancing students' logical thinking abilities when teaching three expository texts. Through a review of literature and pre-testing with students, five instructional strategies were selected: mastery learning, mind mapping, situational teaching, comparative reading, and brainstorming. These strategies were implemented through specific teaching activities. To assess their effectiveness, reference was made to PISA reading proficiency standards while evaluation indicators for logical thinking ability were established including concept judgment capacity, comprehensive reasoning skills, and coherent explanation capabilities. The results indicate that the mind mapping method demonstrated outstanding performance in explanatory text instruction by effectively improving students' logical reasoning abilities. However, its efficacy relied heavily on post-class review and consolidation. Furthermore, when combined with situational teaching methods it yielded even greater impact.

## **Symposium18: Constructing Teacher Learning Community to Create a New Ecosystem for Teacher Professional Development**

### **Cultivating "Good Teachers of a Great Country" with Educator-Type Teachers: Reflection and Reconstruction Based on Professional Capital**

Wang Xinwei Beijing Normal University

Li Xinyou Beijing Normal University

"Educator-type teachers" are the highest honor for personal development of teachers in the new era, and the highest ideal for the overall construction of teachers team. The cultivation of educator-type teachers aimed at improving professional capital to overcome the shortcomings of the current teacher education concept that simplifies teachers' work and ignores teachers' subjectivity, further focuses on teachers' professional knowledge, social interaction and practical reflection, and reveals the inherent nature and mechanism of teacher professional development. From the perspective of professional capital, the following strategies can be adopted to build a sustainable development system for teachers' professional development: first, attaching importance to the improvement of teachers' professional quality and building a long-term accumulation development path; second, consolidating the interpersonal relationship network of teachers and create a mutually beneficial and shared educational ecology; third, cultivating teachers' awareness of evidence-based practice and help teachers make scientific and accurate decisions.

### **The Status and Suggestion on Class Video Analysis in Promoting Teacher Learning**

Gong Chen The Bureau of Education, Jiamusi, Heilongjiang Province

Teaching practice contains significant resources for teacher learning. Class video analysis has been widely applied in teacher learning as result of recording on the authenticity, contextuality and complexity of teaching. It is convenient that teachers could watch repeatedly regardless of time and space, so that they could notice on some key information that they have not paid attention to or even forgotten, and help teachers to reflect on the relationship between teaching behavior, students' learning performance and teacher-student interaction. In practice, it has been including the two ways of developing professional knowledge by viewing on class video of expert teacher and changing professional belief by systematically analyzing class video. This paper claims that Class video analysis effects on guiding teachers to pay more attention to the essence of teaching, developing professional reasoning, promoting knowledge sharing in community and teacher core reflection. This paper suggests that the teacher leaning program based on class video analysis should be continuously optimized, such as constructing a learning community including researchers, teacher educators, teacher leaders and teachers, focusing on core issues, designing observation and reflection tools, providing professional intervention, and cultivating teacher collaborative learning culture.

## **Professional Learning of In-service ESL Teachers in Evidence-based Lesson Study: Cases in Boundary-Crossing Learning Communities in China**

Guo Ying Beijing Normal University, Beijing Guangqumen Middle School

This paper reports on a study of the professional learning of in-service ESL teachers in Evidence-based Lesson Study in China. Professional learning is becoming the new trend of teacher training. Lesson Study, featuring community learning, has been widely understood as the effective approach to enhance teaching and learning. Although Teaching Study in China has the tradition of teachers working together to design a lesson, Lesson Study has drawn the interest of some researchers (An Guiqing, Yang Wendeng) recently. Based on the literature review of Lesson Study and Teacher Professional Learning both in China and abroad, this study defines Evidence-based Lesson Study as well as its value and basic procedures, claiming the significance of Evidence-based Lesson Study in enhancing in-service teachers' professional learning, especially in boundary-crossing learning communities. This paper is the qualitative research and the four participants involved in the Evidence-based Lesson Study are English teachers from Junior and Senior High schools in China. The researcher followed the whole process and collected data through interviews, classroom observations, videos of meetings and facets, aiming to investigate 1) From what aspects do the in-service ESL teachers pursue professional learning in Evidence-based Study? 2) What factors initiate the professional learning of in-service ESL teachers? 3) What are the effects of in-service ESL teachers' professional learning in Evidence-based Lesson Study? With coding and analyzing data, the study aims to reveal the effect of in-service ESL teachers' learning in Evidence-based Lesson Study on professional development, implementation of new curriculum and transforming teaching. In addition, form the model of conducting Evidence-based Lesson Study among boundary-crossing communities in China which enhances in-service teachers' professional learning.

### **Study on Influencing Factors and Characteristics of Teachers' Learning Community in Urban and Rural Kindergartens--Based on a Survey by the Kindergarten Management Resource Center in T City**

Zeng Ling Beijing Normal University, Tongren Preschool Education College

In order to promote the high-quality and balanced development of regional education, the education administrative department will study and solve the real problems of kindergarten teachers' working situation in the community of urban and rural teachers. At present, all the educational administrations in China are collecting active measures to establish a learning community to promote urban and rural teachers to carry out learning in a common space, but there are few studies on urban-rural linkage education community. The survey samples of this study are 201 kindergarten management resource centers in T City. The center aims to promote urban and rural kindergarten teachers to realize professional learning through collaboration through monthly collective teaching and research, construction and management of curriculum resources. In according with the survey sample is not apply the Teacher Professional Learning Community to design, the survey tool is Lauer

and Dean's questionnaire on the realization of teacher professional learning community. Based on the survey data of urban and rural kindergarten teachers from 201 kindergarten group management resource centers in T City, we explore the influencing factors of the urban-rural linkage education community organized by the government through confirmatory factor analysis, then explore the characteristics of urban and rural teachers' learning community through descriptive statistical analysis. The results of this study can provide the basis for empirical research on the factors and characteristics of urban and rural



## **Symposium19: Cultivating Teachers for Greater Country: Local and Frontier Investigation into the Training of Student Teachers Based on CSTPS Data**

### **Exploring the Potential Impact of Educational Course Learning Experiences on Professional Commitment Among Normal Students in Central and Western Local Normal Colleges in China**

Yuan Peili Beijing Normal University

Song Huan Beijing Normal University

Professional commitment plays a pivotal role in predicting teacher attrition, which significantly impacts students' inclination towards pursuing a teaching career and their future dedication to the profession. Exploring the professional commitment of students from central and western China's normal universities holds immense importance for rural teacher development. Leveraging data from the Chinese Student Teacher Panel Survey (CSTPS), this study employs potential profile analysis technology to categorize the curriculum experiences of 26,076 local normal university students across 17 provinces in central and western China. The findings reveal substantial disparities in professional commitment, prompting further investigation into the underlying reasons behind these differences. This research will provide both theoretical foundations and practical insights for guiding reforms in teacher education curricula, ultimately fostering heightened levels of professional commitment among aspiring teachers.

### **Choosing to Teach: Career Aspirations among Student Teachers in Chinese Normal Universities and Colleges**

Wu Weiran Beijing Normal University

Wu Yuchen The Chinese University of Hong Kong

Song Guoyu Beijing Normal University

Zhang Luyao Beijing Normal University

Song Huan Beijing Normal University

High teacher turnover rate has been a central concern in the educational field. It is important to understand teachers' prospects on teaching profession, especially to figure out how new generation of teaching forces decide to teach and stay at teaching. To address the issue, this study examines factors influencing teaching aspirations of 37,514 Chinese pre-service teachers, with aspects to occupational entry, expected retention years, and willingness of teaching in rural areas. Findings indicate that influential factors of pre-service teachers' career aspirations are complex and multi-layered, which gives implications for future teacher preparation.

## **Cultivation in Line with Aptitudes: Influence of Teacher Preparation on the Professional Identity of Different Types of Pre-Service Teachers - A Latent Profile Analysis Based on the Personality of Pre-Service Teachers**

Song Guoyu Beijing Normal University

Wu Weiran Beijing Normal University

Professional identity is of great significance to pre-service teachers' learning engagement, as well as their future willingness and performance in teaching. Initial teacher education is a critical period for the formation of student teachers' professional identity, which has always been a "black box" drawing great research attention. Various elements of the teacher education process have been found to influence the professional identity of pre-service teachers, with dispositions and personality traits proved to play influential roles as well. Using data from the Chinese Student Teacher Panel Survey (CSTPS), this study explores the effects of factors in the teacher preparation process (i.e., curricular experience, perceived teacher support, and perceived peer social support) on the professional identity of different personality types of pre-service teachers based on a latent profile analysis, with the purpose to provide insights for future teacher preparation policy and practice.

## **Identification of Critical Factors Influencing Pre-service Teachers' TPACK Development in the Context of the Digital Intelligence Era-Based on Educational Data Mining Methods**

Wang Jiacheng Beijing Normal University

In the era of digital intelligence, identifying the critical factors that influence the development of Technological Pedagogical Content Knowledge (TPACK) among pre-service teachers, within the context of Artificial Intelligence literacy and the capability to integrate Information and Communication Technologies (ICT), holds significant implications for cultivating high-quality educators capable of navigating the educational digital transformation and contributing to the advancement of a strong educational nation.

This research is anchored on the Teacher Training and Development Data Platform, utilizing machine learning techniques under the educational data mining methodological framework to analyze data. It adeptly navigates the linear and non-linear relationships among voluminous data features, unveiling the underlying patterns and connections within complex datasets. Through this approach, the study investigates and analyses the multidimensional factors critically impacting the development of TPACK among pre-service teachers, and constructs predictive models accordingly. Methodologically, this research contributes to the expansion of educational data mining approaches within the domain of teacher education.

In terms of findings, it offers fresh analytical perspectives and empirical evidence that support the optimization of TPACK training mechanisms for pre-service teachers in the digital intelligence era, as well as the enhancement of professional development pathways for educators.

## **The Impact of Education Environment for Ethical Decision-Making on Pre-Service Teacher's Tolerance of Ethics Anomie Behavior: Moderated Mediation Model**

Zhan Qifang Beijing Normal University

By investigating 5519 pre-service teachers from 19 normal universities in China, this study uses quantitative research methods to analyze the impact of education environment for ethical decision-making on pre-service teacher (PT)'s tolerance for ethics anomie behavior, and introduces professional development orientation and reality shock to construct a moderated mediation model. The results show that education environment for ethical decision-making not only has direct effect on ethics anomie behavior tolerance, but also has indirect effect through the mediating role of professional development orientation and the moderating role of reality shock. Adopting Gert Bista's agency theory featuring "past-present-future" as the theoretical framework, education environment for ethical decision-making shapes PT's moral agency, while educational practice presents potential ethical challenges that may arise in future teaching careers and reality shock. In these contexts-for-action PT's professional orientation is developed and the judgment for ethics anomie behavior is formed.

## **Symposium 20: Inspiring Teachers, Reaching Far 5th Global Summit on Teacher Education, Beijing Normal University**

### **A Study on the Connotation, Core Value, and Development Path of Teachers' Digital Leadership in the Context of Digital Transformation**

Liang Jinlong Northwest Normal University

In the era of digital transformation, teachers' digital leadership has become a key component of their professional competencies, possessing unique contemporary connotations and practical value. This study aims to construct an innovative theoretical model to systematically explore the connotation of teachers' digital leadership, encompassing four core competency areas: technology application, teaching practice, professional development, and cultural construction. The research further analyzes the key value characteristics of teachers' digital leadership from three dimensions: individual, school, and society. The findings indicate that teachers generally face challenges in digital leadership, including insufficient awareness, weak technological integration skills, and a lack of effective professional guidance. To enhance teachers' digital leadership, the study proposes comprehensive strategies such as changing teachers' mindsets, strengthening skills training and professional guidance, fostering a positive digital educational environment, and building a digital learning community. This study not only enriches the theoretical framework of teachers' digital leadership but also provides valuable references for driving innovation in educational practice.

### **The Enlightenment of Marxist Teaching Labor Integration Thought on Vocational Labor Education in the Era of Artificial Intelligence**

Zhang Xusheng Xichang Minzu Preschool Normal College

This article reports a study on the inspiration of the Marxist concept of combining education and labor in the era of artificial intelligence for vocational labor education. Marxism particularly emphasizes the important position and significance of labor, emphasizing that labor creates the world, labor creates history, and even creates the human body. The idea of "no worker, no food" identifies labor as the core value of socialism and creatively proposes the concept of "combining education and labor" in the historical development process. The Marxist concept of "combining education with labor" has rich connotations and different value implications for capitalist society and future society. Vocational colleges are a typical field for practicing the concept of "combining education with labor", and also the foundation for implementing labor education. In the era of artificial intelligence, vocational colleges have undergone a series of paradigm shifts in labor education from educational concepts to educational content, which has also led to the dissolution of the value of labor education due to technological supremacy and the weakening of the practical effect of labor education due to physical detachment. Therefore, in the era of artificial intelligence, we need to rethink the inspiration of Marxist "teaching labor integration" thinking for vocational colleges to carry out labor education, maintain technological rationality, and define the technological boundaries of labor education; Implement online and

offline labor education, optimize the context of labor education; Adhere to the goal of labor education and clarify the human subject status, in order to achieve the optimal effect of artificial intelligence technology empowering labor education in vocational colleges.

### **Under the Consciousness of the Chinese National Community Constructing Preschool Teacher Education Programs in Ethnic Areas**

Ma Yaling Qinghai Normal University

Hou Man Qinghai Normal University

Normal University in ethnic areas are tasked with cultivating outstanding teachers for the new era, and teacher education programs need to be constructed in accordance with the curriculum system of social development. In the construction of preschool teacher education curriculum, it is necessary to firmly grasp the main line of Chinese national community consciousness, deepen the knowledge of "potential teachers" in ethnic areas about the cultural pattern of pluralism and unity, enrich the experience of the Chinese national social life community, and promote the practice of Chinese excellent traditional culture education; however, when we look into the current teacher education curriculum, we find that the contents of the general education curriculum concerning Chinese national community consciousness are scattered and lack of systematic content. However, if we look into the current teacher education curriculum, we will find that the contents of the general education curriculum concerning the consciousness of the Chinese national community are fragmented and lack of systematicity, the contents of the specialized curriculum lack the element of "casting" education, and the practical curriculum is alienated from the reality of local education. We should actively construct a systematic "casting" curriculum, integrate the contents of knowledge, ability and values, and expand the carrier of practical courses in teacher education. We will dig deep into the cultural core of the "Chinese national community", organize the learning community of teacher educators of various nationalities to accumulate practical knowledge in the education field, and open up possible paths for the high-quality development of preschool education in ethnic areas.

### **Unidirectional Flow: The Dilemma and Breakthrough of Rural Teacher Team Construction from the Perspective of High-Quality Balance**

Fan Yu Fuyang Normal University

The balanced distribution of high-quality educational resources is an important indicator for measuring educational equity, and teacher resources are an important component of high-quality educational resources. This article focuses on the construction of rural teacher teams and conducts semi-structured interviews with several principals and teachers from rural areas in central China based on grounded theory. The interview content is organized, coded, and analyzed using NVivo software. Research has found that "one-way flow" is a real dilemma in the construction of rural teacher teams, with problems mainly concentrated in four aspects: institutional construction, teacher management, teacher training, and external support. Therefore, research proposes optimization suggestions such as resource allocation, emotional

support, strengthening process management, and exploring more standardized dynamic flow to help balance the distribution of high-quality educational resources.

### **Construction and Implementation of an Integrated Rule of Law Education Across Primary, Secondary, and Tertiary Levels Based on Curriculum Standards**

Zhang Wei Xichang Minzu Preschool Normal College

Starting from the perspective of curriculum standards, this paper compares the core literacy requirements, objective requirements, and content requirements of rule of law education at the stages of primary school, junior high school, senior high school, and university. It suggests that the common goal of rule of law education in schools at all levels is to continuously enhance the awareness and initiative of the majority of young people to respect, learn, abide by, and apply the law, thereby improving their legal literacy. To achieve this goal, rule of law education should follow a progressive and spiral upward pattern to avoid simple repetition. In primary school, it should be closely linked to daily life, focusing on cultivating an awareness of rules, allowing students to perceive the law in their lives and around them. At the junior high level, students should acquire a basic understanding of essential legal knowledge necessary for personal growth and participation in social life, developing the ability to distinguish right from wrong using legal knowledge and to protect their own legal rights and participate in social life according to the law. At the senior high level, students should gain a more comprehensive understanding of the basic framework and institutions of the socialist legal system with Chinese characteristics as well as general legal knowledge, beginning to develop the capacity to engage in legal practice and correctly defend their rights. At the university level, the aim is to further deepen the understanding of the concepts of the rule of law, principles of the rule of law, and key legal concepts, firmly establish the concept of the rule of law, recognize the significance of governing the country according to the law comprehensively, and strengthen the ideals and beliefs in following the path of the socialist rule of law with Chinese characteristics.

## **Symposium21-22: Professional Literacy of Family Education**

### **Guidance for Teachers in the New Era –Theory ·Policy ·Practice**

#### **The Reconstruction of the Mission and Responsibility of Teacher Family Education Guidance in the New Era**

Bian Yufang Beijing Normal University

The rapid development of society and the transformation of family structure have given rise to new demands on the part of teachers in the guidance of family education. This research report presents a comprehensive analysis of the evolving role and responsibilities of teachers in family education, and proposes strategies for its reconstruction. The report commences with an examination of the contemporary challenges confronting family education, including the evolving requirements of family education in the information age and the diversification of family structure. Subsequently, the report underscores the function of teachers as a conduit in family education, noting that educators should not merely disseminate knowledge, but also serve as the facilitator of home-school communication and the mentor of family education. Furthermore, the report proposes a set of core competencies that teachers should possess, including cross-cultural communication, emotional support, and the integration and innovation of family education resources. Finally, the report recommends that schools and education administrations should provide teachers with continuous professional development opportunities to facilitate their professional growth in family education guidance and to collectively establish a harmonious home-school partnership.

#### **The Construction of the Connotation of Core Literacy in Teacher Family Education Guidance**

Yuan Li Beijing Normal University

The objective of this research report is to construct the connotation of teachers' core literacy in family education guidance, with the aim of meeting the needs of education in the new era. The report initially delineates the fundamental attributes of home education guidance, encompassing professional knowledge, competencies, dispositions, and values. Subsequently, the report examines the specific contents and interrelationships of these qualities in detail, including the theoretical knowledge of family education, communication skills, emotional intelligence and a profound comprehension of family education that teachers are required to attain. Furthermore, the report examines the deficiencies in teachers' literacy in family education guidance and suggests strategies for improvement. These include enhancing teachers' practical skills through case studies, role-playing and reflective practice. Furthermore, the report underscores the significance of teachers' self-development, urging them to persist in learning, reflection, and innovation to enhance their ability to navigate the nuances and complexities of family education. Additionally, the report recommends that those responsible for formulating educational policy and overseeing school administration prioritize the advancement of teachers' core competencies and ensure the provision of requisite support and resources to facilitate their professional growth in family education guidance.

## **A Practical Investigation of The Educational Guidance Services Provided by Schools for the Benefit of Their Pupils and Their Families**

Kang Liying Capital Normal University

This report examines the policy interpretation of the construction of the family education guidance service system, and analyses the means of supporting the effective implementation of family education based on institutional culture and resource advantages. Furthermore, it elucidates the rationale behind schools' efforts to implement family education guidance services, encompassing the integration of resources, curriculum design, and the assessment of efficacy. In conclusion, the report presents the insights gained by teachers in the course of implementing family education guidance services. These experiences not only attest to the professionalism of teachers but also offer valuable references and insights for other educators. The objective of this report is to provide practical guidance and advice to schools and teachers in the field of family education, with the aim of facilitating home-school cooperation and promoting the comprehensive development of students.



## **Symposium23: Renowned Teacher Professional Development 3**

### **Problem-solving Oriented Project-based Learning**

Chen Ying Beijing Bayi School

Problem-solving oriented project-based learning guides students in problem-solving as the core through the RUDDER six-step method (Raise a Problem, Unearth Disciplinary Issues, Deconstruct Perspectives, Design a Plan, Execute a Plan, Reflect and Evaluate) to advance project learning in an orderly manner. This method is suitable for project-based learning with different class hour requirements, applicable to both single-discipline and interdisciplinary learning. It can transform real problems into subject-specific problems, emphasizing the guiding role of subject theory in project practice, helping students quickly determine research directions, gradually solve various small problems within the project, and ultimately achieve project goals, significantly improving the efficiency and relevance of students' problem-solving, promoting the development of scientific inquiry and innovative capabilities, and enhancing their comprehensive problem-solving abilities.

### **Research on the Design and Implementation of Differentiated Mathematics Homework for Rural Junior High School Students**

Cui Ming Tsinghua University High School-Yongfeng

Differentiated teaching has always been a key and challenging aspect of mathematics education. This study, based on the concept of differentiated mathematics education, focuses on the design and implementation of tiered homework, exploring the principles and strategies of differentiated homework design. Through a comprehensive application of classroom observation, physical analysis, and textual analysis, the study reveals significant differences in students' mastery of mathematical knowledge and learning abilities. Based on these findings, the study divides the student group into three levels: foundational, advanced, and expanded. Researchers propose and implement corresponding homework design principles and strategies for each level, aiming to design homework with different types, difficulties, and quantities. Through research on the implementation effects, it is found that tiered homework design not only effectively reduces students' homework error rates but also significantly improves their academic performance and enhances classroom participation. This study provides strong practical support for differentiated mathematics education and offers new ideas and methods for improving the quality of junior high school mathematics education and fostering students' personalized development.

## **Promoting Deep Learning in Junior High School Physics through Contextual Creation**

Deng Heguo The First Affiliated Middle School of Central South University

Situational teaching is a new teaching model that integrates physical knowledge with situations, and it is an important means to facilitate students' deep learning. In the context of the "Double Reduction" policy, the reasonable application of situational teaching in junior high school physics classrooms, by creating physical situations, can motivate students to actively explore and dig into physical knowledge in deep learning, solve problems related to physical knowledge, develop problem-solving abilities, and cultivate physical literacy. Based on this, this paper conducts an in-depth analysis and study of strategies for creating physical situations to promote deep learning among students under the "Double Reduction" policy.

## **Empowering Teachers' Teaching Reform Ability through "Three Layers and Six Rings" Thematic Training**

Huang Yousheng Hunan Primary and Middle School Teacher Development Center

Based on the extreme importance of school-based training and the typical problems existing in current school-based training, guided by educational ecology, this paper constructs and practices the "Three Layers and Six Rings" school-based thematic training model from the perspective of the training ecology. This model aims to empower primary and middle school teachers to improve their educational and teaching reform abilities and to awaken the intrinsic power of educational and teaching reform in schools and teachers. The main experiences include the "three-step method" for refining major themes, the school management layer's "six rings" of building, researching, training, competing, evaluating, and using for school-based training, the training group's "six rings" of determination, allocation, learning, research, use, and display for organizing school-based training, and the individual teacher's "six small" topic training to promote professional development.

## **The Theory of Developmental Classroom Immediate Evaluation: Framework and Interpretation**

Jiang Lianguo Beijing No.80 High School

Developmental classroom immediate evaluation is an immediate evaluation in the classroom under the perspective of developmental evaluation. Based on defining the concept of developmental classroom immediate evaluation, this paper proposes the evaluation concept of "dynamic diversity, promoting development," introduces the formation process of the theory, constructs the framework of the theoretical system of developmental classroom immediate evaluation, interprets the system framework, and provides operational suggestions.

## **Practical Research on Cultivating Students' Innovative Thinking in High School Mathematics Teaching**

Liu Yuhua Binzhou Experimental Middle School

Research on cultivating students' innovative thinking is a strategic need for the country to cultivate innovative talents. However, in everyday teaching, the traditional teaching thought and behavior centered on exams still exist, and teachers are far from sufficient in cultivating students' innovative thinking, resulting in low teaching efficacy and low educational quality. Based on this, the research group began a 10-year practical research on cultivating students' innovative thinking in high school mathematics teaching. It focuses on cultivating innovative thinking as the core, improving mathematical thinking quality as the key, and leads through the practice of mathematical problem variation and correlation, exploration and application, reading and writing, and subject integration, promoting students' innovative thinking ability in the process of exploring knowledge generation, and improving learning quality and level.

## **Research on the Development Path and Evaluation System of First-Class Core Courses and High-Quality Teaching Materials in Vocational Education**

Shang Chuanchuan Boxing County Vocational Secondary School

"Post-Course-Competition-Certificate" is a new model for talent cultivation in vocational education in the new era. This model urgently requires changes in the type, form of teaching materials, and the development team of teaching materials to adapt to the new changes. The teaching standards, courses, and teaching materials of vocational education are the concrete manifestation of new industry standards, new specifications, and new technologies in teaching, and they are important carriers for cultivating technical and skilled talents. The development of first-class core courses and high-quality teaching materials not only requires innovative design concepts but also integrates the new "competition items" of the World Vocational College Skills Competition and the "1+X" skill level new certificate standards in terms of content. The presentation form should be more open and personalized, meeting the needs of students for online and offline blended learning. The evaluation of teaching materials is closely related to the quality of their compilation. Constructing a teaching material evaluation system with Chinese characteristics in vocational education can adapt to the requirements of the "Five Metals" construction and the "101" plan for vocational education in the new era, which is conducive to improving the quality of teaching materials in vocational colleges and promoting the high-quality development of vocational education.

## **Symposium24: Renowned Teacher Professional Development 4**

### **Research on the Construction of a Thematic Teaching Model Based on Deep Learning**

Liu Jia Beijing Chaoyang Foreign Language School

This paper explores a thematic teaching model based on deep learning, emphasizing the development of students' mathematical core literacy through challenging themes. Deep learning refers to a learning process under the guidance of teachers, where students actively participate in and experience success around challenging themes, aiming to cultivate independence, critical thinking, creativity, and a spirit of cooperation. Thematic teaching, on the other hand, uses the teaching theme as the central axis, integrates the knowledge network, and implements holistic teaching. The paper points out that the two are closely related and mutually reinforcing; thematic teaching provides the soil for deep learning, while deep learning enriches the teaching content. Building challenging themes is key, requiring an understanding of teaching content, goals, and student conditions, and the introduction of challenging questions, which can be sourced from history, the forefront of modern mathematics, high school mathematics textbooks, and real-life practice. The paper also proposes constructing chains of questions and activities to support deep learning, promoting the cultivation of higher-order thinking and abilities in students as they solve problems.

### **Building High-Quality Course Groups to Enhance the Advantages of Subject Education**

Pan Hongyan Shandong Experimental High School

Diversified and systematic course groups are the curriculum support for students' personalized growth, and a student-centered teaching perspective is the classroom concept for students' active development. The mathematics department at Shandong Experimental High School focuses on the development of students' mathematical core literacy, actively explores the path of national curriculum localization, and constructs three major course groups for high school mathematics: "Erudition," "Space," and "Climbing," supported by big data technology and guided by the "student-centered" and "dynamic" classroom teaching concept. By combining scientific stratification with precise positioning, it empowers students' development and adds value.

## **Construction of Mental Health Education Literacy Index System for Primary and Secondary School Teachers: A Study Based on Delphi Method**

Peng Weijing Hunan Academy of Educational Sciences

Liu Ruijie Xiangya School of Public Health, Central South University

Liang Qi Changsha Changjun Middle School

Wu Yi The Second Affiliated Primary School of Hunan First Normal University

Hu Mi Central South University

**Objective:** To construct the literacy index system of mental health education for primary and secondary school teachers, so as to provide a basis for making scientific and accurate evaluation tools and a theoretical basis for making intervention strategies. **Methods:** Literature review and qualitative research were used to construct the framework of mental health education literacy index system, and a research team was formed to initially construct the index system. Finally, the index system was determined by Delphi method. **Results:** The literacy index system of primary and secondary school teachers' mental health education includes three dimensions: knowledge, skills and attitude. Knowledge includes 2 first-level indicators, 4 second-level indicators, 9 third-level indicators, 27 fourth-level indicators and 70 literacy indicators. Skills include 2 first-level indicators, 4 second-level indicators, 10 third-level indicators and 16 literacy indicators. Attitude includes 3 first-level indicators, 8 second-level indicators and 19 literacy indicators. **Conclusion:** The index system has high expert validity, and it is the most comprehensive index system at present.

## **Practice of Core Literacy-based Project Learning in High School Chemistry: Making Self-Heating Packs**

Sun Jing Beijing Ritan Middle School

**Design Background:** The "General Senior High School Chemistry Curriculum Standards (2017 Edition)" states that in the teaching of chemistry, it should not only stay at the level of imparting knowledge but also rise to the function of education. Teachers are required to teach knowledge through diverse courses and at the same time enhance students' core literacy, helping them to form correct values and develop essential character and key abilities to adapt to society. Project learning starts with a problem that needs to be solved and ends with a product, with its prominent features being generation and experience. These characteristics of project learning are clearly beneficial for achieving the aforementioned curriculum goals.

## **"Seeking Truth from Facts": Evidence-Based Practice of Test Questioning in the Perspective of Formative Assessment**

Wang Jiayu The High School Affiliated to Renmin University of China

Test question formulation is a crucial component of the deepening reform in the field of evaluation. Scientifically formulated test questions by frontline teachers can not only accurately assess students' learning, but also provide valuable feedback for teaching, thereby promoting the improvement of educational and teaching quality. This paper delves into the

evidence-based practice of "seeking truth from facts" in test question formulation under the perspective of formative assessment. This practice not only aligns with the contemporary needs for deepening evaluation reform but also satisfies the practical requirements for the innovation of evidence-based concepts. In the context of the "double reduction" policy, its approach to addressing real-world issues highlights its unique value. Through re-analyzing test question formulation under the lens of formative assessment, re-exploring test question formulation based on learning evidence, and re-constructing test question formulation guided by evidence-based thinking, the paper aims to more accurately define the conceptual framework of test question formulation. Based on these discussions, the paper actively explores practical pathways such as "developing question frameworks, disassembling the question cycle, collecting learning data, converting learning data into evidence, and formulating test levels and question frameworks based on evidence."

### **Reflections on the Application of Mathematical Axiomatization Thinking Methods**

Wang Changqing Huairou No.5 Middle School

Axioms have a basic understanding among the general public. When people come into contact with "axioms" in mathematics, the seeds of axiomatization thinking sprout in many minds, and people unconsciously use it to think about problems. Axiomatization thinking has a role in various aspects of society, and many unsatisfactory policy decisions are largely due to the lack of axiomatization thinking. Axiomatization thinking can lead to the establishment of rules that people are willing to follow; it can help us find the best thinking strategies in communication, exchange, and the design of action plans; it can guide the direction of natural science research; it has guiding significance for the development of social sciences; and it can guide people's understanding and transformation of the world. Axiomatization thinking should not disappear from middle school mathematics textbooks, and the teaching of the application of axiomatization thinking methods should be strengthened.

### **On Kindergarten Good Life Education: Connotation, Value, and Action Strategies**

Xu Jiang Changsha Municipal Government Office Lotus Kindergarten

Kindergarten Good Life Education is centered around a good life and aims to promote the comprehensive development of children as its ultimate goal. It is a common pursuit of kindergarten educators in the new era. Educators and children, based on understanding real life, jointly create a beautiful environment, establish good relationships, and carry out good activities to meet the children's real needs, helping them to share the process of a good life and ultimately achieve the comprehensive development of children.

## **Practice of "Interactive Teaching" in High School Geography Based on Data Analysis of Students' Learning Process**

Zhao Qing Beijing ChenJinglun High School

This paper is based on the practice of interactive teaching in high school geography. By exploring digital network platforms such as the school's Super Star (Xuexitong) platform, DingTalk for assisting online classroom teaching and self-study, and the Beijing "Digital School" platform, the paper conducts data analysis on students' learning process, uncovering the hidden learning patterns behind the big data generated by students. It constructs a model of "interactive teaching" in high school geography supported by data platforms and summarizes strategies for "interactive teaching" in high school geography supported by data platforms, opening up effective ways to build efficient learning in the geography subject.

## **Practice of Cultivating Critical Thinking in Junior High School Science Teaching**

Zhang Yuyan Capital Normal University Affiliated Experimental School

This paper discusses how to solve the operational concept system, comprehensive cultivation path, and cultivation methods of critical thinking in junior high school science teaching. It systematically explains the practical achievements of educational and teaching practices for "how to cultivate critical thinking in junior high school science teaching." It proposes a convenient quantifiable operational concept system for critical thinking, providing ideas for measuring the level of critical thinking among junior high school students and laying the foundation for practical teaching in junior high school science classes. The systematic cultivation system for critical thinking in junior high school science includes "thirteen measures and three paths" for general cultivation, general cultivation methods for various subjects, and a multidisciplinary comprehensive cultivation approach of "focusing on one point, linking multiple points, and integrating various subjects," aiming to provide reference for junior high school science teachers in cultivating students' critical thinking.

**Symposium25: Taiwan Region's Education Situation and  
Development: Teacher Education, Middle-level Leadership, and  
Learning Outcomes**

**A Study on Integrating Generative AI to Optimize Interdisciplinary Courses for  
Teacher Professional Learning**

Chen Peiyong Taiwan Normal University

Generative artificial intelligence (AI) provides opportunities for teachers to engage in professional practice and professional learning in interdisciplinary curriculum. This study aims to explore how generative AI technology can be applied to optimize interdisciplinary curriculum and thereby enhance teachers' professional learning. The research focuses include: (1) developing processes and tools for applying generative AI to curriculum optimization; (2) exploring teachers' experiences and reflections on using AI for curriculum optimization; and (3) investigating how teacher communities employ AI to promote collective professional learning and uphold their confidence.

Qualitative data collection and analysis are the methods used in this study. The interviewees were teachers from various subjects who participated in generative AI workshops. The actual experiences of these teachers were also collected to understand how they applied AI in collaborative lesson planning and the effectiveness of their professional learning after the training. The findings showed that teachers' integration of generative AI in optimizing interdisciplinary curriculum had a significant effect on improving quality. The teachers reported that their sense of efficacy increased when using AI technology. This was especially evident in their conceptual understanding of interdisciplinary curriculum, ability to design guiding questions, formulate formative assessment rubrics, and enhance the coherence of learning objectives, content, and performance tasks. These improvements led to teachers' increased sense of control over interdisciplinary curriculum development. Finally, AI was able to connect teachers from different backgrounds, promote interdisciplinary professional learning and collaboration, and facilitate collective exploration of how to integrate AI into teaching innovation and reflection. This, in turn, enhanced teachers' curriculum awareness and their confidence in applying teaching methods.



## **A Study on the Social-Emotional Learning Empowerment Model in New Taipei City: Strategies and Outcomes**

Chen Yuchuan Taiwan Normal University

Chen Peiying Taiwan Normal University

Chi Fuan Taiwan Normal University

The purpose of this study is to explore the strategies and implementation effectiveness of the tripartite collaboration among the county/city government, schools, and universities in promoting social-emotional learning (SEL) empowerment, using the New Taipei City Education Department, school staff in New Taipei City, and the resources of Taiwan Normal University as examples. The main research method is questionnaire survey, and the data analysis includes t-test, one-way ANOVA, and Pearson correlation analysis. First, the "BEST ME Emotional Literacy Scale" was used to conduct pre-test and post-test on the SEL seed teachers in New Taipei City who participated in the "SEL-BEST ME Seed Teacher Workshop", in order to understand their emotional states, emotional literacy, self-efficacy, and beliefs about social-emotional learning, and thereby evaluate the effectiveness of the implementation of SEL empowerment. Subsequently, the "Social-Emotional Learning Needs Survey Questionnaire" was used to investigate the needs and perceptions of school staff regarding social-emotional learning, in order to summarize the key elements of professional empowerment. Based on the research results, suggestions are provided for reference in related SEL policies and teacher professional empowerment planning.

## **What Do Special Education Teachers Teach? A Study on Reform of Technological Special Education Pedagogical Content Knowledge (TSPCK) for Junior High School Special Education Teachers**

Huang Yanrong Taiwan Academy

What do special education teachers teach? This question seems to be one frequently asked of special education teachers throughout their teaching careers, yet there appears to be no consistent and complete response to this question in the field. The purpose of special education is to cultivate students' ability to connect with society, enabling them to live independently and participate in society. Whether special education teachers possess sufficient professional knowledge for teaching to guide students to face an unknown future society, and what the actual content of this relevant teaching professional knowledge is, warrants exploration. This study aims to investigate the current status of subjects taught by junior high school special education teachers in Taiwan, as a basis for understanding the related subject content knowledge, and to construct a system for Special Education Technology Pedagogical Content Knowledge (STPCK). This concept is primarily developed around special education professional knowledge (SK), integrating technology knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK) as elements, combined with teaching context, teaching strategies, and interdisciplinary integrated teaching capabilities to form a comprehensive knowledge system. This is crucial for guiding special education students to face a challenging future society. It is hoped that special education teachers will possess this professional knowledge to effectively address the unique learning needs of special education students, assisting them in efficient learning to achieve good teaching

outcomes. The research method adopted is a mixed-method approach, using secondary data analysis, interviews, focus group discussions, and surveys for data collection. The study interlaces various methods throughout the research process. Initially, the subjects taught by junior high school special education teachers are clarified through data from various county and city curriculum planning platforms. Subsequently, a knowledge system for special education technology pedagogical content suited to junior high school special education teachers is constructed through interviews and focus group discussions. A self-designed survey is used to investigate the situation of special education technology pedagogical content knowledge among junior high school special education teachers, thereby verifying the feasibility of this knowledge system model in the teaching field. This serves as a reference for improving policies related to special education and teacher training planning.

### **How to Train School Mid-Level Leaders? The Research and Development of Training Programs for Candidate Directors of Primary and Junior High Schools**

Lin Xinzhi University of Taipei

In addition to the principal, public primary and secondary school campuses still require professionals with leadership qualities, effective communication and coordination skills, continuous improvement in professional ideologies, and the ability to assist the principal in managing school affairs and implementing public education policies as middle-level leaders. This project, based on the M-CEO model, designs a new program to provide headmasters with the necessary abilities and skills when serving as middle-level leaders in schools. In terms of the integrated research framework, Design-Based Research (DBR) is utilized. It is expected to conduct four phases over a period of two years through theoretical analysis, individual interviews, surveys, and focus group discussions: (1) Integration and analysis of theories to conduct program needs analysis; (2) Designing programs and assessment mechanisms; (3) Program implementation and effectiveness evaluation; (4) Reflecting on the impact of the program. The main research findings are as follows: (1) Overall satisfaction with the new program is quite high, but there is room for improvement, particularly regarding "teaching methods". (2) Adjustments to the content of the new program could focus on further enhancing "integration" and "self-directed learning". (3) Participants have a high level of awareness of learning effectiveness, but there is room for improvement, particularly in terms of "emotional aspects". (4) Due to the large number of trainees, the effectiveness of practical assessments has been weakened, and peer assessments should be strengthened and improved. (5) The new program should be designed towards an OMO (Online Merged with Offline) model, with a focus on physical presence supplemented by online components, but priority should be given to improving the effectiveness of synchronous online courses. (6) According to the results of follow-up surveys, the most helpful aspect of the program for on-site work is the effective development of personal leadership abilities, particularly in "practical reflection and team communication".

## **Research on the Performance Evaluation of Interdisciplinary Learning Training for Specially Selected University Students**

Tsai Ming-Hsueh Taiwan Academy

In Taiwan, a group of university students who enter universities based on specific vocational technical specializations often face considerable challenges with academic courses that may not align with their expertise, leading to a reluctance to complete their university studies. To address this issue, a technology university in central Taiwan has developed a program called "Future College", which allows students to choose courses flexibly and receive guidance from professional teachers, thus helping these technically skilled students to complete their education. This study primarily employed a questionnaire survey to evaluate the effectiveness of the program implementation and used Partial Least Squares (PLS) analysis to analyze the results. The analysis revealed that students' ability to choose courses autonomously and the support from mentoring teachers directly impact the effectiveness of the program implementation.

## **Symposium26: Neuroscience in Teacher Education: Reform the Teacher Education with Evidence-Based Approach**

### **Teaching Expertise: Behavioral and Neural Differences Between Expert and Novice Teachers**

Sun Binghai Zhejiang Normal University

Exploring the differences in the teaching process of novice-expert teachers from both behavioural and neurological dimensions can help to identify general patterns of teacher professional growth. The current study recruited two types of expert-novice teachers to complete two lessons on fractions and decimals with 12 unfamiliar third-grade students, and used functional near-infrared spectroscopy to record the brain activities of teachers and students in the classroom, searching for behavioral characteristics during teaching dialogues and their underlying inter-brain neural basis. The results revealed that (1) expert teachers engaged in less verbal hegemonic behavior, asked more open-ended questions, and provided more elaborated feedback; (2) students in classes taught by expert teachers performed better on tests; (3) significant class-based teacher-student brain synchronization was observed in the frontal and temporal regions during the Initiation-Response-Evaluation/Feedback process of classroom dialogue, particularly when feedback was given by the teachers; (4) classroom-based interbrain synchronization in the frontal cortex successfully predicted student test performance. These findings deconstruct the characteristics of classroom dialogue among teachers at different developmental stages and elucidate its interbrain neural basis, holding important implications for teacher training and improving teaching effectiveness.

## **A Study on Expert Mathematics Teachers' Visual Attention to Students' Hand-Raising Behavior**

Ding Fujun Zhejiang Normal University

Hand-raising serves as a mechanism through which teachers and students collaboratively construct knowledge during classroom interactions. Teachers assess students' learning status and make instructional decisions by focusing on hand-raising behaviors. Unpacking the visual attention processes of expert teachers in response to students' hand-raising behavior is a key approach to understanding their expertise in classroom visual attention. This study employs an expert-novice comparison paradigm and leverages cutting-edge eye-tracking technology to examine the visual attention patterns of expert mathematics teachers when students raise their hands. The findings reveal that expert mathematics teachers are more likely to encourage hand-raising behaviors during high-level tasks and strategically distribute their visual attention toward hand-raising students in these contexts. Experts allocate more visual attention to each hand-raising behavior and focus on balancing their attention between hand-raising and non-hand-raising students. In high-level tasks, expert teachers demonstrate a more sophisticated visual attention shift pattern, with frequent transitions of attention among hand-raising students, indicating a complex and refined mechanism for managing visual attention in the classroom.

## **From Eye Movements to Scan Path Networks: A Pilot Study to Investigate Teacher Noticing in Classroom**

Xiao Weilong Zhejiang Normal University

Teacher noticing serves as the foundation of professional vision and represents an external manifestation of teachers' expertise in attending to and interpreting various classroom participants' behaviors or events. Eye-tracking technology has been widely employed in teacher gaze research, leading to the development of diverse data analysis methods. However, existing approaches often face challenges in fully integrating spatiotemporal information. In this study, we utilized network analysis to examine the gaze trajectories of expert and novice teachers during real classroom instruction. Specifically, we used portable eye-tracking devices to record the eye movements of 18 primary school mathematics teachers (10 experts and 8 novices) over two teaching sessions. The collected eye movement data were used to construct scan path networks, reflecting teachers' gaze toward students and instructional materials. The findings revealed that: (1) the core indicators of the scan path network for novice and expert teachers exhibited distinct characteristic patterns. Expert teachers' gaze patterns were more stable, focused, efficient, and student-centered. (2) Over time, novice teachers' scan path networks evolved, gradually aligning with the patterns observed in expert teachers. These results align with current theories of teachers' professional vision and offer insights into the complexity of visual cognition in both expert and novice teachers. The findings suggest that teacher education researchers can foster teachers' classroom gaze behavior and enhance professional growth by developing more efficient and streamlined attention mapping networks in teachers.

## **Empathic Concern Drives Costly Teacher Caring During Teacher-Student Interactions: A FNIRS-Based Hyperscanning Study**

Shao Yuting Zhejiang Normal University

The teacher-student relationship serves as a bridge for the transmission of human civilization, playing a profound role in the development of civilization. Teachers facilitate the exchange of knowledge, emotions, and values through interactions with students. The Heuristic Working Model is a classic model with the greatest influence in the field of teacher empathy and teacher-student interactions. This model posits that empathy affects the quality of teacher-student interactions, particularly in the dimension of emotional support. Empirical studies based on the Heuristic Working Model have found a positive association between the affective and cognitive components of empathy and the quality of teacher-student interactions. However, no research has yet explored the relationship between the motivational component of empathy and the quality of teacher-student interactions in real interactive situations, and there is a lack of evidence from neuroscience. To address these shortcomings, the study manipulated empathic concern in real interactive situations and examined the quality of interaction using teacher-student self-report and third-party coding. Concurrently, the study employed hyperscanning technology based on near-infrared spectroscopy imaging to record the neural activities of teachers and students simultaneously. The results revealed that, in real dyadic teacher-student interactive situations, the motivational component of empathy, like the cognitive and affective components studied previously, can promote teachers' caring for students. Unlike previous studies, we found that teacher caring driven by empathic motivation comes at the cost of emotional and cognitive expenditure, and is accompanied by lower teacher-student brain synchronization under high motivational conditions. This brain synchronization is related to the transmission of emotions and the establishment of social connections during the interaction. Additionally, the study found that the motivational component of empathy can enhance the depth of dialogue and the integration of viewpoints in teacher-student interactions. Theoretically, the findings of this study expand and deepen the Heuristic Working Model. Practically, the findings provide insights for the psychological adjustment of teachers and the improvement of the quality of teacher-student interactions.

## **The Influence of Trait Empathy on Teachers' Empathic Decision-Making and Its Underlying Neural Mechanisms**

Wang Yaoyao Zhejiang Normal University

This study investigated the phenomenon, influencing factors, and neural basis of teacher empathy selection across three experimental systems. Experiment 1 explored the phenomenon of teacher empathy selection, finding that teachers tend to prefer empathy. Experiment 2 explored how trait empathy levels influence teacher empathy selection. Empathy levels (high or low) in 124 teachers were assessed using the Interpersonal Reactivity Index (IRI). Results showed that teachers with high empathy levels exhibited significantly greater empathy selection than those with low empathy levels. Experiment 3 further examined the neural basis and psychological mechanisms underlying the influence of trait empathy levels on teacher empathy selection. A total of 102 teachers were selected based on high and

low empathy levels, assessed using the IRI-C. The findings replicated those of the previous experiments. ERP results showed that teachers with high empathy levels exhibited stronger brain wave amplitudes in the N1, N2, and LPP components than those with low empathy levels. Additionally, empathy motivation was found to mediate the relationship between trait empathy and empathy-related decision-making. In conclusion, this study systematically examined the impact of trait empathy levels on teacher empathy selection and its neural basis, thereby enriching the theory of empathy selection.

### **Exploring Teachers' Moral Needs and Their Fulfillment Through the Dual Process Model of Psychological Needs**

Fan Liting Zhejiang Normal University

As the field of education places growing emphasis on teachers' professional ethics, the focus of teacher ethics construction is gradually shifting from external to internal drivers. Addressing teachers' intrinsic moral needs has become a critical issue in the study of teacher ethics. By thoroughly analyzing the concept of moral needs and integrating the two-process model of psychological needs, this study explores the characteristics of teachers' moral needs and the psychological mechanisms that fulfill these needs in educational practice. Finally, aligned with the embodied pathways of teacher ethics education, the study proposes further investigation into the behavioral characteristics and neural basis of teachers' moral needs to provide more precise scientific support and practical guidance for the development of teacher ethics.

## **Symposium27: Connecting Teachers, Education, and Neuroscience: From Neural Mechanisms to Teacher Professional Development**

### **Integrating Neuroscience in Teacher Education Research: Advances and Implications**

Liu Lisha Beijing Normal University

Yan Ziluo Nanjing University

Liu Qiaohui Beijing Normal University

This study explores the current state and progress of integrating neuroscience into teacher education research from 2004 to 2024, highlighting both basic (n = 14) and applied research (n = 12). Basic research focuses on the neural foundations of teachers and teaching utilizing techniques such as fNIRS and EEG. The study reviews research on teacher-student inter-brain synchronization (IBS) (n = 9), characteristics and mechanisms of teachers' neural activity (n = 5), and the development of neuroscientific analysis methods (n = 2). Applied research consist of conducting teacher education based on neuroscience evidence (n = 6), applying neuroscience technology to evaluate teacher education effectiveness (n = 5), and using neuroscience evidence to explain phenomena in teacher education practice (n = 1). The findings of this study manifested that the interdisciplinary field of teacher education and neuroscience is still in an exploratory stage, lacking in-depth investigations into its principles and applications, and has not yet formed a complete theoretical framework and practical methodology. Neuroscientific approaches can facilitate the elucidation of the intrinsic characteristics and mechanisms of teacher learning and development in teacher education. Future efforts should focus on strengthening basic research and translational applications.

### **Research Progress on the Current Status of Teachers' Neuroscience Literacy: A Scoping Review**

Liu Qiaohui Beijing Normal University

Xu Peiyuan Beijing Normal University

Liu Lisha Beijing Normal University

Wang Xiao Beijing Normal University

Teachers' neuroscience literacy has increasingly attracted international academic attention and is regarded as an essential component of teachers' professional competencies. Studies have confirmed its significant role in promoting teachers' professional development. Using the scoping review methodology, this study conducts a coding analysis of 55 research articles published between 2000 and 2024 on the current status of teachers' neuroscience literacy. The findings reveal a tension between teachers' limited neuroscience knowledge and their positive attitudes toward its application. Specifically, teachers exhibit weak general and

specific neuroscience knowledge and tend to trust neuromyth, yet they hold an optimistic view of applying neuroscience to teaching practices. Factors influencing teachers' neuroscience literacy include both personal and environmental aspects. Based on these findings, the study recommends constructing an evaluation index system for teachers' neuroscience literacy, employing multimodal data assessment through mixed research methods, and integrating neuroscience content into teacher education curricula and programs.

### **Progress in Implementing Educational Neuroscience Interventions in International Teacher Education**

Yan Ziluo Nanjing University

Liu Lisha Beijing Normal University

Luo Yuwei Beijing Normal University

Educational neuroscience integrates neuroscience with educational practices, providing a scientific basis for optimizing teaching and learning. Currently, educational neuroscience is widely applied in teacher training and development. Using a systematic literature review approach, this study comprehensively investigates the current state of educational neuroscience interventions for teachers internationally, with a particular focus on learning study to illustrate the implementation of this method in teacher education. The results show that research in this field continues to grow, particularly active in the Americas, especially the United States. Interventions primarily focus on imparting neuroscience knowledge, targeting in-service science teachers. Most studies utilize quasi-experimental designs and participatory learning, predominantly as short-term interventions. The majority of these studies have achieved positive outcomes, benefiting both teachers and students. Therefore, future research should adopt more scientific research designs to enhance study quality; broaden the target audience for teacher interventions; employ a variety of participatory learning methods and appropriately extend the duration of studies; expand the content of interventions to promote the application of knowledge in teaching practices; and explore teacher education neuroscience intervention plans that align with the national conditions of China. This paper also highlights how this method is employed in teacher education and the insights it offers.



## **Investigation and Implication of the Current Status and Related Influencing Factors of Neuroscience Literacy Among Pre-Service and In-Service Teachers in China**

Yu Saidi Beijing Normal University

Liu Mengyuan Beijing Normal University

Liu Lisha Beijing Normal University

In recent years, there has been an increasing international emphasis on teachers' brain literacy, which is regarded as a crucial component of professional literacy. A large number of current status and intervention studies have been carried out. At present, China pays insufficient attention to teachers' brain science literacy. Based on this, this study investigated the current status of brain science literacy (including brain science attitude experience, general brain science knowledge, and neuromyth beliefs) of 436 teachers in China (including 180 pre-service teachers and 256 post-service teachers). The results showed that teachers generally have a positive attitude towards brain science and educational practice applications, but generally lack systematic training experience. Their general brain science knowledge is at a medium level. They generally trust neuromyths, and post-service teachers are more obvious. The analysis of related factors showed that the brain science literacy level of pre-service teachers may be related to grade level, and the brain science literacy level of post-service teachers may be related to their positions and teaching subjects. The results of regression analysis of predictive factors showed that the cognition of the usefulness of learning brain science knowledge has become an important factor affecting the level of teachers' general brain science knowledge, and the higher the score of teachers' general brain science knowledge, the higher their ability to identify neuromyths tends to be. The research results show that the brain science literacy of Chinese teachers is not optimistic. In the future, it is necessary to incorporate relevant content into the training courses for pre-service and in-service teachers to enhance their brain science literacy.

## **Symposium28: Digital Humanism, Teaching Capabilities, and AI**

### **Education Strategy**

#### **Research on the Integration and Development of Moral Education and Neuroscience: A Systematic Literature Review Based on Domestic and International Core Journals**

Fan Xuejian Beijing Normal University

Liu Yile Beijing Normal University

Yang Yu Beijing Normal University

Pei Miao Beijing Normal University

The integration and development of moral education and neuroscience is becoming an important topic in educational research, and there is a lack of research reviews in this field. Through a systematic literature review, this study analyzed relevant literature on the intersection of moral education and neuroscience in SSCI and CSSCI source journals at home and abroad since 2000, covering four major themes: theoretical foundations, implementation paths, practical effects, and future development directions. The results of the study show that the implementation of moral education and the application of neuroscience can effectively improve teachers' moral judgment and emotional development; in terms of theoretical foundation, the combination of the two promotes the neural understanding of moral behavior; the implementation path mainly includes curriculum integration, teacher training and interdisciplinary cooperation; the practical effects are reflected in the enhancement of teachers' moral cognition and behavioral improvement; and the future directions should focus on establishing a framework for interdisciplinary collaboration, deepening the application of neuroscience in moral education, and exploring personalized paths for teacher professional development. In conclusion, this study provides theoretical references and practical suggestions for the integration of moral education and neuroscience, and is expected to provide valuable references for educational practice and promote further research in related fields.

## **A Rapid Cortical Learning Process Supporting Students' Knowledge Construction During Real Classroom Teaching**

Feng Xiaodan Beijing Normal University

Xu Xinran Beijing Normal University

Meng Zhaonan Beijing Normal University

Jiang Jiahao Beijing Normal University

Pei Miao Beijing Normal University

Zheng Yonghe Beijing Normal University

Lu Chunming Beijing Normal University

Classroom teaching plays a pivotal role in individual cognitive development and societal cultural evolution. However, little is known about the neurocognitive mechanisms of real classroom teaching. Here, we addressed this issue in a university's graduate course by combining the real classroom teaching with the wearable functional near-infrared spectroscopy and large language model techniques. The results showed that blended teaching involving both students' recalling and teachers' lecturing led to better learning outcomes than did teachers' lecturing alone. Moreover, we showed that, within the same lecturing phase, blended teaching induced significant knowledge construction in the middle frontal cortex (MFC), while lecturing alone only induced knowledge representation in the temporoparietal junction (TPJ), with the former significantly correlated to learning outcomes but the latter didn't. Additionally, the MFC's construction of knowledge started from students' earlier recalling but was significantly facilitated by teachers' later lecturing, demonstrating a transition from prioritizing the global (i.e., the overall knowledge network) to local (i.e., boundaries of knowledge event) attributes of knowledge structure. Finally, when teacher's TPJ activity preceded that of students' MFC by 8-10 s, significant teacher-student neural synchronization was found during the lecturing phase of blended teaching and correlated to learning outcomes. Together, these findings suggest the MFC as a hub of the students' cortical learning system to achieve knowledge construction, through a functional projection from the teacher's TPJ during blended teaching.

## **Neural Reconstruction of Fragmented Knowledge During Online Learning and Its Transfer Effect**

Xu Xinran Beijing Normal University

He Xiangyu Beijing Normal University

Feng Xiaodan Beijing Normal University

Lu Chunming Beijing Normal University

Zhou Siyuan Sichuan Normal University

It has been long-debated about whether and how the fragmented knowledge learned through online learning will be neurocognitively reconstructed into a meaningful hierarchical structure so as to facilitate later representation and transfer. Here we showed that, during learning of fragmented knowledge through a short video, the knowledge was reconstructed in the posterior cingulate cortex (PCC) into a coherent hierarchical structure that matches the intrinsic knowledge structure. The reconstructed knowledge was then projected to the precuneus (Prec) through a temporally directional functional connectivity for further representation and impacted learning outcomes. Moreover, during learning of new knowledge from a different video 24-hours later, the prior reconstruction facilitated knowledge transfer via reinstating the PCC-Prec connectivity, with a modulation of individual difference in reconstruction capacity. Our findings indicate a novel knowledge reconstruction mechanism in a circuit of the posterior parietal cortex during learning and transfer of fragmented knowledge.

## **Neuro-Cognitive Mechanisms of Family Dynamics in Children's Emotional Development**

Long Yuhang Beijing Normal University

Zhang Na Capital Normal University

Fang Xiaoyi Beijing Normal University

Wang Yifang Capital Normal University

Lu Chunming Beijing Normal University

This study investigates how family dynamics influence children's socio-emotional development. We conducted a functional near-infrared spectroscopy (fNIRS) hyperscanning study with a three-person family (mother, father, and child) during free play, aiming to explore the neuro-cognitive mechanisms involved. Key findings revealed a dissociation between children's emotion regulation and stability. Specifically, interbrain synchronization between the right inferior frontal gyrus (rIFG<sub>dad</sub>) and left middle frontal gyrus (lMFG<sub>mom</sub>) was linked to children's emotional stability, with higher parental synchronization correlating with greater stability. Conversely, synchronization between lMFG<sub>mom</sub> and the child's left orbitofrontal cortex (lOFC<sub>child</sub>) was associated with emotion regulation, indicating that higher mother-child synchronization led to better regulation abilities. Importantly, the study found that the interaction between children's emotional stability and the family environment is mediated by interbrain synchronization between parents. For children's emotion regulation, there exists a spillover effect from the family environment to parental relationships and then to mother-child relationships, highlighting the unique role of mothers in emotion regulation. In summary, this study demonstrates the significant roles of interbrain synchronization between spouses and between mothers and children in children's emotional and social development.

## **Symposium29: Fostering Teacher Education through Inquiry-based Professional Learning**

### **International Inquiry into Teacher Professionalism: Professional Standards, Learning Communities, & Conceptual Change**

Laura B. Liu Indiana University Columbus

A'ame Joslin Indiana University Columbus

This study engages teacher candidates across two distinct university settings – one in a largely rural Midwestern state and one in a large urban city in China - in collaborative inquiry on teacher professionalism, a shared topic in a global profession. This international collaborative research specifically explores how Chinese and U.S. teacher candidates conceptualize teacher professionalism, how these conceptions are informed by professional standards and shaped by context-based inquiry in shared international professional learning communities. This study collected data includes 1) Chinese and U.S. teacher candidate inquiry project presentations, including inquiry questions, methods, findings and implications for practice, policy, and research; 2) Chinese and U.S. teacher candidate reflections on teacher professionalism; and 3) other assignments in the inquiry course, including Chinese and U.S. teacher candidate reflections on how their views were shaped via shared discussion in class and in international professional learning communities (PLCs), mainly to develop their international inquiry projects examining teacher professionalism.

As an overview, the inquiry project topics covered teacher burnout, teacher self-efficacy, teacher identity, collective lesson planning, and information and communications technology training for teachers. By exploring the terminologies of teaching and teachers and examining professional standards through inquiry-based learning across international settings, prospective teachers build up their professionalism via shared values, collaborative mentoring, and fieldwork.

### **Initial Teacher Education Practicum 2.0: Learning through self-study in a professional setting**

Diana Petrarca Ontario Tech University

Shirley Van Nuland Ontario Tech University

Self-study of teacher education practices (S-STEP) within practicum contexts is still an underrepresented area of research. This study explores mainly why the practicum is still a less explored area in the S-STEP community, followed by how teacher educators/researchers facilitate an S-STEP approach to practicum. The exploration begins by examining the challenges of using S-STEP, reviewing the conditions necessary to facilitate S-STEP in practicum settings, and providing arguments that these conditions are difficult to achieve by initial teacher education programs in general. The traditional nature of practicum and university settings, the general lack of support for initial teacher education programs within universities, the absence of the university instructor, and the pressure of a climate of criticism

and conflicting demands that schools face all contribute to the challenges related to conducting S-STEP in a practicum setting. Lastly, the study offers suggestions that may enhance a self-study approach to practicum, where the involvement of university instructors features prominently.

### **On the Four-dimensional Competency Structure of Teacher Educators in Colleges and Universities**

Zhao Ying Shanxi Normal University

The competency structure of teacher educators is a critical component of teacher educators in literacy. Based on the research analysis abroad, expert teacher educators should have a four-dimensional competency structure with instructional competency, management competency, community construction competency, and professional development competency as the core. Teaching competency includes instructional design competencies, teaching competency, teaching evaluation competency, teaching research competency, and teaching demonstration competency; management competency includes leadership competency, organizational competency, cultural and coordination competency, and interpersonal communication competency; community building capacity includes internal community construction competency and external community building capacity; professional development competency consists of the competency to update knowledge base, professional learning competency, professional reflection competency, and professional innovation competency.

### **Research on Reflection as Professional Learning for Master-Degree Teacher Candidates**

Zhao Ping Faculty of Education, Beijing Normal University

Teachers implement various forms of reflection to develop their professional skills, thinking and identity. Taking China as an example, writing reflection journals, group reflection discussions in lesson study, and many other forms of reflection are legally required professional development activities for teachers. However, when pre-service teachers learn to teach through designed university programs, the role, function, and pathways of reflection in the learning process remain unknown for researchers and practitioners in teacher education. Therefore, the researchers are concerned about utilizing reflection as an instrument for preservice teachers learning to teach. Derived from John Dewey's definition of reflective thought as 'active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusion to which it tends, 'reflection is considered as 'meaning-making' and 'practical epistemology.' Taking 2-years master's degree teacher preparation programs as cases, the research collects data by observing preservice micro-teaching videos, collecting strategic documents including self-reflection reports, interviewing preservice teachers and teacher educators and evaluating the effectiveness of reflection in preparing teachers.

## PARALLEL SESSIONS

### 01 Multi-dimensional Exploration of Teachers' Competence

#### **Teacher Innovation Capability in the AI Age: Epochal Value, Significance Analysis, and Implementation Pathways**

Lin Min Beijing Normal University

Yan Nairui South China Normal University

The 20th National Congress of the Communist Party of China has underscored the central role of innovation in the comprehensive modernization of the country. Against the backdrop of rapid advancements in artificial intelligence (AI), teacher innovation capability not only supports the modernization of education but also serves as a crucial guarantee for cultivating innovative talents and developing new productivity. Furthermore, it is a fundamental driver for educational transformation and the national digital education strategy in the new era. This paper, set against the development of the AI era and aimed at building a strong educational nation, focuses on teacher innovation capability, exploring its epochal value, significance, and implementation pathways. It points out that teacher innovation involves not only processes but also novel and valuable outcomes. Teachers should emphasize the dialectics of integrating AI innovation capability, adopting a critical and reflective attitude towards AI, and educating in a manner consistent with the teaching context and educational ethics. Enhancing teacher innovation capability requires not only teachers' subjective efforts in knowledge, emotion, intention, and action but also the support of national and educational administrative policies, effective training by teacher education institutions, guidance and encouragement from school leaders, and collaborative innovation among teacher teams, forming a coordinated effort.

#### **Teacher's Relational Competence in the Post-epidemic Era: Implications of the Times and Ways of Cultivation -- Also on Professor Zhao Tingyang's Co-existence Theory**

Wang Zhipeng Northwest Normal University

The educational transformation in the post-epidemic era shows a relatively obvious "relationship orientation", and teachers' relationship ability has received extensive attention in this process, and needs to be explained and promoted from the dimension of ontology. "Co-existence theory" is proposed relative to "individual existence theory", which is compatible with people's living world. In nature, education is isomorphic with life, which not only happens in the concrete real life world at all times, but also is jointly constructed by people in order to realize their possible life and their own life ideal. The origin, continuity, historicity, sociality and creativity of the living world govern the logic of education development and the logic of teachers' existence in the educational life. The understanding of the era implication and cultivation path of teacher relationship ability in the post-epidemic era should be based on the "co-existence theory". The epochal implication of teacher relationship ability is reflected in that



the basis of teacher's existence increasingly depends on the reality of teacher-student relationship, the uniqueness of teacher's existence increasingly appears in the transcendence of teacher-student relationship, and the nobility of teacher's existence is more realized in the mutuality of teacher-student relationship. To this end, teachers should have a priori goodwill that is willing to show themselves and influence others, be able to expand the teacher-student relationship in an exploratory way, and form a personalized education theory in the process of reasoning.

### **Research on the Influence of School Organizational Atmosphere on Rural Teachers' Learning Power -- Based on the Chain Mediating Role of Teacher Agency and Learning Engagement**

Wu Min Xinjiang Normal University

Mao Ju Xinjiang Normal University

Teachers' learning power is an important driving force for the professional development of rural teachers, and also an important guarantee for the improvement of teachers' professional quality. In order to explore the influence of school organizational atmosphere on rural teachers' learning power, and to explore the chain mediating role of teachers' agency and learning engagement, a questionnaire survey was conducted among 1708 rural teachers, and the structural equation model was used to systematically analyze the collected data. The results show that the school organizational atmosphere has a significant positive predictive effect on the learning power of rural teachers; teachers' agency is the intermediary variable between school organizational atmosphere and rural teachers' learning power; learning engagement is the mediating variable of the relationship between school organizational climate and rural teachers' learning power; teachers' agency and learning engagement play a chain mediating role between school organizational atmosphere and rural teachers' learning power. In view of this, build a teacher's learning community' and create an organizational atmosphere conducive to teacher learning; guide teachers to carry out 'self-directed' learning and enhance the agency of rural teachers; build a teachers' localization' training model and improve rural teachers' learning engagement.

### **Research on Teachers' Key Competences of Western Primary School in the Post-epidemic Era**

Xie Hongmei Guizhou Education University

Teachers' key competences are key factors to promote teachers professional development and improve the quality of education. Through literature review, interviews, questionnaire survey and other methods, this paper proposed the composition of teachers' key competences of western primary school. They are faith and sentiment cultivation competence, education and teaching competence, communication competence, information technology application competence and self-improvement competence. Processing the relevant data using spss27.0.1, the results show that teachers' key competences of western primary school in the post-epidemic era are good, with the strongest competence of faith and sentiment and the weakest competence of information technology application; normal teachers are not outstanding; significant

differences exist in different service areas, strong urban areas and weak villages; it is an "n" shape with age and teaching age increasing; teachers with high titles and high education show their advantages in some dimensions. Finally, from the four aspects of education administrative departments, teaching and research institutions, schools and teachers, we suggest that it should strengthen the system design; play the supporting role of teaching and research; build a carrier and create the environment; learn, practice and reflect to cultivate teachers' key competences.

### **Facing Future Education: The Theoretical Positioning, Practical Mechanisms, and Development Pathways of Teacher's Professorial Vision**

Wu Xuan East China Normal University

In the face of a future society characterized primarily by "uncertainty", it is essential for teachers to be guided by professorial vision to promptly identify teaching issues and seize educational opportunities, thereby improving students' quality of life and fostering their future competencies. This is the inevitable pursuit of a new humanistic education oriented towards the future. Professorial vision, which encompasses the threefold dimensions of situational awareness, humanistic attitude, and practical wisdom, is built upon selective attention, knowledge-based reasoning, and responsive decision-making. In line with contemporary demands, professorial vision for future education follows the logic of anticipation, imagination, generation, and openness. It manifests externally in the areas of lesson planning, teaching environment, instructional guidance, and professional responsibility. To cultivate this professorial vision, it is necessary to strengthen teachers' beliefs and ethical consciousness, promote knowledge sharing and collective wisdom, focus on real-world issues, and achieve localized teaching, while also developing intelligent pathways supported by digital tools.

### **The Promotion of Scientific Research Motivation of Foreign Language Teachers in University from the Perspective of Academic Community: Logic, Problems and Approaches**

Liu Di Beijing International Studies University

The scientific research ability of college teachers is an important embodiment of teachers' comprehensive quality. Foreign language teachers in colleges and universities often pay more attention to classroom teaching and application practice, and have insufficient motivation for scientific research, especially in the context of the national advocacy of organized scientific research, foreign language teachers have insufficient motivation for scientific research. Therefore, based on the perspective of academic community, this paper aims at solving the problems and ways to improve the scientific research motivation of foreign language teachers, making full use of the academic community as an important carrier and platform for scientific research activities in colleges and universities, effectively promoting the integration of the academic activities of foreign language teachers in colleges and universities from the individual to the group, stimulating the scientific research motivation of the teachers, and improving the scientific research and innovation ability.

## **02 Teacher Emotion Research**

### **Contextualized Dilemmas and Sense-making of Teacher Identity in Chinese Ethnic Rural Areas**

Liu Ya Yibin University

This field study investigates the dilemmas of teacher development in an ethnic rural area in south-west China from policy and individual perspectives, and discloses how teacher's identity is shaped and re-shaped contextually. With a focused study of a local school, we analyze the tension between expectations and reality, understanding and misunderstanding for different stakeholders. Their personal stories and narrations enable us to weave a vivid tapestry of how rural teachers' professional identity and personal identity in this regard are deeply intertwined through their daily interaction with local students, parents, colleagues and school administrators, which is easily neglected by policy makers and administrators.

### **A Study on the Development of International Chinese Language Teachers' Social Emotional Competence in the Post-Epidemic Era: An Analysis Based on the Prosocial Classroom Model**

Li Xun Beijing Language and Culture University

The social emotional competence of international Chinese language teachers is embedded in cross-cultural teaching contexts and teacher-student interactions, influencing their perceptions and shaping their professional roles and development. This study conducted semi-structured interviews with eleven international Chinese language teachers to analyze the impact of COVID-19 on their social emotional competence and the characteristics of social emotional competence during this unique era. Findings indicate that COVID-19 has resulted in poor student engagement, a fragile emotional foundation, and easily disrupted relationships, thereby complicating the construction and maintenance of connections between Chinese teachers and international students. It has also altered the content and methods of cross-cultural communication employed by international Chinese language teachers. To navigate these challenges, international Chinese language teachers must leverage their social emotional competence to internally regulate their emotions while externally enhancing their emotional commitment. Professionally, they should thoughtfully select and refine their language and cultural teaching methods to boost international students' sense of participation in this dislocated context. Emotionally, they need to be highly sensitive and empathetic in perceiving and addressing learners' psychological states and emotional needs across different cultures, enabling them to provide genuine care and support.

## **A Study of the Relationship Between Interpersonal Activities and Teacher's Professional Identity --An Exploration of Teacher's Development of Students' Asocial-Emotional Competence**

Li He Changchun Normal University

The online education practice during the epidemic not only changes the traditional education model, but also provides an opportunity to change teachers' teaching concepts and improve students' social emotional ability. In the post-epidemic era, education should re-examine students' learning ability, ethical and moral level, and social emotional ability, and respond to the challenges of social development from an all-round and multi-dimensional perspective. In the post-epidemic era, teachers' cultivation of students' social and emotional ability is a strong support for teachers' professional ability in education. According to the requirements of schools, society and families on the long-term sustainable development ability of people in the post-epidemic era, China should draw on domestic and international experience to intervene in teacher education and improve the efficiency of school education to cultivate students' social and emotional ability. Under the guidance of teachers, the support of schools, and the assistance and cooperation of families, the teachers can implement and guarantee the cultivation of students' social and emotional abilities.

### **Primary School Teachers' Affective Competence Assessment: A Situation Judgment Test**

Wang Songli Shandong Women's University

Li Qiong Beijing Normal University

Based on the situational characteristics of teachers' affective competence and the limitations of scale measurement, this study aims to develop a valid and reliable situational judgment test tool to assess the current affective competence status of primary school teachers. Through key event interviews with 31 outstanding primary school teachers in Beijing, collection of situational response schemes from more than 80 expert teachers, and multiple rounds of consultation with more than 70 expert teachers on the effectiveness of test development, an initial situational judgment test questionnaire was formed and pre-tested for modification, ultimately forming the final version of the situational judgment test. It includes four measurement dimensions (affective quality, affective recognition, affective expression and communication, and affective regulation), 19 situational items, and 76 response options. Then, more than 1,000 primary school teachers in Beijing were selected for formal assessment, and the results show that the test has a good level of reliability and validity; the overall affective competence level of Beijing primary school teachers is medium to high, with good performance in affective quality and affective regulation, but relatively weak performance in affective recognition and affective expression and communication; female teachers, class teachers, and teachers with leadership positions and honorary titles show better affective competence.

## **The Hierarchical Characteristics and Transformation Pathways of Teachers' Emotional Labor**

Huang Yifan Ningxia University

Zhou Fusheng Ningxia University

Teacher emotional labor involves the management, expression, response, and regulation of emotions engaged in by teachers during their educational and instructional work. It is characterized by essential attributes such as situationality, dynamism, complexity, and hierarchical structuring, and is influenced by a combination of internal and external factors. Drawing on the stage theory of teacher professional development, this study examines the hierarchical characteristics and transformation pathways of teacher emotional labor, using field data from 20 teachers varying in age, teaching stage, subject area, and academic rank. The findings reveal distinct characteristics across different types of teacher emotional labor, warranting the development of a systematic approach that accumulates rich emotional experiences for teachers in the professional exploration phase, enhances comprehensive emotional support during the growth phase, provides substantial emotional care during the burnout phase, and fosters a positive emotional culture in the maturity phase, to facilitate the progression and enhancement of teacher emotional labor across varying levels.

### **03 Teachers' Emotional Labor and Mental Health**

#### **Emotional Leadership and Teachers' Psychological Well-Being: The Mediating Role of Emotional Labor and Moderating Roles of Cultural Values in Job Demands-Resources Theory**

Zhu Xiaoshuang Capital Normal University

Tian Guoxiu Capital Normal University

Liu Rui Capital Normal University

A wide variety of research has established a connection between leadership and followers' well-being. Drawing upon the job demands-resources (JD-R) theory, leader-level resources affect followers' personal resources and thus well-being. However, the psychological mechanism that explain the connections from an emotional perspective is still under-explored. The present study aimed to understand how and when emotional leadership affects teachers' psychological well-being. The sample consisted of 2361 Chinese teachers from primary and secondary schools. It explored the mediating effect of emotional labor and the moderating effects of collectivism. Yet the classic Hofstede's concept of collectivism reflects a Western way of thinking, and it is difficult to capture the specificity of diverse collectivist cultures. Among the components of collectivism proposed in previous research, the pursuit of interpersonal harmony and obedience to authority are also emphasized in Chinese Confucian culture. To provide further insights into the complexities and nuances of culture, besides the collectivism, we further compared the moderating effects of two Confucian cultural values, harmony and obedience to authority. Results showed that emotional leadership as a job resource promoted teachers' personal resources such as deep acting (DA), expression of naturally felt emotions (ENFE), eventually influencing individual psychological well-being. DA and ENFE mediated the relationship between emotional leadership and well-being. Moreover, the moderated mediation analysis revealed that emotional leadership caused more surface acting (SA) only when teachers had a lower level of harmony, which led to lower psychological well-being; collectivism, harmony and obedience to authority weakened the positive effects of emotional leadership on teachers' psychological well-being. This study contributes to the JD-R theory by revealing that leader factors (i.e., emotional leadership) could shift from resources to demands to influence personal resources (i.e., DA and ENFE) or demands (i.e., SA) under the moderating effect of cultural values, thus affecting well-being. The findings suggest that leaders should adopt different strategies when providing emotional care to various teachers, and not turn care into pressure.

## **The Effects of Mental Health Literacy on Mental Health of Student Teachers: The Chain Mediating Role of Perceived Stress and Resilience**

Yuan Lin Southwest University

Gu Peilin Southwest University

As a critical aspect of future education, the mental health status of student teachers directly influences the physical and mental development of future students and plays a key role in determining the quality of education. Based on the conservation of resources theory, this study empirically investigated the relationship between mental health literacy and mental health of student teachers, revealing the role of perceived stress and resilience as mediators. A questionnaire survey was conducted among 818 student teachers from six universities, including Southwest University, Shaanxi Normal University, etc. It was found that mental health literacy can be considered as a significant positive predictor of student teachers' mental health. Furthermore, perceived stress and resilience were found to have both separate and chain-mediating effects on this relationship. Consequently, it is crucial for student teachers to enhance their mental health literacy, strengthen their resilience by integrating internal and external resources, and foster a growth mindset to effectively mitigate perceived stress.

## **Exploring the Emotional Labor Experiences of Rural Novice Teachers in China: An Interpretative Phenomenological Analysis**

Li Shuqin Hunan Normal University

Zang Luqing Michigan State University

Liu Xiangyan Hunan Normal University

Liu Xu Hunan Normal University

Teaching involves considerable emotional demands, requiring teachers to regulate their internal emotions to express appropriate emotions. Although emerging research has begun to focus on novice teachers' EL strategies and the associated negative consequences, there remains a need for more systematic exploration, particularly in challenging rural settings. Employing the methodological framework of interpretative phenomenological analysis (IPA), this study investigated the EL of 14 rural novice teachers (RNTs) in China. Semi-structured interviews were conducted to collect data on RNTs' EL experiences and how they make meaning of these experiences. The findings reveal that EL is a critical component of professional practice, serving not only as a process of emotional regulation but also as a means through which teachers transform their identities to align with professional expectations. Teachers invest significant efforts in managing both internal emotional regulation and embodied emotional expressions. Under overwhelming institutional pressures, they often resort to surface acting as a compromise strategy, leading to feelings of powerlessness and burnout. The expression of genuine emotions, coupled with the lack of external support, also results in teachers' exhaustion. Based on this comprehensive and nuanced understanding of EL, this study provides valuable insights for global researchers and practitioners to enhance the overall well-being and retention of RNTs.

## **Positive Reproduction of Emotional Capital: Key Competencies and Cultivation for Teachers to be Competent in Emotional Labor**

Dai Zihan The Chinese University of Hong Kong

Teachers are the foundation of education. Attention to teachers' emotions is a guarantee of educational effectiveness and a requirement of humanism. Bourdieu's "emotional capital" is conceptualized as "the combined capital of emotionally based knowledge, management skills, and sensory capacities that link self-processes and resources to group membership and social location, " which complements the existing "professional capital theory of teachers" and provides a new perspective for understanding teachers' daily emotional practices. Through professional practice as secondary socialization, teachers acquire new emotional capital, which is regenerated through the interplay of structure and agency. This regeneration includes not only the activation of specific emotions but also the transformation of positive and negative emotions, as well as the interaction and transformation of emotional capital with other capitals, such as social, cultural, and human capital. In order to ensure personal well-being and teaching effectiveness, teachers can acquire the ability to positively regenerate emotional capital by constructing positive models of emotional capital, actively engaging in critical reflection, and constructing good emotional relationships.

## **The Influence Mechanism of Professional Identity of Banzhuren Teachers in Primary and Secondary Schools on Subjective Well-Being-- Empirical Analysis Based on the Data of Teachers in Z Province**

Yuan Xin Beijing Normal University

Job burnout of primary and secondary school teachers is related to the quality of basic education. In order to investigate the influence mechanism of occupational calling on job burnout and the difference of professional development stage of primary and secondary school teachers, this study conducted a questionnaire survey on 19248 primary and secondary school teachers in 15 cities countries and districts of H province. The results show that the perceiving a calling, the living a calling and the job burnout of primary and secondary school teachers in H province are significantly negatively correlated, and the living a calling plays a partial mediating role in the negative impact of the perceiving a calling on job burnout. There is no significant difference of professional development stage in the influence mechanism of occupational calling on job burnout. The research results further enrich the theoretical model of the occupational calling and provide useful reference for relieving the job burnout of primary and secondary school teachers.



## **An Investigation of the Pre-Service Teachers' Emotional Awareness in China**

Chen Yezi Suzhou City University

Wang Haibin Huangshan University

Emotional Awareness has been regarded as the skill most fundamental to emotional intelligence. It refers to an individual's ability to recognize and describe one's own emotions, and those of other people, impacting significantly the individual's mental health and interpersonal relationships. The present study used selected pre-service teachers as subjects. A revised emotional awareness scale (LEAS) was used to survey them. We also selected primary and secondary school teachers as a contrast in the study, which can reveal their objective status and differences characteristics, and can be better to develop pre-service teachers' emotional awareness. The results were as follows: (1) The LEAS exhibited good reliability and validity and can be used as an effective tool to measure emotional awareness. (2) Pre-service teachers' emotional awareness ability in general at low-to-medium levels and needs improvement. (3) The ability of emotional awareness of pre-service teachers was found to differ significantly according to gender, grade and profession. Women's emotional awareness was found to be superior to men's. Emotional awareness ability increased substantially with grade rise. Emotional awareness of people involved in liberal arts emotional awareness was higher than that exhibited in people in the sciences. (4) In-service teachers' emotional awareness of self and others were higher than was found in pre-service teachers, but total emotional awareness of in-service teachers did not differ significantly difference from that in senior pre-service teachers.

## **04 Teachers' Competencies and Professional Development**

### **A Study on The Exploration of Key Personal Traits and paths of Outstanding Teachers' Professional Growth in the New Era -- Based on the Textual Analysis of Professional Growth Stories of Fourteen National Outstanding Teachers in "Dual-fame" Program**

Zhang Qian South China Normal University

Shi Qing South China Normal University

It is a powerful guarantee that the training of outstanding teachers aims to build high-level, specialized and innovative teaching corps. Therefore, the thesis takes fourteen outstanding teachers in the "Dual-fame Program" as the research objects, adopts the grounded theory and the in-depth interview method, and uses the Nvivo 12 software to code and analyze the interviews and the professional growth stories of the outstanding teachers in order to explore the key personal traits of professional growth and development of outstanding teachers in the new era, namely three core elements, courageously facing up to setbacks and difficulties, accurately grasping marvellous development opportunities, and actively utilizing the subjective initiative. Also, the interaction among the three shapes the growth mechanism of the outstanding teachers. Thus, on the basis of above personal traits, three directional guidelines are given to in-service teachers, such as developing positive attitudes, grasping significant others and vital encounters, and valuing the flow experience. At the same time, three implications are concluded that the focus of outstanding teacher training should be shifted from the enhancement of "art" to the regulation of "heart", the development opportunities should be shifted from "others" to "self-assignment", and the traits cultivation should be shifted from "innate" to "acquired", so as to inspire in-service teachers with inexhaustible motivation to maintain a good state of professional development.

### **The Education of Post-Graduate Level Teachers in Finland: The Connotation and Development of Teachers' Research Competence**

Cao Yanling Northeast Normal University

The "National Excellence Program" promulgated in 2023 shows the government's policy orientation, which is to build a high-quality and professional teacher team by improving the level of teacher education system. In the discussion of teacher education at the postgraduate level, it is an international consensus that the Finnish research-based teacher education model has significantly improved the quality of their teachers. The practice of teacher education in Finland shows that the key to high-quality teachers is to improve their research competence, including the knowledge and ability to engage in research, reflective and critical thinking, and an inquiry orientation in teaching work. Research is a cognitive means to promote knowledge integration and practice improvement. From the perspective of the particularity of teachers' professional learning, research competence is the key for teachers as reflective practitioners to apply educational and teaching theories to teaching practice and integrate the two. It is also the basic competence for teachers to carry out evidence-based teaching practice and become

research-oriented, academic and expert teachers. The cultivation of research competence should be realized through research-based teacher education. Teacher educators are engaged in teacher education research and teaching based on scientific research evidence.

### **Research on the Development of Assessment Tools for Teachers' Ethics of Normal University Students Based on "Intermediate Concept Measurement"**

Li Yanling Hebei Normal University

Liu Yiwei Hebei Normal University

Teachers' ethics is the fundamental measure of "teachers". Teachers' ethics of normal students are related to the quality and level of teachers' ethics construction from the source. Most of the existing teacher ethics evaluation is "result oriented", which is difficult to take into account the double investigation of behavior and motivation, and it is difficult to play the guiding value of education. Based on the "intermediate concept assessment method" and the self-constructed structure model of normal students' ethics, this study develops a normal students' ethics assessment tool to make up for the above deficiencies. Through structural interviews with 48 normal university students, five intermediate concepts were summarized: willingness to teach, improvement of teaching, practice concept, student management and independent development. Corresponding to the preparation of test questions, each test question contains "situation story", "action options" and "reason options". The "action option" and "Reason option" were determined after the initial draft of the option, evaluation and revision by normal students and experts. H Normal University was selected to carry out the test. After demonstration, the differentiation, reliability and validity of this assessment tool are good, and it can play a role in guiding the education of normal university students.

### **Development Status, Enhancement Mechanisms, and Implementation Strategies of Teachers' Interdisciplinary Teaching Competencies in Compulsory Education Stage**

Wang Yuwen Henan Normal University

One of the most important issues in the current stage of compulsory education in China is the implementation of interdisciplinary thematic learning. Therefore, enhancing teachers' interdisciplinary teaching competencies (ITC) is crucial for the effective implementation of the new curriculum guideline. The development of teachers' ITC is inseparable from the construction of interdisciplinary learning communities. A survey of 1,058 teachers in the compulsory education stage in Henan Province revealed that urban teachers generally possess higher ITC than rural teachers do. Additionally, science and IT teachers show higher levels of interdisciplinary teaching knowledge and ability compared to their counterparts in the humanities. Furthermore, middle school teachers exhibit more positive attitudes toward interdisciplinary teaching than elementary school teachers do. Thus, proposing a mechanism for enhancing teachers' ITC from the perspective of learning communities involves constructing a shared vision among teachers which supported by collegial relationship and lesson study. At the school level, a supportive structure is needed to form a supportive culture and collective deliberation can be helpful to create an integrated vision between teachers and administrators.

In order to achieve the enhancement mechanism of teachers' ITC, there are some strategies of improving teacher identification within interdisciplinary learning communities, respecting the status of teachers from various disciplines, and establishing a support system for the interdisciplinary learning community of teachers.

### **A Study on Strategies for Enhancing the Competencies of Teachers Cultivating Innovative Talents Based on the Exploration of the Connotation of Innovative Teachers**

Yuan Li Beijing Normal University

Wang Mengfei Beijing Normal University

The cultivation of teachers dedicated to nurturing innovative talents constitutes a solid foundation for building China's "dream team" of top-notch innovators. The pre-service teacher education period, which emphasizes acquiring professional knowledge, enhancing professional ethics, and honing innovative abilities, is crucial for enhancing the competencies of teachers who specialize in cultivating innovative talents. To improve these competencies, it is first necessary to clarify the connotative dimensions of innovative teachers. Based on the establishment of the connotation of innovative teachers, this study adopts a dual identity perspective, viewing pre-service teachers as both current "learners" and future "educators," and clarifies the competencies required for nurturing innovative talents by referring to international ideas on the professional competencies of teachers in gifted education. Based on this analysis, it proposes strategic suggestions for enhancing these competencies through strengthening the guidance of educational thought, innovating the "whole-process" cultivation approach, and improving the "whole-person" collaborative education mechanism.

### **On the "Educational Research" in Practical Teaching of Full-time Education Master Program: Organizational Principles and Implementation**

Yang Yue Nanjing Normal University

Following the goals of cultivating Master of Education talents, the requirements for research-oriented teacher quality, and the characteristics and challenges of "learning to teach" that pre-service teachers possess, in full-time education master's degree programs, the mindset of treating educational research as the "last independent link" in practical teaching should be broken through, and global thinking and comprehensive design of "educational research based on case-learning" should be well conducted. Continuity of experience, reflection on Experience, and mediation of case-learning are three important organizational principles of educational research which runs through the entire process of practical teaching and organically combines with curriculum learning and paper writing. Case-reading-and-understanding in theoretical course learning should be strengthened, case-observation-recording-and-analysis in educational internships should be emphasized on, and case-creation-and-writing in educational internships should be actively carried out, so as to better align with the laws of teacher learning and development, and to promote the cultivation of educational practice research abilities for master's degree students in education.

## **05 The Combination of Research and Practice in Teacher Education**

### **An Ethnography of the Logic of Generating Practical Wisdom of New Generation Rural Teachers in the Post-Epidemic Era**

DawaKyid Sichuan Normal University

Practical wisdom is the ability of teachers to analyse, judge and creatively solve practical problems in complex and changing educational situations. This paper adopts an ethnographic research methodology, based on contemporary theories of practical philosophy, to present the history of the generation of practical wisdom of the new generation of rural teachers in the epidemic and post-epidemic period, and to condense the logical judgement of "how to happen" of practical wisdom. This study enriches the understanding of the practice situation and development mentality of the new generation of rural teachers in the post-epidemic era from both theoretical and empirical perspectives, and also provides a case study for insight into the "wise practice" of rural teacher cultivation.

### **The Value Implication and Ideal of High Quality and Balanced Allocation of Rural Teachers Picture and Realization Path**

Ma Yongquan Yili Normal University

Li Yuting Xinjiang Normal University

The high-quality and balanced allocation of rural teachers is the backbone of promoting the high-quality development of urban and rural compulsory education. Comprehensively promoting the balanced allocation of high-quality rural teachers is the starting point for promoting educational equity, the basis for building a high-quality education system and the guarantee for improving the level of public education services. The allocation of teachers in urban and rural compulsory education should take rural teachers as the key point, and strive to build an ideal picture of noble teacher ethics, reasonable discipline structure, high educational level, excellent professional quality, and firm belief in teaching. To realize the balanced allocation of high-quality rural teachers, we need to focus on both symptoms and root causes, and fully implement the policy mechanism of rural teachers. We should make up for weaknesses and help the weak, and strive to promote the precise cultivation of excellent teachers. It is also necessary to strengthen the foundation and improve the quality, and effectively enhance the mission consciousness of rural teachers.

## **Research on Identifying and Measuring the "Unobservable Characteristics" of High-Quality Teachers**

Du Liping Beijing Union University

Xu Mingyue Beijing Union University

Zhang Ayuan Beijing Union University

This study attempts to identify serial representations of "unobservable characteristics" of high-quality teachers and find proxy variables for them. Based on the multiple understandings of the personality characteristics of high-quality teachers from the perspectives of educational theory and practice, the reasons for the ambiguity of high-quality teachers were analyzed. Under the research framework of positive organizational behavior, identifying teachers' psychological capital can be used as an effective measurement tool for the "unobservable characteristics" of high-quality teachers. This study will help to develop the new knowledge of "unobservable characteristics" of high-quality teachers; At the same time, it provides decision-making basis for exploring new ways to improve the quality of basic education teachers.

## **The Development and Application of the Teacher Cultural Identity Scale in the New Era**

Zhang Limin Guangzhou University

Zhang Yijin Dongfanghong Kindergarten in Yuexiu District, Guangzhou

Chen Yinxia Zhongshan Special Education School

As the core force of school education, teachers bear the mission of inheriting excellent traditional Chinese culture in the new era. The degree of cultural identity of teachers is related to the implementation and quality of cultural identity education. This study is based on the theory of cultural identity, with Chinese traditional culture as the main culture and Lingnan culture as the subculture, and develops a teacher cultural identity scale. **Study 1** selected 417 teachers from various school stages in Guangdong Province to predict and revise the scale, and **Study 2** selected 920 teachers from Guangzhou and Jiangmen cities for scale testing and application. The research results indicate that the Teacher Cultural Identity Scale consists of three dimensions: cultural cognitive identity, cultural feeling identity, and cultural behavioral identity, with a total of 38 items, and has good reliability and validity. Meanwhile, the application research results of the scale indicate that there are differences in teacher cultural identity in terms of education level, ethnic identity, regional living time, teaching experience, and school nature. This also indicates that the scale has discrimination and is an effective tool for measuring teacher cultural identity. **Study 3** investigated 470 preschool teachers in the Guangdong Hong Kong Macao Greater Bay Area with a questionnaire to explore the relationship among cultural identity, culturally responsive teaching and professional identity. The results show that the levels of cultural identity, culturally responsive teaching and professional identity are at the upper middle. The level of cultural identity and culturally responsive teaching of teachers in Guangdong are higher than those in Hong Kong and Macao. Preschool teachers' cultural identity can not only directly predict culturally responsive teaching,

but also indirectly affect culturally responsive teaching through the mediating role of professional identity. The study puts forward suggestions on improving teachers' cultural identity and culture responsive teaching in the Greater Bay Area.

### **Understanding and Enhancing Teacher Buoyancy: A Study of Chinese Mainland Teachers**

Dong Yu Dora LI Beijing Foreign Studies University

Fang-Yin YEH The Education University of Hong Kong

Yee Fan Sylvia TANG The Education University of Hong Kong

May Hung May CHENG The Education University of Hong Kong

The teaching profession has become increasingly demanding, particularly after the global pandemic. With the enactment of the Double Reduction Policy in 2021, the job characteristics of K12 school teachers in the Chinese Mainland have undergone various changes, resulting in detrimental effects on teachers' well-being due to overwhelming demands. Scholars have recognized the concept of "Teacher Buoyancy," which refers to how teachers harness personal and contextual resources to effectively navigate the challenges and difficulties they encounter in their daily work. The study investigates the major components of teacher buoyancy of teachers in the Chinese Mainland, with a specific focus on early career teachers (ECTs) who tend to be particularly susceptible to the pressures associated with their role. A mixed-method design was adopted. Data were collected through survey questionnaires and semi-structured interviews with primary and secondary school teachers voluntarily, to examine the major components of teacher buoyancy and to elucidate the features of teacher buoyancy of the ECTs. Accordingly, quantitative data from 356 teachers was first analyzed through Exploratory Factor Analysis (EFA) with a novel factor found specific to Chinese mainland teachers. Next, qualitative analysis of the interviews with ECTs was conducted. Results further revealed a dynamic interaction between teachers' professional growth and personal attributes such as perseverance and positive emotions within the Chinese educational context. The findings offer valuable insights into how teachers can leverage available resources to address the challenges in their daily work and provide support to Chinese mainland teachers in cultivating buoyancy. Additionally, the discussion of the findings sheds light on strategies to enhance teacher buoyancy qualities within a broader educational context.

### **Benefits And Challenges of Virtual Exchange for Pre-Service Teachers: An Action Research Study**

Yin Hang Beijing Foreign Studies University

Virtual exchange, an umbrella term to refer to the online interactive involvement of students and staff from different geographic and intercultural backgrounds, is recognized as an effective pedagogy in pre-service teacher education to enhance participants' multiple literacies. However, the efficacy of its localization is yet to be testified through research and practices in various contexts. This study reports on a carefully designed Chinese-Brazilian virtual exchange embedded in a pre-service teacher education program on the Chinese side. It investigates

student-teachers' general perceptions toward this experience and reveals perceived benefits and emerging challenges. Data are collected via participants' post-program questionnaires, interactive messages from online platforms, instructors' observation notes, and communication records between partner instructors. This study serves as a pilot cycle of an action research study. It reveals that participants generally hold positive perceptions towards this experience, with benefits from aspects of identity transformation, linguistic improvement, social-cultural awareness, and digital literacy; while challenges lie mostly in language deficiency and affective issues. Moreover, the findings illuminate flexible and feasible measures to improve the efficacy of future virtual exchange programs to better foster pre-service teachers' competence.



## **06 Research on Teachers' Professional Identity and Self Identity**

### **Research on Teachers' Self-Construction-- Analysis Based on the Growth History of Special-Grade Teachers**

Guo Fang Hebei Normal University

Special-grade teachers are outstanding representatives of Chinese teachers. Studying their growth process can not only provide a model for the training of prospective teachers, but also further reveal the mystery of their successful educational practice. It is found that the special-grade teachers have a clear sense of self-construction, and the consistent clue of their career is the conscious pursuit of self-construction. The elements of teachers' self-construction include the individual self at the instrumental level, the relational self and the collective self at the ethical-value level. The vertical time line unfolds according to different stages of professional development of special-grade teachers. The instrumental rationality of the individual self of teachers at the entry stage is characterized by the transition from ignorance to teaching competence; the ethical value rationality of the relational self of teachers at the maturity stage is characterized by the transition from emotional impact to relational supremacy; and the ethical value rationality of the collective self of teachers at the expert stage is characterized by the transition from focusing on the self to leading others.

### **Hearing The Voices of "I": The Construction of Teacher Identity Through the Lens of Dialogical Self Theory**

Zhang Ruidan Beijing Normal University

From the theoretical perspective of Dialogical Self Theory, this study aims to understand how teacher identity is constructed through the case study of Xiao Jia, a novice teacher who graduated from a government-funded teacher education program in China.

In this two-year study, Xiao Jia first went through an education practicum as a student teacher and after his graduation, he has become a formal teacher in a high school. The research finds that Xiao Jia has been continuously engaged in interactions with students, teachers, school leaders and other external roles, during which he held different I-positions and those I-positions developed diverse dialogues in his inner space. These dialogues then made him switch from I-positions like "I as a green hand on the podium" "I as a friend of my students" "I as an inferior being judged by everyone all the time" "I as..." to stronger ones such as "I as a capable knowledge deliverer" "I as a role model of my students" "I as a teacher who strives for his own teaching professionalism", etc. In this way, Xiao Jia's teacher identity as "I want to be an expert teacher with morality, proficiency and personality" is gradually formed.

The research indicates that beginning teachers need to construct a positive and stable teacher identity in order to cope with the complex and turbulent external environment, and their continuous self-reflections, solid professional knowledge and skills, and firm educational beliefs are all needed. In light of this, in pre-service teacher education, we should pay attention

to the training of reflection skills, and fostering student teachers' teaching knowledge in line with practice; while in formal working space, schools need to offer specialized guidance and create a supportive working atmosphere, so that novice teachers can explore their own role as a teacher and develop their own path towards a more established teacher.

### **Behind the Halo: Identity Construction of Elite Graduates as Schoolteachers**

Zheng Zhehan East China Normal University

The cultivation of top innovative talents and the high-quality development of education lead to the great importance of "building high-quality professional and innovative teachers". It is urgent to discuss how to integrate elite graduates into the teachers' team and give full play to their unique advantages. Through in-depth interviews, field observation and data collection, this study explores the identity dilemma and construction process experienced by non-normal teachers graduated from top universities. The research finds that under the perspective of the practice community theory, the identity construction of elite graduates is a process of transformation from elite learners to education and teaching communities, from discipline practitioners to discipline teaching communities, from ideal seekers to duty implementation communities. At the same time, teachers have experienced three dilemmas: the lack of education culture, the fetters of elite clothing and the compromise of professional ideal. While actively guiding non-normal graduate teachers in famous universities to integrate into teacher culture, they should be allowed to introduce new ideas and practices, so as to substantially improve the knowledge and practice of the teachers community.

### **How to Understand: Logic of Acceptance and Practical Reasoning in Pre-service Teachers' Ecological Perspective Education**

Yang Maoqing Guangxi Normal University

Liu Zhenfang Guangxi Normal University

Ecological worldview education is a profound reflection and restructuring of existing educational goals and content in the context of global ecological crises. It aims to disseminate and promote the concept of ecological civilization that emphasizes respecting, adapting to, and protecting nature through the education system. The objective is to cultivate both individuals and society to establish a value system that fosters harmonious coexistence between humans and nature. Strengthening pre-service teachers' ecological worldview education is not only an active response to global ecological crises but also an inevitable choice for enhancing the ecological civilization literacy of all citizens and promoting sustainable social development. Moreover, it is fundamentally aligned with the process of educational modernization, serving as a foundational project for constructing a forward-looking, ecologically intelligent education system. The act of reception plays a critical role in determining the effectiveness of pre-service teacher ecological worldview education. By applying the analytical paradigm of reception theory within reading activities, treating the reading activity itself as the process of receiving ecological worldview education, we can observe that the reception logic unfolds across three stages: primary reading, secondary reading, and tertiary reading. These stages respectively correspond to the progressive process where pre-service teachers move from superficial

understanding to deeper interpretation, and finally to creative application of ecological worldview education concepts. Based on the above analysis, pre-service teacher ecological education should respect subjectivity, ignite the intrinsic motivation of pre-service teachers to participate in ecological civilization education, emphasize dialogue to enhance their ability to drive ecological civilization construction, activate innovation to hone their practical skills in teaching ecological civilization concepts, and assist pre-service teachers in progressively gaining a deeper understanding and mastery of the essence of an ecological perspective. This process will ultimately nurture them into future educators who possess solid ecological literacy and exceptional practical capabilities.

### **A Network Approach to Understanding Antecedents of Teachers' Turnover Intention: Linking Job and Personal Resources, Burnout, and Work Engagement**

Liu Yixuan Beijing Normal University

Yang Yiming Beijing Normal University

Wang Wenjing Beijing Normal University

The COVID-19 crisis has imposed various additional pressures on teachers. Surveys indicate that these pressures have increased their intention to leave the profession, negatively impacting schools, teachers, and students. To explore practical strategies for reducing teacher turnover intention, identifying potential predictors of teacher turnover intention has attracted considerable attention. Previous research has identified several prominent factors influencing teachers' turnover intention, such as burnout, work engagement, social support from supervisors and colleagues, relatedness with students, and occupational self-efficacy. How these factors jointly impact teachers' turnover intention remains unclear. Based on the JD-R model, this study employed network analysis to explore and demonstrate the interrelationships among these antecedents and their influence on turnover intention. Additionally, to comprehend how these relationships evolve across various career stages, we performed the network comparison tests (NCTs) to contrast the networks of early, middle, and late career stage teachers. The sample involved 8,998 primary teachers from central China (average age 36.6 years, 83% female), with results indicating a direct link between emotional exhaustion, depersonalization, dedication, and turnover intention. Specifically, Emotional exhaustion and depersonalization exhibited the strongest positive correlation with turnover intentions, while engagement showed the strongest negative correlation. This study also identified the bridging roles of relatedness with students and occupational self-efficacy within the network. Notably, the structure of the teachers' turnover intention prediction network and the bridge strength of nodes varied across early, middle, and late career stages. Future differentiated intervention strategies can significantly reduce teachers' turnover intention at different career stages.

## **The Impact of Organizational Identity on Rural Teachers' Teaching Innovation: The Mediation of Job Satisfaction and the Moderation of Leadership Support**

Zhu Guiqin Chongqing Normal University

Wang Xiaofang Chongqing Normal University

Chen Changming Chongqing Normal University

Teaching innovation is vital for promoting education and existing evidence has well-established that it is substantially shaped by teachers' attitude towards their organization such as organizational identity. However, currently very little has been known about how the organization identity effect is realized and how could it be fostered, especially in rural areas of developing countries such as China given the unique challenges they are facing. The current study explored the mediation of job satisfaction as well as the moderating role of leadership support. Questionnaire surveys on 2762 rural teachers from 19 provinces in China showed that: (1) organizational identity positively predicted the teaching innovation behavior of rural teachers, (2) job satisfaction played an important mediating role in the relationship between organizational identity and teaching innovation, (3) and the mediation of job satisfaction was moderated by perceived leadership support where higher level of leadership support lead to more positive mediation of job satisfaction compared to lower leadership support. The results of this study are of important theoretical and practical implications for revealing the mechanism of promoting teaching innovation, especially for promoting the teaching innovation behavior of rural teachers in China.

### **Development and Validation of a New Scale for Teacher Professional Identity**

Zhang Jiawei University of Macau

Zhou Mingming University of Macau

Teacher professional identity has been examined extensively in the past decades due to its critical role in determining teaching processes and outcomes. However, this area has been dominated by qualitative approaches, and little quantitative research has been conducted, which limits our understanding of this construct. One main reason for the small number of quantitative studies is a lack of a robust quantitative measure. In this study, we developed the Teacher Professional Identity Scale (TPIS) based on the dynamic systems model of role identity (DSMRI) and examined its psychometric properties with a total sample of 561 in-service teachers from K-12 schools in China. Results from factor analyses revealed a 4-factor model (i.e., pedagogical beliefs and goals; self-perceptions and emotion; professional orientation; and perceived behaviors) with good reliability and validity.

Subsequent multigroup confirmatory factor analysis model further proved the measurement invariance of TPIS across gender and teaching levels of teacher groups. We concluded that TPIS can be considered as a valid and reliable instrument in researching about teacher professional identity. Our research sought to leap forward toward an alternative quantitative way of examining this important construct in teacher education practice.

## **07 The Change and Challenge of Teacher**

### **Education in the Digital Age**

#### **Reflection and Reconstruction of Teachers' Innovative Development in the Context of Digital Transformation**

Ji Chunmei Nanjing University

Digital transformation is not a natural empowerment for teachers' development, but a transformation based on teachers' innovative development, which has certain logical consistency with teachers' innovative development, emphasizing understanding, adaptation and promotion of educational reform. It is necessary to be vigilant against the risks of further weakening the "life" of teacher development due to the instrumentality of digital tools, and further weakening the "moral" of teacher development due to the unidirectionality of digital. The essence of digital transformation in the field of teacher development is teachers' innovative development, and teachers' innovative development is the manifestation form of digital transformation. Examining teachers' innovative development requires promoting the vitality of different teachers' development from the perspective of individual teachers, and considering the synergy between different teachers' development from the perspective of the overall development of teachers. This paper analyzes the deep-seated action logic behind teachers' innovative development in the context of digital transformation from the perspective of embodied-cooperative theory, and further clarifies the intrinsic mechanisms and action mechanisms of different innovative paradigms such as adaptive, research-based, and collaborative in regional teacher development in the case of J Province. It deeply explores and reflects on the real problems faced by regional teacher development, such as the lack of main actors, rigid structures, unsmooth mechanisms, and the absence of cultural and ecological environment, and finally proposes that the innovative development of regional teachers in China needs to be further deepened based on the value-oriented deep integration of teacher development and digital technology, and the restructuring of the path of teacher development based on digital decision-making.

#### **Opportunities, Applications, and Challenges in Smart Education**

Sun Yuhao University College London

Generative artificial intelligence (AI) has taken the world by storm, with notable tension transpiring in the field of education. Research indicates that digital tools and mixed realities significantly influence teachers' approach to teaching (Smith, 2021). However, gaps remain in teachers' understanding the effective integration of these tools in teaching practices. The primary objective of this research is to elucidate the limitations inherent in traditional pedagogical methodologies within the framework of digital intelligence, and to examine the role of digital intelligence as a pivotal support mechanism in the transformation of educators from their conventional roles into a dual capacity of both 'teacher' and 'learner.' Employing a mixed-methods approach, this study integrates qualitative data from semi-structured interviews with educators and quantitative data derived from a comprehensive questionnaire administered

to 538 primary and secondary school teachers across 6 schools. Preliminary findings suggest that while educators recognize the potential of digital tools to enhance teaching efficacy, significant barriers related to digital literacy and infrastructure persist (Lim et al., 2023). This study, based on an analysis of five dimensions of teacher digital literacy, clarifies the tripartite empowerment value system that digital and artificial intelligence technologies provide for educators. Additionally, the study aims to devise actionable strategies that facilitate the redefinition of teacher roles, aligning them with the evolving demands of the digital era. These technologies empower a lifelong learning model for teachers, promote professional development, and support the synchronous evolution of educational philosophies.

### **Autonomous Knowledge System: A Peek and Realization of Teacher Educational Personality Generation in the Digital Age**

Liang Chen Zhejiang Normal University

In the digital age, it is urgent for teachers to build systematic knowledge in the broken knowledge structure and form their own independent knowledge system. It is helpful to teachers in preparing education, forming individualized teaching and constructing self-pedagogy. In terms of structure, teachers' independent knowledge system is based on theoretical knowledge, subject knowledge as the core, practical knowledge as the reference, method knowledge as the central axis, and they are interrelated. From the perspective of practical attributes, teachers' autonomous knowledge system is concrete, generated and complete, showing the basic characteristics of the unity of concreteness and logic, the coordination of generation and practice, and the complement of completeness and systemization. Therefore, in the practice of teachers' autonomy, we need to face the concrete knowledge, and realize the deep construction of teachers' autonomy knowledge system in the "breaking"; Rooted in the generative logic, in the "establishment" to achieve the teacher independent knowledge system to the "heart" condensation; Close to the complete person, realize the self-development of the teacher's independent knowledge system in the "sense".

### **Beyond the Controversy Between "Dao" and "Technology": Multiple Cognitions and Active Choices of Teacher Educators in the Age of Technology**

Wang Yanling East China Normal University

Drawing on Marshall McLuhan's media theory, the paper examines six teacher educators' perceptions of and choices about technology. The study found that the dispute between "Dao" and "Technology" in teacher education stems from the one-sided understanding of technology in the technical rationality of teacher education. From the practice of teacher educators, technology is not only a tool for carrying content, teacher educators use technology to teach while also teaching technology; technology also gives teacher educators the possibility to provide more personalized guidance, enriching the content and form of student-student and teacher-student interactions, thus affecting the personality development of pre-service students. Technology and teacher education shape each other; the "Dao" and "Technology" in teacher education in the technological era complement each other. At the same time, teacher educators'

perceptions of and choices about technology are closely related to the technological platform, resource construction level and ease of use of their universities. In order to transcend the debate between "Dao" and "Technology", it is necessary to establish a symbiotic relationship between teacher education and technological advancement based on the development of "human beings".

### **Policy Analysis of the Integration of Artificial Intelligence and Teacher Education in the United States --Based on the Four-Dimensional Policy Analysis Framework**

Lv Guangzhu Huizhou University

Shi Miao Hebei University of Science and Technology

At present, the United States attaches great importance to the integrated development of artificial intelligence and teacher education, and has issued relevant policy documents to promote the reform of teacher education in the era of artificial intelligence. Based on the four-dimensional policy analysis framework, this study analyzes the development policy of the integration of artificial intelligence and teacher education in the United States, and finds that at the normative level, the federal government follows the values of people-oriented, moral responsibility, fairness and security based on liberalism, in order to build the extensible goal of "teacher education system-education big data strategy-international competitiveness"; On the structural level, the federal government, state governments and school organizations form a "top-down, in-depth and efficient overall planning" cooperation model in terms of capital investment, material support and talent recruitment ; On the constitutive level, internal stakeholders such as universities, teachers and students, and external stakeholders such as federal and state governments and academia have shown the characteristics of clear demands, quality improvement and efficiency improvement in policy planning; On the technical level, the federal and state governments are good at using national strategic advantages to obtain external support from policies, and they have shifted from emphasizing teacher-driven and technical rationality to pursuing student-driven and humanistic reflection.

## **08 Fairness, Mechanism and Challenge of Teacher Education in**

### **Digital Age**

#### **Pathways and Mechanisms of Digitization in Promoting Teacher Learning Equity in Border Ethnic Minority Areas**

Li Xiaoyan Beijing Normal University

Teacher learning equity in border ethnic minority areas needs improvement, manifested in the absence of equity in learning opportunities, processes, and outcomes. Digital technology provides new avenues for promoting teacher learning equity in these regions. While research on digitization empowering teacher learning is rapidly growing both domestically and internationally, there is a lack of attention to critical groups such as teachers in border ethnic minority areas. Furthermore, there is a dearth of focused discussions on the pathways and mechanisms to promote teacher learning equity for this group. This study aims to construct a theoretical framework for teacher learning equity and develop theoretical models and practical frameworks for digitization to promote teacher learning equity in border ethnic minority areas. It enriches, innovates, and expands teacher learning theories in the digital age, formulating pathways and mechanisms tailored to the characteristics of border ethnic minority areas and providing policy recommendations for establishing a high-level teacher learning system in these regions.

#### **Why Does the Ideal Fall Short of the Reality?--A Study on the Causal Mechanisms of the Implementation Dilemma of Educational Technology Courses under the Threshold of Actor Network Theory**

Wei Lincui East China Normal University

Zheng Zhehan East China Normal University

Educational technology curriculum for teacher education students shoulders the mission of cultivating future teachers' digital literacy, and the implementation of high-quality curriculum is of great significance to teacher education students' digital literacy. Based on previous studies, it is known that there is a certain gap between China's current educational technology curriculum and the ideal model required by the policy, but there is limited discussion on what kind of gap exists, and there is a lack of research on the mechanism of generating the gap, which is a "black box". In view of this, the study adopts a qualitative research paradigm and draws on Bruno Latour's Actor Network Theory to examine the mechanisms that generate the gap between the implementation of the 2022 Digital Literacy of Teachers and teacher education curriculum for teacher education students. The study used the interview method and text analysis method to collect data on the textual content of 21 education technology courses in China, as well as interviews with 46 education technology lecturers, course administrators, and teacher education students related to the courses. The results show that the implementation gap in China's current educational technology courses is generated by the following mechanisms: first, problematization, the problems faced from policy to curriculum have not yet



been clarified, and the point of mandatory access is blurred; second, the lack of interest in the uncertainty of the interests of the actors in the implementation of the course, making it difficult to form a bonding network; third, enrolment, the core group of actors has not reached a collaborative effort, and the distribution of tasks to the main actors' roles is unclear; Fourth, in terms of mobilization, technical objections have yet to be resolved, while mechanisms for interactive consultation have yet to be generated. A synthesis of the findings shows that: firstly, the actions of the actors in the education technology curriculum are fragmented when the old and new issues of Digital Literacy of Teachers are not yet clear; secondly, when the policy is implemented into the curriculum actors have difficulty in seeing the definite benefits, they may choose to work from their own preferences in order to obtain the maximum benefits; finally, Digital Literacy for Teachers lacks rigid guidelines and Finally, the Digital Literacy of Teachers lacks rigid guidelines and links to relevant rigid guidelines, and the division of labour between teacher education institutions and the Ministry of Education is weak, and the division of financial and administrative powers is still in a state of instability and change, making it difficult for actors to work together to form a stable network for the implementation of the education technology curriculum.

### **What Salary Level Can Enhance the Professional Attractiveness of Primary and Secondary School Teachers? -- An Empirical Analysis Based on the "China Teacher Professional Status Survey" (CTPS) Database**

Mu Honghua Zibo Normal College/Shandong University of Technology

Zhao Nan Beijing Normal University

Shi Chunyan Beijing Normal University

Teachers are the first resource in education, and high professional attractiveness is a necessary condition for building a high-quality teaching staff. To support the high-quality development of the teaching staff in China's primary and secondary schools, this study leverages the China Teacher Professional Status Survey (CTPS) database from the Institute of Education Economics and Information, Beijing Normal University, to analyze the issues and countermeasures related to the salary level of primary and secondary school teachers from both subjective and objective perspectives. From both subjective and objective perspectives, it explores the issues and strategies regarding the salary levels of primary and secondary school teachers in China.

The study finds that: (1) The average monthly actual salary and the average monthly salary as per the contract are approximately 4,022 yuan and 5,649 yuan, respectively, for the sample primary and secondary school teachers. The average monthly salary as per the contract for high-level civil servants, high per capita income, high payment satisfaction, and high social status teachers is approximately 6,600 yuan, 6,300 yuan, 6,200 yuan, and 6,000 yuan, respectively; (2) The average monthly salary as per the contract is at a relatively high level compared with the 19 major industries, while the average monthly actual salary is at a relatively low level; compared with on-duty employees, the average monthly salary as per the contract is at a slightly higher level, while the average monthly actual salary is at a relatively low level;

compared with state-owned enterprises, the average monthly salary as per the contract and the average monthly actual salary are both at a relatively low level.

Referring to the research findings, this study proposes four design standards for improving the salary level of primary and secondary school teachers, and the prospective predictive study on the fiscal resource support capacity for the feasibility of these standards within the next 2-3 years shows that these standards are expected to be realized within the next 2-3 years.

### **Blockchain Enabled Teacher Education Coupling Analysis**

Dai Weifen Central China Normal University

Xu Jing Central China Normal University

Blockchain, with its unique technological characteristics such as decentralization, transparency and openness, tamper-resistant traceability, privacy protection, and programmability, is reshaping the face of teacher education and becoming an essential part of promoting digital transformation in teacher education. The constantly evolving blockchain connotation and characteristics are coupled with the digital demands of teacher education, and empowering digital transformation in teacher education from five areas such as building a new system of teacher education curriculum ecology, expanding digital teacher education teaching methods, opening up a digital ecosystem of teacher education resources, jointly building a new mechanism for teacher education governance, and improving comprehensive evaluation of teacher education. However, current research has made some progress, there are still certain challenges and gaps in achieving a deep integration of "blockchain + teacher education" and applying it to practical scenarios in teacher education.

## **09 Exploration the Path of Teacher Professional Development in the Era of Digital Intelligence**

### **Research on Building a Teacher Learning Community Based on New Media Matrix**

Lin Zirui Guangdong Baiyun University

Chen Wei Huizhou University

In the context of the digital era, this research aims to explore the construction of a theoretical model for a digital teacher learning community by combining new media platforms such as Zhihu, Xiaohongshu, and WeChat, and testing it through practice. The research first systematically reviews relevant literature on teacher learning communities and new media both domestically and internationally. Secondly, this research provides in-depth analysis of the theoretical support of constructivist theory, learning organization theory, and interactive learning theory for this research. Based on this, construct a theoretical model framework, connotation, and specific elements of a teacher learning community based on the new media matrix, and conduct practical tests on the learning community in actual educational environments to verify the effectiveness of the model in promoting teacher professional growth, improving teaching quality, and strengthening educational innovation. Finally, based on the results of practical testing, this research extracted a theoretical model of teacher learning community suitable for the new media environment, and explored its promotion value in a wider range of fields.

### **TPACK Enhancement Path for Teachers in the Digital Age: Fostering a Community of Praxis and Reflection to Enhance Teacher Development**

Wei Zhihui Shanghai Open University

Lin Donghua Shanghai Open University

Liu Yumei Shanghai Open University

Sun Ruifang SUNY Empire State University

Zhang Yan Shanghai Customs College

Liu Chunxia Shanghai Open University

Guo Kehui Qufu Normal University

Chen Qi Shanghai Open University

Hu Xiaotian Shanghai Open University

Chen Yihua Shanghai Open University

In recent years, emerging technologies such as live streaming technology, metaverse, and generative artificial intelligence have emerged and rapidly changed, bringing opportunities and

challenges to the education field. The experience of applying technology in the field of education shows that the short-term and long-term impact of technology on education largely depends on how teachers understand it and how they critically and creatively integrate it into teaching and learning practices in schools and classrooms. However, previous practice and research have shown that promoting teachers' understanding and application of emerging technologies, and developing Technological Pedagogical Content Knowledge (TPACK) have long-term and complex characteristics, often difficult to achieve solely through routine training. Therefore, this study lasted for three years and constructed a practical reflective community composed of educational researchers and teachers aimed at promoting teacher growth across teaching experience, disciplines, fields, and borders. It provides systematic, professional, personalized, and long-term cognitive and emotional support to teachers through regular sharing and communication, helping them extract TPACKs accumulated in practice, collaborating on emerging technology education application practices and research projects, writing and publishing teaching academic papers, etc. , in order to stimulate their understanding of the variability, opacity, instability, and revolutionary characteristics of emerging technologies, carry out integrated technology teaching practices, and strengthen reflection and research, understanding and changing their own mental models and educational concepts. The preliminary research results indicate that the teacher practice reflective community promotes cross-border learning between educational researchers and teachers, promotes teachers to carry out integrated technology teaching practice and reflection, and thereby improves their TPACK level. The research results help educational institutions at all levels and types to better understand the difficulties and principles of teacher development in the digital age, carry out mechanism innovation, and promote high-quality development of the teaching staff.

**Empowerment through Digital Intelligence: Constructing a New Ecology of School-Based Teaching and Research within Educational Groups --Exploratory Practices for Professional Growth of Secondary School Teachers in the Digital Era**

Wang Ying High School Affiliated to Guangzhou University

Liu Weiwei High School Affiliated to Guangzhou University

Xu Chunling High School Affiliated to Guangzhou University

The professional growth of teachers in traditional school-based research faces challenges such as uneven resource allocation, subjective teaching diagnostics, and the neglect of individual teaching styles. The classroom structure-based multi-model supported scoring system (CSMS) --noted for its convenience, scientific rigor, and objectivity--offers a promising avenue for optimizing school-based educational research. This study focuses on high school mathematics, analyzing, correlating, mining, and aggregating CSMS data over a one-year period involving 50 teachers of varied experience levels (new teachers, key teachers, and renowned teachers) across different campuses of an educational group in Guangzhou and Qingyuan. By creating a "group profile" that correlates with individual profiles, we distilled a set of common research norms to establish new standards for collaborative educational research. This study has preliminarily developed a three-dimensional interactive paradigm for teaching

research, characterized by point-to-point, point-to area, and area-to-area connections. Furthermore, we constructed a new ecological framework for group teaching research that transcends regional and institutional boundaries, featuring distinctive elements of integration, inclusivity, and collective advancement--termed the "Three R" (Reintegration, Inclusivity, and Shared Prosperity).

### **Unpacking Teachers' Professional Agency for the Post-Humanism Period: Systematic Literature Review (2018-2024)**

Murad Aliyev Beijing Normal University

Guoqing Zhao Beijing Normal University

In recent years, the discussion about education has shifted to include the impact of posthumanism, challenging traditional notions of agency and prompting rethinking of educators' roles and responsibilities. In this situation, the concept "teacher agency" becomes critical to understanding how educators manage the complexities of the modern educational settings. As we go beyond anthropocentric ideas, the function of teachers is no longer explicitly viewed through the prism of human purpose and control, but rather as part of a network of multiple factors and impacts. From this point of view, instead of focusing only on human goals and control, we view teachers' roles as linked with a multitude of interconnected elements and consequences. This approach recognizes the complex relationships between teachers, students, communities, cultures, environments, and systems, among other stakeholders in the diverse educational systems.

This systematic review provided scenarios from the 32 countries synthesizing 81 empirical studies on teachers' professional agency published between 2018-2024. Through a comprehensive analysis of the literature, we identified the key dimensions, factors, stakeholders, challenges and solutions for teachers' agency on the national, institutional and individual levels for the new era. The predominance of qualitative research in the articles evaluated underlines the limits in the breadth and generalizability of results on teacher performance. Therefore, as majority of the studies ignore the importance of cross-contextual and large-scale empirical data. This research gap raises serious concerns regarding the quality and application of current information in various educational contexts. Addressing this gap is critical to the advancement of teacher education, necessitating theoretical, practical, and methodological reforms in different education systems.

### **A Systematic Review of Virtual Simulation-Based Research on Classroom Management Skills Training**

Ma Haiyan Zhejiang Normal University

Li Yunlu Zhejiang Normal University

Chen Gaoyu Zhejiang Normal University

Virtual simulations hold great promise for developing teachers' classroom management competencies and helping to bridge the gap between teacher education and practice. The overall goal of the study was to identify a pathway for improvement and development of virtual

simulation-based classroom management competency training. It systematically reviewed 50 eligible studies (the sample of studies all reported on the impact of virtual simulation on teachers' classroom management skills development), identifying key implementation elements (e.g., scenario authenticity and interactivity, evaluative feedback) and challenges (e.g., insufficient participation in experiential learning, simplistic program design, etc.) in classroom management training within virtual simulation environments. Based on this review, a clear action pathway for virtual simulation-based training was outlined, encompassing aspects like multimodal information interaction, scaffolding scenario construction, and human-computer collaborative guidance. This review contributes to the design and implementation of development plans for teachers' classroom management skills based on virtual simulation, offering insights into the transformation of teacher training models.

### **Using Q Method to Explore Professional Competences of Teachers in the Artificial Intelligence Era**

Lin Min Beijing Normal University

Song Guoyu Beijing Normal University

The development of generative artificial intelligence technology has posed new challenges to education and teaching, as well as set new requirements for teachers' professional development. However, which aspects should be included in teachers' professional competencies in the era of artificial intelligence, and which competencies should be considered key, still require further research, updates, and clarification. At present, research on teachers' AI literacy is constrained on one hand by the limited prevalence of AI technology's actual application in frontline education, and on the other by the cutting-edge and dynamic nature of technological development, which presents significant challenges to related studies. As a result, existing research on teachers' AI literacy is largely based on theoretical inference, literature comparison, or expert analysis, with a lack of empirical exploration. This study employs the Q-methodology, beginning with a Q-set of professional competencies for teachers in the AI era, which was formed based on international literature reviews, interviews, and expert evaluations. Teachers with experience in integrating AI technology into teaching were then invited to participate. They were asked to rank the competency statements according to their importance based on their practical applications, and follow-up interviews were conducted to gather supplementary explanations and additional perspectives. By synthesizing the rankings and teacher interpretations, the study found that teachers from different disciplines, with varying years of experience and professional backgrounds, hold different views on the key competencies required to apply AI technology in teaching. At the same time, there was consensus among all teacher groups on certain competencies. Based on these findings, the study contributes to a better understanding of teachers' educational practices and professional development in the AI era, supporting the enhancement of teacher professionalism and workforce development in the era of digital and intelligent education.

# **10 Evaluation and Reflection on Teacher Professional Development in the Age of Digital Intelligence**

## **Challenges and Reshaping of Teacher Subjectivity in the Digital Age**

Wang Jiayi Beijing Normal University

Liu Yiteng Beijing Normal University

Teacher subjectivity refers to the qualities of autonomy, self-awareness, and agency exhibited by teachers in their professional development and educational practice. In the context of fostering new quality of talent in the digital age, teacher subjectivity has emerged as a pressing issue. From the perspectives of self, others, and society, this paper analyzes the challenges that technologies, particularly artificial intelligence, bring to teacher subjectivity in the educational field. These challenges include the erosion of teachers' consciousness due to technological dependency, the destabilization of teachers' subject status in human-machine interactions, and the infringement of teachers' rights by technological oversight. The reshaping of teacher subjectivity in the digital age is crucial to individual teacher growth, teacher-student relationships, and educational development. To address this, efforts should be made to enhance teachers' agency in the use of digital technology, create an educational environment where technological rationality and humanistic care coexist, and safeguard teachers' rights to data privacy and intelligent teaching.

## **The Practice Diagnosis and Optimization Strategies for Teacher Professional Development Empowered by Artificial Intelligence: An Analysis Based on the Typical Case in H District**

Han Shuo Beijing Haidian Teachers Training College

In the era of intelligence, there is a strong emphasis on the seamless integration and innovation of technology applications. The Ministry has launched two pilot actions under the "Artificial Intelligence Promoting Teachers' Development" initiative, resulting in significant advancements in leveraging resources, enhancing the learning environment, and fostering innovative mechanisms. The article delves into 33 typical cases in H districts and employs the Substitution Augmentation Modification Redefinition (SAMR) model to analyze how primary and secondary school teachers have utilized intelligent technology for teaching and learning innovations. Through content analysis, the article highlights key characteristics of technology applications and proposes strategies to enhance teaching and learning effectiveness. These strategies include problem-oriented top-level design, human-computer collaboration practices, model innovation with a results-oriented approach, and fostering teacher and student growth. Ultimately, the aim is to offer valuable insights and recommendations for teachers navigating professional development pathways in this era of innovative intelligence.

## **Action Research as a Way to Transform Teachers' Beliefs (Usage of Digital Tools in the Classroom)**

Aleksandra Mikhailova National Research University Higher School of Economics

The research is devoted to the transformation of teachers' beliefs during their change of practice. One way to change both practice and beliefs of teachers is for them to conduct their own research in their classroom as a part of their in-service professional development.

15 schoolteachers of various disciplines carried out their own action research by designing and conducting lessons using digital tools for active learning of their students. How did the teachers perceive their own learning process? How do their beliefs about their own practice and the digital tools change if they do? What aspects within this practice do they identify as significant for themselves?

In the course of this study, it was revealed that the transformation of beliefs occurs in the logic of student-centered learning. Teachers noted that an opportunity to do their own research in their own classroom helped them better accept the proposed tools and methods of work. Teachers are starting to consider digital tools to be used not only by themselves, but also by students. In addition, new ways of using digital tools are changing the flow of the lesson, provoking a transition from traditional learning to active methods of work. At the same time, working with digital tools becomes more conscious and meaningful for teachers.

## **Impact of an AI-Enhanced Teacher Professional Development Program on Teacher Instruction and Student Mathematics Performance**

Li Jingxian University of Southern California

Yasemin Copur-Genturk University of Southern California

Scholars and practitioners have advocated for professional development (PD) for teachers that is both personalized and broadly accessible. Self-paced online PD programs for k-12 educators have gained significant attention owing to their convenience and flexibility regarding time and location. However, a common problem with these self-paced online learning systems is the absence of frequent interactions and timely, individualized feedback for educators. This study addresses this problem by developing an AI-enhanced computerized PD program for middle school mathematics teachers. The program offers teachers opportunities to engage with and receive real-time personalized feedback from a virtual agent, utilizing natural language processing. To measure the impact of the PD program on teachers' instruction and their students' mathematics performance, we conducted a randomized controlled trial with teachers across the United States in which teachers were assigned to either this program (N= 38) or business as usual condition (N=32). Based on the data collected from 53 middle school teachers and their 1727 students, we found teachers who completed our program (N = 29) used mathematically richer tasks and created a more coherent, connected learning environment for students to build conceptual understandings than did teachers who were in the business-as-usual condition (N = 23). We also found that the program had a statistically significant impact on students' mathematics performance. The findings highlight the potential of incorporating an automated, interactive feedback feature supported by AI to create effective, scalable teacher PD.



## **The Professional Development of Teachers Empowered by the Metauniverse: Prospect, Risk Challenges and Resolution Path**

Li Jiang Chongqing University of Education

The constant influx of capital has led to the explosive development of the concept of the meta universe and its surrounding industries, bring human society into a high-level form of digital survival. The meta universe is a digital world created by human beings based on the real world, which depicts an imaginative picture and opportunity for the future professional development of teachers, and construct a new pattern of teacher professional development for future. The metauniverse has created possibilities for the multimodal shaping of teachers' professional emotions, the systematic generation of professional knowledge, and the collaborative acquisition of professional skills. At the same time, teachers' professional development also faces challenges such as the dissociation of role cognition under the impact of technology, the decline of knowledge authority under the expectation of development, the degradation of technology subject under the change of tools, and the hidden moral and ethical risks under the business model. Therefore, By analyzing the interaction mechanism of the metauniverse, the coping strategies for teachers' professional development are as follows: correctly grasp the technical capabilities of the metauniverse to enhance professional consciousness; actively adapt to the integration of the virtual and real of the metauniverse to deepen embodied interconnection; rationally use the trans-boundary integration of the metauniverse to solve the dilemma of degradation; attach importance to the human-machine collaboration of the metauniverse to avoid ethical threats.

## **Modeling the Influences on the Acceptance of Generative AI by Primary and Secondary School Teachers**

Wang Xiaoli South China Normal University

Lai Huili South China Normal University

As an emerging technology, generative AI has shown great potential in education and teaching. The extent to which teachers accept and apply new technologies determines the depth and breadth of the integration of technology and education. This study attempts to explore the main influencing factors of generative AI acceptance by primary and secondary school teachers by constructing a model of influencing factors. The study found that the influencing factors of generative AI acceptance are ranked as follows: technological characteristics > environmental factors > organizational factors > effort expectancy > performance expectancy. Based on empirical results, future strategies for promoting generative AI in education are proposed: change traditional thinking patterns and drive the development of generative AI teaching with innovation; improve product performance and effort expectations based on demand orientation; improve generative AI technology to enhance its data compatibility; carry out teaching research and training, reconstruct the concept and methods of applying generative AI; strengthen top-level design of systems to regulate the application boundaries of generative AI in education.

## **11 Digital Intelligence Empowers Teacher Education Practice**

### **The Research on The Path of Teachers' Evidence-Based Practice Based on Artificial Intelligence Technology**

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Li Meiju East China Normal University, High School Affiliated to Guangzhou University

Zhuo Jianmin Zhixin High School

Evidence-based practice follows evidence. It is difficult for teachers to collect, correctly understand, and reasonably apply evidence in educational practice due to various factors. The implication of artificial intelligence technology in classroom evaluation provides a new method for evidence-based education practice. Through two case studies in lessons and units for teaching improvement, the study illustrated how the classroom structure-based multimodal-supported scoring system (CSMS) helps teachers reflect on the relationship between elements in the classroom and proposed an evidence-based path enabled by artificial intelligence technology. It also elaborated on the interaction between experts and technology to empower teacher education development by enhancing evidence-based value.

### **Application and Research on Smart Teaching in the Age of AI**

Wang Jundan Zhaoqing University

This study deeply analyzes the impact of AI teaching on teaching quality and reveals the mediating effect of students' learning motivation and teachers' expertise in this relationship. Based on the AI-TPACK theory, the data were quantitatively analyzed through questionnaire surveys using AMOS structural equation modeling, and it was found that AI teaching did not directly and significantly improve the quality of teaching, but indirectly contributed to the improvement of teaching quality by enhancing learning motivation and improving teachers' professionalism. The study challenges previous hypotheses that AI teaching directly affects teaching quality and reveals the importance of student and teacher development. It provides important insights for education policy makers, school administrators and teachers' professional development, emphasizing that the key roles of students' intrinsic learning motivation and teachers' expertise development should be fully recognized in the promotion of AI teaching strategies, and that the overall optimization of teaching quality can be achieved through the construction of a student-centered and teacher-driven AI teaching environment.

## **Teacher Engagement and Learning in Materials Development:**

### **A Qualitative Study**

Xu Yueting South China Normal University

Li Kuo South China Normal University

The newly-issued English Curriculum Standards for Compulsory Education in China have prompted publishers to reedit and rewrite textbooks, involving university professors and school teachers. Given that school teachers have long been users of course materials, their experiences in materials development have remained under-explored. To address this gap, we conducted a qualitative study to understand how four primary school teachers engaged in materials development, whether engagement in materials development elicit learning, as well as what the teachers learned? Drawing from individual interviews, materials development documents, and observations of in-house meetings, findings reveal that these four teachers engaged in materials development across behavioural, cognitive, social, and emotional dimensions to different degrees, which led to teacher learning in various ways.

## **AIGC Technology Empowers High School English Education**

Guo Jiong Northwest Normal University

Xia Jiang Northwest Normal University

This article delves into the application of artificial intelligence generated content (AIGC) technology in high school English teaching. Intended to evaluate the impact of this technology on traditional teaching models, while exploring its potential in promoting personalized learning, improving teaching efficiency, and stimulating learning motivation. Through multiple methods such as case analysis, educational data statistics, and user feedback analysis, the effective application of AIGC technology in designing multimodal learning activities, adaptive learning paths, and constructing evaluation systems was demonstrated. Research has found that the introduction of AIGC technology significantly improves students' English proficiency, especially in listening, pronunciation, reading comprehension, and oral expression. The personalized learning path and data-driven teaching strategies provided by AIGC technology greatly enhance students' learning enthusiasm and self-motivation. In addition, by creating virtual language practice environments and immersive learning experiences, students' language learning process becomes more vivid and efficient. The innovation of this study lies in integrating AIGC technology into high school English education and systematically analyzing its positive effects on educational quality and teaching efficiency. The study also highlights the evolution of the role of teachers, shifting from traditional knowledge transmitters to guides and facilitators of learning, proposing new paths and directions for the future development of educational technology.

## **Explorations on the Integration of Pedagogy into the Development of AI-Related Learning Products in Children's Number Sense Training Contexts**

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Jia Yixiang Tsinghua University

Sha Meichen Nanjing Normal University

Hong Xiumei Nantong Normal College

There has been an emergence of diverse AI-enhanced learning products as AI technology has rapidly developed. Much research demonstrates the adaptivity and personalization of AI educational products from the perspectives of constructing learning content and stimulating students' motivation. The focus of this article is on the latter. This article will explore how to design products that can enhance learners' interest by incorporating considerations from pedagogy into product design, using adaptive design of wait time as an example. After controlling for variations in content adaptability, this article designs artificial intelligence learning products with differences in wait time, with mathematical number sense training as the learning theme. A total of 168 children have participated in these comparative trials. Results suggest that the participants in the experimental group have demonstrated a significant improvement in both motivation and learning effectiveness. Our research findings offer a new perspective for teachers to evaluate learning platforms in terms of pedagogy integration. Practitioners in learning product development are also encouraged to consider how to further improve adaptivity based on pedagogical integration.

## **Cameroonian Chinese Language Teachers' Emotional Experiences During ICT Integration: A Qualitative Study**

Grace Hulda Beijing Normal University

Linda Djarsoumna University of Yaoundé

This study investigates the emotional experiences of Cameroonian Chinese language teachers during the use and integration of information and communication technologies (ICTs) in their classrooms. Based on in-depth interviews with eight teachers, two main themes emerged: (1) positive emotions, and (2) the challenges faced when integrating ICTs, which triggered negative emotions. The results reveal that the positive emotions experienced by Cameroonian Chinese language teachers as they integrate technology are largely influenced by several factors, such as increased student motivation, direct access to the Chinese culture, the ability to create engaging lessons, and innovative teaching methods facilitated by ICT. However, challenges such as the gap between teacher expectations and student outcomes, recurrent power outages, insufficient ICT resources, and network issues, compounded by a lack of administrative support and in-service training opportunities, trigger negative emotions among teachers. Understanding these emotional nuances in Chinese language teachers' ICT integration in the specific context of Cameroon is important to inform policies and interventions aimed at improving Chinese language education in Cameroon. It is suggested that collaboration between

China and Cameroon be strengthened to provide regular in-service training opportunities for Cameroonian Chinese language teachers to improve their ICT skills; in addition, it is recommended that the Cameroonian government improve ICT infrastructures in secondary schools and provide psychological support to Chinese language teachers to help them deal with the negative emotions associated with integrating technology into the classrooms.

## **12 Digital Intelligence Empowers Teachers' Teaching Research and Teachers' Teaching Evaluation**

### **Study on Blended Teaching and Research from the Perspective of Community of Inquiry Theory: Teaching and Research Practice Based on Rooted Literacy Integrated Media Intelligent Learning System**

Niu Qingsen Beijing Normal University

Community of inquiry theory is an effective theoretical framework for studying blended learning. Transferring this theory to the field of teacher research is crucial for building a community with a trinity of social existence, cognitive existence, and teaching existence. It is of great significance for improving the quality of blended learning research and promoting teacher growth. Based on the rooted literacy integrated media intelligent learning system, in terms of social existence, with a mentor system as the basic organizational form, several mixed and cross regional dynamic teaching and research groups are formed through meticulous pre-testing of teaching situations, creating a flexible, intelligent, and autonomous teaching and research environment. With the help of task driven, the emotional response, interactive response, and cohesive response of group members are enhanced. In terms of cognitive existence, according to the opinions of domain experts and project teams, optimize top-level design and organizational design, plan and integrate teaching and research resources and services, provide guidance and feedback on multimodal teaching design and implementation, and promote teachers to carry out critical and reflective teaching and research. In terms of teaching existence, based on the project orientation and data analysis of intelligent learning systems, personalized and precise teaching and research paths are designed for each teacher, systematic personal literacy cultivation projects are carried out, and visual personal growth profiles supporting process tracing are formed, so that teachers can truly see the development of "people" in the teaching and research community.

#### **Construction of regional accompanying teaching and research model supported by digital technology**

Chen Lei Beijing Normal University/Beijing Chaoyang Academy of Educational Sciences

Qian Shouwang Beijing Chaoyang Academy of Educational Sciences

Bai Wenqian Beijing Chaoyang Academy of Educational Sciences

With the popularization and application of digital technology in education, the combination of online and offline teaching and research methods has become the norm. How to give full play to the advantages of online and offline teaching and research to improve the effectiveness of teaching and research has become a topic of concern for many researchers. This study aims at practical problems such as fragmentation, consistency, and inefficiency of regional teaching and research. Guided by the teacher professional development stage theory, developmental evaluation theory, and community theory, researchers creatively propose the concept of accompanying teaching and research, and summarizes the five characteristics of

accompanying teaching and research, including accompaniment, development, precision, ubiquity, and empathy. And researchers explore a practical model of accompanying teaching and research supported by digital technology. Finally, taking the Future Education Insight Forum as an example, researchers share the practical path of accompanying teaching and research, which improves teachers' curriculum leadership and promotes the transformation of regional teaching and research methods.

### **Is the Magic in the Mix? The Development and Validation of the L2 Teachers' Blended Assessment Literacy Scale**

Su Xiaoli The Chinese University of Hong Kong, Sichuan Normal University

Icy Lee Nanyang Technological University

Blended learning environments demand teachers to possess a high level of assessment literacy, as they play a crucial role in facilitating students' second language (L2) learning outcomes and overall well-being. However, a notable research gap exists in understanding L2 teacher assessment literacy within the blended learning context, further exacerbated by the scarcity of valid assessment instruments tailored specifically to investigate L2 teachers' assessment literacy for blended learning. To address this gap, the present study undertook the development and validation of the L2 Teachers' Blended Assessment Literacy Scale (L2TBALS). The study involved 614 L2 teachers from China, divided into two sub-samples. The first sample underwent exploratory factor analysis (EFA), which revealed a robust four-factor solution comprising Knowledge, Attitude, Practice, and Socio-emotional management. Confirmatory factor analysis (CFA) with the other sample of 307 L2 teachers confirmed the scale's structure and sub-scales, establishing the final 40-item L2TBALS as a psychometrically reliable and valid instrument for measuring self-reported L2 teachers' blended assessment literacy. These findings have practical implications for teachers and teacher education programs, as well as broader implications for assessment literacy research.

### **A Case Study of Developing Three Middle School English Teachers' Classroom-based Assessment Literacy Based on Diagnostic Assessment**

Huang Ju Southwest University

Su Jiaoyang Southwest University

This study attempts to elucidate the connotation of language teacher education, clarify the relationships between related disciplines in language teacher education research, and point out that language teacher education is a triple value attribute of national cause, professional practice, and research field. On this basis, it is proposed to establish a language teacher education system, including a language teacher education policy system, a language teacher education pre-service training system, a language teacher education post service training system, and a language teacher education academic system, in order to provide inspiration for language teacher education theory research and professional development practice.

## **A Practical Exploration of Utilizing the Classroom Smart Monitoring System (CSMS) to Empower Teachers' Professional Growth**

Zhuang Haiyan Shenzhen Futian Fuhua Primary School

This article aims to explore the strategies and practices for empowering teachers' learning and development through the Classroom Smart Management System (CSMS) digital technology. Through an in-depth analysis of the CSMS digital technology, the article proposes a "11234 Discussion Model" for the digital transformation of teacher growth. This model, based on the CSMS digital technology, is designed to empower teachers' learning and development. It includes "one core concept, one application community, two organizational forms, three implementation paths, and four development dimensions," providing systematic guidance and support for teachers' professional growth. By applying the CSMS digital technology, it achieves process monitoring, analysis, and feedback of teachers' teaching processes. Through data profiling and in-depth diagnosis, problem attribution, and precise improvement of teaching behaviors, it effectively enhances teachers' teaching quality and professional capabilities. The model also promotes communication and collaboration among teachers, driving the sharing of teaching resources and innovation in teaching methods. The practical results show that the model can effectively facilitate teachers' digital transformation, improve teachers' professionalism as well as their education and teaching ability, and provide strong support for cultivating a high-quality teacher workforce in the new era. The research in this article offers valuable exploration and reference for empowering teachers' learning and development using digital technology.



## **13 Pre-service Teacher Training in the Age of Digital Intelligence**

### **Pre-Service Teachers' Application of TPACK: Evidence from Interactive Whiteboard-Supported Collaborative Microteaching**

Su Fan Shanghai Normal University

Zhou Quan Guangdong University of Education

The rise of educational technologies necessitates technological, pedagogical, and content knowledge (TPACK) for teachers to effectively integrate technologies in education, especially for pre-service teachers (PSTs) who are the main force in today's digital era. This study focuses on enhancing the TPACK of 70 PSTs, organized into 22 teams, through hands-on experience with Seewo-supported collaborative microteaching--Seewo is an educational interactive whiteboard. Data collected from TPACK questionnaires, microteaching videos, and reflective journals undergo paired t-tests and thematic analysis. Results show significant TPACK improvements among PSTs in all aspects except PCK. They acknowledge the significance of contextual knowledge of TPACK but demonstrate a tendency to prioritize PCK over TK and its intersections with PK, CK, and PCK.

### **Equality and Diversity: An Exploration of the Values and Paths of Critical Digital Literacy Cultivation among Canadian Pre-service Teachers**

Lv Yijing Nanjing Normal University

Pre-service teachers, with their dual roles as "future educators" and "lifelong learners", are encouraged to understand inequalities in the digital society and to critically assess diverse information flows, which will help to address the general lack of reflection on the use of technology in the field of education, and to promote the Digital Strategy for Education initiative. Digitalization of Education Strategic Initiatives. The thesis analyses the policy processes and values of digital literacy frameworks introduced for teacher educators in major Canadian provinces. It explores the multiple pathways they take to foster critical digital literacy among pre-service teachers. The study finds that the policies aim to develop pre-service teachers' ability to critically access, absorb, and create digital information, and to integrate such skills into their future teaching practices. The value proposition is "pendulum" in that it focuses on an egalitarian approach that critically views the way rights operate in digital spaces, and a diverse approach that emphasizes the autonomy of digital citizenship due to the uncertainty of pre-service teachers themselves. Regarding practical pathways, Canada has adopted three initiatives: reconceptualizing teaching and learning based on K-12 curricula; empowering learners by breaking down digital learning stereotypes; and incorporating critical pedagogies and focusing on mental skills. Overall, the Canadian pre-service teachers' experience of critical digital literacy formation suggests a congruence between pendulum value orientation and behavioral choices; and a dialectical and unifying relationship between understanding digital practices and inter-power relations and creative production. The findings of the study inform the full implementation of strategic initiatives for the digitalization of education in China from the dimension of teacher quality literacy cultivation.

## **Examining Preservice Teachers' Digital Literacy and Readiness for Championing Technological Transformation in Schools**

Fred Yaredi Mgata Beijing Normal University

Fortunatha Lawrence Mtesigwa Beijing Normal University

Since the education process is becoming more digital, having the knowledge and skills to function in a digital environment has never been more critical. Professions in teaching need digital literacy to navigate the workplace, though not all are skilled. The case is more challenging in developing countries such as Tanzania where the integration of Information and Communication Technology (ICT) in teacher training is still lagging. The situation results in most of the graduates entering their teaching careers with insufficient digital skills. However, the case is different with PSTs taking ICT programs as they undergo training to equip them with digital skills to teach and navigate ICT in schools. Thus, graduates from ICT programs are expected to be more skilled in integrating ICT into the teaching process and they are also expected to take the lead in promoting the use of ICT in schools. Yet, the evidence of the relationship between digital literacy and readiness to take charge in enhancing technology use in schools is not well documented. Thus, this study intends to explore preservice teachers' digital literacy and readiness for championing technological transformation in schools. Three research questions will guide it i) What is the perceived level of digital literacy of PSTs and their readiness for technological transformation in schools? ii) What is the relationship between PSTs' perceived digital literacy and their readiness for technological transformation in schools? iii) What mediates the relationship between PSTs' perceived digital literacy and their readiness for technological transformation in schools? In this quantitative research, PSTs undertaking ICT programs in two teacher education institutions in Tanzania will be involved. The survey questionnaire will be used for data collection, while descriptive statistics, correlational analysis, and structural equation modelling will be utilized for analysis. The SPSS and AMOS analysis software will be used for data analysis. Research validity, reliability, and ethics will be adhered to throughout the research. Finally, the findings will be presented statistically and implications to teacher education and teacher education program developers will be presented.

### **Strategies for Developing Digital Competencies of Pre-service English Teachers: A Case Study of the RICH Model**

Yao Qian Zhejiang Normal University

This study focuses on the strategies for developing digital competencies of pre-service English teachers, applying a case study of the RICH model. The acronym RICH represents Research-based learning, Integrated curriculum, Cooperating learning, and Humanistic outcomes-which are the core principles of curriculum reform implemented by the English Department of the College of Foreign Languages, Zhejiang Normal University. This study aims to explore the interaction between digital technologies and the core principles of the RICH model through an in-depth analysis of 59 pre-service English teachers' experiences during a semester-long Basic English Course. Through a detailed analysis of these representative cases, this study highlights the salient features of the RICH model and proposes strategies for cultivating digital competencies of pre-service English teachers.

## **Anticipating Generative AI Integration: Insights into Behavioral Intentions of Chinese Pre-Service Teachers**

Natthawin Cho Beijing Normal University

Wang Jiayi Beijing Normal University

Generative artificial intelligence (generative AI) has emerged as a transformative force in various domains, including education. While its role in teaching and learning remains a subject of debate, preparing pre-service teachers to effectively integrate generative AI tools is crucial. This study delves into pre-service teachers' perceptions of generative AI adoption in education, employing the Technology Acceptance Model (TAM) and Technological Pedagogical Content Knowledge (TPACK) framework. Due to limitations in sample size, a traditional TAM model was employed, focusing on three constructs: perceived ease of use (PEU), perceived usefulness (PU), and behavioral intention to use (BI). Data collection was facilitated through an online questionnaire administered to pre-service teachers in Beijing. Structural equation modeling (SEM) was employed to analyze 131 valid cases. The findings revealed a significant influence of PEU on both PU and BI, suggesting that pre-service teachers' perceptions of generative AI ease of use positively impact their perceptions of its usefulness and willingness to adopt it. However, PU was not found to have a direct impact on BI, indicating that other factors beyond usefulness might influence pre-service teachers' intention to use generative AI in their future teaching. These findings shed light on the factors influencing pre-service teachers' perceptions of generative AI, providing valuable insights for teacher education programs seeking to prepare future educators for the integration of innovative technologies in the classroom. Future research should further explore the relationship between TAM constructs and TPACK components to gain a comprehensive understanding of pre-service teachers' generative AI integration capabilities.

## **14 Digital Literacy of Teachers in the Age of Digital Intelligence and its Training Path**

### **From Compensation "Substitutability" to Life "Transition": The Way to Advance Teachers' Digital Literacy in the Intelligent Era**

Guan Xinping YiLi Normal University

In the evolution of education digitization, it is necessary to explore the way of co-creation between teachers and technological change and improve teachers' digital literacy. However, in the response logic of technology advent, education transformation and teachers' digital literacy development, the lack of relationship between teachers' digital literacy and digital technology leads to a bridging dilemma. The four kinds of relations proposed by Don Ihde in the phenomenology of human-technology relationship are used to achieve the replacement of the embodiment, the construction of the symbiosis between teachers and digital technology, the replacement of the hermeneutic relationship to help teachers identify the technical "text", the replacement of the alterity relationship to enhance the collaborative ability of teachers and digital technology, and the replacement of the background relationship to stimulate teachers and stimulate teachers' practical innovation. In the intelligent era, based on technology to compensate the "embodiment" to the life transition, to achieve the high-level development of future teacher literacy, one is the cognitive transition: establish a people-oriented education concept, the second is the ability transition: the pursuit of the whole person's self-realization, the third is the emotional transition: adhere to the higher responsibility of life, the fourth is the practical transition: Practice the intelligent teaching of teacher-machine cooperation, and seek a mirror for the symbiotic development of digital technology and teacher literacy in the future.

### **Examination of the Current Status and Enhancement Strategies of Digital Literacy Among Community Education Teachers--An Empirical Study Based on Teachers in S City**

Zhou Cuiping Shanghai Open University

Tao Mengzhu Shanghai Open University

Cao Yan Shanghai Open University

Yang Yinyinzi Shanghai Open University

The level of digital literacy of community education teachers is not only related to their personal professional development and quality of life, but also to the quality and speed of digital transformation of community education. However, few studies have focused on the digital literacy of community education teachers. Based on the industry-standard indicator framework of Digital Literacy for Teachers issued by the Ministry of Education, this study investigated the current status and problems of digital literacy of more than 2,000 teachers in S city through a self-administered questionnaire. The study found that more than half of the community education teachers' digital literacy is at good level and above, but the digital literacy of

community education teachers still needs to be further improved, the digital literacy level of teachers at different levels of instruction is not balanced, the digital learning resources required by community education teachers are generally insufficient, and the systematic, hierarchical, and effective nature of the digital-related trainings still needs to be further improved, and so on.

### **The Basic Logic and Practical Pathways for Digital Technology to Empower the Enhancement of Digital Literacy Among Higher Education Teacher Educators**

Chen Cong HuBei Normal University

Fu Guanghuai HuBei Normal University

With the in-depth advancement of educational digitalization, the construction of digital teaching staff is imminent. In this process, the enhancement of digital literacy of university teacher educators, who cultivate future teachers, is crucial for adapting to and leading this transformation. Based on the Triple Helix theory, a comprehensive analysis is conducted from the government, industry, and university levels. The basic logic of digital technology empowering the enhancement of digital literacy of university teacher educators starts with "government policy support," progresses through "enterprise technical support," and aims at "the main role of universities." Based on this logic, to comprehensively enhance the digital literacy of university teacher educators, it is necessary to outline their professional portraits according to the traces of university teacher educators, and match integrated teacher education resources; to carry out cross-domain cooperative classroom technology innovation and optimize simulated teaching environments; to innovate professional development training strategies for university teacher educators with multiple interactions; and to cultivate their digital literacy leadership with the characteristics of tripartite collaboration, and establish an outcome-oriented assessment system.

### **Research on Digital Literacy Training Paths for Elementary, Middle and High School Teachers in Japan Under the Background of Educational Digital Transformation**

Cui Meihua Yanbian University

Wang Zihe Yanbian University

In the context of the global digital transformation of education and the post-pandemic era, Japan is committed to accelerating the process of digital transformation of education in order to meet the challenges of the "5.0" era. Since 2001, Japan has been promoting educational digital transformation by improving teachers' digital literacy. Subsequently, under the guidance of national policies, the government has accelerated the construction of digital teaching infrastructure. In the pre-service training stage, digital content has been widely integrated into theoretical learning and practical sessions of teacher training courses. Afterward, continuous digital literacy enhancement of teachers is achieved through a combination of online and offline training and a collaborative in-service training mechanism at the national and local levels. Furthermore, national and third-party surveys and school self-evaluation are conducted through the "evaluation-driven reform" approach to promote the improvement of teachers' digital literacy. After years of practice, the overall digital literacy of Japanese teachers has been

steadily improving. This article aims to provide reference for the establishment of digital literacy training pathways in China by analyzing the training pathways for elementary, middle and high school teachers in Japan.

### **Digital Literacy of Applied University Teachers: Connotation, Path and Practice**

Sun Xichao Xingtai University

Wang Huibin Xingtai University

Sun Lulu China Civil Aviation Museum

At present, digitalization empowers the all-round development of higher education modernization, and digital technology deeply integrates with education and teaching. Digital transformation has triggered systematic changes in education. Under the trend of digitalization, education goals, education environment, education duration, school connotation, and curriculum form will all undergo significant changes. In the digital era, application-oriented universities advocate the educational concept of "application orientation and integration of industry and education", emphasizing the practical teaching of "integration of industry, academia and research", and posing new challenges and demands for teachers' digital literacy. From the perspective of enhancing the digital literacy and skills of the entire population, this article analyzes and reveals the contemporary connotation of digital literacy among applied university teachers through literature review and practical work exploration, and explores targeted improvement paths and practical strategies.

### **Capability Development of Adult Educators in the Digital Futures: Anticipating Paradigm Shifts and Cultivating Digital Literacy**

Zan Chen Singapore University of Social Sciences

The prevalence of online learning and Artificial Intelligence (AI) presents a dynamic landscape for teacher education and capability development. This paper explores the essential skills and capabilities that adult educators need to navigate the digital realm effectively. Drawing data from a recent nationwide study in Singapore, this paper provides an overview of the current status of educators' skills and proficiency in relation to their work in training and adult education. It also explores the emerging practice and trends in the use of Artificial Intelligence (AI) in training and adult education, the perceived impact of AI on adult educators' role, workload, income, job quality, work opportunities, as well as current and long-term impact of AI on education institutions, training providers, higher education, and potential changes to the future of education. Additionally, it addresses critical issues and challenges as well as support needed in educator capability development. It proposes potential pathways to leverage on the ecosystem to support boundary crossing and development, thus to strengthen the proficiency and currency of educator skills and capabilities. Finally, it offers practical recommendations for educators, policymakers, and researchers.

## **15 Subject Teacher Burnout and Identity**

### **The Development Dilemma and Solution Path of the Career Resilience of the New Generation of Rural Physical Education Teachers**

Min Hang Beijing Normal University

Hu Ti Beijing Normal University

The occupational resilience of the new generation of rural physical education teachers affects the stability and quality of the rural physical education teachers. How to make rural physical education teachers to maintain continuous enthusiasm and motivation for teaching, and maintain the vitality of rural physical education teachers, has become an unavoidable problem for the professional development of physical education teachers. In this study, semi-structured interviews were used to randomly select 20 new-generation rural physical education teachers. After qualitative situation analysis and category analysis of the interview data, it was found that the career resilience of the new-generation rural physical education teachers was low. Mainly in the inconsistency between teaching and learning makes low job satisfaction; the thought of emphasizing intelligence and neglecting body leads to low identity; high mobility workplace environment, the heart is difficult to determine; economic pressure makes the tendency to leave agriculture obvious. Based on this, it is proposed to improve the professional ability of part-time physical education teachers through precise training, establish an educational concept of all-round development of morality, intelligence, physique, beauty and labor, slowdown the flow rate of the workplace through multi-party coordination, and improve the salary to alleviate the survival pressure of the new generation of teachers.

### **Research on the Influencing Factors and Mechanisms of Professional Identity of Music Education Majors**

Yu Hao China Conservatory of Music

Music education majors are an important reserve force of music teachers in primary and secondary schools. A high level of professional identity can deepen the music education feelings of music education students. A deep understanding of the influencing factors and mechanisms of music education students' professional identity is helpful to put forward targeted strategies for improving professional identity. Based on qualitative interview data from 20 music education students, coded and analyzed through thematic analysis, the study found that the professional identity of music education majors is influenced by four internal factors—professional cognition, professional interest, self-efficacy, and significant experiences—and three external factors—significant others, organizational environment, and sociocultural context. The interaction of these seven factors forms the mechanism that affects the professional identity of music education students. In the context of external factors, significant experiences impact professional identity in two ways: by influencing professional cognition and professional interest on the one hand, and by affecting professional cognition and self-efficacy on the other. To improve the music education majors identify with the music teacher profession but do not want to engage in the profession, we need to cultivate the strength of various parties

and enhance the career intention of the music education majors; To set the example of music teachers and promote the professional status of music teachers in primary and secondary schools; To shape the role consciousness of teachers and strengthen the professional belonging of music education majors; Support career development planning and promote career preparation for music education majors.

### **Emerging Self: A Case Study of the Professional Identity Development of a Discipline-Based Teacher Educator**

Zhu Hongcui Yancheng Teachers University

Yang Yue Nanjing Normal University

This study utilises self-study to investigate the internal progression and processes of the researcher's development from a secondary school teacher to a subject-specific teacher educator. The results indicate that the researcher's professional identity experienced four phases of conflict and evolution: "entry," "presence," "competition," and "integration." The formation of professional identity transpires via the synergistic interaction of four-dimensional mechanisms involving "cognition-emotion-adjustment-norms." Developing continuous cognitive systems, enhancing emotional resonance, nurturing adaptive thinking, and promoting continual reflection may aid in the formation of subject-specific teacher educators' professional identity. This will facilitate the transition of teacher educators' roles, stimulate their professional passion, address value conflicts, and encourage norm reconstruction.

### **A Latent Profile Analysis of Burnout Among Primary and Secondary School Mental Health Education Teachers in China**

Liu Wei Guizhou Normal University

Teachers are at high risk of burnout, which also has an impact on student development by affecting teachers' work engagement and physical and mental health. However, as the maintainers of primary and secondary school students' mental health, the primary and secondary school mental health education teachers' burnout has received less attention. Therefore, this study applied Teacher Burnout Inventory, Work Engagement Questionnaire, and the General Health Questionnaire as survey instruments to collect data from 2,367 primary and secondary school mental health education teachers, and latent profile analysis (LPA) was used to analyze the data.

The results showed that there were five types of burnout among primary and secondary school mental health education teachers, and their naming and number percentages were low burnout (16.2%), emotionally engaged (11.0%), moderate burnout (34.6%), emotionally depleted burnout (20.2%), and higher burnout (17.9%), respectively.

Using BCH method with work engagement as the outcome variable, the results showed that the differences in work engagement among teachers of all five burnout types were significant ( $\chi^2 = 719.05$ ,  $p < 0.001$ ), as evidenced by the fact that the low burnout type had the highest work engagement ( $M = 6.21$ ). Specifically, the low burnout type had the highest work engagement ( $M = 6.21$ ), the emotionally engaged type had the second highest ( $M = 5.91$ ), the moderate burnout type had the third highest ( $M = 5.27$ ), emotionally depleting burnout was



ranked fourth ( $M = 4.98$ ), and the higher burnout type had the lowest work engagement ( $M = 4.52$ ).

The results of using the BCH method with general health as the outcome variable showed that all five burnout types of teachers differed significantly in their mental health ( $\chi^2=1692.96$ ,  $p<0.001$ ). Specifically, teachers in low burnout type had the lowest mental problems ( $M = 1.42$ ), the next lowest was moderate burnout type ( $M = 1.75$ ), the third was the group of emotionally engaged type ( $M = 1.98$ ), the fourth was the type of emotionally depleting burnout ( $M = 2.23$ ), and the higher burnout group had the highest mental problems ( $M = 2.30$ ).

Consequently, measures need to be taken to help primary and secondary mental health education teachers reduce burnout. Particular attention should be paid to two groups of teachers, the emotionally depleting burnout type and the higher burnout type.

### **A Conceptual Analysis of Teacher Identity: Based on a Multidisciplinary Review of Identity**

Chen Jun Chongqing Normal University

Identity is closely related to individuals' value realization and meaning construction, which has become a wide concern in multidisciplinary fields. Numerous studies on teacher identity have been conducted in the field of education for teacher retainment, and professional development; however, conceptual ambiguity and generalization have hindered its implication in practice. Based on a systematic literature review of identity in the multi-disciplines, this study examines the evolution of identity and clarifies its characteristics. Subsequently, it provides a conceptual analysis of teacher identity. The study reveals that research on identity from the perspectives of philosophy, psychology, and sociology has undergone an evolution of understanding from essentialism to constructivism and then postmodernism. Contemporary research on identity focuses on the reflective construction and reconstruction of identity in individual-social interactions. The findings of this study contribute to a deeper understanding of teacher identity and provide references for enhancing teacher identity in practice.

## **The Development of Professional Identities of Beginning English Literature Teachers in Tanzanian Lower Secondary Schools**

Fortunatha Lawrence Mtesigwa Beijing Normal University

Ye Juyan Beijing Normal University

This study examines the professional identity development of beginning English Literature Teachers (ELTs) in Tanzanian secondary schools. Examining the professional identity development of beginning English literature teachers is crucial because it is their journey of self-discovery, success, and establishing a strong foundation for their teaching practices and professional growth. This study was guided by Wenger's theory of Community of Practice (CoP) which offered a robust framework for examining the professional identity development of beginning English literature teachers in Tanzanian secondary schools. Methodologically, this qualitative study employed narrative inquiry with in-depth interviews and observations as the methods of data collection. This study was conducted in Geita region, Tanzania. The data extracted from the narratives of the five participants revealed that beginning English Literature teachers in Tanzanian secondary schools underwent four stages of their professional identity development including Legitimate Peripheral Participation (LPP), mutual engagement in the digital community of practice fostered by peer literature teachers through WhatsApp groups, shared repertoire of resources, and belonging in a joint enterprise. Therefore, the evolution of the professional identity of English literature teachers in Tanzanian lower secondary schools is dynamically supported by the technology-enabled CoP, where beginning teachers transition from peripheral participants to more central figures within the community of practice. Moreover, the study underscores the importance of language policy in classroom instruction, teachers' educational backgrounds, and teachers' professional learning communities that exemplify how technology can bridge the gap of insufficient knowledge to enhance their practice and self-efficacy. Moreover, the study adds to the growing body of knowledge on developing teacher identities according to sociocultural contexts and provides educators, decision-makers, and academics with theoretical and practical insights.

## **16 The Theoretical Research of Subject Teacher Educator**

### **The Diachronic Picture, Evolutionary Logic and Continuation Path of Rural Teacher Educator Spirit**

Mao Ju Xinjiang Normal University

Zhang Jiwei Xinjiang Normal University, Shihezi University

The spirit of rural teachers and educators constitutes a vital component of the broader ethos of Chinese educators, serving as a tangible representation of the rational qualities exhibited by exemplary rural teachers. Utilizing the three-level coding principle inherent in grounded theory, an analysis of the 'Rural Teachers' Oral History Series' reveals that the spirit of these educators has undergone significant historical transformations characterized by phases such as 'building the countryside for national development,' 'educating in rural areas,' and 'revitalizing rural communities while upholding truth.' In terms of evolutionary logic, this spirit consistently aligns with a shared spiritual orientation guided by ambition, driven by consciousness as its primary motivator, and anchored in love as its foundational core. From a perspective of change, the spiritual landscape for rural teachers has shifted from 'connection to rural education' to 'alienation from it,' while their spiritual soil has transitioned from a focus on subjective dimensions to other-oriented dimensions. In this new era, the spirit of rural teachers faces challenges including: 'the lack of practical engagement limiting cognitive depth,' 'diminished local sentiments weakening emotional ties,' and 'insufficient developmental beliefs obstructing behavioral practices.' Consequently, fostering cognitive spaces, rekindling emotional memories, and shaping behaviors are essential for nurturing the enduring spirit among rural teachers and educators.

### **The Autonomous Knowledge System of Chinese Teacher Education Discipline: Conceptual Framework, Value Analysis, and Construction Pathways**

Xu Peiyuan Beijing Normal University

The autonomous knowledge system of Chinese teacher education discipline is not only an integral part of the autonomous knowledge system in Chinese philosophy and social sciences, but also a core prerequisite for the construction of a high-quality teacher education system with Chinese characteristics. This paper focuses on three key issues: "What is the autonomous knowledge system of Chinese teacher education discipline?", "Why should we pay attention to the autonomous knowledge system of Chinese teacher education discipline?", and "How can we construct the autonomous knowledge system of Chinese teacher education discipline?" It proposes both broad and narrow frameworks for this knowledge system, conducts an in-depth analysis of its policy, theoretical, and practical values, and outlines four construction pathways: localization, subjectification, systematization, and interdisciplinarity.

## **Ideological and Political Teacher Education: Connotation, Value, and Path**

Li Yan Beijing Normal University

In the context of further deepening reform and promoting Chinese path to modernization, ideological and political teacher education has become an important theoretical and practical proposition. Ideological and political teachers are the core subject of conducting ideological and political education activities, and their competence is a key factor in promoting the high-quality development of ideological and political education. The new historical stage endows ideological and political teacher education with new connotations, reflecting the contemporary value of activating the main driving force of ideological and political education development, enhancing teachers' ability to respond to educational challenges, and the significance of national reform and development goals. To enhance the practical effectiveness of ideological and political teacher education, it is necessary to strengthen the top-level design of ideological and political teacher education, optimize the training system, and gather support to jointly assist in the construction of a strong education country with Chinese characteristics and achieve the in-depth development of Chinese style education modernization.

### **Thinking Like an Expert: Pathway Representation and Influencing Factors of Teachers' Knowledge Boundary- Crossing**

Bai Songtao Zhejiang University

Boundary-crossing of knowledge refers to the learning behavior of teachers who cross the boundaries between different knowledge fields for the purpose of professional growth. By thinking like subject experts and education experts, teachers grasp the original experience and production logic of knowledge, and transform it into pedagogical discourse through design and practice. Teachers' self-efficacy, literacy-oriented view of students, and the community mechanism of teaching and research are important factors affecting the completion of boundary-crossing. The boundary-crossing theory can describe the path of teachers' knowledge-boundary crossing, but the narrative study of teachers from M school found that teachers' choices of knowledge boundary-crossing path have a complex and flexible performance. Individual experiences are gradually hidden in the process of boundary crossing, and no longer directly bear the function of teaching reproduction; there may be a binary risk of "which is more important" between educational knowledge and subject knowledge; The tension between "pursuit of innovation" and "effective practice" in training community makes teachers often vacillate between "hesitation" and "breakthrough".

## **The Confusion and Way Out for the Development of Subject Theory Teachers in Normal Universities**

Yan Jianzhang Shanxi Normal University

The development of University teachers are teachers' self development and self improvement. Its connotation includes to raise the academic level of occupation, the development of teachers' knowledge and skill and moral enhancement. the Necessity of the development of University teachers lies in the rapid development of science and technology, the accelerating update of knowledge and the popularization of higher education, At present, The Confusion subject Teachers are facing is the problem of belonging, the disconnection between theory and practice, the marginalized situations of academic research. The Effective Strategies to Promote the Sustainable Development of Subject Teachers are the following: To position subject teachers in correct field; To improve the professional level of subject teachers continuously; To strengthen links with basic education

### **Teachers' Roles in Interdisciplinary Teaching from the Perspective of Integration of teaching, learning and assessment:Expectation-Dilemma-Generation**

Jin Panpan Capital Normal University

Wang Qiang Capital Normal University

Interdisciplinary teaching require teachers to fulfill their role functions. Research has shown that interdisciplinary teaching practice is an integrated process of teaching, learning and assessment. Therefore, teachers' role behavior depends on the unity of all three. This paper points out the teachers' role expectations of interdisciplinary teaching, in which teachers are the decision makers of interdisciplinary thematic programs and the coordinators of interdisciplinary cooperation; the facilitators of collaborative learning and the guides of self-regulated learning in students' learning activities; and the feedback monitors and the reflective researchers in the evaluation activities. Teachers may face role dilemmas such as ambiguity in role perception, behavioral conflict and emotional anxiety of roles in their interdisciplinary teaching practice according to *Role Theory*. By coordinating the organic linkages between the individual, school and social considerations, we can help teachers relieve role-related dilemmas in interdisciplinary teaching practices and facilitate shaping of their roles.

## **17 Promote Professional Development of Subject Teacher through Research**

### **Project-based Teaching Leads the Innovative Path of Professional Development for Labor Education Teachers**

Liao Wen South China Normal University

The results of the quality monitoring of labor education in high schools across a province reflect a "weak positive correlation" between labor teaching evaluation and reflection, labor field configuration, sense of labor learning efficacy, the research and teaching situation of labor teachers, teaching strategies in labor classes, teachers' ability to implement labor courses, parental support for traditional education on-site, and the development of students' labor literacy. The correlation analysis between the indicator of students labor homework amount and the development of students' labor literacy shows a "weak negative correlation". This poses a "soul-searching" question for labor teachers on how to effectively carry out labor education.

This article will explore labor education from the perspectives of field theory and grounded theory. Based on face-to-face semi-structured interviews with multiple labor education teachers, it analyzes the current "distorted" phenomena in labor education and the problems of students' disconnection between labor literacy and actual practice, as well as the mismatch between emotions and intelligence. It reveals the basic dilemmas faced by labor education at present: the professional development path for labor education teachers has not been fully constructed; labor education is mainly carried out by teachers, and the role of society and families has not been fully utilized to achieve a synergy effect; there are deficiencies in mechanism construction, and the construction of educational goals, curriculum design, assessment systems and so on. They all still need to be strengthened; learning methods are outdated, and the disconnect between teaching and practical application make it difficult to truly cultivate students' labor literacy.

In the context of integrated education, this study examines the practice path and strategies of implementing project-based teaching by teachers in labor education. Through the integration of school, family, and society, interdisciplinary integration, and learning mode integration, it aims to implement the key tasks of integrated school-family-society, labor education innovation, and integrated assessment reform in the new era of education reform. It seeks to enhance students' labor literacy and construct an innovative path for the professional development of labor education teachers.

## **Preliminary Exploration into the Mechanism of Novice Major Teacher Educators' Professional Development: From the Perspective of Self-Study**

Zhu Chenfei Nanjing Normal University

Jin Min Nanjing Jianye District Teacher Development Center

This study takes two comparable novice mathematics teacher educators (that is the authors of this study, i.e. "we") as research subjects, and uses our ongoing self-reports of our first two years professional career as research materials. Using narrative inquiry as the research method, this study analyzes and compares critical incidents about our professional practice around four aspects centered on middle school mathematics: researching about teaching, teaching mentoring, setting examinations and assessing their results, and teacher training. Combined with the staged achievements in our professional growth, we try to gain insights into a possible mechanism for the professional development of novice major teacher educator. The findings are as follows: From the perspective of the process of our development, responsibility awareness, knowledge and ability supplement, alternative experience, and knowledgeable others are key factors that promote our development. Action research, cross-over cooperation, using examples to illustrate principles, and self-breakthroughs are crucial ways to promote our development. Efficacy, belonging, curiosity, and feedback are the potential forces that support our development. The heavy responsibility on our shoulders, the limitation of knowledge and ability, and the crisis of decision-making are more likely to stimulate our development. The combination of theory and practice, the mutual growth of teaching and researching, and the integration of knowledge and action are the reasons for achieving our development. From the perspective of the result of our development, our development is mainly reflected in the growth of professional knowledge, professional in-the-moment tact, and professional beliefs. The enhancement of professional agency is both the prerequisite and the result of our development. Our professional developments are reflected in the improvement of our reasoning ability, judgment ability, adaptability, creativity, organizational ability, and reflective ability based on our experience in the process of professional practice.

## **The Rationale for and Interpretation of Professional Competency Standards for University Foreign Language Teachers**

Zhang Hong Beijing Foreign Studies University

The professional competency of university foreign language teachers includes nurturing competency, disciplinary competency, teaching competency, research competency, digital competency, and learning competency. These six competencies are interconnected, mutually reinforcing, yet distinct from each other, jointly forming the specific indicators of foreign language teachers' professional competency. This article first introduces the rationale for establishing the professional competencies of university foreign language teachers and the relationship among them. It then focuses on interpreting the connotation of professional competencies from the perspectives of four constituent elements, namely correct values, core knowledge, key abilities, and indispensable character traits. Finally, it provides suggestions for the use of the teacher professional competency standards.

## **Integrated Teaching Videos and Teacher Feedback: Instructional Design to Improve Pre-service Teachers' Putonghua Language Competence**

Kou Zhihui The Chinese University of Hong Kong

To enhance the Putonghua language competence of pre-service Chinese language teachers in Hong Kong's primary and secondary schools, we combined the Putonghua Proficiency Test (PSC) syllabus with the Hong Kong Examinations and Assessment Authority (HKEAA) requirements for assessing language use in Putonghua classroom teaching. Leveraging the Padlet teaching platform, students uploaded recordings for evaluation, including reading aloud, speaking, and simulating classroom teaching. Professional Putonghua assessors provided feedback.

Teacher feedback plays a crucial role in language instruction. Written feedback tends to be more explicit, while oral feedback combines both explicit and implicit elements. Our plan is to further enhance students' Putonghua application and examination skills by integrating written and oral feedback from teachers, along with supplementary instructional videos.

Research findings reveal that students make errors in Putonghua pronunciation, vocabulary usage, and grammar norms. Additionally, they lack familiarity with colloquial expressions in spoken language and conversational skills. Based on student perceptions of assessment results, teacher feedback, and video applications, we aim to optimize assessment design and feedback strategies. This will improve the effectiveness of Putonghua teacher training and foster self-assessment and peer evaluation skills among pre-service teachers.

### **How do Past Learning Experiences Influence Science Pre-Service Teachers' Teaching Efficacy and Beliefs? -- An Interpretive Mixed Study Based on 64 Science Pre-Service Teachers**

Yang Yuhong Beijing Normal University

Liang Disi Beijing Normal University

Gao Xiaoyi Beijing Normal University

#### **INTRODUCTION**

The quality of science teacher education is crucial for the development of national science education and the strategy of revitalizing the country through science and education. In recent years, there has been a shift in teacher education models that emphasizes teacher-centered and experience-focused approaches, recognizing teachers' learning experiences as important educational resources. However, research in this area is scarce in China, and there is a lack of understanding of the past learning experiences of pre-service science teachers. This study aims to explore the types of scientific learning experiences among Chinese pre-service science teachers and their impact on teaching efficacy and beliefs, as well as to discuss how to utilize these experiences effectively to facilitate the development of pre-service teachers.

#### **METHODS**



A two-stage, sequential explanatory mixed methods design was adopted, involving 64 pre-service science teachers. The first stage collected quantitative data to measure teachers' teaching efficacy and beliefs; the second stage gathered qualitative data, specifically teachers' personal scientific autobiographies, requesting recollections of K-12 learning experiences. Adapted STEBI (Science Teaching Efficacy Belief Instrument) scales and DASTT-C (Drawing Animated Science Teacher Test - Computer version) tools were used for analysis.

#### FINDINGS

(1) In the autobiographies of elementary-level science learning experiences, only pre-service teachers in the high-efficiency and high-beliefs group recalled their elementary science education positively and with interest. Conversely, the recollections of the other three groups were predominantly negative or unimpressive, with the low-efficiency and low-beliefs group expressing particularly strong negative attitudes.

(2) In the autobiographies of secondary-level science learning experiences, all four groups of pre-service teachers reported a mix of positive and negative experiences. However, significant differences emerged in their attitudes towards these narratives. High-efficiency and high-beliefs pre-service teachers did not express repulsion or disgust at the increasing difficulty of secondary school science. Some even reflected on this challenge positively, viewing it as an opportunity for achievement and deeper understanding.

(3) Pre-service teachers' conceptualizations of their future science classrooms were heavily influenced by their secondary school science experiences. In a between-group comparison, those with high teaching beliefs (Groups 2 and 4) often remembered hands-on experiments as a key component of their secondary science education. In contrast, those with low teaching beliefs (Groups 1 and 3) described secondary science as theoretical and memorization-based. Groups 1 and 3 also tended to depict teacher-centered classrooms in their visions of future science classrooms, suggesting a correlation with their secondary school experiences.

(4) Past science teachers significantly influence most pre-service teachers' attitudes toward science. Additionally, pre-service teachers' autobiographies highlighted multiple sources of influence, including informal science learning experiences. Positive, diverse, and in-depth science learning experiences likely contribute to the development of their pedagogical efficacy and beliefs.

#### CONCLUSION

Pre-service teachers possess unique science learning experiences and beliefs. Teacher educators should provide more opportunities for reflection and narrative, helping pre-service teachers build positive teaching efficacy and beliefs, and mitigate the negative impacts of past experiences. This requires further research and exploration by teacher educators.

## **A Qualitative Study on How Teachers' Perceptions of School Climate Affect Classroom Teaching Actions.**

Huang Xiaolin Xi'an University

The perception of school climate by teachers influences their understanding and recognition of classroom teaching activities, which is a significant perspective for understanding teachers' teaching actions. This study selected two primary school mathematics teachers as research objects and collected research data through pre-lesson interviews, classroom observations, and post-lesson interviews, comparing the teachers' classroom teaching views in their teaching design, teaching setting, and actual teaching activities. The study explored how teachers' perception of school climate affects specific teaching actions. The research found that teachers' self-evaluation of teaching focuses more on whether the teaching process is smooth than on guiding students' learning. They pay more attention to teaching task progress than students' learning processes. The underlying reason is that teachers' understanding of the purpose and value of classroom teaching, influenced by the school climate, is inconsistent between value rationality and instrumental rationality. It even sees value rationality as giving way to instrumental rationality. The school climate silently affects their professional identity recognition, and the teaching values formed are obscured in teachers' professional identity recognition, which affects their classroom teaching activities

## **18 Research on Discipline Teacher Accomplishment in the New Era**

### **Construction and Empirical Research of Interdisciplinary Literacy Assessment Model for Middle School Geography Teachers**

Chen Jieying Beijing Normal University

The "Compulsory Education Curriculum Plan (2022 Edition)" calls for the implementation of interdisciplinary thematic teaching. The lack of interdisciplinary literacy among teachers is one of the significant reasons for the ineffective implementation of interdisciplinary teaching. Possessing interdisciplinary literacy is fundamental for primary and secondary school teachers to engage in interdisciplinary thematic learning. Current research on teachers' interdisciplinary literacy mainly focuses on curriculum design for interdisciplinary thematic learning oriented towards core competencies, analysis of foreign interdisciplinary concepts, and the value pathways of interdisciplinary thematic learning. However, there is still a lack of rich research on the cultivation of teachers' interdisciplinary literacy, and the construction of models for teachers' interdisciplinary literacy specific to subject areas remains a blank slate. Promoting the development of teachers' interdisciplinary literacy, enabling them to truly possess interdisciplinary teaching capabilities, is a key issue in building a new era of innovative and modern teacher teams. The subject of geography, with its comprehensive and practical nature, has stronger value for interdisciplinary curriculum design. Therefore, this study aims to enhance the interdisciplinary literacy of geography teachers. It conducts a coding analysis of interview materials from geography teachers and geography teaching researchers to extract the constituent elements of interdisciplinary literacy for secondary school geography teachers, constructs an assessment model for their interdisciplinary literacy, and utilizes this model to evaluate the level of interdisciplinary literacy among secondary school geography teachers.

### **Core Competency, Growth Process and Development Motivation of the District/County-level Educational Researcher Staff --Model Construction Based on Grounded Theory**

Jiang Mingju Beijing Normal University

Song Huan Beijing Normal University

The district/county-level educational researcher staff are special groups active in the field of basic education in our country. Different from the teaching and researcher staff, expert teachers and professors, they make the role of bridge in transformation of educational practice and education theory, and are the practical teacher educators. It is significant to pay attention to the professional development of district/county-level educational researcher staff to improve the Educational scientific research quality of Primary and secondary school teachers. This paper intends to use the research method of grounded theory to conduct in-depth interviews with district/county-level educational researcher staff, conduct text analysis of the interview data, and extract the three core categories of "Core Competency", "Growth Process" and "Development Motivation" by means of open coding, spindle coding and selective coding.

Based on this, the research findings are presented from the aspects of competency indicators, growth stage and key motivation of district/county-level educational researcher staff.

### **Constructing an Observation Scale of Classroom Evaluation Literacy for Secondary School Chemistry Teachers: An Example of a Prospective Chemistry Teacher's Microteaching of "Chemical Equilibrium"**

Li Honglin Central China Normal University

Zhang Xingpeng East China Normal University

Zhang Wenhua Central China Normal University

Shi Huanting Central China Normal University

This study aims to explore the development of classroom assessment literacy in pre-service chemistry teachers and its influencing factors. By constructing an observation scale based on the ACAI evaluation framework, this study conducted an in-depth analysis of the performance of a pre-service chemistry teacher in micro-teaching training. The study found that pre-service teachers performed weakly in the evaluation process dimension, lacking control over the evaluation process and awareness of student participation in evaluation. The development of the evaluation fairness dimension was slow, with a single evaluation language and a lack of attention to individual differences among students. The study revealed the deficiencies in the classroom assessment literacy of pre-service teachers and provided tools and cases for the development of chemistry teacher education curriculum content and in-service teacher evaluation practices, which is of great significance for improving teaching quality.

### **Exploring Factors Influencing Student Teachers' Pedagogical Innovativeness in the Context of Large Language Models**

Li Tao Beijing City University

The development of large language models has created higher requirements for developing pedagogical innovativeness of student teachers to promote high quality teacher education. This study made a survey on 396 student teachers majoring English education to explore the factors that influence their technological innovativeness within the context of large language models. Path analysis found that constructivist pedagogical beliefs influenced student teachers' technological innovativeness directly and indirectly mediated by perceived usefulness. Behaviorist pedagogical beliefs showed a significant impact on student teachers' technological innovativeness mainly mediated by perceived usefulness. General innovativeness showed little impact. The study provided some suggestions on teacher education by restructuring curriculum, promoting the implementation and evaluation of student teachers' practicum teaching to develop their innovativeness within the context of large language models.

## **Chinese Teachers' Understanding of the National Cultural Image of Textbooks and Their Adaptation Strategies**

Sun Caiwen Northeast Normal University

As an important part of national image, "National Cultural Image" is the institutionalized result based on cultural theory and cultural phenomenon. The National Cultural Image in Chinese textbooks is shaped externally by the deep structure of national cultural ideas and internally by the comprehensive judgment of students' personal cultural understanding, and has the characteristics of intertextuality. Chinese teachers' understanding and adaptation of the national cultural image of textbooks directly affect students' perception and practice. According to the relevant theories of culturology and textbook science, the process of Chinese teachers' understanding of National Cultural Image in textbooks can be divided into five stages: "onfirming - deconstructing - deep describing - constructing - expressing". In order to realize the true implementation of the National Cultural Image of textbooks, Chinese teachers need to combine the institutional spirit at the national level, the discourse system at the textbook level, and the value identification at the student level, and properly deal with the relationship between grand narrative and symbolic representation, perceptual capture and rational speculation, logical sorting and experience generation. The construction of the national cultural image of textbooks can be adapted to the development of students' Chinese Key Competences.

## **Research on the New Pattern of Key Competences-Oriented Digital Classrooms: A Case Study of English Subject Practice in Chongqing High-tech Zone's "Five-Learning Classroom" Smart Education Initiative**

Zhang Yunjian Chongqing High-tech Zone Education Affairs Center

Classrooms play a crucial role in implementing new curriculum standards and driving the digital transformation of school education. Chongqing Hi-Tech Zone's smart education initiative focuses on human intelligence, technological intelligence, and ecological collaboration. Building on innovative practices in this program, this study utilizes the digital transformation of teaching to promote quality and equitable development in education. It aims to reconstruct teaching practices based on the new curriculum standards and to develop data-intelligence classrooms characterized by Problem-based Learning, Contextual Learning, Collaborative Learning, Assessment for Learning, and Digital Assisted Learning. The Five-Dimension Classroom is expected to be a key factor in transforming teaching relationships and promoting the implementation of core competencies in the context of new smart education. Additionally, the study aims to provide subject-specific ideas and practical examples of operating data-intelligence classrooms to frontline teachers, serving as a valuable reference for those involved in classroom transformation.

## **19 Training Strategies and Development Paths of Subject Teachers in Multiple Contexts**

### **Learning of Non-University-Based Teacher Educators in Interdisciplinary Research Community: Insights from China**

Wang Zhaoxuan University of Macau

Wang Kailun University of Macau

Yuan Rui University of Macau

Li Mo University of Electronic Science and Technology of China

Informed by a conceptual framework on teacher educators' learning, this study seeks to explore the learning experiences and outcomes of 46 subject-based non-university-based teacher educators (NUBTEs) who conducting collaborative action research within a professional development program in China. Utilizing data collected from individual and group interviews, field observations, and various documents such as reflective journals, research logs, and final reports, the study identified three key ways through which NUBTEs learn: 1) Teaming up and inquiring into practical teacher education problems; 2) Reconciling disparities emerge from research activities; 3) Envisioning a "better" research-empowered teacher educator. This study emphasized the interactive nature of NUBTEs' engagement, alignment, and enactment within interdisciplinary research community, which stimulated their imagination in applying enhanced research abilities or research findings to teacher education practices. However, challenges such as insufficient theoretical knowledge and research training hindered their research progression. The facilitation provided by NUBTEs, along with their creation of cognitive dissonance, encouraged NUBTEs to improve their understanding of research and advance in completing their projects. As a result, NUBTEs from diverse academic backgrounds enhanced their research skills and attitudes and deepened their comprehension of subject teaching and teacher education. The study concludes with practical implications for NUBTEs to enact research abilities by guiding teachers' research within their schools or leading collaborative research projects in specific subjects or interdisciplinary areas.

### **Reflections on the Nature of Subject Teachers' Assessment Knowledge from the Perspective of a New Knowledge Production Model**

Li Xiao Harbin Normal University

Assessment has the function of facilitating student learning, but it can also be a significant impediment to student learning. Whether assessment can realize the function of promoting learning depends largely on teachers' assessment knowledge. Existing research on the ontological level of teachers' assessment knowledge mainly focuses on the exploration of its connotation and constituent elements. This paper argues that teachers' assessment knowledge is more specific than subject knowledge, and that revealing its specificity is the "upstream issue" of exploring how to develop teachers' assessment knowledge. This paper jumps out of the existing research ideas, traces the roots of the new mode of knowledge production, examines

the essential attributes of teacher evaluation knowledge, such as interdisciplinarity, problem orientation, heterogeneity, and reflexivity, and sorts out its production body, production field, production process, dissemination channels and dissemination mode, and discusses its unique evaluation standards.

**Research on the Growth Pathways of Outstanding Physical Education  
Teachers from the Perspective of Marxist Humanism: A csQCA  
Analysis Based on 40 Cases**

Zhuo Zhenmei   Central China Normal University

Dong Guoyong   Central China Normal University

Liu Te   Central China Normal University

Promoting the construction of a high-quality, specialized and innovative teaching force with outstanding physical education teachers is an important strategic support for building a strong educational country. Based on the Marxian anthropological perspective, this study selects 40 typical cases of the growth of outstanding physical education teachers as analysis samples, and applies a clear set of qualitative and comparative analysis methods to reveal the causal relationships and effective grouping paths between different combinations of spiritual needs, teacher-student relationships, family-society relationships, physical education teaching, extracurricular activities, training competitions, and willfulness, as well as the growth of outstanding physical education teachers. The study found that high-level physical education teaching is a necessary condition for the growth of excellent physical education teachers, and it is organically combined and synergistically linked with other elements to form five kinds of developmental patterns: all-factor aggregation type, internal and external coupling type under the concurrent progress of teaching and activities, need-driven type under the excellence of teaching, optimization of relationship under the excellence of teaching and "coaching and competitions" comprehensive development type. The five driving paths are "Coaching and Racing" and "Comprehensive Development". Accordingly, it is proposed that the growth revelation of outstanding physical education teachers: (1) consolidate the foundation of the implementation of the whole path: deepen the professional competence of physical education teachers with the learning community; (2) improve the support structure of the labor-led path: optimize the growth environment of physical education teachers with multi-source educational resources; (3) optimize the empowering method of the relational path: construct a symbiotic relational network with the collaborative nurturing of family, school, and community; and (4) focus on the higher-order demands of the need-based path: optimize the growth of teachers with the (4) Focusing on the higher-order needs of the need-based path: anchoring the coordinates of outstanding growth with ideals and beliefs.

## **20 Subject Teacher Training and Development**

### **Research on the Construction of Integrated and Infiltrated Training Model for Primary and Secondary Schools Ideological and Political Course Teachers**

Hao Guoqiang Beijing Haidian Teachers Training College

Based on the theory of integrating ideological and political courses in universities, secondary schools and primary schools and the ecological turn of teacher development, a "five dimensional integration, three layer infiltration" training model for primary and secondary schools ideological and political course teachers has been explored through deep cooperative training practices with several universities, effectively promoting the integrated training of ideological and political course teachers in universities, secondary schools and primary schools. "Five dimensional integration" refers to the integration and connection between the teaching stage and the development stage, the integration and improvement of teacher ethics and professional abilities, the integration and blend of subject knowledge and teaching skills, the integration and linkage of centralized learning and group communication, and the integration and coordination of learning reflection and transformation application; The "three-layer infiltration" refers to partner infiltration, curriculum infiltration, and cultural infiltration.

### **School Counselors: Necessity, Urgency, and Connotation**

Wang Xiao Beijing Normal University

School counselors are vital support forces for students' academic, career, and personal and social development. This paper discusses the necessity, urgency, and connotation of school counselors. Firstly, it explores the necessity of school counselors. School counselors are essential in the modernization of education and the cultivation of high-quality talents; they serve as a practical path for building a high-quality education system and accelerating the transformation of educational methods; they are crucial measures to promote students' comprehensive development and enhance their physical and mental well-being. Secondly, it discusses the urgency of school counselors. The psychological issues of students during social transitions have attracted great attention from the Party and the country; intensifying international competition calls for the establishment of professional school counselors in primary and secondary schools; and the psychological teacher workforce in China faces multiple challenges in terms of quantity, quality, and other aspects. Finally, the paper delves into the connotation of school counselors from historical, policy, ontological, and functional perspectives.

### **A Myth of Teachers' Professionalization? --A Latent Semantic Analysis on French Teachers' Policies Since 2000**

Ganfen Xiang Sorbonne Université

A myth of teachers' professionalization? --A Latent Semantic Analysis on French Teachers' Policies since 2000 The objective of this paper is to examine whether the professionalization of teachers has effectively contributed to the enhancement of educational



quality and reduction of educational inequalities. Beginning from the reform of the French teacher training institutions in 1989, the professionalization of teachers in France has incited debates between "republicans" and "pedagogists". Objectively, the reformed teacher training institutions have produced a larger number of teachers to meet the demand for mass education, but this has led to paradoxical outcomes under the banner of democracy. Employing latent semantic analysis (LSA) on policy documents related to "teachers" in France from 2000 to 2023, the results reveal that: (1) France adopts a problem-oriented policy-making approach. (2) A managerial turn emerges: reforms of professionalization are initiated and driven by administrative powers, and the role of teachers is transformed from academic instructors to task-skills-oriented professionals. (3) Professional competence now defines the new teacher professional identity. (4) Teaching is student-centered, moving the mission of education from disciplinary, lecture-based knowledge transfer to facilitating and motivating students' independent learning through activities. In the context of decentralization in French educational system, the professionalization of teachers also intensified feelings of degradation among teachers and accelerated the outflow of qualified teachers from educationally disadvantaged areas. Moreover, the learning process increasingly relies on the individual intelligence and family cultural capital of students. This paper highlights that distancing ourselves from the official discourse, behind the apparent consensus, the movement towards teachers' professionalization can both renew and widen educational equalities.

### **Unpacking MATESOL Students' Self-Regulated Learning Strategy Use in an EAP Course**

Zhang Hong Beijing Foreign Studies University

Li Runyi Beijing Foreign Studies University

Liao Wei Beijing Normal University

This study investigates how Chinese postgraduate students in a Master of Arts in Teaching English to Speakers of Other Languages (MATESOL) program used self-regulated learning (SRL) strategies in an English for Academic Purposes (EAP) course featured with an innovative, immersion-based instructional approach and how the students developed their SRL strategies in this course. Data included the reflections of three participants, their reading notes and PowerPoint slides used in the course, and responses in semi-structured interviews. The findings revealed that the participants used various SRL strategies, including setting learning goals, strategic planning, enacting learning plans, attributing causes, and adapting their behavior with sustained monitoring, reflection, and self-evaluation. These strategies were closely linked to the innovative instruction used in the course, which was characterized by clear goals, high-quality materials, inquiry-oriented procedures, collaborative learning tasks, and comprehensive evaluation. Implications for future research and recommendations for EFL teachers aiming to cultivate students' use of SRL strategies are proposed and discussed.

## **21 Teacher-Student Feedback and Emotional Interaction in Classroom Teaching**

### **The "Chinese Portrait" of Elementary Social-Emotional Learning Classroom Teaching through the Lens of Global Teaching Insights**

Zhu Han East China Normal University

Song Shuoqi State University of New York at Buffalo

Ruan Linyan Beijing Union University

The exploration of the "black box" in classroom teaching serves not only as a pivotal tool for fostering individual teacher reflection but also as a necessary pathway for converting innovative educational concepts into effective teaching practices. With the advancement of digital technologies, video analysis presents expansive opportunities for large-scale educational surveys and assessments of teaching quality. Utilizing the OECD's Global Teaching Insights (GTI) coding system, this study analyzes 21 routine video recordings from an elementary school in China to assess the quality of social-emotional learning (SEL) classroom instruction. The findings reveal a high degree of uniformity and balance across classrooms in overall performance. In terms of classroom management, teachers focus on creating well-ordered, disciplined environments with continuous student engagement. Social-emotional support is characterized by teachers intentionally providing respect, encouragement, warmth, and patience. In the instructional domain, classroom dialogues and assessments based on student understanding are notably advanced, whereas the quality of subject content is moderate, and student cognitive engagement is relatively low. Based on these findings, several recommendations are proposed for optimizing SEL classroom teaching in Chinese elementary schools.

### **Crossing the Teacher-Student Mental Gap through Embodiment:**

#### **A Case Study of Embodied Pedagogy for the Development of Teachers' Empathy**

Liu Qiaohui Beijing Normal University

Pei Miao Beijing Normal University

Teachers' empathy is important for teachers' moral development and students' overall development, but it is difficult to find appropriate teaching methods in the field of teacher education. This study advocates that embodied pedagogy can be an innovative approach to improve teachers' empathy. We designed and implemented an embodied pedagogy course and collected process based mixed data to verify its effectiveness. The research results show that embodied pedagogy is effective in enhancing teachers' empathy, and that the "embodiment" and "contextual" nature of embodied pedagogy is consistent with the psychological and neural mechanisms of teachers' empathy, and can provide teachers with all-round training from empathic attention, experience to action. The mechanism of the impact of embodied pedagogy on teachers' empathy lies in the fact that "embodiment" bridges the gap from "self" to "others",

which mainly involves three levels: pre-service teachers form a subjective consciousness by perceiving the body, which lays the foundation for empathy; they perceive students' body cues to facilitate the occurrence of empathy; and they express empathetic behaviors through body metaphors to represent empathetic outcomes.

### **The Trajectory and Transformation Strategies of Teachers' Affection in Classroom Conflicts --Based on Spinoza's Affection Theory**

Tian Guoxiu Capital Normal University

Wan Hanlong Capital Normal University

The article is based on Spinoza's Affection theory to analyze the generation and change trajectory of teacher affection in a classroom conflict event. We believe that the purpose of teacher affection is to maintain self preservation, and the mechanism of occurrence is a process of physical and mental integration. The essential reason is the power battle between teachers and students. The triggers of affection, the physical reactions of affection, and the causal chain of affection prove the inevitability of teachers developing passive affection. But teachers can exert the power of spiritual rationality, and achieve the transformation from passive affection to active affection through five methods: understanding affection processes, identifying affection objects, perceiving physical sensations, thinking about affection reasons, and shaping spiritual virtues.

### **Design and Practice of a Multimodal Classroom Teaching Behavior Data Analysis Model Based on Heterogeneous Systems: A Case Study of the Teaching Behavior Analysis Data Cockpit at Guangzhou Smart Teacher Training Innovation Practice Center**

Zeng Hai Guangzhou Open University

Classroom teaching behavior is one of the significant factors directly affecting the effectiveness of classroom teaching. Traditional classroom teaching behavior analysis primarily relies on manual observation, which is subject to large variations in analysis results and low efficiency. With the widespread adoption of artificial intelligence technology and big data, it has become possible to intelligently acquire, annotate, and analyze multimodal data of classroom teaching behavior, making the analysis more accurate, comprehensive, and authentic. This article, based on the smart classroom of the Guangzhou Smart Teacher Training Innovation Practice Center, organizes and categorizes the elements of classroom teaching behavior from heterogeneous systems. It constructs a data analysis model for classroom teaching behavior supported by multimodal data, encompassing four modules: classroom overview, teacher situation analysis, student situation analysis, and behavior review. The model generates a data portrait of classroom teaching and builds a big data cockpit, aiming to provide methodological references and smart experiences for the intelligent evaluation practice of classroom teaching behavior, and to promote the high-quality development of classroom teaching.

## **Critique as an Educational Event: The Imagery of Meaning and Its Generation**

Niu Jiong South China Normal University

Yuan Bing South China Normal University

Huang Haotian South China Normal University

Critique serves not only as a significant educational tool but also as an educational event within the interactions between teachers and students. Through case studies, it is found that the development of critique events exhibits consistency. In the pre-critique phase, critique holds a priori ethical significance for teachers, authentic educational meaning for students, and experiential significance in highlighting the teacher's identity. Teachers generate critique strategies based on their consideration of the nature of the events, while students anticipate the critique and engage in reflection. During the critique process, teachers develop critique strategies influenced by the nature of the event, the impact of the critique, and the characteristics of the students. They further elucidate the symbols of critique based on students' responses. Students are affected by their own cognitive levels, peers, and the discourse and methods of critique, leading to varied understandings and responses such as identification, dissatisfaction, shame, and indifference. In the post-critique phase, teachers track the effectiveness of the critique, deepening their understanding of students' deviant behaviors and the critique itself, while students adjust their understanding of critique based on their experiences of the critique events. Further discussions reveal that the meaning of critique is profoundly related to the identity recognition of teachers and the self-identification of students. Aiming to promote student development, teachers should emphasize the generation and circulation of critique knowledge, balance the emotional and formal aspects of critique, and enhance the specificity of their critiques.

### **Does Activation of Higher Order Thinking Skills Lead to Students (Dis)Satisfaction with Their Academic Experience?**

Irina Shcheglova Xi'an Jiaotong-liverpool University

Although satisfaction with academic experience in the context of higher education has been an area of research for nearly forty years, it is still unclear how pedagogical practices in the development of thinking skills are related to students' satisfaction. This study aims to investigate the relationships between students' satisfaction and the levels of thinking skills aligned with Bloom's revised taxonomy (BRT) taking into account students' characteristics. Relying on survey data (14 341 undergraduate students from five US universities), this study shows that when students are engaged in thinking skills higher on cognitive hierarchy of BRT, they are more likely to feel satisfied. Whereas engaging students in low thinking skills activities does not increase satisfaction with their academic experience. This study contributes to better understanding of how course design can be associated with student satisfaction and how instructors can implement the principles of BRT in their courses.

## **22 Cultural Blending and Teaching Inheritance in Educational Practice**

### **Embodiment of the Morality: A Grounded Theory Study on the Mechanism of Pre-Service Teachers' Learning of Professional Moral**

Pei Miao Beijing Normal University

Wang Hongyao Beijing Normal University

The study of teacher ethics for pre-service teachers is an intrinsic requirement for the development of teacher ethics and conduct. The embodied approach to teacher ethics learning provides new perspectives for pre-service teachers. To explore the various models and internal mechanisms of embodied teacher ethics learning, this study uses grounded theory to code and analyze the data from the pre-service teachers' embodied teacher ethics learning process. It constructs a mechanism of embodied teacher ethics learning centered around the core phenomenon of 'carrying out the path through oneself'. Carrying out the path through oneself is both a specific requirement of embodied teacher ethics learning activities and an expectation for the development of teacher ethics. The situational conditions for 'carrying out the path through oneself' occur within the curriculum field, with the causal condition being the situational teaching context. In the chain of intermediary conditions, cognitive conflicts experienced by pre-service teachers serve as the starting link, emotional experiences as the connecting link, and post-practice reflection as the closing link. On this basis, pre-service teachers have developed differentiated strategies and outcomes for 'carrying out the path through oneself'.

### **Using Lesson Study Transform the Culture of Departmental Professional Learning Communities**

Zhou Xiu Southwest University

Zheng Xin Southwest University

Culture plays a crucial role in the effectiveness and sustainability of a professional learning community (PLC). Establishing or transforming the culture of teacher communities is a challenging and underexplored issue in current PLC research. This qualitative case study examines two departmental PLCs from separate schools in Chinese contexts. The results reveal that even though collaborative activities were institutionalized in these PLCs, they suffer from cultural issues of formalism, rigidity, and superficiality. The study demonstrates that by implementing themed and sequenced lesson studies as artifacts, departmental PLCs reshape their objectives, subsequently altering the division of labor and rules within the groups, and rebuilding community relationships. Furthermore, the depth of guidance provided by subject leaders emerges as a critical factor in driving cultural transformation through their deep and accurate guidance within the communities. Implications are discussed for school leaders and teachers involved in developing and sustaining PLCs.

## **The Dimension of Teachers' Understanding of Educator's Spirit-- An in-depth Interview Based on 20 Teachers**

Du Jing Henan University

Luo Mengyuan Henan University

As the concrete perceiver and practitioner of the educator's spirit, teachers' understanding of the educator's spirit plays an important role in cultivating the educator's spirit. The study selected 20 front-line teachers in primary and secondary schools as interviews to guide teachers to express their understanding of the spiritual connotation of educators. The results of the interview show that teachers generally express their understanding of the six dimensions of educator spirit by describing personal experience, experienced teaching events and key figures who are familiar with and worship. Although each teacher understands the spiritual connotation of the educator is different, the way of understanding of the interviewed teachers reflects certain group characteristics and thinking limitations, such as experience-led, fragmented, perceptual and different between knowledge and practice, and so on. In view of this, it is critical and necessary to transform teachers' perceptual and fragmented understanding into spiritual guidance through rational thinking and practice. The study found that deepening teachers' emotional identity, improving teachers' humanistic literacy, reducing teachers' physical burden and setting up teachers' role models can promote teachers' in-depth understanding and practice of educators' spirit.

## **Transformation and Transcendence: Research on Teacher-Student Interactions in Elementary Social-Emotional Learning Classrooms within the Chinese Cultural Context**

Ruan Linyan Beijing Union University

Zhu Han East China Normal University

Huang Xin Zhongguancun No.4 Primary School

Shen Yue Beijing Normal University

Liu Huizhen Beijing Union University

Li Xiangxiang Beijing Normal University

Zhu Shenzhi Capital Normal University

Song Shuoqi State University of New York at Buffalo

Despite the growing emphasis on social-emotional learning (SEL) as a key component in global basic education to meet 21st-century challenges, there is a notable lack of systematic research assessing teacher-student interactions in SEL classrooms within the specific cultural context of China. This study delves into the interactions between teachers and students in first-grade SEL classrooms at a Chinese elementary school. Utilizing an improved Flanders Interaction Analysis System, lag sequential analysis, and non-participatory classroom observation, the research aims to uncover the characteristics and cultural logic behind these

interactions. The findings reveal that: firstly, influenced by Confucian collectivism and the culture of "face," interactions typically show a harmonious "teacher call and student response" and "feedback and encouragement," yet rarely promote deep emotional resonance or independent observation and thinking among students; secondly, moving beyond traditional teacher authority and rote learning, the classroom instruction remains teacher-led but offers various opportunities for student participation in SEL; thirdly, emerging from the integration of information technology with educational practices, the application of technology by teachers and students enhances the efficiency of information transfer and sensory impact, though caution is needed against the dominance of "technological tools." Based on these insights, the study proposes several recommendations for optimizing teacher-student interactions in SEL classroom teaching within the Chinese cultural context.

### **Innovation and Practice of Integrating Local Culture into the Ideological and Political Teaching Model of the "Residential Space Interior Design" Course in Universities**

Cai Xiaoyi Handan University, Center for Teacher Education Research of Beijing Normal University

Ma Xueyu Xingtai University, Center for Teacher Education Research of Beijing Normal University

The fundamental purpose of higher education institutions is to nurture individuals with virtue and culture. Through aesthetic education courses, universities can enhance students' appreciation for beauty, thereby fostering their aesthetic sensibility, encouraging humanistic care and social responsibility, and shaping positive moral sentiments and values. This paper uses aesthetic design courses as a case study to explore effective methods for incorporating local traditional culture into aesthetic education curricula in the contemporary era. The goal is to guide college students in valuing and cherishing traditional culture, establishing a modern aesthetic value system that is grounded in the preservation and advancement of traditional culture. This approach also aims to achieve a synergistic effect between the acquisition of professional knowledge and the integration of ideological and political education within the broader educational objectives of higher learning institutions. Ultimately, the aim is to realize the organic unity of education, talent cultivation, and moral development in colleges and universities.

### **Action Research on Educational Narrative of Chinese Language Reform in Cross-Strait Universities**

Lin Yuhui Huanggang Normal University

College Chinese is a common course for most college students in colleges and universities on both sides of the Taiwan Strait. Researchers found that most students don't like to listen to this required course for the whole school, and most teachers don't like to teach it. The main reason is that the curriculum is decoupled from teaching and reality, and students' learning needs are not taken into consideration. However, there are still many teachers in the teaching

fields of universities on both sides of the Taiwan Strait who are working hard for the high-quality development of their native languages. University Chinese language must be reformed, and the curriculum and teaching must be transformed into "student-centered" teaching. College Chinese teachers who are relatively lacking in teacher education must practice lifelong education, continuously improve their courses and improve their teaching. This article lays the foundation for the theory of multiple intelligences and uses educational narrative to carry out action research on the reform of Chinese language in universities on both sides of the Taiwan Strait. This study carried out a total of 8 semesters of teaching practice, 4 semesters on each side of the Taiwan Strait. A total of 681 participants were included in the study, including 330 from Taiwan and 351 from mainland China. Based on the action research of "teachers are researchers", this paper explores the teaching practices and reflections of university Chinese curriculum reform on both sides of the Taiwan Strait.



## **23 Teacher Emotion and Job Stress in Professional Life**

### **The Professional and Psychological Traps of Time Poverty For Primary School Teachers**

Liu Tianyu Capital Normal University

With the rapid development of society and the normalization of after-school service policies, teachers' time resources are increasingly scarce, and time poverty has become a common problem for teachers. However, teachers' time poverty in our country is still unclear. This study investigates the practical dilemma and group differences of primary school teachers' time poverty and finds that the overall level of time poverty of primary school teachers is relatively high, and there is no significant difference in gender, teaching age, and professional title. However, there is a significant difference in position. This study further explores the possible outcomes of time poverty in order to find out whether and how time poverty affects teachers' mental health and job burnout. The study finds that teachers' time poverty can indirectly have a significant positive effect on job burnout through mental health factors. Therefore, education departments and school leaders should reduce the burden on teachers and clarify the boundaries of teachers' work; respect teachers' time autonomy, protect teachers' mental health, and reduce the risk of teacher burnout.

### **The Influence of Role Stress on Teachers' Job Burnout at Different Stages of Professional Development**

Zhang Qixiu South China Normal University

Kuang Qian South China Normal University

Zhong Luojin South China Normal University

The role stress and job burnout of teachers have long been the focus of research in the field of teacher education. Numerous previous studies have examined the components and influencing factors of teacher role stress and job burnout, as well as their relationship, providing valuable insights for mitigating these issues. However, teachers at different stages of professional development may experience distinct characteristics of role stress and burnout. To investigate the characteristics and relationship between role stress and job burnout among teachers at different professional development stages, over 1200 teachers (novice, experienced, and expert) were surveyed using role stress and job burnout scales. The results revealed significant differences in three dimensions of role stress (role ambiguity, conflict, overload) among novice, experienced, and expert teachers. Similarly, there were notable differences in three dimensions of job burnout (emotional exhaustion, dehumanization, low personal accomplishment). Furthermore, the main source of role stress for novice teachers was found to be role ambiguity; this dimension had the greatest impact on their job burnout. Role conflict emerged as the primary source of role stress for experienced teachers with a significant influence on their job burnout. For expert teachers, role overload along with role conflict were identified as major sources of role stress, with role overload having a substantial impact on their professional teacher burnout. This study sheds light on the current statusquo and influence relationships between teacher role stress and job burnout across various professional development stages, providing more targeted strategies to alleviate these issues.

## **An Analysis on the Emotional Labor of a Female Foreign Language Teacher in the County Primary School: A Narrative Study from the Perspective of Life Course Theory**

Xie Ziwen Beijing Foreign Studies University

Li Qingfeng Beijing Foreign Studies University

Teachers, as the foremost resource in basic education, are not only a crucial agent in accelerating the construction of a high-quality basic public education service system in China but also the cornerstone of solidifying the foundation of basic education. The impetus for implementing the action plan to expand and improve the quality of basic education in the "new era" and driving the high-quality balanced development of compulsory education in counties across the nation lies with teachers. In the historical process of advancing from basic balance to high-quality balance in compulsory education, frontline subject teachers stationed in counties, while dedicating both physical and mental labor, also engage in intensive emotional labor. The existence of emotional labor reflects that the personal emotions of the teaching profession have transformed from private psychological representations into forms of immaterial labor constructed by public factors such as specific historical periods, social culture, and organizational structures. The emotional practices of county teachers often support the effective implementation of their own school curricula and teaching in a concealed or overt manner. This narrative study will focus on the compulsory education stage of primary school, concentrating on the emotional labor reflected by a female English teacher in a primary school in a southwestern province in her daily educational affairs. In the research design and story presentation phase, life course theory is used as the analytical framework for this narrative case, highlighting the processual landscape and construction mechanism of her emotional labor. The study finds that the emotional labor process of female foreign language teachers is centered around the individual's life trajectory as the "axis" of the evolution of emotional labor, linked by the "multiple clocks" of social, school, and individual time as "chapters," and driven by the nested and interwoven multiple identities of motherhood, parenthood, and instructor/mentor at specific spatiotemporal nodes. Ultimately, the emotional labor process of county primary school English teachers is constructed as a life landscape with "love" as the background color, rooted in and transcending the geographical boundary significance of the county, and jointly built by educational values, beliefs, and sense of responsibility.

### **Why Is the Localized Cultivation of Rural Teachers Necessary: Evidence from 5,342 Questionnaires**

Qiang Faying East China Normal University

Wang Yanling East China Normal University

The localized cultivation of rural teachers serves as a pivotal pathway to facilitate the "going to rural areas, staying there, and teaching effectively" phenomenon within the rural teaching workforce. However, there exists a dearth of robust data to support whether locally sourced teachers are indeed more inclined to "go, stay, and teach well." Therefore, this study grounded on survey data from rural teachers in Yunnan Province, endeavors to substantiate the

necessity of localized rural teacher training. The findings reveal four key insights: firstly, the overwhelming majority of rural teachers hail from rural backgrounds, with younger generations exhibiting a more pronounced lack of rural sentiment; secondly, rural teachers with prior rural living experiences demonstrate a heightened adaptability to rural educational models and a stronger willingness to take root in rural communities; thirdly, the career mobility tendencies of locally sourced rural teachers exhibit a dual pattern of "urban migration" and "rural return"; fourthly, teachers in the county with more than 5 years of teaching experience are more likely to "stay and teach well", and are more likely to gain positive professional experience in teaching practice. Based on these findings, the study proposes several strategies: improving the localized rural teacher training system, establishing an integrated pre- and in-service rural sentiment cultivation mechanism, fostering intergenerational interaction and knowledge transmission among locally sourced rural teachers, and enhancing their comprehensive welfare benefits. These measures aim to actualize the vision of localized rural teacher training and foster a renewed connection with their rural roots.

### **An Exploration of Critical Factors in Teacher Turnover-- An Empirical Study Based on Machine Learning Approach**

Li Zhenyu Beijing Normal University

Li Qiong Beijing Normal University

The departure of teachers has significant negative implications for the education system and student learning, making it imperative to investigate its causes. Utilizing PISA 2022 data from Hong Kong teachers and employing the random forest classification method in machine learning, this study explores 31 factors influencing teacher turnover in Hong Kong. Through comprehensive data processing and model establishment, the study identifies 8 variables with the most significant impact on teacher turnover. The order of importance of these variables is as follows: satisfaction with the teaching profession, job satisfaction, negative psychological symptoms, occupational stress, life satisfaction, teacher emotions, professional development needs, and class size. Based on these findings, recommendations are made for educational authorities and school administrators to enhance their focus on teachers' professional and job satisfaction, improve working conditions and benefits to enhance teachers' retention intentions. Additionally, attention should be paid to teachers' mental health and the alleviation of occupational stress by providing psychological support and career development opportunities to help teachers better cope with work challenges. Furthermore, there is a need to adjust class sizes reasonably to ensure that teachers can manage students more effectively and improve teaching effectiveness.

## **Towards an Emotional Perspective of Teacher Feedback Literacy: A Multiple Case Study of Three Supervisors**

Liu Chengcheng South China Normal University

Xu Yueting South China Normal University

Feedback is emotional in nature. In supervisory feedback processes, supervisors are expected to regulate their own emotions, which constitutes part of their feedback literacy. Despite growing scholarly interest in teacher feedback literacy, limited research has approached it from the perspectives of emotion and emotion regulation. Therefore, the current case study explored three Chinese master's supervisors' emotions and emotion regulation strategies in the supervisory feedback process to shed light on teacher feedback literacy. Three rounds of semi-structured interviews were conducted with individual supervisors and supervisors' feedback (e.g., written feedback, oral feedback, and online feedback) were collected to offer an in-depth understanding of supervisors' emotions and emotion regulation. Findings revealed that supervisors experienced various feedback emotions such as joy and anxiety. Furthermore, they usually adopted multiple emotion regulation strategies such as cognition change and situation modification in feedback processes. The study contributes to the scholarship of teacher feedback literacy and underlines the significance of knowledge and expertise related to emotion regulation. It also has implications for teacher feedback literacy development, especially the emotion dimension.

## **24 Evidence-Based Education Policy and Improvement of Teacher Education Quality**

### **An Evidence-Based Study: Has the Teacher Education Professional Certification in China Promote the Quality of Normal Students' Learning?**

Zhang Wei Hubei University of Education

The implementation of teacher education professional certification in China has been over five years. In the perspective of the theory of modernization of education, the evaluation of its implementation effect should mainly be based on the standard of enhancing the learning quality of normal students. The researchers plan to find systematic evidence related to the two through qualitative evidence-based tracking and quantitative evidence-based research (affected by the COVID-19 epidemic) from 2021-2023. Due to the limited sample size of the research in Hubei province, Hunan province, Henan province, and Beijing city, the researchers cautiously believe that although there are significant shortcomings in China's teacher education professional certification, it has effectively promoted the optimization of the teaching and nurturing environment of teacher education institutions, and indirectly improved the self-efficacy of normal students' learning through the improvement of teaching & learning relationships and social emotional abilities between normal students and educators. In the future, China's teacher education professional certification should be fully improved through evidence-based and digital approaches to enhance implementation effectiveness.

### **A Study of the Effects of Teacher Education Research on Teacher Education Policy Making with Evidence-based Theory**

Zhu Xudong Beijing Normal University

Liu Lisha Beijing Normal University

Fu Yu People's Education Press

Jin Wei Beijing Institute of Education

Li Maosen Huzhou University

Evidence-based teacher education research has increasingly become an important basis for influencing teacher education policy formulation. Based on the four key factors of teacher education policy research: the quality of research production, the choice of research use, the relationship between research production and use, and the external macro background, this study puts forward the Context and Mediators Influence Model of teacher education research on teacher education policy. In the future, China should also enhance the evidence-based research awareness and academic sensitivity of policy makers, enhance the evidence-based policy awareness and quality level of researchers, and fully understand the complexity of the interaction between academic research and policy formulation.

## **A Phenomenological Reflection on Evidence-based Education Reform in Britain and U.S.**

Man Ying Northeast Normal University

Evidence-based education reform in Britain and America is deeply driven by the practical evidence culture . The transformation of educational research paradigm from the focus on speculative research to evidence-based science is adapted, and it complies with the "evidence-based" shift of educational accountability system. In the exploration for a long time, it has formed a reform model that takes the evidence-based education evidence resource library as the evidence acquisition channel, the evidence level of evidence-based research as the reform basis, and the evidence-based intervention as the implementation means. However, it is necessary to rationally reflect on its value bias of the supremacy of effect and the potential risks behind technicalism. Firstly, the "colonization" of the educational life world is embodied, that is, the meaning of the real educational life world is obscured by the one-sided pursuit of evidence. Secondly, the "instrumentalization" of educational technology intention is embodied, that is, the unity of educational research theory and practice is stripped by the over-focus on technicalism. Finally, the "disembodied" teacher's leading role is embodied, that is, the teacher's leading role is weakened by the separation of professional wisdom and empirical evidence. Therefore, the weakness of education should be considered and the due dimension of "educational risk" should be accepted; the technical embezzlement should be avoided, a research method system of integration and symbiosis should be built; the value alienation should be avoided, the teachers' value and subjectivity should be pursued.

## **An Evidence-Based Study on the Reform Trend of Preservice Teacher Education --Based on the National Teaching Achievement Awards in Higher Education of the Past Four Sessions**

Li Xinyi Zhejiang Normal University

Xu Shangpin Zhejiang Normal University

Teacher education, as the workshop of the education cause, needs to actively carry out teaching reform in line with the requirements of the times. A total of 91 reform projects in teacher education from the past four rounds of national-level teaching achievement awards were selected, examining the reform dynamics of pre-service teacher education in China and summarizing reform experience. Based on the overall requirements of "what kind of people to cultivate, how to cultivate them, and for whom to cultivate them," a four-dimensional analytical framework of "objectives-system-construction-positioning" was constructed to analyze the textual materials. The analysis shows that the objectives of cultivating people have multi-dimensional derivatives and are closely linked to the requirements of the times; the cultivation system has been continuously coordinated and integrated, presenting a new reform pattern of synergy and integration; the cultivation measures have been refined and advanced, entering from all aspects such as courses, teaching, resources, teachers, evaluation, and guarantee; the positioning of cultivation has always been to support the development of the Party and the state as the top priority, optimizing frontline teaching, adapting to the needs of disciplines, and conforming to regional development. In the future, preservice teacher education reform should

base itself on reform experience, accurately adjust the positioning of cultivation, cultivate the connotation of teachers in a layered and classified manner, effectively integrate cultivation concepts, upgrade cultivation resources in multiple dimensions, thus driving the high-quality development of teacher education.

### **Does The Funding-While-Binding Teacher Education Policy in China Impact Student Teacher Engagement? A Mixed-Methods Study Based on The Situated Expectancy-Value Theory**

Liu Yi Southwest University

Since the implementation of the Central Government-Funded Teacher Education (CGFTE) policy in China's six leading normal universities in 2007, the level of engagement among student teachers funded by this policy has been a topic of concern. However, existing studies have presented divergent views on this issue. This study utilized Schaufeli's UWES-S scale to examine the engagement level of 712 student teachers from three normal universities and colleges. The quantitative data analysis revealed no significant difference in engagement levels between first-year policy-funded and self-sponsored student teachers. Nonetheless, as students progressed through higher grades, the engagement level of policy-funded student teachers did not improve significantly compared to that of self-sponsored student teachers. Drawing upon Eccles and Wigfield's (2020) "situated expectancy-value" theory, as well as qualitative data analysis from in-depth interviews with 12 policy-funded student teachers, this study posits that the regulations of the CGFTE policy, which encompass both motivating and restricting aspects, have a "mutual offset" effect on the engagement level of policy-funded student teachers in lower grades, thereby yielding no significant impact. However, due to the unique "situations" faced by self-sponsored student teachers in higher grades, such as job-hunting and further education pursuits, their engagement levels show a significant improvement. Given that employment and further education are guaranteed by the policy, the engagement level of policy-funded student teachers in higher grades does not experience significant growth, leading to a notable disparity in engagement levels between policy-funded and self-funded student teachers in higher grades. Finally, this paper discusses the implications and provides suggestions for enhancing the CGFTE policy and improving the quality of teacher training.

## **How Does New Curriculum Policy (Re)Shape Physical Education and Health: Critical Reflection from Chinese Physical Educators**

Jing Yang University of Strathclyde

Chao Qiu University of Jiangnan

Dillon Landi University of Queensland

David Kirk University of Queensland

This study provides a comprehensive exploration of the transformative efforts of new Compulsory Education Physical Education and Health (PEH) Curriculum Standards issued by the Chinese Ministry of Education in April 2022, from the perspectives of both teacher educators and physical education teachers in Shanghai. To understand curriculum policies and practices, it is crucial to take into account the fact that they are not locked in a static conception of society but emerge from the mobile associations among "things" (Paraskeva, 2021). This research involves a reconsideration of how curriculum policies and practices are perceived, emphasizing the fluid nature of societal elements and their intricate interplay within educational contexts. Teachers and teacher educators play a crucial role in policy, contributing to both its development and enactment (Alfrey et al. , 2017; Lambert & Penney, 2019). However, the positioning of physical educators regarding policy varies based on factors such as career stage, experience, and responsibilities (Ball et al. , 2011). Through a conversational inquiry approach (Leavy, 2017) involving teacher educators and physical education teachers from three universities and four schools in Shanghai, we gained insights into their engagement with and enactment of the new curriculum. The study provides valuable insights into the challenges and opportunities in promoting holistic approaches to PEH. It highlights how curriculum policies shape the day-to-day realities of school PEH, influenced by contextual factors, professional agency, and ideological influences. Moreover, the findings demonstrated the concept of policy slippage and the importance of university and school contexts in shaping this enactment of policy (Vors and Kirk, 2016). In conclusion, this research contributes to a deeper understanding of the complex interplay between curriculum policies and educational practices in the domains of PEH. By exploring the perspectives of physical educators, it reveals both challenges and possibilities within school PEH and underscores their significant contribution to (re)-shaping curriculum and influencing the future of PEH in Chinese educational landscape.



## **25 The Project-enabled Pre-service Teachers to Evaluate and Improve Their Practical Ability**

### **Methods for Enhancing the Practical Abilities of English Majors in Normal University Within the Framework of Evidence-Based Education**

Fan Xuerong Hebei Normal University of Science and Technology

Ma Wenjing Hebei Normal University of Science and Technology

The practical abilities are very important for the development of English majors in normal university. Within the framework of evidence-based education, a normal university carries out educational practice activities based on research evidence in the development of English majors, paying attention to both research and practice. The practical abilities of English majors can be enhanced through the following ways: enrich teaching practice courses by adding "Teacher language", "English teacher skill training", "Micro-teaching", "Lesson study", "English drama in middle school" and "Telling Chinese stories in English" in addition to "the three practice courses of education", so as to closely integrate knowledge learning with teaching practice; build a community of practice through carrying out a series of activities of "Master Teachers" (Master Teachers in classrooms, Master Teachers in lecture halls, Master Teachers in studios) to integrate multiple evidences with professional wisdom; establish a case library by inviting university teachers, middle school teachers and normal university students to work jointly in compiling *Classroom English for Teachers* and *Cases of English teaching and education*, to collect first-hand empirical evidence; improve teachers' ability of evidence-based education by organizing activities such as "The Interpretation of *English Curriculum Standards for Compulsory Education*", "Basic Education Forum" and "Courses for Ideological and political Education Forum" to promote the sustainable development of evidence-based education.

### **Professional Socialization of Preservice Teachers: Peripheral Identity and Interactive Conflicts in Transition**

Chen Liyuan Shanghai Jiao Tong University

Based on semi-structured interviews with preservice teachers and their cooperating teachers, the study explores the peripheral identity of preservice teachers and their professional socialization process in practicum before they become qualified teachers. Under the current teacher education system, preservice teachers need to pass through this transitional period and participate in teaching with peripheral identity in order to become "more like a teacher." This study focuses on three main research questions: In what ways is this peripheral identity reflected in the process of professional socialization experienced by preservice teachers? With this peripheral identity, what conflicts do the preservice teachers encounter in the process of interacting with the teachers and students at intern schools? Does this peripheral identity contribute to enhancing their professional competence and gaining professional status?

## **Pre-service English Teacher Feedback Literacy Development in Teaching Practicum: A Quantitative Study**

Zhang Jiadong South China Normal University

Xu Yueting South China Normal University

Despite the importance of teacher feedback literacy (FL), research and practice of FL for pre-service teachers (PSTs) has remained scarce. To address the gap, the present study develops a feedback literacy scale for pre-service teachers (FLSPSTs) based on the multi-dimensional and continuum-oriented framework of teacher FL (Y. Xu et al., 2023) and validates the reliability and validity of the FLSPSTs. Results show that 1) the FLSPSTs has psychometrically sound reliability and validity; and 2) it consists of 26 items and seven factors, namely conceptions of feedback, contextual knowledge about feedback, feedback operation, teacher's emotions in feedback, attitudes towards feedback, students' emotions in feedback, and strategic knowledge about feedback. The FLSPSTs differentiated from the existing teacher FL scales because it highlights the cognition and disposition dimensions of PSTs' feedback literacy and incorporates PSTs' own emotions in feedback as an important component of their FL. The study may shed light on exploring new instruments to measure PSTs' feedback literacy. Implications for teacher education are also provided.

## **Enhancing Professional Identity through Reflection in Experiential Learning: A Case Study on a Language Immersion Program for Chinese Language Pre-service Teachers in Hong Kong**

Gu Yining University of Cambridge

This study investigates the impact of experiential learning on the professional identity of pre-service Chinese language teachers in Hong Kong, employing a case study approach to provide empirical evidence on the effectiveness of developing professional identity through reflective practices. The study centers on an immersion program offered by a leading Hong Kong university in partnership with a normal university in mainland China. The program, involving both undergraduate and postgraduate students in six- and eight-week courses respectively, immerses participants in a Putonghua-speaking environment. Throughout the program, students engage in a series of activities aimed at enhancing their cultural understanding, language skills, and pedagogical competencies. The experiential learning process is divided into three phases: preparation before immersion, active engagement during immersion, and reflection and artefact creation in post-immersion. By analyzing data from interviews and questionnaires, the study evaluates how their reflection from these experiences influence the professional identities of the participants. The findings aim to offer valuable insights into designing reflective practice that is effective for the development of teacher identity. Additionally, the study is expected to provide insights into optimizing experiential learning designs in teacher education.

## **Evidence-Based Curriculum Reconstruction of Pre-Service Teacher Education Based on Growth Mindset: The Perspective of Educational Neuroscience**

Xiang Wei Zhejiang Normal University

Since Professor Carol Dweck proposed the concept of growth mindset on the basis of attribution theory, achievement goal theory, and implicit intelligence theory, the academic research on teachers' growth mindset has mainly focused on the areas of teachers' professional development, such as educational beliefs centered on students' outlook, teaching efficacy centered on self-evaluation, and the quality of autonomy centered on resilience, as well as empirical studies on the impact of teachers' growth mindset on students' academic performance and the intervention of teachers' growth mindset to regulate classroom practices. However, there are few empirical studies on the heterogeneity of pre-service teachers' growth mindset, and especially there is a lack of in-depth involvement of experimental methods in educational neuroscience in the study. Through the data obtained from questionnaires and interviews with nearly 5000 teacher trainees and nearly 300 in-service teachers in Zhejiang Province, this study concludes that there are some problems in the pre-service teacher cultivation, such as lack of growth mindset cultivation, relatively outdated teacher education curriculum system and teaching methods. At the same time, the heterogeneous characteristics of pre-service teachers' growth mindset in terms of teaching ability, educational sentiments and educational will are screened out, and the experimental methods of educational neuroscience are used to examine the factors affecting the growth mindset of pre-service teachers in turn, and finally determine the key factors that really have an important impact on the growth mindset of pre-service teachers. Focusing on these key factors, we initially rebuild the educational neuroscience-based curriculum design for pre-service teacher education, set up additional teacher education courses in the direction of brain science, and improve the educational neuroscience literacy of pre-service teachers; the study also emphasized the cultivation of growth mindset mode, strengthens the role of modules such as self-cognition, active learning, situational experience, data analysis and demonstration discussion in the fields of educational belief and responsibility, educational knowledge and ability, educational practice and experience goals, and adjusts the proportion of each module. The adjusted teacher education curriculums were tested in a teacher education workshop. Two months later, the experimental method of educational neuroscience was used to test whether growth mindset was significantly enhanced. Meanwhile, the key variables were followed up by pre-post questionnaire evaluation, reflective evaluation, pre-service teacher classroom observation, effect evaluation and teacher-educator interview, and intervention and control were carried out. The evaluation feedback was submitted to the next round of trial test to form an evidence-based curriculum reconstruction model of "preparation - design - intervention - release - feedback", so as to stimulate pre-service teachers to apply growth mindset mode to long-term and authentic teaching practice to a greater extent.

## **26 Teachers' Learning Engagement and Professional Development in Evidence-Based Practice**

### **The Influence of the County Teachers' Job Crafting on the Engagement of Teaching and Research Activities: Taking "J" County in Western China as an Example**

Yuan Li Beijing Normal University

Ma Haowen Beijing Normal University

The high quality and balanced development of county compulsory education and strengthening the construction of county compulsory education teachers are the clear direction of our current policy. However, the current county education is faced with problems such as the homogenization of urban and rural areas in teacher training, unbalanced opportunities, and the lack of awareness of teachers' active participation in teaching and research activities. It is worth paying attention to the behavioral, cognitive and emotional strategies that county teachers can adopt spontaneously to cope with the work burden and the needs of individual professional development. Job crafting is a kind of behaviors that individuals change the content and mode of work, interpersonal relationship and cognition of their roles with an active attitude to obtain the sense of work meaning. Based on the job crafting theory, this quantitative study investigated a total of 698 county teachers in J county in western China, in order to research the influence mechanisms of job crafting on teaching and research engagement of county teachers, the mediating role of professional identity and job satisfaction.

The main findings of the study are: (1) The job crafting, professional identity, job satisfaction and teaching research engagement has significant differences in teaching age, and teachers whose teaching age is less than 3 years generally get lower scores than teachers with longer teaching age in all variables and dimensions. (2) There are significant positive correlations among the four variables. (3) There is a mediating effect model of the variables. Teachers' professional identity and job satisfaction play a positive chain mediation role in job crafting predicting teaching and research engagement. County teachers can actively discover their own initiative and explore corresponding strategies to promote their own development, and school leaders should also leave some space for teachers to independently initiate job crafting and provide teachers with appropriate resources and support to promote teachers' positive professional development path.

### **How Does Critical Dialogue Occur in Teacher Learning Communities? -- A Comparative Study Based on Multiple Cases**

Yan Jiaping Shanghai Academy of Educational Sciences

Critical dialogue is key to the effectiveness of teachers group learning, which is relatively lacking in the professional learning communities of Chinese teachers. This paper investigates critical dialogue through the dimensions of breadth, depth and future orientation of group conversation, focusing on "proposing diverse and challenging viewpoints" "discussing based

on evidence and reasoning" and "embracing openness and generativity". By engaging in participatory observation of three long-term and iteratively improved group learning cases among primary and secondary school teachers, it was discovered that promoting critical dialogue within teacher group learning requires goal orientation directed at teacher learning or problem-solving; providing cognitive scaffolding for teacher dialogue or expert assistance in the construction of teacher thinking; introducing new knowledge represented by theory; and organizing learning in smaller scales to reinforce participation responsibility. Based on empirical case comparisons within the Chinese context, this paper deepens the understanding of critical dialogue in teacher group learning and offers possible insights for improving the quality of teacher group learning from the perspective of critical dialogue.

### **Attitudes of Special Education Teachers Towards Evidence-Based Practice: An Examination of Influencing Factors**

Hu Xiumei Beijing Normal University

Meng Yifei Beijing Normal University

Liu Hongmei Beijing Normal University

Hu Xiaoyi Beijing Normal University

This study, grounded in Charles Zastrow's social-ecological systems theory, employed the well-validated Evidence-Based Practice Attitude Scale (EBPAS-50) to investigate the evidence-based practice attitudes of 572 special education teachers from 36 regions across China, including Beijing, Guangdong, Hebei, Henan, Sichuan, and Jiangsu. The study explored the evidence-based practice attitudes of special education teachers in China and identified factors influencing their attitudes. Based on the findings, the study highlights the urgent need to establish an ecological framework from the micro, meso, and macro levels to promote a virtuous cycle of evidence-based practice attitudes among special education teachers in China.

### **To Swim or Sink: A Narrative Inquiry of Exemplary ESP Teachers learning under the Education Reform in China**

Wu Huizhen Shanghai Business College, Tongji University

Ruan Linyan Beijing Union University

The study reports on the life history narratives of five exemplary ESP teachers working in higher education in China mainland. An interpretive analysis of the narrative inquiries complemented with classroom observation and curriculum\teaching documents\syllabi not just reveal divergent career trajectories of the teachers, but also offers a nuanced and complex picture of these teachers' lives in critical phases of their learning and teaching. In so doing, it challenges and expands prevalent TESOL education theories that do not fully address the confusions and transitions in EFL teachers learning trajectories. The narrative inquiries of the study reveal the following aspects: 1) how individuals mobilize external available resources to facilitate their transformation and growth; 2) how individuals exercise agency to overcome challenges in different institutional contexts; 3) how their prior experiences, social and institutional contexts mediate their professional trajectories.

## **The Features and Inspirations from Outstanding Teachers' Learning Experiences: Cross-Cases Analysis Based on 10 Teachers' Learning Experiences**

Yang Yudong Shanghai Academy of Educational Sciences

Outstanding teachers' training was always emphasized in teachers' policy and teachers' further education system, but a few studies to explore the features of learning experience of outstanding teachers. Based on 10 case studies on outstanding teachers' learning experiences, cross-cases study method was employed to do analytical induction and the learning model of Environment—Process—Outcome (EPO) was applied to analyze the features of outstanding teachers' learning experience. Some results were found in this study: Outstanding teachers experienced high-level challenging tasks in the learning environment; they embodied high-level inside motivation and emotion, personally active input with colleagues' interaction, and divers and differentiated learning content during their learning process; their learning outcome pointed to a sense of professional achievement or value that comes from inside. So the following suggestions were put forward: teachers' learning environment should emphasized the features of working place and high-level tasks; teachers' learning process should strengthen the design of learning interaction; teachers' learning outcome urgently need to go beyond the narrow view of knowledge or competence.

## **Interdisciplinary Teacher Education to Advance Pre-service Teachers' Digital Competence: A Systematic Review**

Selina Sugiono Beijing Normal University

Research has revealed the benefits of interdisciplinary education in terms of trait development, including open-mindedness, innovation, critical thinking, and collaboration—all of which are needed to solve complex and holistic context real-life challenges. Interdisciplinary education is also useful in coping with advancing and fast-changing educational technology, which has highlighted the need for updated teacher education, involving the development of curriculum that equips pre-service teachers with digital competence for future classrooms. This encourages teacher education to enrich its' pedagogy silo with more technology discipline to instill pre-service teachers' digital competence and self-efficacy in using educational technology tools due to their importance, especially in the future. While there are a vast number of studies on interdisciplinary education, limited studies have been conducted on interdisciplinary approach in teacher education to improve digital competence. This research conducted a systematic review on 16 studies published between 2019 to April 2024. The purpose of this study is to review interdisciplinary in teacher education focusing on digital competence to develop an interdisciplinary model for teacher education. The results suggest a model with conditional factors (policy, institutional culture, and curricula) and utilizes human-computer interaction to develop digital, student agency and co-agency competence, and epistemic knowledge of pre-service teachers, which in turn will benefit their future students. Additionally, the model suggests self regulated learning as the skills to be developed through the interdisciplinary learning. The model accommodates the OECD Learning Compass 2030 framework for well-being as it emphasizes the significance of competencies that enable individuals to navigate unfamiliar and uncertain contexts and employ multiple, even contrarian, ways of knowing. Avenues for future research include investigating the design and institutional culture in adopting interdisciplinary education, cost implications, and examination from policymakers' point of view.

## **27 Evidence-Based Practice and Reflection of Teacher Education in Multiple Contexts**

### **Teacher Educators: The "Proletariat" of Academia from a Disciplinary Perspective**

Kang Xiaowei Capital Normal University

Teacher educators are responsible for developing teacher education activities, and their professional development is crucial for ensuring high-quality teacher education. However, they are often marginalised within the pedagogical community. This study explores the reasons behind this phenomenon and proposes solutions to address it. The objective of this study is to investigate the marginalisation of teacher educators in academia within the higher education community, using Foucault's perspective of disciplinarity. The study conducted interviews with eight teacher educators from four typical teacher education universities in China. The findings revealed that these educators perceive their academic status in higher education to be low. Teacher educators face challenges with demanding research requirements and pressures that marginalize them in the academic community of education research. They lack academic power and resources, and the community of teacher educators is not yet fully formed. The study proposes a support system to promote the production of academic knowledge by teacher educators. This involves establishing a disciplinary system for teacher education that promotes the development of teacher educators' knowledge, creating a system that encourages teacher educators to engage in both teaching and research, and transforming the training of teacher educators into a teaching and research-oriented system. The task involves creating a disciplinary system to support the development of teacher educators' knowledge, establishing a supportive environment that facilitates the mutual promotion of teacher educators' teaching and research, and implementing a multifaceted evaluation system based on their performance.

### **Research on the Contradiction Analysis Framework of Collaboration between University Experts and Mathematics Teachers in the Context of Project-based Learning**

Liu Lizhe Capital Normal University

The application of Project-based Learning (PjBL) in mathematics education has become a popular topic in international mathematics education research. Although research and discussion on PBL have been ongoing domestically for many years, it is still in the experimental stage in the field of mathematics. Collaboration between schools and universities ("U-S collaboration") in educational research is an important avenue for promoting teaching reform. However, in the process of developing PBL cases in mathematics, university experts and mathematics teachers often encounter issues such as differences in viewpoints and ideas. To investigate the root causes, the study is based on Activity Theory and Expansive Learning Theory, using "contradictions" as a general term for issues mentioned above. By employing a

mixed research method combining quantitative and qualitative approaches, contradictions in the collected textual data were coded at three levels to establish a preliminary analysis framework. Subsequently, after two rounds of expert evaluation and modification, the S-U collaboration contradiction analysis framework under the context of mathematics PBL was finally constructed. This framework serves as a novel tool for describing and analyzing related research.

### **Curriculum Leadership of Preschool Teachers in Nature Education: Connotation, Experience, and Development Strategies**

Ru Rongfang Shijiazhuang University

Liu Shuying Shijiazhuang University

Li Meng Shijiazhuang University

Preschool nature education not only respects the natural attributes of children in terms of educational value orientation, educational content, and educational methods and fully utilizes natural resources, but also prominently demonstrates the organic integration of humans and nature, society, culture in the ultimate aim of children's development. The construction and quality enhancement of the preschool nature education curriculum are realized through the curriculum leadership of teachers in nature education. The connotation of preschool teachers' curriculum leadership in nature education refers to the process of planning the vision of nature education curriculum, integrating nature education curriculum resources, organizing curriculum implementation, leading curriculum research, conducting curriculum evaluation, and improving curriculum quality under the guidance of nature education ideology. It serves as the fundamental guarantee for preschool nature education practice and the supporting condition for the high-quality construction of preschool curriculum, featuring characteristics such as autonomy, development, action, and influence. In practice, curriculum leadership of preschool teachers in nature education requires, first and foremost, a clear vision planning for the nature education curriculum; secondly, the ability to integrate and construct various resources of nature education curriculum; thirdly, the establishment of a complete implementation system for nature education curriculum; and finally, the evaluation and reflection on aspects such as the curriculum plan based on children's learning situations. The development strategies include: Firstly, reshaping the child-friendly nature education curriculum culture to facilitate teachers' understanding of the curriculum; secondly, reconstructing the collaborative development curriculum ecology and "empowering" teachers' curriculum deliberation; thirdly, establishing diverse cross-disciplinary learning communities for teachers to strengthen teachers' curriculum research. Preschool teachers' curriculum leadership serves to improve the quality of preschool curriculum and enhance the level of children's learning and development, representing the organic integration of nature education concepts, curriculum forms, children's experiences, and learning needs.



## **Intelligent Integration of Social-Emotional Learning into Teacher Education: A Study on the Roadmap for Cultivating Hybrid Learning Community**

Huang Xi Hubei Second Normal University

Within the framework of Cloud Interconnectedness Theory, the research seeks to deepen the integration of social-emotional learning (SEL) into pedagogical practices in higher education context. Specifically, the researcher categorized the observation points of SEL-integrated Hybrid Learning Community (HLC) model implementation effectiveness into six dimensions. Drawing upon a sample of 37 students from a provincial Normal university, the study conducted a two-month education research over Comprehensive English course.

Data on HLC learning engagement and emotional experiences in preliminary analysis revealed a significant positive correlation between membership in the community and overall social-emotional competence (SEC). Furthermore, active participation in SEL interventions was associated with notable improvements in specific dimensions of SEC. These findings underscore the potential of the SEL-integrated HLC model to foster the concurrent development of SEC and academic abilities among university students within second language instructional contexts.

## **Big Ideas-Based Language Instruction: A Duoethnography of Two Teacher Educators in Teachers' Professional Development Through a School-University Partnership Project**

Li Xueru Beijing Normal University

Sun Wanlei Beijing Normal University

This study aims to explore how two doctoral students working as research assistants support teachers in a lesson study (LS)-oriented language teacher professional development (TPD) project for big ideas-based instruction in English-as-a-foreign-language (EFL) classrooms. The study adopted a duoethnographic approach through which the two teacher educators juxtaposed and reflected on their experiences by maintaining regular Tencent meetings (an online meeting software) and sharing individual reflective journals. They specifically reflected on their motivation and puzzles in collaborating with in-service teachers to implement big ideas-based language instruction. The challenges and complexities in their learning to be teacher educators were also explored. The findings reveal that big ideas-based language teaching should be incorporated into teachers' professional development. Furthermore, engaging in the process of duoethnography allowed them to refine their professional identities as teacher educators. The study sheds light on the importance of institutional support for novice teacher educators to support their professional development. It also emphasizes the importance of duoethnography in promoting novice teacher educators' self-reflection and broader collaboration.

## **Interaction Between Universities and Schools as a Foundation for Promoting the Evidence-Based Approach for Teachers' Professional Development**

Sergey Kosaretski HSE University

Elena Ovakimyan HSE University

Contemporary universities play a critically important role in the development of human capital of the territory and ensuring its social sustainability. This is simultaneously the third mission and an important component of the university's competitiveness strengthening strategy. One of the promising directions for implementing such a role is organizing work with schools (teachers, students), including professional development of teachers, student preparation, consulting, and methodological support in the implementation of programs for improving the quality of education and implementing innovations. This direction is particularly relevant in the post-epidemic era, against the backdrop of the overall decline in the quality of educational outcomes, to contribute to the restoration of culture, knowledge levels, and further development of the university's presence territory. In the modern world, a significant number of schools face challenges in achieving high academic results of students, which are determined by the characteristics of the student body (concentration of children from low-income families, migrant families, etc. ), as well as the economic and socio-cultural environment of functioning (remote and deprived areas). At the same time, for this group of schools, the resources of universities undoubtedly represent value in terms of expanding opportunities for students to receive quality education and building positive educational and professional trajectories. The interaction between universities and schools has now emerged as a distinct subject of research in education (Clark, 1988; Miller, Hafner, 2008; Handscomb et al. , 2014; Berryhi et al. , 2016; Green et al. , 2020; Day et al. , 2010). Initially, universities relied on schools as platforms for organizing student practice and research. However, in recent years, the balance has shifted significantly: the needs of schools increasingly stimulate the formation of partnership relationships between schools and universities. It has been noted that both parties can benefit from collaboration (Clark, 1988). The effects of this partnership include bridging the gap between research and practice, promoting educational innovations, and bringing about changes in education, among others (Sarmiento-Márquez et al. , 2023). However, establishing productive partnerships and achieving potentially diverse effects is a complex process (Taylor, 2008). Clearly, modern conditions require an evidence-based approach when designing solutions in the field of education, including programs for prevention and overcoming educational underachievement. An evidence-based approach is a process in which rigorous and validated evidence is used for the development, implementation, and refinement of methodologies/programs/reforms. The main principle of the evidence-based approach is that decisions regarding educational organizational reforms or the implementation of new pedagogical tools should be based on an evidence base rather than solely relying on established traditions, current circumstances, or personal opinions. In several countries, when selecting programs and projects to support underperforming schools with a high proportion of struggling students, preference is given to evidence-based programs that have proven effectiveness. Schools that implement programs with demonstrated effectiveness are encouraged. The principle of the evidence-based approach has been promoted by the Institute of Education at

HSE University since 2015 through projects implemented in partnership with the Ministry of Education to provide methodological and consultative support to regional and municipal education authorities in the development and implementation of programs for prevention, correction, and overcoming underachievement. The evidence-based approach in education has also become a central theme in the design of programs for additional professional education. The report will present the experience of the Institute of Education at HSE University in popularizing and promoting the evidence-based approach in working with schools operating in complex social conditions, including efforts to enhance the qualifications and professional expertise of the teaching staff in these schools.

## **28 Quality Evaluation and Sustainable Development of Teacher**

### **Education from an International Perspective**

#### **An Analysis of the Quality Evaluation Model for Initial Teacher Education of the Past Decade in the UK --A Case Study of the University of Edinburgh**

Ma Xiaoyan Ningxia University

Li Wenjun Ningxia Normal University

University autonomy and external evaluation are the basis for ensuring the quality of pre-service teacher education in the UK. In the past ten years, teacher education in the UK aims to cultivate pre-service teachers who promote social equity, takes the construction of excellent curriculum as the carrier, and focuses on the formation of sustainable development ability. Taking the School of Education of the University of Edinburgh as an example, this paper analyzes the contents of pre-service teacher education evaluation based on the analysis of the reform background of the evaluation. It includes the goal evaluation of training teachers to achieve educational excellence and equity, the content evaluation that systematically focuses on the comprehensive training of pre-service teachers, the evaluation subject that balances various stakeholders, and the diversified evaluation methods for the process development of pre-service teachers. At the same time, the quality evaluation of pre-service teacher education in the University of Edinburgh is also inadequate, and the quality-oriented consciousness of teacher educators needs to be improved, and the feedback on the quality evaluation of normal university students needs to be strengthened. It is worth recognizing that the evaluation system of pre-service teacher education quality of the University of Edinburgh has certain reference significance for the evaluation and improvement of the quality of pre-service teacher education in the aspects of teaching practice, integrated training of pre-service teachers, partnership and cooperation.

#### **Toward Quality Enhancement: Practices and Implications of Evidence-Based Teacher Students' Teaching Practicum Evaluation in Singapore--Analysis based on BA/BSc (Acad Dspln& ED) Teacher Education Programme**

Xie Xiaowei Zhejiang Normal University

Zhu Jian Zhejiang Normal University

To improve the quality of teaching practicum, Singapore has designed an evidence-based evaluation of teaching practicum for student teachers. This study takes the BA/BSc (Acad Dspln& ED) Teacher Education Programme as an example and employs the analytical framework of evidence-based practice. The findings show the following: in the evaluation of teaching practicum for student teachers, Singapore focuses on top-level design, best evidence support, and multiple data participation; its evaluation standards, evaluation procedures, evaluation methods, and evaluators are separately characterized by the benign interaction between the best evidence and evaluation decision-making, the flexible complementarity between evidence support and feedback loop, the iterative improvement between formative

evaluation and summative evaluation, and the tripartite collaboration of the cooperative community. Based on this, it proposes that Singapore's relevant practices can shed light on the reform of teaching practicum evaluation for student teachers in China: the general direction of teaching practicum evaluation should be guided by evidence-based concepts; the formulation of evaluation standards should be based on best evidence; the evaluation process should be rigorous and fair; and the selection of evaluation methods should be multifaceted and comprehensive.

### **Fostering the Development of Transversal Competencies in Science Teacher Education: A Comparative Study between Finland and China**

Wang Yan Shenzhen University

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Educational reforms, particularly over the past decade, underscore the integration of support for the development of transversal competencies into national curricula. In addition to teaching subject-specific content, teachers are increasingly expected to impart transversal competencies. Despite this shift, there is a paucity of research examining how teachers themselves are trained in transversal skills or competences. Furthermore, attention has been given to investigate how teachers conceptualize goals related to transversal competencies, how they perceive these goals, and whether their beliefs align with the curriculum content.

In this study, data was collected through interviewing both pre-service teachers in Finland and China. Participants were asked about their perspectives on the significance of transversal competencies, the competencies they feel proficient in, and areas in which they may require additional support. The collected data was analysed, using qualitative content analysis methods.

In both countries, student teachers were well aware of the aims for transversal competencies, described in the national level curricula. According to interviews, these aims significantly influence teaching of topics in the classrooms. Preliminary analysis indicate a consensus in both countries that thinking skills and the ability to learn are interpreted as most crucial transversal competence. However, student teachers need in both countries more support to teach these competences. Notably, Chinese student teachers did not mention entrepreneurial skills in their interviews, while Finnish expressed a need for support in cultivating these skills within themselves.

This study suggests that students teachers possess a solid understanding of what they need to teach but may require additional guidance on how to effectively teach transversal competencies. Even though transversal competencies are integrated into teacher training courses, there is a potential need for explicitly defined courses focused specifically on transversal competencies.

## **Teacher Education in Nexus Between Past Traditions and Future Possibilities: Continuous Professional Development Opportunities and Needs of Teacher Educators in Nepal**

Prem Prasad Poudel Tribhuvan University

In the changed contexts of educational practices supported by rapidly changing technology use in rapidly changing educational systems, teachers have not experienced new ways of work and their roles redefined- from knowledge authority to facilitators for knowledge construction (Choi & Poudel, 2022). In this context, the age-old approaches to teaching, learning, assessment, and teacher education have been questioned (Block & Cameron, 2002; Hayland & Wong, 2013). In responding to this pressing need to shift from conventional ‘knowledge provider’ role of teachers to ‘facilitators for knowledge construction’, teachers and teacher educators are facing challenges in providing quality learning opportunities as intended by the curricula and their own continuous professional growth as educators of the 21st century pedagogy that demands them to use technology in educational practices. Since teacher educators play pivotal role in improving the quality of educational processes and outcomes through their planned engagement in supporting teachers to do best pedagogies, understanding of their professional development opportunities and needs shall help to find pathways for confronting today’s complex and multiple problems faced by teachers and teacher educators.

Against this backdrop, in this study, continuous professional development practices, perspectives and needs of teacher educators in Nepal were explored. In Nepal, teacher education is conducted in two ways- pre-service teacher education programs run by universities through their academic programs and in-service teacher education conducted by line agencies of the Education Ministry (e. g. , Center for Education and Human Resource Development; Provincial Level Educational Training Centers). The current study focused on in-service teacher education, and specifically the professional development needs of teacher educators working in in-service teacher education.

Data were collected through a nation-wide survey among 162 teacher educators, and interviews were conducted with 14 teacher educators, 6 heads of training centers, 35 teachers, that took place in 2023. The findings show despite several professional development opportunities available for teacher educators, there is a need for a reviewed approach to the development of capacity of educators to deal with rapidly changing knowledge bases and context-specific pedagogical skills. It also found that systemic mechanisms for assessing trainer quality are lacking, so that teacher educators are falling short in making informed decisions. This paper will also report important implications for future policy and program decisions in Nepal concerning teacher educators’ continuous professional development. Moreover, understanding of teacher educators’ capacity and effectiveness of in-service teacher education could provide future directions on what systematic mechanisms can contribute to enhanced teacher education, to support the nations’ long-terms efforts in creating quality teaching and learning through quality of teacher professional development.

**The Consequences of Implementing English as a Foreign Language Instruction  
in the Municipal School: A Case Study of  
School-University Collaboration in Thailand**

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English was the language used in globalization, and learning English as a foreign language was very important. However, promoting children's learning English was difficult because the circumstances were not supportive for students learning English in daily life. In the context of Thailand, the local administrative organization was concerned about the quality of education for students in the municipality and aimed to promote students' English communication skills. The local administrative organization launched the free learning English for all policy for students in municipal schools. Consequently, collaboration between municipal schools and universities emerged to develop English as a foreign language instruction. This study was a case study of the collaboration between the municipal school under the local administrative organization in four provinces (Nonthaburi, Trang, Pathum Thani, and Chon Buri) and Kasetsart University. Based on the needs of the municipal school, the university designed and developed the program for enhancing the English communication of municipal students into two programs, namely the Normal Program Plus (NP+) and the Mini-English Program (MEP), and managed the program, such as recruiting qualified foreign teachers, conducting teacher professional development training for foreign teachers, and supervising foreign teachers and school teachers.

The study employed objective-oriented evaluation methods to determine the programs' outcomes and impacts. A total of 1,443 students, 189 school administrators and Thai teachers, and five supervisors from 23 schools across six municipalities or sub-district municipalities participated in the data collection process. To evaluate learning outcomes, descriptive statistics were applied. The PNI Modified Index was employed to assess impact analysis, while content analysis was utilized to examine the various factors that influence program performance. The findings revealed that over fifty percent of students in grades 3, 6, 9, and 12 had achieved proficiency in listening and speaking communication English at the A1, A1+, A2, and B1 levels, respectively, for both NP+ and MEP. In comparison with NP+, the pass rate among students participating in MEP was greater. In addition, the program developed significantly impacted school management, learning management, students, teachers, and communities. Key factors included sustainable policies, budget readiness, improved learning sites, development of foreign teachers' skills, and coordination among Thai and foreign teachers. Moreover, parental collaboration was crucial for the program's success.

## **29 Teacher Education in Cooperation Between Universities and Primary and Secondary School Partners**

### **Analysis on Contradictions in Cross-Boundary Collaboration of U-S Community Based on CHAT: A Case Study of Change Laboratory for School Placement**

Zhao Yuchen Capital Normal University

Wei Ge Capital Normal University

School placement mentoring is mostly organized and completed together by university mentors and school mentors, and such a U-S community in cross-border collaboration faces a "triple dilemma", including conflicts between theoretical knowledge and practical ability, intrinsic motivation and extrinsic motivation, as well as individual learning and collective learning. These contradictions are more clearly reflected in the context of change laboratory, as the interaction among participants can be regarded as a projection of the U-S partnership in the real scene of school placement mentoring. Based on the project of Department C, University S, which focuses on the improvement of school placement mentoring, this research coded the dialogue texts produced in the first four change laboratory meetings of the project and conducted a critical discourse analysis towards them, thus leading to a discussion on the contradictions and the intrinsic learning potentials of the U-S partnership in school placement mentoring. This research found that university mentors, school mentors and student teachers were unable to be aware of their respective subjectivities in school placement mentoring due to the underlying social rules and work division, and it was difficult for them to "cross the boundaries", which resulted in the phenomenon of "objectification of the subject". The phenomenon of "subject objectification" is the core contradiction in school placement mentoring, and various sub-contradictions under it are important factors to promote the improvement of school placement mentoring. To resolve these contradictions, the functions of the change laboratory should be fully intensified to make the participants discover their subjectivities and finally prompt an active participation in the construction of the U-S community.

### **Opening the "Black Box": How Does U-S Partnership Promote Teacher Boundary-Crossing Learning-- A Systematic Literature Review Based on International Research**

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Bai Songtao Zhejiang University

Liang Ying Zhejiang University

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For decades, university-school partnership has become an important mechanism for expanding the learning context of teachers, promoting their professional development, and driving school improvement and change. How teachers can achieve continuous and effective



boundary-crossing learning in the context of U-S partnership has emerged as a significant issue in the field of teacher professional development. By using the method of systematic literature review and the activity theory of "culture-history", this study constructed a four-dimensional analysis framework of "community-intermediary tool-division-rules", made a qualitative analysis of 29 international research literature on teachers' boundary-crossing learning in the context of U-S partnership, explained the inherent characteristics and operation rules of the activity system formed by boundary-crossing collaboration between university and school teachers, and analyzed the contradictions and conflicts in the development process of boundary-crossing collaboration community. Based on these findings, the study proposes the need to further optimize operational modes through shared visions and aggregation mechanisms, reshape the design and intervention mechanisms of mediating artifacts, and create a democratic and equal collaborative support atmosphere to promote the symbiotic development of boundary-crossing collaboration between universities and schools, thereby steadily achieving teachers' professional growth.

### **Participation of Primary and Secondary Schools in Teacher Education: Value Implication, Realistic Demands and Solutions -- Case Study Based on Boundary Theory**

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Liu Yan South China Normal University

He Yufei South China Normal University

Wang Hong South China Normal University

Under the background of the "Plan to Strengthen Basic Education Teacher Force," the participation of primary and secondary schools in teacher education serves not only as an important supplementary mechanism for building a high-quality teaching staff but also as a necessary means to promote the high-quality development of education and empower the construction of a high-quality and balanced public education service system. The analysis employs case study methodology, utilizing the three key elements of boundary theory as an analytical framework to examine the practical measures taken by primary and secondary schools in teacher education. It reveals the significant role of these schools as members of a cross-boundary learning community in promoting the integration of theory and practice, the comprehensive application of disciplinary knowledge, and collaboration among families, schools, and communities. However, it also identifies challenges encountered during collaboration, such as aligning educational philosophies, division of roles, and establishing institutional frameworks. With the transition from normal education to teacher education and the urgent need for professional development among educators, primary and secondary schools must urgently seek and create boundary objects. Examples include establishing teacher development communities, conducting school-based research, and initiating inter-school cooperation projects to effectively address these challenges.

## **How to Form Shared Objects to Enhance University-School Collaboration? A Cultural-Historical Activity Theory Perspective**

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University-school (U-S) collaboration has proven to be an effective approach for teacher professional development, but it could be hampered by the lack of shared objects. To understand how shared objects are formed in U-S collaboration, this research established a university-school collaborated Change Laboratory in W primary school based on cultural-historical activity theory (CHAT), which is under the background of Chinese teaching research activity (TRA). Recordings of meetings throughout the year were transcribed into texts and coded, and then analyzed via the method of grounded theory and contradiction analysis. The findings reveal that, in comparison to previous studies regarding shared object formation process, this study identified an special phase named ‘experimental object’, which highlights the significance of experimentation in U-S collaboration. Also, multiple contradictions are recognized as the driving force for shared object formation. which would gradually transform into fundamental conflicts between tools. The main contradictions identified include those between scientific and daily concepts, university culture and school culture, as well as new experiment and old routine. The current study implicates that U-S collaboration is an expansive learning process to acquire unknown knowledge, which necessitates both parties engaging in exploration and experimentation together. Furthermore, shared object formation within U-S collaboration requires participants to focus on developing teaching tools while consciously undergoing changes in aspects such as logic of thinking, culture and routine.

### **Analysis of the Dilemma of "Double Tutors" Collaborative Education and Practice Breakthrough**

Zhang Wen Huanan Normal University

With the integration of teacher education, university mentors and primary and secondary school mentors—key stakeholders in this field—collectively undertake the critical responsibility of practical training within teacher education. Employing field theory, we can analyze the logical structure of the collaborative educational process involving "double mentors" and identify underlying dilemmas from the perspectives of capital, habitus, and field. These dilemmas encompass inadequate interaction between university mentors and primary/secondary school mentors due to disparities in capital, failures in role positioning stemming from entrenched habitus, and insufficient physical presence resulting from encroachments within their respective fields. By elucidating capital logic, delineating rights and responsibilities among participants, and innovating new frameworks for collaboration between "double mentors"; by reshaping educational habits, fostering a shared educational consensus, and cultivating a novel ecology for cooperation across all levels; as well as enhancing inter-field integration to facilitate cooperative channels—we can effectively address the tangible challenges faced in collaborative education among "double mentors."

## **On Cultural Conflict and Integration Between Normal Universities and Primary and Secondary Schools**

Xue Zhengbin Ningxia Normal University

The integrated development of teacher education has broken the separation between normal universities and primary and secondary schools, establishing a partnership between the two. But the culture of normal universities is mainly based on profound theoretical accumulation and cutting-edge academic research, emphasizing research and ideological aspects; The culture of primary and secondary schools mainly summarizes the practical experience of daily education and teaching, emphasizing practicality and daily relevance. Therefore, there is a cultural conflict in the cooperation between teachers in normal universities and primary and secondary schools. But the cultural differences that objectively exist between the two provide complementary and mutually beneficial conditions for their cooperation. Therefore, it is proposed to build a common organizational culture, promote the integration of institutional culture, establish equal partnerships and equal discourse power, in order to achieve the integration of "research-oriented culture" in normal universities and "teaching oriented culture" in primary and secondary schools, and effectively promote the professional development of teachers before and after their employment.

## **30 Exploring the Cross-Border Community Model of Teacher**

### **Education**

#### **How Can We Establish a Sustainable Mechanism for U-S**

#### **Cross-Border Collaborative Teaching and Research? --A Case Study from the Perspective of Actor Network Theory**

Jiang Shuling Zhejiang Normal University

He Zhen Zhejiang Normal University

Currently, challenges such as cultural differences, role conflicts, and institutional loopholes persist in cross-border teaching and research collaborations between universities and primary and secondary schools. Developing a robust operational mechanism is imperative for the transformation and upgrading of teaching and research work. Using Actor Network Theory as a foundation, the case study of Project K exemplifies a functioning operational mechanism. Core actors can accurately identify and address the teaching and research issues faced by other actors, establish shared objectives, assign benefits to actors based on mandatory access points, dynamically recruit diverse actors, and actively motivate them to participate in the ongoing operation of the collaborative teaching and research network. The reshaping of a new cross-border teaching and research landscape and the establishment of a cross-border teaching and research community encompass the following fundamental principles: Utilizing responsibility and mission to motivate cross-border teaching and research, fostering cross-border teaching and research vitality through self-awareness and metacognition, and enhancing cross-border teaching and research productivity through knowledge and product development. Together, these mechanisms trigger a comprehensive feedback loop between material and mental processes, leading to collective dual-loop learning, thereby reconstructing the ecosystem for cross-border teaching and research.

#### **A Study on The Construction of a Community of Teacher Educators in Chinese-Style Cross-Border Integration Colleges and Universities**

Dai Weifen Central China Normal University

The Ministry of Education's Teacher Education Collaborative Quality Improvement Program is a teacher education program with Chinese characteristics that combines Chinese practices with a view to building a high-quality teacher education system and improving the overall level of teacher education in teacher colleges and teacher education programs. In order to solve the current problems of looseness of collaborative quality improvement within groups of teacher education colleges and universities and the tendency of weak schools to focus on short-term results, this study argues that there is a need to build a community of teacher educators that is multifaceted and cross-border. The quality of teacher educators is the key to improving the level of teacher education in colleges and universities. Focusing on the development of teacher educators (in disadvantaged schools), each subject crosses the traditional boundaries of teacher training college hierarchies, geography, virtual and real space

and knowledge, and promotes the deepening of collaborative quality enhancement work by means of in-depth cooperation, in order to realize the integration of teacher education resources and strengthen the integration of teacher education awareness, so as to maximize the reduction of the gap in the quality of talent cultivation at the root, guarantee the overall quality of the teaching force in underdeveloped areas, and thus help to crack the ecological imbalance of the education system.

### **How U-S Partnership Promotes the Quality of Teacher Education: the Case of the National Excellence Program**

Gao Xinyu East China Normal University

Zhang Ying East China Normal University

In the field of teacher education, the primary manifestation of partnership is the collaborative relationship formed between universities (U) and primary/secondary schools (S) during the process of teacher education. This study investigates the concept of partnership within the domain of teacher education. It examines the practical implementation of partnerships in the "National Excellence Program" (NEP) across four dimensions: goals, personnel, methods, and resources. Improving the institutional design of the "mentor team system" is a possible approach to enhancing the capacity building of teacher education partnerships. This can be achieved by defining the division of labor and responsibilities among various types of mentors to promote the identity construction of teacher educators, fostering role negotiation to form collaborative identities by creating "boundary spanners", and enhancing innovative reflective practice capabilities through the establishment of communication mechanisms.

### **How can Cross-boundary Collaboration Helps Teachers Coping with the Curriculum Reform? Case Studies of Collaborative Innovation School Project in Beijing**

Zhong Yani Beijing Institute of Education

In order to enhance teachers' ability to cope with the curriculum reform, a Cross-boundary Collaboration named "Collaborative Innovation School Project" was launched from 2015 by Beijing Institute of Education. This paper enquires about the collaboration approaches and strategies in six schools by case study. After analyzing the problems and challenges facing by the teachers, the project confirms to focus on the following collaborative dimension: school governance, curriculum making, pedagogical innovation, educational assessment et al.. The paper also analyzes the effectiveness of the project on teacher professional development, students and school development. Based on the problems of this kind of collaboration, the paper ends with the suggestions on effective ways of collaboration in order to enhance the quality of basic education.

## **Navigating the Challenges in Boundary Crossing School-to-School Collaboration: A Systematic Review**

Norah Alexander Mwipopo Beijing Normal University

In recent years, there has been significant attention on boundary-crossing practices, where professionals merge elements from different contexts to create hybrid situations, intending to empower weaker or underqualified schools. While existing studies explore how boundary actors navigate these boundaries (Chen & An, 2022), the learning mechanisms involved (Leung, 2020), and the roles of boundary actors and objects in educational assistance (Garner et al. , 2021), there is a scarcity of systematic literature addressing challenges in boundary crossing. This study aims to: 1) Identify obstacles encountered in navigating unfamiliar territories during school collaboration practices. 2) Recommend strategies for effective implementation of boundary-crossing practices. This study presents a systematic review focusing on challenges inherent in school-to-school support across boundaries. Methodologically, it involved a comprehensive search across databases like Elsevier, Google Scholar, Sci-hub, Science Direct, Erick, Sage Journals, Springer, and NCIK. Initially, keywords such as "school-to-school collaboration" and "Challenges" generated 7680 studies, which were refined to 4070 after excluding non-educational boundary crossing studies, 1400 after adding "boundary actors", and 216 after adding on boundary spanners. Ultimately, 20 articles met the inclusion criteria and were selected as they effectively addressed the research questions. Findings highlight the complexity of finding or creating appropriate boundary objects for knowledge transfer (Leung, 2020). Communication and collaboration issues, such as the lack of communication between course instructors and school mentors, disrupt student-teacher experiences (Wang et al. , 2022). Negotiating meaning and transforming roles and relationships pose challenges (Tsui & Law, 2007), alongside dilemmas between exam-focused education and holistic student development and difficulty in applying theories and principles in school practice as well as the gap between theory and practice in the activity system. (Chen & An, 2022). The study recommends; Establishing clear communication channels, fostering collaborative partnerships, providing professional development, utilizing technology for knowledge exchange, implementing monitoring and evaluation mechanisms, promoting reflective practice, supporting adaptive leadership, and cultivating a culture of collaboration. This study aims to raise awareness of boundary-crossing complexities and offer recommendations for mitigating challenges and enhancing collaboration, knowledge exchange, and innovation in diverse educational contexts.

## **Academics' Perceived Negotiated Space in University-Industry Collaborative Research Projects**

Shi Lan Tsinghua University

Lai Manhong Beijing Normal University

Many countries encourage universities to strengthen cooperation with the industry, viewing such collaboration as an effective tool to promote knowledge transfer and economic development. Driven by the industry-university-research collaboration policy, the Chinese government actively encourages universities and teachers to collaborate with the industry in applied projects, promoting knowledge innovation and technological progress to support industrial upgrading.

However, studies have found that collaborations with industry on applied projects face many challenges. Industries are interested in using these projects to solve practical production problems, which contradicts the exploratory and innovative nature of academic research, leading to many restrictions for university teachers in the process of conducting applied projects. Additionally, excessive involvement in applied projects with industries can also reduce the time that university teachers invest in academic research and teaching activities, thereby sacrificing the quality of their academic research.

This study adopts a qualitative research method and conducts interviews with 32 teachers from two universities at different tiers in China. The study found that, university teachers attempt to seek to expand a negotiated space to balance the demands of external funders for application and their own academic interests.

Our study found that, first, the negotiated space is relatively limited, with applied projects subject to restrictions from industries in terms of research problem selection, research process arrangements, and evaluation of research results. Second, university teachers recognize the constraints of this space, and they found it difficult to negotiate with industries based on academic judgment and the needs of knowledge innovation. University teachers need to seek to expand this negotiated space by employing market language and mitigating production risks. Finally, the negotiated space is influenced by factors such as the personal factors of university teachers, disciplinary characteristics, and the reputation of the university, and university teachers can expand this negotiated space by integrating various factors.

## **31 Teacher Efficacy Acquisition and Associated Factors**

### **Whether Resilience Is a Mediator of The Effect of Self-Efficacy on Teachers' Work Engagement?**

NUR – EVA Malang State University

Ajar Dirgantoro Malang State University

Teachers' work engagement is important. Teachers who are engaged in their work will be able to maintain a commitment to their profession and be key to achieving performance. Teachers engaged in their work will display maximum performance and simultaneously generate involvement in students to affect their learning achievement. Teachers' work engagement is influenced by self-efficacy and resilience. This study aimed to analyze the effect of self-efficacy on teachers' work engagement with resilience as a mediator. The method used is correlational. The sample of this study was 220 teachers of junior high school. The instruments used are the Utrecht Work Engagement Scale (UWES) from Schaufeli and Bakker (2004), the General Self-Efficacy (GSE) Scale from Scholz et al. (2002) and the Connor Davidson Resilience Scale (CD-RISC) from Connor and Davidson, (2003). The data were analyzed using Partial Least Square - Structural Equation Modeling (PLS-SEM). The results showed an effect of self-efficacy on teachers' work engagement with resilience as a mediator ( $p = 0.021$ ;  $T = 2.311$ ). This research implies that teachers' work involvement can increase teachers' resilience and self-efficacy by providing a wider discussion space for teachers facing various problems encountered during work.

### **Research on the Grouping Paths of Kindergarten Teachers' Professional Well-being Improvement: Based on Fuzzy Set Qualitative Comparative Analysis (fsQCA)**

Zhou Qiao Chongqing Normal University

Zhang Chaoyue Chongqing Normal University

Weng Jin Chongqing Normal University

Wei Yonggang Chongqing Normal University

As a key element in the allocation of preschool education resources, the professional well-being of kindergarten teachers cannot be ignored. This study adopted the fuzzy set qualitative comparative analysis (fsQCA) method, selected 6 conditional variables including job engagement, professional identity, competency, subjective well-being, social support and organizational support, and took 305 kindergarten teachers across the country as research objects to explore the multiple paths affecting the improvement of kindergarten teachers' professional well-being. The results show that there are three patterns affecting the improvement of kindergarten teachers' professional well-being, which can be divided into four paths. One is type A of "support - subjective happiness leading", which contains two sub-paths. This type is generated by kindergarten teachers' receiving "support" from both inside and outside as the leading mechanism and combining subjective well-being. The second is type B



of "internal and external resonance driving", which has one sub-path. The emergence of this type is mainly driven by internal and external factors to promote kindergarten teachers' professional well-being. The third is type C of "multi-support symbiosis", with one sub-path, which fully indicates that kindergarten teachers' professional well-being comes from many aspects and is a complex synthesis. It can be seen that a single conditional variable is not enough to directly determine the level of kindergarten teachers' professional well-being, but jointly affects it in the form of configuration. In addition, based on this study, it is also found that organizational support exists in every path as the core condition, which is particularly important for the improvement of kindergarten teachers' professional well-being, and provides a theoretical basis for kindergartens to strengthen organizational construction. Based on this, the administrative decision-makers and managers of kindergartens should implement differentiation strategies, go beyond the dependence on a single factor, adopt the concept of diversification and integrity, build organizational support with work support, value recognition and interest care as the core to become the endogenous driving force for sustainable development, and promote the comprehensive improvement of kindergarten teachers' professional well-being through multi-pronged measures.

### **Exploring the Relationship Between Beginning Teachers' Wellbeing, Job Characteristics, Emotional Regulation Strategies and Mindset: A Cognitive Behavior Therapy Perspective**

Ao Narentuya Capital Normal University

Zhu Bing Capital Normal University

Beginning teachers are inexperienced in dealing with unfamiliar stressors, tending to undergo more challenges in regulating their emotions and keeping their wellbeing. Therefore, understanding and supporting their wellbeing during the critical period of induction is of great significance. However, current studies mainly focused on problem analysis from sociological perspectives, failing to construct effective induction programs specifically designed for prevention or intervention of potential problems. Emotion is a socio-psychological construct, thus valid analysis of emotional problems and designs of prevention or intervention programs ought to be based on a socio-psychological or psychological framework. Cognitive Behavior Therapy (CBT) is a type of psychotherapeutic treatment that helps people learn how to identify and change the destructive or disturbing thought patterns that have a negative influence on their behavior and emotions. Taking CBT as the analytical framework, the current study explored the relationship between three beginning teachers' wellbeing, job characteristics, emotional regulation strategies and mindset in their first three years of teaching. It was found that the participants experienced a low level of wellbeing and chaotic use of emotional regulation strategies in their first year of teaching with parent teacher communication and school culture working as major contributing factors. In their second and third year of teaching, the contributing factors remained unchanged but the level of their wellbeing increased greatly because of changes in their emotional regulation strategies and mindset. The current study helped to generate insights into the particular issues facing beginning teachers in their anticipatory socialization process, and it also cast light on generating effective prevention or intervention programs to help maintain or improve teacher wellbeing.

## **The Impact of Peaceful Hope on Job Burnout Among Primary School Teachers: The Moderating Effect of Ego-Resiliency**

Lu Changshun Beijing Normal University

Under the background of the "double reduction policy", the group of primary school teachers has become a "heavy disaster area" of job burnout (Su,2023). Hope and resilience, as important qualities of positive psychology, have a protective effect on mental health. To explore a new perspective on intervention for teacher job burnout, a study was conducted on the relationship between peaceful hope, ego-resilience, and job burnout. A convenient sampling method was used to select 349 primary school teachers from a large coastal city in the south, including 62 males and 287 females, with an average age of 35.15 years old. A survey was conducted on 349 primary school teachers using CPHS, MBI-ES, and ERS. Through data analysis, it is shown that there is a significant negative correlation between the peaceful hope and job burnout among primary school teachers, and it can significantly negatively affect job burnout. Ego-resiliency has a negative moderating effect on the impact of peaceful hope on job burnout.

## **Action Strategies to Implement the Idea of Social Responsibility in Teacher Education: The Reflections from the Perspective of Social Practice**

Yang Chihuahua-Ying Pingtung University

University Social Responsibility (USR) has gradually become a key focus in the development of higher education recently. This trend has also influenced Taiwan's teacher education policies, particularly with the transformation of the "Local Education Guidance Work" in teacher education policy into the "University Social Responsibility Program for Teacher Education" starting in 2024. Since "social practice" is a crucial theoretical perspective for implementing USR, this study aims to reflect on the current status and challenges of implementing USR in Taiwan's teacher education through the lens of social practice theory. The study will focus on four strategic aspects: needs assessment, field shaping, network collaboration, and action intervention. To achieve the research objectives, this study employs document analysis and interviews for data collection and analysis, with research subjects consisting of teams from five teacher education universities that are implementing the USR plan for teacher education. Based on the analysis of relevant research data, this study proposes action strategies and recommendations for the implementation of USR in teacher education.

## **32 Multi-Dimensional Exploration of Teacher Professional**

### **Development Path**

#### **How do Leadership Practices Affect Professional Learning Communities? The Mediating Role of Principals' Perceived Trust by Teachers**

Liu Zhihui Zhejiang University

Zhang Jia Zhejiang University

Drawing on social exchange theory, this study aims to explore the effects of various leadership practices on professional learning communities (PLCs) and the mediating role of principals' perceived trust by teachers in the relationships between various leadership practices and PLCs from Chinese principals' perspective. Survey data were collected from 739 principals from different provinces. To examine the proposed model, the study utilized four-step hierarchical regression, Shapley value decomposition, and bootstrap methods. The results indicated that all the four components of leadership practices, namely setting directions, developing people, redesigning the organization and managing the instructional programme significantly and positively affected PLCs, and their contribution rates were 15.81%, 23.43%, 36.48% and 23.25% respectively. Principals' perceived trust by teachers was a significant mediator between all the four components of leadership practices and PLCs. The practical implications of the findings and suggestions for future research are discussed.

#### **The Application of Positive Psychology in the Sustainable Development Ability of Normal University Students and the Prevention of Juvenile Delinquency**

Zhang Xiangna Xingtai University, Taihang Branch of Teacher Education Research Center,

Beijing Normal University

The education energy that local normal university students can provide after becoming teachers is much higher than we usually recognize, including the prevention of juvenile crime. This paper studies a teacher graduate with positive psychology. By analyzing her educational experience and her successful inspiration and education to students in the past 34 years, it can be deduced that the use of positive psychology education can influence the future teacher group of normal university students. Let normal university students exert their ability to become a reliable partner of family education, a powerful supplement and a good medicine in special circumstances in the prevention of juvenile delinquency after becoming teachers, and then further study how normal university students carry out positive psychology education in learning and practice, so as to achieve remarkable results in reducing juvenile delinquency after the normal university students become teachers. This finding provides a new perspective and path for the education of normal college students and the prevention of juvenile delinquency.

## **"Lying Down" or "Not Lying Down": An Empirical Study on the Participation of Teachers in Professional Development Activities in Local Normal Colleges**

Chen Xiaole Xingtai University

The study takes the psychological process of local normal university teachers participating in professional development activities as a logical clue, uses narrative research methods to interview 10 teachers from X College, and conducts thematic analysis on the interview data. Based on the framework of planned behavior theory, the study explores the influencing factors of teachers participating in professional development activities under the drive of collaborative quality improvement plan policies. Research has found that teachers' participation in professional development activities is mainly influenced by three aspects: participation attitude, subjective norms, and perceived behavioral control. Among them, participation attitude includes instrumental value and spiritual value; Subjective norms include a development atmosphere and role model guidance; Perceived behavioral control includes internal and external controls, such as project promotion, project attractiveness, personal early accumulation, family workload, proactive learning habits, and personal ability traits. Further describe it into two types of portraits: active "not lying flat" under positive feedback influence and passive "lying flat" under weak cumulative influence. It is recommended to promote teachers' independent participation in professional development activities by practicing the spirit of educators, accurately designing professional development activities, and leveraging the exemplary role of excellent teachers.

### **How Does Master Teacher Studios Promote the Development of Teachers' Professional Capital?**

Du Jiaoyang Beijing Normal University

Li Qiong Beijing Normal University

Developing teachers' professional capital is an educational investment. Master Teacher studios not only facilitate the development and mechanisms formation of professional capital but also exert regional influence, catalyzing broader self-investment and development among teachers and schools. This study, focusing on a mathematics master teacher studio in a district-level primary school in Beijing, aims to refine and advance the theoretical framework of teachers' professional capital, distill mechanisms for its development, and reveal the facilitating role of master teacher studios in the development of teachers' professional capital. Through semi-structured interviews with 10 teachers in the studio, complemented by participatory observation and material collection, the study finds that members' professional capital consists of four elements: opportunity capital, human capital, social capital, and decisional capital. By delineating three pathways for professional capital development, three facilitating strategies for master teachers, and six challenges at three levels of development, the study further unveils a three-dimensional development mechanism for professional capital. This mechanism encompasses various forms of members' professional capital development, constructing a learning space for them. As members deepen their learning, participation, and interaction, this space expands outward progressively.

## **Community of Practice: Promoting the Professional Growth of Student Teachers**

Wu Jinyue XingTai University

Song Wenxia XingTai University

Hou Hongxia XingTai University

Community of Practice: Promoting the professional growth of trainee teachers The practice-oriented teacher education curriculum concept requires in-depth education and teaching reform, highlighting the practical teaching link, and educational practice has become the only way for normal students to grow professionally. This paper takes a trainee teacher majoring in preschool education as the research object, and explores the process and characteristics of his professional growth in the practice community composed of professional instructors, kindergarten instructors and children during the internship period by analyzing the diary, video materials, and internship manuals during the internship. The study found that the trainee teachers experienced a transformation process from the confusion of entering the kindergarten to the gradual adaptation, from theory to practice, and from passive to active during the internship period, and their professional growth was mainly reflected in the aspects of educational philosophy, teaching skills, class management ability, and self-awareness. In order to improve the education quality of preschool education trainee teachers and promote their professional development, it has certain enlightenment significance.

### **Reality Shock or Boundary Crossing Learning? Construction of Teacher Professional Identity of "National Excellent Program" Students in Practice Teaching**

Xie Xinhe Nanjing University

Cao Taisheng Nanjing University

"National Excellence Program" allows a group of high-level comprehensive universities to participate in the training of graduate level teachers, how to help these graduate students to build teacher identity, enter and stay in the education industry after graduation, directly determines the quality and effect of the implementation of the program. Research shows that practical teaching is a key stage for teacher candidates to construct teacher identity. Different from the traditional separation of theory and practice to cultivate teachers' knowledge, from the perspective of cross-border learning theory, the key for teachers to construct teacher identity is to be able to freely cross the boundary between theory and practice. Based on the existing research literature, this paper constructs a mechanism to develop teachers' professional identity for National Excellence Program graduate students in practical teaching. The successful realization of cross-border learning requires that National Excellence Program graduate students have the basic cognitive foundation, are in the social relationship network and environment, have the role of boundary objects, and have the initiative of individuals. In view of the special performance and needs of national excellent planning students in constructing teacher identity, this paper proposes the following design principles for practical teaching training of national excellent planning students: regard theoretical training as a process to reserve the cognitive basis of dialogue, present more diverse boundary differences of teachers' work to create opportunities for dialogue, and regard research as an important boundary of practical teaching training of national excellent planning students.

## **33 Technological Innovation Enables Teachers to Expand Their Ability**

### **Video Club Empowering Teacher Learning: How to Promote Teacher Noticing in a Chinese Primary School**

Zheng Yixuan East China Normal University

Xia Yuxi East China Normal University

Video club represents a novel model for teaching and research, facilitating the professional growth of educators by enhancing their ability to engage with critical classroom events through reflective learning. Despite its global popularity, video club remains underutilized in Chinese primary and secondary schools. In light of this, this study recruited seven Chinese language arts teachers from an elementary school in City G, China, to participate in a semester-long video club aimed at assessing its efficacy in fostering teachers' noticing competence across different stages of professional development within the Chinese educational context. Following a preliminary analysis of data collected from ten video club sessions, several key findings emerged. Initially, all seven participants exhibited a greater focus on students' behaviors in video clips compared to teachers' behaviors, with less attention directed towards understanding the underlying reasons behind students' actions. Additionally, disparities were observed in how novice, skilled, and expert teachers attended to crucial classroom events, suggesting potential cultural implications underlying their respective noticing styles. While expert teachers demonstrated superior abilities in noticing and interpreting classroom scenarios in certain respects, novice teachers' inquiry-based reflection processes also demonstrated their advantages. Third, over the course of the semester, all teachers exhibited varying degrees of development in their noticing capacities, notably transitioning from simplistic observations of student behaviors to more nuanced analyses of student cognition. Ultimately, this study underscores the potential of video clubs to facilitate a paradigm shift in Chinese teaching and research, encouraging educators to adopt a strengths-based perspective and contributing to broader educational reforms.

### **Advancing Medical Physics Education in China: Challenges and Strategies for Radiotherapy Technological Innovation**

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The current status and challenges of medical physics education in China are explored in this paper, with a focus on its role in supporting the development of radiotherapy technology and the current challenges faced. The paper traces the transition of domestic radiotherapy equipment from complete dependence on imports to independent research and development, as well as the origin and development of the medical physics discipline. It then highlights the deficiencies in China's medical physics talent training system, including talent shortages, an imperfect education system, and a mismatch with clinical needs. By analyzing these challenges, the paper proposes a series of targeted improvement measures, including the establishment of

a certification system, the strengthening of the teaching staff, the standardization of professional title evaluation processes, and the promotion of international cooperation and exchange. The paper also draws on the mature experiences of regions such as the United States, the European Union, and Australia in medical physics education, providing a reference for the reform of medical physics education in China. Ultimately, the paper aims to provide strategic suggestions for cultivating medical physics talents who can meet clinical needs and possess innovative capabilities, thereby promoting the continuous innovation and development of radiotherapy technology in China.

### **Integrating Teacher Education and Artificial Intelligence (AI): Value, Content, Paths, and Prospects**

Lu Hong South China Normal University

Zhao Yuqin South China Normal University

Wang Hong South China Normal University

The integration of teacher education and artificial intelligence (AI) has led to emerging disciplinary fields and research perspectives, but there is currently a lack of review of related content. This study adopts a systematic review method to analyze 39 literatures from 2016 (AI Year 1) to 2024, focusing on the value, content, path, and prospects of their integration. The research results show that the value of integration lies in optimizing the educational ecology to drive the transformation of teachers' educational environment, bringing opportunities to teacher education to empower the professional development of teachers; the content of integration focuses on the innovation and transformation of teacher education goals, curriculum, practice, patterns, and evaluation in the context of AI; the integration path follows the principles of problem-orientated, concept-guided, and subject-dialogued, promoting the deep integration of the two in stages, levels, and subjects. Based on in-depth research on teacher knowledge, role positioning, and competency literacy, the teacher education discipline system is reconstructed, and technology is updated, forming a closed loop of "two-way upgrading and deep integration". The future should shift from a technological orientation to a value orientation, commit to transforming AI into an endogenous force for the development of teacher education, achieving the meshing and complementary transmission of the two, and building a smart teacher education landscape of human-machine collaboration.

### **Research on the Strategy to Enhance the Interdisciplinary Teaching Practice Capacity of Undergraduate Teacher Trainees in the Date Intelligence Era**

Zhang Yiwen Ningxia University

Hao Zhenjun Ningxia University

In the context of the date intelligence era of interdisciplinary reform of basic education, teachers' teaching competence is undergoing a shift from professional teaching ability to interdisciplinary teaching ability. Higher education undergraduate teacher trainees are the main reserve of the future teaching force, and the cultivation of their interdisciplinary teaching practice competence has become an important innovative trend in teacher education nowadays.

On the basis of clarifying the connotation and characteristics of interdisciplinary teaching practice ability of college undergraduate teacher trainees, this research constructs the evaluation scale and evaluation index system of interdisciplinary teaching practice ability of college undergraduate teacher trainees from the four dimensions of interdisciplinary teaching cognitive ability, interdisciplinary teaching practice ability, interdisciplinary teaching implementation ability, and interdisciplinary teaching evaluation ability through questionnaire survey method, interview method and Delphi method. Based on this, this project takes undergraduate teacher trainees of Ningxia University as the research object, in-depth investigates the status quo and influencing factors of their interdisciplinary teaching practice ability, and proposes the path to enhance the interdisciplinary teaching practice ability of undergraduate teacher trainees of colleges and universities through empirical research, i.e., curriculum enhancement is the main focus, and community activities are the supplement; assessment for teaching is the basis, and competition for learning is the advancement; innovative learning mode is empowered by numerical and intellectual technology.

### **The Mechanism Construction of Supporting Teachers' School-based Learning from the Perspective of "Three Metaphors Culture" --A Case Study of the "Lesson Study Workshop" in Shanghai Jianping Experimental Middle School**

Wei Lan Shanghai Jianping Experimental Middle School

The exploration and the practice of the "Lesson Study Workshop" in Shanghai Jianping Experimental Middle School from the theoretical perspective of "Three Metaphors Culture", combined with the analysis of the type composition and development status of the teachers in this school, mainly focusing on flexible teacher learning community of cross-teaching age, cross-discipline, cross-grade and cross-field, have constructed three major support mechanisms for teacher learning through multiple rounds of research and practice: the integration mechanism of educational theory learning and classroom teaching practice, the renewal mechanism of research method evolution and research tool adaptation, the integration mechanism of practical experience combing and academic achievement refining. The exploration and the practice promote the daily routine of education and research, the manifestation of tacit knowledge, and the structuring of practical wisdom. The interaction, integration and penetration of professional communication among different groups of teachers are propelled and a teacher learning ecology of transmission, feedback, and mutual promotion is formed. The exploration and the practice not only gather strength for the sustainable development of the high position of the school, but also pave the way for and empower the high-quality education career of teachers, as well as lay the foundation for every student's lasting happy life as the purpose and destination.



# **Research on the Operational Mode of Teacher Education in High-level Comprehensive University from the Perspective of Organizational Cross-border Learning**

Du Qian Nanjing University

Xie Xinhe Nanjing University

High-level comprehensive universities have outstanding advantages in the source of students, disciplines, academic research and educational resources. Although the rationality of high-level comprehensive universities participating in teacher education has reached a consensus, there are still many difficulties in the practical process. Among them, the problem of organization and coordination is the key practical obstacle. If high-level comprehensive universities want to play a full role in the transformation of teacher education system and adapt to the development trend of three-dimensional and integrated teacher education, they must identify and resolve the key contradictions in organizational cross-border. The so-called organizational cross-boundary learning refers to the process in which organizations with different activity systems and different conceptual systems cross the boundaries of their daily functional structures, interact with other organizations, and produce positive changes through output, integration, transformation, input, feedback and other ways. High-level comprehensive universities carry out teacher education in a variety of modes, involving a large number of organizations, different organizations in the education concept, training orientation, teaching objectives, implementation mode, evaluation methods and management means of the contradictions are more prominent; At the same time, some organizations only position themselves as the main management body of teacher education, ignoring cross-border communication and the construction of learning organizations, making it difficult to resolve the differences between organizations through cross-boundary learning, and ultimately affecting the supply of resources and the quality of teacher education in high-level comprehensive universities. Therefore, based on this, this study takes organizational cross-boundary learning as a theoretical perspective, examines different operating modes of teacher education in high-level comprehensive universities, understands its current situation and dilemma, analyzes the deep-rooted reasons, pays attention to the patterns and mechanisms of organizational cross-boundary learning in each mode, and proposes countermeasures and suggestions for optimizing the operating mode of teacher education through organizational cross-boundary learning. To translate the relevant policy vision into reality contribute theoretical thinking and practical reference.

## **34 Construction of Teacher Education System: Macro Perspective and Case Study**

### **The Construction of the Independent Knowledge System of Chinese Teacher Education: Logical Attribution, Framework Support, and Path Guarantee**

Ma Yongquan Yili Normal University

The construction of an autonomous knowledge system for Chinese teacher education is an important content and requirement for strengthening China's autonomous knowledge system in the new era. It is also a necessity to demonstrate China's responsibility as a major country under the international situation of profound changes unseen in a century, to promote the realization of a strong educational nation, and to enhance the autonomy of teacher education in China. The core essence of the autonomous knowledge system of Chinese teacher education is to reflect Chinese characteristics and autonomy. Its construction should be supported by Chinese traditional philosophy and Chinese-style Marxism as ideological support, by concepts and theories with Chinese characteristics as original innovative concepts and theoretical support, by the local practice of teacher education in China and the exploration of universally applicable teacher education issues based on this practice as practical support, and by the Chinese-style teacher education system as scientific support. To fully realize the construction of an autonomous knowledge system for Chinese teacher education, we must adhere to the leadership of the Communist Party of China, prioritize the development of teacher education as a national policy, and pursue innovation through mutual learning among world civilizations.

### **Historical Review and Future Prospects of Teacher Education Discipline Construction in China**

Yan Jianzhang Shanxi Normal University

Shang Wenhua Shanxi Normal University

The construction of a high-quality teacher education system with Chinese characteristics in the new era relies on the in-depth promotion of teacher education research. The educational qualifications of teachers in China have gone through three stages of development: the embryonic stage, the exploratory stage, and the mature stage. They have formed their own historical trajectory through a progressive approach of rationalizing the exploration of disciplinary foundations, legalizing the exploration of disciplinary identities, and conforming to the research disciplinary system. From the perspective of the three major systems of discipline construction, their experience and shortcomings are mainly manifested in the steady progress of discipline system construction but the lack of overall planning; Academic theoretical knowledge has gradually become clear but not systematic; The construction of discourse system has been preliminarily explored, but the consensus is still shallow. Looking ahead to the future, China's teacher education will enter a period of comprehensive construction, and the foundation of disciplinary development should be consolidated, and a disciplinary

system should be constructed in a coordinated manner; Strengthen academic innovation research and accelerate the construction of a discipline independent knowledge system; Improve the disciplinary identification mechanism and promote the construction of a disciplinary discourse system.

### **Evaluation of Pre-Service Teacher Education Programs Based on Output Orientation: Concepts, Problems and Countermeasures**

Shang Mingyang Northeast Normal University

Accreditation of teacher education programs focuses on the final learning outcomes of students throughout the entire education process, and the curriculum, as the basis for achieving the goals, needs to be evaluated regularly for its reasonableness and effectiveness. Output-oriented education emphasizes a goal-oriented evaluation strategy to ensure that students learn effectively and achieve the expected outcomes through systematic planning and continuous improvement. In the past, the evaluation of pre-service teachers' courses had problems such as single subject and unclear authority and responsibility; unstable cycle and inaccurate direction; subjective method and poor process; weak data correlation and insufficient feedback. Based on the concept of output orientation, the following measures should be taken to improve the evaluation: strengthening multi-party collaborative evaluation, clarifying the rights and responsibilities to improve the effectiveness of evaluation; setting a stable evaluation cycle based on the graduation requirements; applying qualitative and quantitative analysis methods for continuous improvement; and constructing a rationalization model to continuously test the validity of the evaluation results.

### **Supply-Demand Adaptation for Preschool Education Teachers: Challenges and Responses to Low Birth Rates**

Wei Yonggang Chongqing Normal University

Lei Yaxian Beijing Normal University

Yuan Qihong Chongqing Normal University

The new trends in population development present fresh challenges for educational advancement. The 2024 working conference of the Ministry of Education emphasizes the need to "focus on population change trends to strengthen forward-looking arrangements" and to "promote the optimization of teacher resource allocation." Since the implementation of the "universal two-child policy" in 2016, China's birth population has experienced a brief rebound for two years followed by a continuous decline for six years, dropping from 15.23 million in 2018 to 9.02 million in 2023. The impact of population changes on educational development is fundamental, pioneering, and overarching, with preschool education being at the forefront. The overall development of the national education sector indicates a consistent decline in the number of children enrolled in kindergartens since 2021, with a total reduction of 7.2529 million over three years. The number of kindergartens has also been decreasing continuously since 2022, with a reduction of 20,410 over two years. The potential risks of a "kindergarten shutdown wave" cannot be ignored, posing a significant challenge to preschool education teachers. According to the basic situation of the development of the national education sector,

the number of full-time kindergarten teachers has shown a decline for the first time in 15 years in 2023, with a decrease of 170,500 in just one year. The trend of "teacher layoffs" in kindergartens is emerging. Given the significant expansion of preschool education since 2010, this sudden transformation will inevitably affect the employment of numerous preschool education majors and necessitate adjustments and transformation in the layout of preschool education majors. Compared to the previous emphasis on resource supply and supply-demand balance, supply-demand adaptation has become an important issue in the allocation of educational resources under the new population change trends. From a practical standpoint, local governments and schools face a strategic choice between "cost models" and "quality models" in teacher resource allocation under the impact of population changes. Education departments or schools often unilaterally reduce teacher allocation or simply dismiss teachers based on financial constraints or cost reduction considerations, which will inevitably weaken the foundation of building an educationally strong nation and the "Strong Teacher Plan." Therefore, it is imperative to seek and achieve effective teacher supply-demand adaptation between cost and quality through systematic and in-depth research to provide decision-making references and practical guidance.

### **Rural School level Teacher Development Center: The Strategic fulcrum of Promoting Chinese Rural educational modernization**

Bo Yanling Beijing Normal University

From the perspective of modernization theory, the modernization of Chinese style rural education faces a dual dilemma of "internal and external integration". The development center for rural school level teachers has organizational advantages in breaking through the "internal and external integration" dilemma of Chinese style rural education modernization. Its strategic pivot value in promoting the modernization of Chinese style rural education is reflected in institutionalizing the learning of rural teachers, improving the five-level teacher education system, driving the overall transformation of rural schools, revitalizing the rural education system, and shaping the ecological circle of rural education governance. The construction of rural school level teacher development centers urgently requires the construction of an actor network composed of government, district and county teacher development institutions, universities, third-party social institutions, and multi-dimensional rural social systems, exploring multi-dimensional paths, including collaborative governance paths, material and technological support paths, spiritual and cultural construction paths, professional support paths, and policy and institutional paths.

## **Analysis of the Function Transformation and Construction Path of District and County Teacher Development Institutions-- Taking the Reform of Teacher Development Centers in Guangdong Province as an Example**

Wang Hong South China Normal University

Chen Lu South China Normal University

Song Yiyao South China Normal University

Bai Hongtai South China Normal University

The construction of teacher development institutions is an important part of the teacher education system with Chinese characteristics, and plays the role of a link between the top and the bottom. However, the current construction of teacher development institutions is plagued by problems such as lack of integration between departments, poor functioning, and lagging professional capacity building. This article starts with the research status of existing teacher development institutions and analyzes the "expected state" of the functional positioning of teacher development institutions; Taking the reform practice of county-level teacher development centers in Guangdong Province as an example, using text analysis tools, this study examines the "actual state" of the functional positioning, functional performance, and professional construction of county-level teacher development centers after the integration of complete departments; By analyzing the gap between "what is" and "what should be", the value and significance of functional transformation achieved by district and county teacher development institutions through departmental integration are analyzed. The research and analysis of the functioning status quo of county and district teacher development centers in Guangdong Province, based on the theory of the "third space", further explore the connotation of teacher development agencies as the "link" of the teacher education system, so as to propose a path and strategy for the reform and development of the current county and district teacher development agencies. In this way, it proposes paths and strategies for the reform and development of the current district and county teacher development institutions.

## **35 Cooperative Development Model of Teacher Education: from a Global Perspective**

### **Unpacking International Teacher Educator's Boundary Crossing Experiences: A Perspective from Tanzania**

Anna Benson Boreka Beijing Normal University

Boundary crossing is one of the practices that has impacted the professional growth of many educators in the 21st century. There is a growing number of teacher educators who are working outside of their country of origin in search for new experiences and professional growth. By crossing geographical boundaries, teacher educators are expected to expand their perspectives, assess their beliefs, and modify their pedagogical approaches to effectively meet the needs of diversified students and create meaningful teaching and learning experiences for themselves, their students and add value to the field of education. It is crucial to understand that international teacher educators' experiences might differ across nations, especially for those who are crossing borders from global north to global south countries which might impact educators' ability to execute their responsibilities. This study, therefore, seeks to investigate the boundary-crossing experiences of international teacher educators in higher learning institutions in Tanzania. Guided by boundary crossing theory, this qualitative study will employ document review and interviews to explore the challenges and opportunities experienced by international teacher educators and how they navigate those challenges to effectively support their professional growth and make an impact in teacher education in Tanzania. The study will offer a comprehensive knowledge of the experiences of teacher educators working across national which adds to the expanding body of knowledge on boundary crossing practices and their impact on building a diversified atmosphere in educational institutions. The study will also provide insights into the broader implications of the phenomenon in the Tanzanian context and in other countries with similar contexts. The results will also contribute to policy and practice in terms of creating policies and guidelines that will attract international teacher educators in Tanzania, which will lead to an increase in the international atmosphere in Tanzanian educational institutions and strengthen global partnerships among teacher educators.

### **Institutional Trust and Community Empowerment: How Can Teacher Professional Learning Communities Promote Quality and Balance in Urban and Rural Education? -- Take the "Quality Teaching Round" in New South Wales, Australia as an Example**

Shao Yimin Zhejiang Normal University

Zhu Jian Zhejiang Normal University

In order to continue to expand social equity in education and solidly promote Chinese-style modernisation, it is important to implement the focus and difficulty of quality and balanced development of urban and rural education. Effective teacher professional development models that ensure the double sinking of quality teachers and quality teaching are

a powerful growth point in promoting the shift from "basic balance" to "quality balance" in China's compulsory education. The internationally flourishing practice of "teacher professional learning communities" provides a compelling picture of how evidence-based teacher collaboration can bridge the gap between urban and rural societies in terms of educational attainment and thus promote systemic educational change. For rural teachers, teacher professional learning communities (TPLCs) are micro-environments that link macro-social structures with individual teacher improvement. Rural teachers' trust in the external system, and in the micro-environment, shapes their confidence in their professional responsibilities. The state of New South Wales in Australia, after more than a decade of exploration, has developed a set of mature teacher professional learning community building programme - "Quality Teaching Round", which guarantees effective teacher professional development through external institutional regulation and community empowerment, depicting a new model for quality and balanced development of urban and rural education. The programme has created a new pattern of quality and balanced development of urban and rural education.

### **A Study on the Innovative Teacher Education Collaboration Model Based on eTwinning in the European Union**

Yang Xia Nanjing Normal University

eTwinning is an online community funded by the European Commission for European teachers, which promotes cooperation, communication, and cross-cultural innovation among European school communities through the use of information and communication technologies (ICT) to form a new framework for transnational cooperation within the European region. This collaborative innovation framework, built through the integration of "demonstration training - diversified pairing - support and motivation," has led to the formation of a new model of teacher education cooperative innovation: from individual participation to organized leadership, creating a new path of incremental growth in teacher education cooperative innovation; from pairing cooperation to educational experience, building a new space for teacher education cooperative innovation in the exploratory community; and from the "deficit model" to the "asset model," changing the new form of professional growth in teacher education cooperation. Rooted in the theory of innovation diffusion, eTwinning promotes the development of professional competence, teaching-specific beliefs, and motivational orientations of teachers by cultivating their professional knowledge, and encourages the development of a collaborative and open attitude and multicultural understanding based on the concept of connectivity. It also motivates the development of "innovation islands" based on the concept of connectivity and promotes the shift of the concept of professional development from information technology to innovation diffusion, and realizes the practical advancement of the "influence model" based on innovation diffusion. The teacher education cooperative innovation model based on eTwinning will also provide insights and lessons for the exploration of teacher education cooperative innovation models in China.

## **Study on the Integrated Development of Teacher Education in the Guangdong-Hong Kong-Macao Greater Bay Area from the Perspective of Global Education Governance**

Wang Hong South China Normal University

Xiu Qi South China Normal University

The integrated development of teacher education in the Guangdong-Hong Kong-Macao Greater Bay Area concerns the optimal allocation and sharing of educational resources in this area, and it is also the key to improving the quality of education in the Greater Bay Area and cultivating a high-quality teaching force with an international outlook and innovative ability. The integrated development of teacher education in the Greater Bay Area is conducive to opening the window of dialogue between teacher education in China and the international community, and is of significant value and significance to the enhancement of global teacher education. This study argues that participation in global education governance is both the starting point and the landing point for the integrated development of teacher education in the Greater Bay Area. Therefore, under the perspective of global education governance, this study systematically investigates the value implication of the integrated development of teacher education in the Greater Bay Area, the logical purpose and operation mechanism of participating in global education governance, and builds a mechanism for the integrated development of teacher education in the Greater Bay Area, including the mechanism for leadership and policy negotiation, the mechanism for the participation of social forces, the mechanism for the integration and sharing of resources, the mechanism for cross-boundary training, the mechanism for best practices sharing, and the mechanism for cooperation and sharing of knowledge. On this basis, this research try to provide a pathway and model reference for the integrated development of teacher education in the Guangdong-Hong Kong-Macao Greater Bay Area with the vision of participation in global education governance.

### **Difficulties and Breakthroughs of Social Organizations Participating in Rural Teacher Education: A Longitudinal Case Study of the "Pingju Jingcheng" public welfare project**

Guo Jia Beijing Normal University

Guan Xiaoyu Beijing Normal University

Yi Lili Department of Public Management Teaching and Research, National School of Administration (Chinese Academy of Governance)

The education of rural populations in China remains a significant challenge, with a notable lack of public resources allocated to this sector. However, the involvement of social organisations in the advancement of rural education can serve to bridge this gap, thereby enhancing the quality of education in these communities. The long-term influence of urban centralism has resulted in a relative scarcity of resources in rural education. Consequently, social organisations that focus on rural education must address the issues of resource scarcity, resource dependence and development constraints in order to fulfil their functions effectively



and create greater public value. In order to address this question, this paper employs a longitudinal case study methodology, drawing upon a substantial corpus of primary data. It combines social capital and resource orchestration theory to construct a mission-driven resource orchestration theoretical framework and to analyse the development history of "Pingju Jingcheng" from its inception in December 2016 to the present. The study finds that the resource orchestration process of social organisations focusing on rural education is also progressive, dynamic and effective. Furthermore, the competence of key organisational members is embedded in the process of the evolution of social organisations' resources. Secondly, the resource orchestration process incorporates The utilisation of vernacular elements as a form of social capital has enabled social organisations to overcome the challenge of resource dependence and facilitate effective development. Thirdly, the pursuit of a clearly defined mission serves as a significant motivating factor in the resource orchestration of social organisations, enhancing internal resource exchange, social capital and the overall growth and development of these organisations. Finally, mission-driven motivation for social organisations' resource programming enhances the efficiency of resource exchange and knowledge acquisition within organisations, promotes empathy, trust and cooperation among organisational members and facilitates the formation of a common identity.

### **The New Trend of Teacher Mobility System in Japan and its Enlightenment**

Huang Zhixuan Sichuan Normal University

The teacher mobility system, as an important means to optimize the allocation of educational resources and promote educational equity, has received widespread attention worldwide. As a developed country in education, Japan has a long history and significant achievements in its teacher mobility system. In recent years, with the continuous deepening of education reform, the teacher mobility system in Japan has also shown new trends. Firstly, the scope of participants in mobility has expanded and extended to prospective teachers who receive pre service education, thereby further advancing the training process for teachers with the ability to support remote areas; Secondly, the diverse types of mobility have broken down barriers between regions and schools; Again, improve mobility security, consider the differentiated needs of relevant stakeholders, and promote the balance and sustainable development of the entire mobility ecosystem; Finally, establish a sound management system and standardized flow process, and build a complete and independent teacher flow system. The new movement of Japan's teacher mobility system has brought the following inspirations to China: (1) policy guidance and support should be strengthened, (2) compensation and guarantee mechanisms for mobile teachers should be improved, (3) diversification of mobility types should be promoted, and (4) an independent and complete teacher mobility system should be constructed in China.

## **36 Teacher Identity and Career Choice**

### **The Psychological Construction of "Stability": A Historical Narrative of the Collective Identity and Mobility Trend of Middle-Aged and Elderly Teachers in Rural Areas**

Li Caihong Tsinghua University

Zhu Zhiyong Beijing Normal University

Taking "Wu Xiao," a former state-owned farm primary school in eastern Inner Mongolia, as a case, this study deeply explored the trends, characteristics, and causes of the mobility of middle-aged and elderly teachers in ethnic minority areas in the process of rapid urbanization, and deeply understood the life choices of this generation of teachers in multiple contexts from the perspective of historical changes and regional development. The study found that middle-aged and elderly teachers on state-owned farms who had tasted "bitter and spicy sweetness" had derived a triadic collective identity including survival security identity, emotional identity, and attachment, professional efficacy and self-identity based on the cross-construction of institutional identity, legal identity, and professional identity in the historical process of market-oriented operation and management system reform, unity system change, and education management system reform of state-owned agricultural reclamation enterprise groups. This collective identity is the value tendency and emotional belonging of unit members based on close social community relationships, with collective status as the carrier, due to the convergence of collective interest, collective consciousness, and collective emotional connection. In the end, the triadic collective identity jointly promoted the construction of the psychological mechanism of middle-aged and elderly teachers with "stability" as the core in the way of positive and negative direction, explicit and implicit interaction, and inhibition and praise combination, and jointly condensed the collective choice and sticky characteristics of middle-aged and elderly teachers staying in the countryside and reverse mobility, thus revealing another abnormal form that has little attention in the field of rural teacher mobility. Under the pattern of continuous urbanization, this "stable" psychological mechanism has a non-negligible significance and enlightenment for promoting the construction of rural teacher team, and improving the professional development of rural teachers and the quality of rural education.

### **Teacher Role Identity in the Perspective of Collaborative Education Between Home and School in the New Era: Crisis and Solutions**

Feng Xiaohang Changchun Normal University

Wu Likai Changchun Normal University

Sun Zhonghua Changchun Normal University

Li He Changchun Normal University

"Who am I, and what kind of teacher do I want to become?" This is the self-reflection of teachers in the new era facing their professional development. Teacher professional role identity, in the collaborative education between home and school, enables teachers to provide

support in professional knowledge and basic skills as collaborators and integrators. In the context of collaborative education between home and school in the new era, teachers face crises such as intensified role conflicts, insufficient professional skills, and blurred role responsibilities.

Empowering teachers with positive emotions in home-school cooperation; emphasizing the cultivation of key abilities for teachers in home-school cooperation, reducing teachers' sense of powerlessness; clarifying the boundaries of cross-border cooperation in home-school cooperation, promoting teachers' professional development, forming a sense of professional identity, and clarifying the roles and responsibilities of teachers in the new era, and elucidating the direction of teachers' educational development.

### **Why and How to Teach? -- A Multidimensional Review of Aesthetic Education in Teacher Education in the Context of Visual Culture**

Zhang Zhiqiang Xingtai University

Visual culture is based on the new digital technology and the innovation of modern communication media in the context of globalization, which has given birth to an epoch-making media revolution of mankind. After entering the 21st century, with the further popularization of the Internet and the continuous iteration of technology, digital media technology, three-dimensional virtual environments, precise superimposition of information, artificial intelligence interaction and other visual technology further enrich the visual scene and interaction mode, people from different countries and nationalities communicate with each other through the media of images, and the types of art that are based on the media of visual images, especially contemporary digital visual images, are developing rapidly, resulting in the creation of aesthetic creativity and perception mode. The rapid development of visual images, especially the contemporary digital visual image-based art types, has led to the formation of aesthetic creativity and changes in the way of perception. It is increasingly important for students to develop the ability to feel, interpret, express, communicate and create visual images. It has become an indispensable part of the comprehensive qualities valued by society. Correspondingly, teacher education should be taken care of in the process of talent cultivation. Based on the perspective of why and how to teach, we clarify the value implication of aesthetic education in teacher education, and sort out the difficulties highlighted in reality, including the complexity of aesthetic contexts that weaken students' ability to discriminate, the deviation of aesthetic values that constrains the realization of educational goals, and the embedded barriers of extracurricular resources that affect the effectiveness of the implementation of aesthetic education. Breaking the shackles of the digital aesthetic environment, breaking through the barriers of aesthetic values, bridging the limitations of the supply of aesthetic resources, and releasing the potential of out-of-school aesthetic resources are the effective paths to promote aesthetic education in teacher education under the perspective of visual culture.

## **Why Do Science and Engineering College Students Switch to Teaching? Multiple-Case Study from The Perspective of COM-B Theory**

Wang Xinyue Zhejiang University

Zhang Jia Zhejiang University

The early cultivation of top innovative talents puts forward higher requirements for the construction of high-quality science teachers in K-12 education. Under the background of the "National Excellence Plan", more science and engineering graduates are entering primary and secondary schools to teach, becoming an important support for the construction of a high-level science teacher team in China. In order to deeply understand and explain why science and engineering students switch careers to teach, based on the COM-B theory, multiple-case study method is used to conduct in-depth interviews with 10 career-changers from three types of institutions who changed careers to teach, and constructed a COM-B model for science and engineering students to switch careers to teach. This research finds that students from science and engineering disciplines who transition into teaching are influenced by three core factors: personal capability, policy opportunities, and the motivation to change careers. Depending on their reliance on these factors, different types of transitions into teaching among science and engineering students can be identified, including capability-driven, opportunity-led, motivation-driven, and cost-benefit evaluative types. The transition of science and engineering students into the teaching represents a complex decision-making process. This research from the perspective of COM-B theory enhances our understanding of the decision-making process involved in switching to teaching and expands the application of COM-B theory in the field of education. This article provides practical suggestions for the in-depth development of science teacher force in K-12 education, and for attracting comprehensively capable science and engineering students who are enthusiastic and suitable for teaching to become science educators in K-12 education.

## **Who are More Favored by Schools, Government-Funded Student Teachers from Top-Ranked Normal University or Graduates from Top-Ranked Comprehensive Universities? --Practical Research on the Teaching Competence**

Li Qiong Beijing Normal University

Chen Jieying Beijing Normal University

Zhang Meiqi Beijing Normal University

Yuan Yucong Beijing Normal University

As the open teacher education system continues to improve, the differences in teacher quality between different teacher training modes need to be further clarified. This research focuses on the deployment of Government-Funded Student Teachers and teachers graduated from top-ranked comprehensive universities to explore the differences in the teaching competence between the two groups of teachers, with a practical perspective from frontline practitioners. It is found that Government-Funded Student Teachers have strong beliefs in

professional identity and adherence, outstanding abilities in classroom teaching, class management, educating students based on curriculum and activity. They have clear career planning, short professional growth periods, and have played the role of leading and demonstrating, but Some of them lack the spirit of hard work. Graduates of comprehensive universities are more motivated by external factors and lack of conviction in teaching careers, but they are more capable of mastering the depth of content disciplines and scientific research, and have an outstanding capability of self-developing. Both two groups need to improve practical educational skills, such as psychological counselling and home-school communication. To improve teacher quality under an open teacher education system, it is necessary to strengthen the guarantee of external resources for teachers and attract outstanding students to teach; to accurately meet the practical needs of basic education, optimise teacher training programmes, and increase the number of courses on career planning, psychological counselling, educational research and management; to adjust the requirements for obtaining teacher qualifications, and add an assessment of educational internships and beliefs ; to establish a professional growth profile of teachers, and to provide personalised teacher training, as well as to promote teacher identity recognition for graduates of comprehensive universities.

### **The "Bay Area Program" to Cultivate the Patriotism of Teachers from Hong Kong and Macao under the Perspective of the Theory of Interactive Ritual**

Zhang Yunting South China Normal University

Xu Chensi South China Normal University

Wang Hong South China Normal University

In the post-epidemic era, promoting Hong Kong and Macao teachers to gain a sense of patriotism, integrate into the overall development of China, and lay the cornerstone of Hong Kong and Macao's national identity is one of the key tasks of cross-border collaborative governance of teacher education in the Guangdong-Hong Kong-Macao Greater Bay Area. Regarding to problems of inconsistent focus of Hong Kong and Macao teachers, unfusion of situational infiltration perception, different symbol system, synchronized rhythm of emotional interaction, and discontinuous emotional feedback, this study tries to cultivate teachers' national feelings of teachers in Hong Kong and Macao, referring to the interaction ritual chain theory. First, to activate and gather the forces of education and teacher development institutions, universities, primary and secondary schools, cultural and tourism publicity, and non-governmental organizations in the three places.

## POSTERS

### Group 1 October 26, 2024, First Half 14:00-15:30

#### **A Study on the Teaching Leadership of Middle School Teachers in M District, Beijing**

Liang Tingting Beijing Normal University

The development of teaching leadership is not only the fundamental of teacher professional development, but also becomes the core issue of improving the quality of school education and teaching and the overall reform of schools. In view of this, the study took the junior middle school teachers in M District of Beijing as the investigation object, and based on the literature research, constructed three basic dimensions of teaching planning, teaching implementation and teaching evaluation to understand the overall level of teachers' teaching leadership. The study found that, on the whole, the overall level of teachers' teaching leadership in M District of Beijing was good, and the development level of teachers' teaching planning, teaching implementation and teaching evaluation was highly correlated, and the teaching age would affect the performance of teachers in teaching monitoring and evaluation and teaching evaluation improvement. Through the further investigation and study of teachers' teaching planning, teaching implementation and teaching evaluation, the study took improving the level of teachers' teaching leadership as the core, and analyzed and proposed four strategies to improve the teaching leadership of junior middle school teachers from the aspects of teachers' cognition, motivation, generation and orientation. In terms of cognition, it is necessary to strengthen the diversified understanding of the concept of teaching leadership. In terms of motivation, it is necessary to pay attention to teachers' teaching effectiveness, belief and reflection. In terms of generation, it is necessary to strengthen the planning and implementation of teaching. In terms of orientation, it is necessary to pay attention to the combination of theoretical learning and practical investigation.

#### **Interdisciplinary Competence of Primary and Secondary School Teachers: A Systematic Review**

Wang Hong South China Normal University

Sang Linjie South China Normal University

In the context of rapidly evolving educational landscapes, enhancing the interdisciplinary competence of primary and secondary school teachers is essential to effectively address emerging pedagogical challenges. This paper aimed to map new trends and the possibility of interdisciplinary competence of primary and secondary school teachers. For this purpose, a systematic review was conducted. The resulting sample was further selected according to PRISMA guidelines, with screening and eligibility process conducted based on the inclusion criteria defined concerning the research objective. This research consisted 20 studies. The findings revealed a growing interest in this field from 2019-2023. Furthermore, the research

methods were mainly qualitative research, followed by mixed research. Interdisciplinary competence of primary and secondary school teachers mainly consists of pedagogical knowledge of the relevant disciplines (PCK), pedagogical skills, communication and cooperation skills, teachers' non-cognitive factors. The strategies for cultivating teachers' interdisciplinary competence included professional teacher development programs, teacher cooperation models, teacher community operation, administrative support, and flexible management. Future research can focus on administrative reform, cooperation models, cognitive differences among teachers from various disciplines, the relationship between interdisciplinary competence and non-cognitive factors, as well as the construction of learning platforms.

### **A Meta-analysis of the Current State of Teacher Resilience in Chinese Basic Education**

Chen Chen Zhejiang Normal University

Yin Yuxin Zhejiang Normal University

Teacher resilience affects the psychological and physiological health status of teachers and plays a crucial role in teacher education and the teacher community in China. Scholars in China have carried out empirical studies on the current status of teacher resilience in various school segments of basic education, but the conclusions are not quite the same, which has led to extensive controversy. This study used meta-analysis to analyse the results of 34 empirical studies on teacher resilience and to clarify the current status of resilience level of teachers in basic education in China. The study shows that, on the whole, the resilience level of China's basic education teachers is significantly lower than that of teacher trainees, comparable to that of general adults, and higher than that of secondary school students; in terms of the moderating variables, the age of teaching and the teaching term have a significant effect on the resilience level of teachers, while age, education, and marital status only have a significant effect on the individual dimensions of the resilience of teachers, and gender does not have a significant effect on the level of resilience or on any of the dimensions of the resilience of teachers. This study analyses the current status of resilience of basic education teachers in China at the macro level, which provides a basis for decision-making on subsequent interventions to regulate the resilience of basic education teachers.

### **Research on the Impact of School Climate Perceived by Rural Primary School Teachers on Social-Emotional Education Practices: The Mediating Role of Social-Emotional Competence**

Liu Yang Chongqing University of Education

Xia Yulin Chongqing University of Education

The practice of social-emotional education is an educational strategy whereby teachers leverage their own social-emotional competencies to promote students' social-emotional learning. This practice is a crucial factor in fostering students' holistic development and enhancing teachers' professional growth. Grounded in ecological systems theory and the prosocial classroom model, a survey was conducted with 983 rural primary school teachers,

along with in-depth interviews with 11 selected teachers, to explore the relationship between teachers' perceptions of school climate and their practices in social-emotional education. The findings indicate that the overall practice of social-emotional education among rural primary school teachers is commendable, although development varies significantly across different groups. Female teachers, married teachers, those from county-level schools, teachers with advanced professional titles, those with 6-10 years of teaching experience, teachers driven by intrinsic motivation, and those who enjoy their teaching profession exhibit better practices in social-emotional education. Moreover, teachers' perceptions of the school climate exert a significant positive influence on their social-emotional education practices. Furthermore, teachers' social-emotional competencies mediate the relationship between school climate, its various dimensions, and social-emotional education practices. Based on these findings, the following recommendations are proposed: First, emphasize the equity of educational practices, highlighting the central role of students. Second, pay attention to specific groups of teachers and support the implementation of social-emotional education. Third, create a supportive school climate that facilitates the execution of social-emotional education. Fourth, enhance training in social-emotional education to improve teachers' social-emotional competencies.

### **Chinese In-Service EFL Teachers' Research Attitudes in a Graduate Program**

Chen Lei Shaanxi Normal University

In recent decades, the practice of involving teachers in research in degree programs is becoming popular. Yet, little is known about the impact of research experiences on teachers' behavior: whether research experiences change their teaching practices and lead to further research efforts in future careers, especially in the unique social, cultural, and educational culture of China. Thus, this study examines Chinese in-service EFL teachers' research attitudes in a graduate program with a reasoned action approach. We used an embedded mixed methods research design to investigate a cohort of 197 IETs (in-service English teachers) who completed the Research Attitudes in Vocational Education Questionnaire (RAVE-Q). The quantitative data validates the survey and shows that, in general, the IETs hold positive attitudes toward research. Next, semi-structured interviews investigating IETs' perceptions of research were conducted, and the qualitative data shows a variety of research experiences among the IETs. Specifically, this study highlighted some interviewed Chinese teachers who had the desire to be reflective about their teaching and to apply research in their practices, nevertheless, the educational contexts made such efforts impossible. Thus, this study questioned the previous assumptions that positive research attitudes lead to corresponding research behaviors. This study offers implications for EFL graduate programs seeking to improve IETs' research attitudes both within and outside China.



## **How Emotional Labor Empowers Teachers' Quality Development in the Age of Affectional Turn? --A Systematic Literature Review Based on Domestic and International Studies**

Wang Huanfang Zhejiang Normal University

Xu Shangpin Zhejiang Normal University

Under the context of the affectional turn of education, high-quality teacher development encompasses not only the updating of professional knowledge and skill enhancement but also the holistic development of teachers, emphasizing the importance of leveraging their emotional and spiritual strengths. A systematic review of 83 empirical studies on teachers' emotional labor conducted globally between 2008 and 2024 reveals that teachers' emotional labor strategies typically encompass surface acting, deep acting, and expression of naturally felt emotions. The utilization of these strategies exhibits flexibility, allowing for their combination in various forms to constitute distinct emotional labor profiles. Emotional labor has been found to impact teachers' burnout, mental health, professional identity, sense of efficacy, and professional well-being. Notably, expression of naturally felt emotions and deep acting strategies typically exert positive influences, suggesting that emotional labor possesses the prerequisite conditions to empower high-quality teacher development. To harness the empowering potential of emotional labor for high-quality teacher development, it is imperative to implement targeted training programs and courses, foster a supportive organizational climate, optimize teacher recruitment and evaluation processes, and adopt diversified measures to enhance teachers' emotional labor practices. The findings and conclusions of this study offer numerous insights for advancing both theoretical research and practical reforms related to teachers' emotional labor.

## **From Natural Person to Social Person: The Development Status and Cultivation Strategies of Rural Teachers' Social-Emotional Competence in the New Era**

Hu Qiaohong Xingtai University

Socio-emotional competence is a powerful weapon to cope with the challenges of the 21st century, which in essence responds to the fundamental mission of education to train natural persons into social people. The social-emotional competence of rural teachers is an important starting point to improve the quality of rural teachers in the new era, and is the basis and leading power for the revitalization of rural education and the modernization of Chinese rural education. A questionnaire survey on the development status and influencing factors of social-emotional competence was conducted among 268 rural teachers in Hebei Province. The results show that rural teachers' social-emotional competence is above the medium level, and there are significant differences in teaching age, gender and working years as class teachers. work ability, interpersonal relationship and education training can significantly predict rural teachers' social-emotional competence. Based on the research content, this paper puts forward cultivation strategies from three aspects: activating subject consciousness, strengthening practical responsibility, improving communication mechanism, providing system guarantee, optimizing professional training, and improving local feelings and working ability.

## **A Study on The Adaptability Training of International Teachers in the Post-Epidemic Era -- A Case Study of Universities in Beijing**

Jiang Dantong Beijing Normal University

As the pandemic comes to an end, international student education is gradually recovering, presenting new demands for educational services in the post-pandemic era. Teachers' cross-cultural teaching abilities, online teaching skills, innovation capabilities, adaptability, teaching assessment skills, interdisciplinary collaboration skills, caring and supportive abilities, as well as reflective skills, have become essential for advancing the modernization and internationalization of international student education. This study aims to explore the adaptive abilities required of teachers in the post-pandemic era by investigating the satisfaction of international students studying in universities in Beijing. Through deepening reforms in international student education in Beijing in the new era, valuable experiences and exemplary practices will be provided for international student education nationwide.

This study conducted in-depth interviews with five international students and one responsible teacher. Based on the interviews, a questionnaire survey was conducted among 450 international students from Beijing Normal University, Beijing University of Chemical Technology, Beijing Institute of Technology, Beijing Jiaotong University, and Beijing University of Science and Technology, resulting in 442 valid responses with an effective rate of 98.2%. The questionnaire demonstrated excellent reliability and validity.

### **International Experience and Local Action of Digitally Empowering Teachers' Professional Development-Based on the Theoretical Framework of TOE**

Feng Kairui Henan University

Du Jing Henan University

Focusing on the world, digitally empowering teachers' professional development has triple values, namely, dissolving the "impossible trinity" and giving teachers new kinetic energy for development; Adapt to the development of digital technology and improve teachers' digital literacy; Bridging the gap of teachers' digital literacy and promoting educational equity. Examining the international experience based on the theoretical framework of TOE, it is found that, at the technical level, digital literacy framework leads teachers to improve their digital competence. On the organizational level, digitalization opens up a new pattern of teacher education organizational structure; On the environmental level, the digital platform reshapes the new ecology of teachers' professional development. In view of this, China should lead the world trend in the digital development of teacher education, respond to the standard "Teachers' Digital Literacy" and cultivate teachers' teaching competence in the digital age; Reform the organizational structure of teacher education to adapt to the new pattern of digital education development; Build a digital teacher professional development support system and create a future teacher growth environment.

## **Integrating Theory and Practice: The Core Essence and Implementation Path of Technology-Enabled Teacher Education Curriculum Implementation**

Wen Zhengmei East China Normal University

Wang Yanling East China Normal University

The disconnect between theory and practice is a prominent problem faced by teacher education courses for a long time, and the core essence of technology-enabled teacher education courses is to break down the barriers between theory and practice in teacher education courses and promote the effective integration of the two. The implementation of technology-enabled teacher education curriculum has multiple significances: technology enables normal students to maintain "thinking consistency" in the self-constructed system, realizes the two-way flow of knowledge in the cross-border interaction system of the learning community, and promotes the effective transformation of theory and practice in the equal and open collaborative division of labor system. In order to promote the integration of theory and practice in the implementation of teacher education curriculum, it is necessary to create a technology application environment, actively cross the boundary between theory and practice, continuously expand the dialogue space between the community, highlight the initiative of normal students, and then promote normal students to form the wisdom of teaching practice in the era of technology.

### **Research on the Construction of Digital Literacy Training System for College Teachers**

Feng Xinxin Inner Mongolia Normal University, Beijing Normal University

The digital age has put forward new requirements for the digital literacy of university teachers, and building an efficient training system is an effective measure to seize the opportunities of digital technology. The digital literacy of university teachers is the core competency of teacher competence in educational digitization. The digital literacy of teachers plays a supporting role in various activities in universities. Against the backdrop of rapid updates and iterations in digital technology, how to effectively enhance the digital literacy of university teachers has become an important research topic. Using the iceberg model to analyze the characteristics of digital literacy training for university teachers, specifically divided into explicit factors of digital skill enhancement and implicit factors of digital learning drive. Based on the characteristics of training, this study explores the construction of a training system for digital literacy of university teachers from the aspects of current situation assessment and demand mining, design and implementation of short-term and long-term training programs, as well as near and far transfer of training.

### **A Probe into European Self-reflection Tool for Teachers' Digital Competence**

Wang Xue Tianjin Normal University

Yang Xiuyu Tianjin Normal University

Nowadays, digitalization is an inevitable trend in the development of global education. Therefore, the cultivation of teachers' digital competence has become a key factor in the transformation of education in various countries. In order to guide teachers to conduct self-

assessment of digital competence and promote their professional development, the EU has created a self-reflection tool for teachers' digital competence (SELFIE for TEACHERS) based on the European Framework for the Digital Competence of Educators (DigCompEdu), which encourages teachers to critically reflect on their digital competence and plan their future growth paths. The tool helps teachers to self-identify and recommend improvements to their digital competencies in six areas, thirty-two indicators and seven levels of proficiency, supports teachers and teacher educators to formulate development strategies in collaboration and has been received good feedback in the pilot countries. This tool has implications for the development of teachers' digital competency under the guidance of the concept of new quality productive forces and the framework of Teachers' digital Literacy in improving teachers' competency evaluation system, cultivating teachers' digital subject consciousness and building teachers' digital learning community.

### **Research on Construction of Online Learning Space Based on Social Presence**

Li Jing Jilin Normal University

As an important "engine" in the information age, the popularity of Internet technology has created conditions for the conversion and docking of teaching space to learning space. Flipping classroom, mooc, spoc and other online learning modes emerge endlessly, changing the process and support of traditional classroom "teaching and learning", and restructuring the learning space structure of learners. The construction of online learning space based on social presence can present the spatial production of online learning through self-projection, perception of others, and sense of belonging and identity to the community, and from the "emotional involvement" and "common presence of learners" "Sense" representation and endogenous energy augmentation in three directions to explore the path of online learning space construction, in order to achieve the reorganization of social relations and the actual construction process of social order.

### **Becoming a Teacher, Coexisting with Emotions: Emotion Regulation of Preschool Student Teachers in Practicum Contexts in China**

Chen Yitong Guangzhou University

Zhang Limin Guangzhou University

Zhong Wenhui Guangzhou University

Jiang Lianjiang The University of Hong Kong

Early childhood education (ECE) student teachers have a heavier burden of emotional regulation due to the "reality shock" they experience in internships, coupled with the fact that preschoolers are young and have strong emotional attachments to their teachers. Effective emotion regulation can alleviate the impact of negative emotions and facilitate the construction of teacher identity. But there are few studies on the emotional regulation of ECE student teachers. To fill the research gap, we conducted a qualitative and follow-up research design to collect the emotional experiences and emotion regulation strategies of 25 ECE student teachers in Guangzhou, China, during their internships using interviews, observation, and critical

incidents forms. The study identified four categories of emotion regulation strategies for ECE student teachers, including expressive regulation, cognitive change, behavioral adjustment, and sequential regulation. The study also analyzed the emotion regulation strategies at different stages of their internships, presenting the uniqueness of ECE student teachers' regulation of emotions in the Chinese cultural context. This study enriches our understanding of ECE student teachers' emotions regulation and provides implications for ECE teacher education programs.

### **Explore the Assignment Feedback of Senior High School English Teachers from the Perspective of Large-Unit Teaching--An Analysis Based on the Case Text in NVivo**

Meng Qingrong Guizhou Normal University

Exploring an in-depth analysis of the Assignment feedback text of senior high school English teachers by NVivo , it is found that the current Assignment feedback presents new characteristics, which are manifested as follows: In terms of feedback content, the students' mistakes are directly corrected, but the guiding suggestions are lacking; In terms of feedback methods, quantitative feedback is the main line, but qualitative feedback is incomplete; In terms of feedback effect, the diagnostic orientation is clear, but the motivation is weak. Therefore, senior high school English teachers need to provide guidance and suggestions to show students the way forward; Strengthen qualitative feedback and build a comprehensive feedback system; Use encouraging language to motivate students to learn.

### **Exploration of the Ecological Civilization Education Practice Through the Extended School-Based Cartography Curriculum From the Perspective of Lifeworld Geography**

Li Xin Beijing No.17 Middle School

Field cartographic practice in geography is a crucial pathway for implementing the ideology of ecological civilization education. However, current implementations of high school geography curriculum often lack a comprehensive philosophical epistemology and methodology to deeply evaluate students' geographical practical abilities. Moreover, the limitations of the curriculum itself hinder the full exploitation of these abilities. Humanistic geographer David Simon's perspective on lifeworld geography argues for using everyday places as sites for geographical practice, where students apply their senses, perceptions, and concepts accumulated through different stages of learning to conduct field investigations of geographical environments, presenting a vital approach to environmental education. Consequently, this study endeavors, under the guidance of lifeworld geography, to foster high school students' core competencies in geography through an extended school-based cartography curriculum, aiming to align with the humanistic educational psychology's emphasis on individual self-actualization and humanistic development while cultivating students' affection for a Beautiful China through the practice of ecological civilization education.

## **From Focusing on Lecture-Centered Teaching to Serving Learning: The Shift of Teachers' Teaching Behavior Under the Competency Orientation**

Fang Xueqin Central China Normal University

Competency is a relatively stable characteristic inherent in the structure of human body and mind, which is non-transferable. The basic mechanism of students' competency development lies in their own active activities. The competency-oriented teaching process requires that teaching should be learning-centered and teaching for learning, that is, to regard learning-centered teaching as the basic form of teaching. Learning-centered teaching requires teachers to change their teaching behavior from focusing on lecture-centered teaching to serving learning, that is, the purpose and function of teaching behaviors change from teaching knowledge to causing students to actively participate in learning activities and promoting them to complete learning activities independently and effectively. The object of teaching behaviors shifts from textbook content and students to students' competency development-oriented learning activities. The mode of teaching behaviors change from lecture-centered teaching behaviors to diversified teaching behaviors that cause and promote the process of students' learning activities. There are three groups of teaching behaviors that serve learning, which are the teaching behaviors of designing learning activity plan, organizing and promoting learning activity process, evaluating learning effect and supporting after class.

## **The Development of Research Literacy Among Early Career Teachers in China: An Exploratory Study**

Liu Meiyang South China Normal University

Chen Ming University of Bristol

Zhong Ling South China Normal University

Hua Weiyong South China Normal University

Pan Fengqin South China Normal University

In the context of ongoing reforms in basic education, research literacy (RL) has emerged as a critical skill for teachers and plays a key role in their professional development. Our study aimed to explore the development of RL among early career teachers (ECTs) in China and to identify the factors that influence the development of RL. Data collection included questionnaires and semi-structured interviews. The findings demonstrate that, overall, the results suggest that ECTs have relatively high levels of RL. ECTs with non-teacher education (NTE) backgrounds showed higher levels of research confidence, had stronger research skills, and demonstrated more proficiency in planning and conducting research compared to those with teacher education (TE) backgrounds. However, ECTs were less likely to engage in research reading and research activities. This limitation may be attributed to their lower research skills and time constraints. Based on these findings, we propose a series of recommendations to support the development of RL among ECTs.

## **The Value Connotation, Basic Guidelines and Practical Approaches for Normal Universities to Carry Forward the Spirit of Educators**

Amuguleng Inner Mongolia Normal University

Yang Lin Inner Mongolia Normal University

The Spirit of Educators is the source of strength for constructing a team of high-quality teachers in a new era and the crucial point for building educational power. Promoting the Spirit of Educators plays an important role in teacher development, talent development, course system construction, and campus culture construction in normal universities. To promote the Spirit of Educators in normal universities, it is necessary to obey the rules of higher education and students' mental and physical development, uphold the principle of combination of theory and idea, discipline and phase, and knowledge and life. Exhibit the scheme and wisdom of normal universities to build educational power, by forming a Synergistic mechanism in different bodies, constructing a course system that follows "One Core Three Integration" concept, creating a campus fashion of respecting faculty and valuing education, and constructing a scientific and valid evaluation mechanism.

## **How Do Preschool Teachers Perceive Their Roles of Being Inclusive Education Teachers? A Qualitative Case Study of a Chinese Kindergarten Pioneering Inclusive Education**

Zhang Yao East China Normal University

Deng Meng East China Normal University

The current situation of inclusive education in developing countries is still not optimistic. As the largest developing country in the world, the development of inclusive preschool education in China has not received extensive attention in previous studies. This research aims to explore how the Chinese preschool teachers pioneering inclusive education perceive their changing role as inclusive education teachers and how their changing roles affect the practice of inclusive education. Semi-structured interviews were conducted with eight preschool teachers from a kindergarten which was among the first to pilot inclusive education in China. The research found that preschool teachers have experienced a transformation from their initial ambiguous role as "left-behind" educators, to oscillating between being caregivers and professional teachers before becoming explorers, and then promoters and defenders of inclusive education. Moreover, Professionalization, changes in educational philosophy, and empowerment and advocacy of inclusive education were key determinants in shaping preschool teachers' role transformation. The research conclude that sustainable trainings should be provided to preschool education teachers with a clear authorization of professional roles to advocate and practice inclusive education. So this initial research will be useful not only to academics in the field of education but also to professionals working in policy making, administration, and management responsible for advancing inclusivity.

## **Evidence-Based Practice in the Reconstruction of Teacher Education Classrooms in Local Universities from the Perspective of Educator's Spirit**

Zheng Yanfang Hengshui Normal University

Li Hongliang Hengshui Normal University

Wang Li Hengshui Normal University

" The spirit of educators " is a high level summary of teacher literacy in the new era, providing the Ideological guidance and fundamental basis for the development of teachers in the new era. The classroom is the main battlefield for the implementation of educational ideals. Under the guidance of the spirit of educators, the reconstruction of teacher education classrooms is an inevitable requirement for cultivating excellent teachers in the new era and implementing the strategy of building a strong education country. It helps to improve the quality of classroom teaching, enhance the comprehensive literacy of future teachers, and cultivate the urgently needed "masters" of the times. The author explores the teacher education classroom guided by the spirit of educators through the evidence-based practice concept, and reshapes the teacher education classroom teaching from the perspective of cultivating the spirit of educators. This involves the construction of classroom connotation and value pursuit, classroom culture reshaping, classroom structure reshaping, classroom relationship reshaping, and classroom effect evaluation reshaping, clarifying the integration of the spirit of educators into classroom



teaching objectives; Strengthening the reshaping of classroom culture based on the pursuit of the spirit of educators; Pay attention to the logical construction of classroom structure and grasp the internal path of the infiltration of the spirit of educators; Clarify the reconstruction of teacher education classroom relationships and classroom effectiveness evaluation, promote the integration of the spiritual system of educators, and effectively implement it.

### **On the Construction of Classroom Observation Index System for Primary School Mathematics Discipline Practice**

Chen Xiumei Anqing Normal University

The 2022 version of the Compulsory Education Curriculum Plan proposes to achieve a transformation of educational methods marked by discipline practices. The discipline practices of primary school mathematics adheres to the orientation of discipline, practice, and the integration of discipline and practice. The professionalism and research-oriented nature of classroom observation make it an important way to support the implementation of discipline practices in classrooms. As an important component and hub of classroom observation, the classroom observation index system is constructed based on the scientific deconstruction of primary school mathematics classroom. It can not only present the research framework and cognitive map of discipline practices, but also support the reverse teaching design and provide the classroom evaluation framework. The classroom observation index system of primary school mathematics discipline practices, includes 5 first-level indicators and 15 second-level indicators, such as teachers' subject understanding, subject practice, subject practice design, subject practice implementation and achievement of subject practice goals. Based on these index systems, researchers can develop observation scales to carry out classroom observation to achieve teaching improvement and research power improvement.

### **Reality Tension and Value Return-- A Case Study on Teacher Professional Learning Community**

Guo Yanan Xingtai University

Teacher professional learning community is an important means to cultivate excellent teachers, improve teachers' quality and build high quality teachers. From the perspective of tension theory, this study selected S Middle School in Hebei Province as a case, and carried out field investigation through interviews and observations on its difficulties in the development of teachers' professional learning community. The survey found conflicts and tensions in shared vision, collaborative culture, leadership and reflective development. In view of the above tension, this paper puts forward some strategies, such as forming a common vision to cultivate the driving force of teacher professional learning, creating a group culture to build the foundation of teacher professional learning community, maintaining the intersubjective status to stimulate the vitality of teacher learning community, and encouraging reflection, development and innovation of teacher professional development paths, in order to promote the practice and development of teacher professional learning community. It provides useful reference for realizing the due value of teachers' professional learning community.

## **Transport Prepared Teachers for Rural Areas -- Practice and Enlightenment of Pre-service Training for Rural Teachers in Australia**

Wang Xiaoli Zhejiang Normal University, Huzhou Normal University

Liu Jianhong Zhejiang Normal University, Huzhou Normal University

Liang Chen Zhejiang Normal University

Zhu Yue Zhejiang Normal University

There is a large number of rural schools and rural students in Australia. Nearly half of the schools are located in rural and remote areas, which account for nearly a third of all students in Australia. Australia is a highly urbanized nation, but the development of education is extremely unbalanced between urban and rural areas. Education in rural areas has been troubled by low quality and teacher shortage. In order to resolve these problems, Australia has made great efforts in initial teacher education, including carrying out a large number of rural education surveys and research projects, developing rural teacher education curriculum, promoting the practice of pre-service rural education for normal school students, establishing a multiparty cooperative rural teacher training mechanism, and issuing the National Professional Standards for Teachers according to the characteristics of rural education, and so forth. These have important implications for the preservice teacher education for rural teachers in China.

## **Ordinary Magic: Exploring the Knowledge Base and Evolution Paths of International Teacher Resilience Research**

Li Yu Hainan Normal University

Yan Hanbing East China Normal University

Li Xiaoying Zhejiang Normal University

In the contemporary context of complexity and uncertainty, teacher resilience plays a crucial role in enhancing well-being, promoting professional development, and improving the overall career lifecycle, directly impacting the achievement of educational objectives. This study aims to explore the knowledge base and evolution paths of international teacher resilience research, addressing the current inadequacies in the exploration of teacher resilience theory and practice within the domestic context. Utilizing 121 highly correlated teacher resilience articles from the Web of Science core collection database (1999-2022), this research employs visual scientific tools such as HistCite, Pajek, VOSviewer, and CitNetExplorer. It generates citation chronograms and main path maps of key literature, as well as cooperation relationship maps of core authors, to uncover the knowledge foundation of international teacher resilience research. Through citation clustering analysis, a citation temporal network is constructed, intricately portraying the evolution paths of four core themes in international teacher resilience research: resilience in complex situations, early career teacher resilience, resilience in high-risk and high-demand situations, and resilience among teachers in "non-core" subjects such as sports and interdisciplinary teaching. By narratively linking the "author-literature-theme" chain, this study connects the knowledge base and evolution paths of international teacher resilience research, providing a reference for subsequent research. It facilitates the tracking and comprehension of the theoretical framework and key concepts in this field, leading to a comprehensive and detailed understanding.

## **"New Normal" Background Study on the Construction of Interdisciplinary Learning Communities for Teacher Education Students in Local Universities**

Zhang Taoxuan Hebei Normal University, Xingtai University

With the continuous advancement of education reform and development, the demand for teachers in the field of basic education in China has gradually changed from scale satisfaction to quality improvement and balanced development, which puts forward new requirements for the construction of normal majors and the cultivation of normal students. In order to broaden the vision of education and improve the quality of teaching, a reasonable cross-border learning project is designed to build a cross-border cooperative learning community between local colleges and regional primary and secondary schools. This will help to break the discipline boundary and thinking mode of traditional teacher education, and realize the organic integration of knowledge, ability and emotion of all participants in the community organization, so as to help solve the problems existing in the current teacher education and improve the professional quality and training quality of normal students. In the future, it is necessary to further strengthen cross-border cooperation and exchanges between universities and primary and secondary schools, so as to provide a new perspective and practical path for the reform of normal education in the new era.

## **Exploring Strategies for Cultivating Innovation in Pre-service Teacher Training**

Wang Wenting Guangdong University of Foreign Studies

Exploring innovative pre-service teacher training strategies is an important topic for promoting the innovative development of teacher education and building an innovative teacher workforce. Although schools generally emphasize the cultivation of innovative talents, the training of innovative pre-service teachers in educational practice is not sufficiently comprehensive, resulting in unsatisfactory outcomes. The pre-service training of innovative teachers is not a singular, linear trajectory, but is influenced by complex, continuous, and multi-level factors within the system and through interactions with relevant contexts and environments. Therefore, this study employs Bronfenbrenner's "ecological systems theory" and constructs a comprehensive theoretical model of pre-service training strategies for innovative teachers, which integrates microsystems, mesosystems, exosystems, and macrosystems. The microsystem refers to the immediate environment in which pre-service teachers are directly involved, namely the school environment, primarily composed of teacher educators (course instructors, mentors) and peers. Influences arise through positive interactions with teacher educators, collaborative learning with peers, and experiences in teaching practice at internship schools. The interactions among microsystems, mesosystems, exosystems, macrosystems, and their collective impact across different levels collectively influence the training of innovative pre-service teachers.

## **Group 2 October 26, 2024 Second Half 16:00-17:30**

### **From Anxiety to Competence: The Characterization and Relief of Teachers' Digital Anxiety**

Li Xiangyu Beijing Normal University

As an important breakthrough in the digital transformation of education, the digital competence of teachers is a key link in implementing the digital strategy of education, a requirement of building a high-quality teaching team, and a direct force in promoting the improvement of students' digital literacy. However, due to the impact of digital technology on education and teaching, teachers face digital anxiety states such as survival anxiety caused by the replacement of their teaching positions and professions, developmental anxiety caused by difficulties in transforming their roles, technical anxiety caused by poor digital technology application capabilities, and value anxiety caused by the easy loss of educational value rationality. To promote teachers to overcome digital anxiety through digital competence, it is necessary to focus on top-level design, strengthen policy implementation, and establish a new mechanism for improving teachers' digital literacy; Develop a digital competency indicator system and build an evaluation framework for improving teacher digital literacy; Strengthen the construction of digital environment and digital training for teachers, and enhance their digital literacy on a large scale; Teachers should actively adapt to and embrace the digitization of education, moving from digital anxiety to digital competence.

### **Novice Teacher's Social and Emotional Learning: Challenges and Coping Strategies**

Ding Shanshan Southwest University

Luo Shiyong Southwest University

Zheng Xin Southwest University

Social and Emotional Learning (SEL) has gained global attention as a crucial factor in nurturing students' social-emotional competencies and supporting teachers' well-being. Novice teachers, in the early stages of their careers, face diverse and significant social and emotional challenges during their transition from student to professional educator. This qualitative case study, involving six novice teachers in Chinese context, elucidates the distinct characteristics of SEL among novice educators from their first to third year of teaching. Novice teachers encounter key challenges such as the dissonance between teachers' ideals and the reality of managing multiple and complex tasks, difficulties in student management and parent communication, as well as inadequate experience in emotional regulation. Effective coping strategies to enhance novice teachers' SEL include: improving teachers' discernment and judgment towards job tasks and allocating their time and energy effectively, seeking suitable stress-relief methods, proactively seeking assistance from others and so on. Additionally, the implications for novice teachers, schools, and professional development programs are discussed in the context of environmental and cultural factors.

## **Key Competencies of Primary School Physical Education Teachers in the Post-Pandemic Era and Their Cultivation**

Liang Xufeng Beijing Normal University

Tang Donghui Guangdong University of Finance

Liu Yuanhua Beijing Normal University

Research background: China has entered the post-epidemic era after December 2022. In this special context, a new proposition has been put forward for China's health education. How to better improve students' health in the post-epidemic era? With the development of the post-epidemic era, the education environment and challenges faced by physical education teachers have changed significantly. So they need some key capabilities to adapt to this change. In particular, physical education teachers in primary schools have encountered great challenges.

Research purpose: First of all, the body of primary school students is in a stage of rapid growth, and the development of bones and muscles, the development of cardiopulmonary function, the improvement of metabolism, sensory ability and psychological problems cannot be without the help and guidance of physical education, which indirectly requires primary school physical education teachers in the post-epidemic era to promote the healthy development of primary school students through systematic physical training and appropriate intervention measures. It is not only necessary to provide a healthy living environment, but also to promote the overall development of physical and mental health, which further requires primary school physical education teachers to have excellent physical education skills, but also have the ability to design innovative sports activities, safety management and epidemic prevention awareness, the ability to conduct online physical education, the ability to quickly adapt to different environments, and the ability to cross-disciplinary teaching. This paper will deeply explore the key abilities and cultivation methods of primary school physical education teachers, so as to provide constructive suggestions for future primary school physical education teachers, so that the future primary school physical education can be better carried out and better serve students.

Research methods and results: Therefore, this paper will review the existing literature, combine with practice, and make a detailed analysis of the key abilities of primary school physical education teachers in the post-epidemic era and various ways to cultivate them, and by comparing the key abilities of primary school physical education teachers before, during and after the epidemic era, so as to provide more constructive suggestions for cultivating the key abilities of primary school physical education teachers.

### **A Study on the Application of Teachers' Professional Ethics Ability Assessment Method Based on Practical Situations**

Chen Yue South China Normal University

Wang Xiaoli South China Normal University

Li Wenjing South China Normal University

Teachers are the source of education, and professional ethics are the soul of teachers. With the development of teacher professionalization, discussions on teacher ethics have gradually

shifted towards a professional practice perspective, focusing on how teachers understand and respond to the requirements and standards of teaching practices. This study used the Teaching Professional Ethics Situational Judgment Test as a tool to understand the specific manifestations and influencing factors of teachers' professional ethics in practice, and to explore the principles that teachers follow in the moral decision-making process, aiming to visualize the professional ethical capabilities of teachers. The research findings include: (1) Teachers generally show good performance in professional ethical capabilities; (2) Factors such as teachers' years of teaching, educational background, and position affect their ethical practice to varying degrees; (3) There is a phenomenon among teachers of unclear concepts regarding teaching professional ethics, leading to difficulties in integrating knowledge with practice in ethical behavior. Based on the investigation, the article provides suggestions for the real needs of ethical training and proposes recommendations for the professional development of teachers.

### **Children's Perspective: Revitalizing the Professional Development of Kindergarten Teachers**

Zhong Xiao Nanjing Normal University

Gu Rongfang Nanjing Normal University

Children's perspectives have high research value, and introducing children's perspectives into kindergarten teachers' professional development may be able to alleviate the problems in teachers' professional development and revitalize their professional development. Teachers' current professional development is characterized by a lack of sustainable ways, a lack of contemporary content, and utilitarian purposes. The past, present and future of kindergarten teachers' professional development are separated. However, children's perspectives are endlessly explorable, changing and full of charm, and children's perspectives can link the past, present and future, and have vitality. Focusing on children's perspectives can clarify the starting point and direction of kindergarten teachers' professional development, enable teachers' professional development to find a balance between "change" and "no change", and help teachers realize the fun of professional development. A series of measures, such as stabilizing the position of children's perspectives, learning how to understand children, and returning to children's needs and problems, can help revitalize the professional development of kindergarten teachers.

### **Teacher Emotional labor and Work/Family Conflict: The Mediating Role of Teacher-colleague Relations**

Chen Yidan Capital Normal University

Sun Siyu Capital Normal University

Amidst the swift advancement of the information age, the inherent worth of teachers is gaining prominence, with emphasis placed on their emotional contributions. Consequently, prioritizing teachers' non-cognitive skills such as emotional regulation and collaboration is in line with the need to improve teachers' professional well-being, and accelerate their overall professional growth. Using the conservation of resources theory, this research engaged 690

primary and secondary teachers, employing Teacher Emotional Labor Strategies Scale (surface acting (SA), deep acting (DA), and the expression of felt emotions (ENFE)), Teacher-colleague Relations Scale, and Work/family Scale (work-family conflict, WFC, and family-work conflict, FWC) to examine how teacher emotional labour influence their work/family conflict and the mediating role of teacher- colleague relations. The results of structural equation modeling showed that (1) the more teachers used SA strategies, the more teachers had work/family conflict. The more teachers used DA, the less FWC teachers had. The more teachers used ENFE, the more FWC teachers had. (2) Teacher-colleague relations mediated the relationship between SA and work/family conflict. Specifically, teacher-colleague relations mitigated teachers' work/family conflict by buffering the negative effects of teachers' use of SA strategies in the workplace. These findings highlight the role of teachers' emotional labor strategies and teacher-colleague relations in reducing teachers' work/family conflict and promoting teachers' well-being. Implications for the improvement of teacher regulation ability and school environment are identified.

### **International Research Trends and Progress in Reflective Practice in Teacher Education: A Bibliometric Analysis Based on the WOS Database**

Luo Sangzhaxi Beijing Normal University

Huang Jiali Beijing Normal University

Reflective practice has become one of the primary modes of cultivation in teacher education worldwide. It advocates for teachers to critically reflect on their experiences within authentic teaching and classroom contexts to improve educational and instructional practices. This study is based on academic literature from the Social Sciences Citation Index (SSCI) journals in the Web of Science database to better understand the global status and cutting-edge trends in the research on teachers' reflective practice. A bibliometric analysis was conducted on 428 articles published between 2003 and 2023, using related keywords retrieved through CiteSpace. The international research outcomes of reflective practice in teacher education primarily aim at professional development for teachers, focusing on preservice and in-service teachers in English language teaching. The research predominantly employs action research methodologies and relies on reflective journals as data sources. The peak period for publications on this theme was between 2018 and 2022, with professional identity emerging as a potential focal point for future research.

### **An Empirical Study on the Impact of Teacher Job Satisfaction, Teacher Qualifications, and Educational Resources on Educational Outcomes-- An Analysis Based on PISA 2022 Data**

Li Fenglei Tianjin Normal University

The level of teachers' occupational well-being affects the development and progress of teachers and even the entire education system, so it is of great significance to explore the impact of teachers' occupational well-being on education output. For the first time, the OECD took the occupational well-being measurement as an important content of PISA2022. Based on the survey data of PISA2022 in Hong Kong and Macao, China, this paper empirically explored the

interaction between teachers' occupational well-being and the shortage of teachers and educational resources on education output by using the mixed effect model. The influence of teachers' occupational happiness on educational output highlights that improving teachers' occupational happiness is an effective means to enhance the status and occupational attractiveness of teachers in China, and also a new policy tool to promote the high-quality and balanced development of education, which provides a new methodology for the expansion and improvement of the quality of compulsory education in China.

### **How University ICT Support Affects Student Teachers' TPACK: A Quantitative Examination from a Technology Learner's Perspective**

Li Xinyao Beijing Normal University

Zhou Shenji Beijing Normal University

Song Huan Beijing Normal University

Student teachers' Technological Pedagogical Content Knowledge (TPACK) is based on their mastery of information technology and their ability to employ it effectively in support of their learning. According to the "Bridging the Digital Gender Divide" report released by the UNICEF in 2023, the adolescent girls and young women have a significantly lower prevalence of digital skills than their male counterparts. In the context of Chinese culture, student teachers' self-efficacy in using ICT and their preferences for its use may differ due to gender role expectations and familial influences, which are rooted in traditional norms. Supposedly, the ICT support provided by teacher education institutions plays a crucial role in enhancing student teachers' TPACK. Using the Teacher Training and Development Data Platform, this study employed SEM to investigate how the supportive environment for ICT at universities affects the TPACK of student teachers, through chain mediation involving ICT self-efficacy and ICT-supported learning. This, subsequently, affects their tendency to utilize technology for self-regulated/cooperative learning and ultimately contributes positively to their development of TPACK. In this sense, it is imperative that teacher education institutions not only furnish student teachers with a sufficiently conducive ICT environment but also motivate them to integrate ICT into their individual learning endeavors via collaborative and self-regulated methods; doing so will establish a strong groundwork for the advancement of TPACK.

### **Research on the Influencing Mechanism of Pre-service Teachers' Self-Development Expectations towards AI**

Jiang Tao Beijing Normal University

Wu Yuchen The Chinese University of Hong Kong

Song Huan Beijing Normal University

The ongoing advancement of artificial intelligence (AI) in the field of education poses new challenges for the preparation of pre-service teachers. Examining the influencing mechanism of pre-service teachers' Self-Development Expectations of AI (AI-TSDE) is beneficial for enhancing their digital literacy, promoting the establishment of high-quality teacher teams, and facilitating the digital transformation of education in China. A structural equation model is



constructed based on survey data collected from third-year undergraduate pre-service teachers via the Teacher Training and Development Data Platform to analyze the impact mechanism of Beliefs in the New Cultural Learning (BNCL) on pre-service teachers' TSDE. The study finds that BNCL has a significant positive effect on pre-service teachers' self-development expectation of AI, with "AI Anxiety (TA) → Perceived Benefits of AI (TPB)" serving as a chain mediating effect between the two. The survey on teachers' beliefs in the new culture of learning (BNCL) evaluates teachers' beliefs regarding students' utilization of technology for learning and the integration of digital resources as learning tools (Chai & Koh, 2017). These beliefs directly impact pre-service teachers' AI-TSDE. Furthermore, they also raise pre-service teachers' expectations for the benefits of AI, thereby stimulating their motivation for advancement in the field of AI education. Hence, pre-service teachers' recognition of integrating digital technology into educational practices will reduce their technological anxiety. This will enable them to adopt a more positive and open-minded attitude towards AI in educational settings, fostering their readiness to embrace and actively engage in AI education.

**Artificial Intelligence Promotes Regional Teaching and Research Actions in  
Teacher Team Building—Dual-Teacher Classroom Teaching and Urban-Rural  
Integrated Joint Research Practice Case Models as Examples Under the  
Background of Digital Intelligence Empowerment**

Zhao Juan Beijing Daxing Teacher Training College

To promote the balanced distribution of high-quality resources, Daxing District relies on the Ministry of Education's artificial intelligence to boost teacher team building projects, creating a dual-teacher classroom teaching model in the context of digital intelligence empowerment and integrated research. It has developed four models: collaborative dual-teacher classroom application models of "synchronous teaching + personalized guidance," problem-solving-based dual-teacher interdisciplinary thematic learning courses, and a six-step method for dual-teacher teaching and research. Multiple dual-teacher classroom teaching seminars covering all subjects have been designed and implemented, and they have been selected as typical cases on the national primary and secondary school smart education platform and awarded prizes.

## **Innovative Mechanism for Mutual Employment Between Universities and Primary and Secondary School Teachers-- Building a Regional Big Data Long-Term Dynamic Learning Pool**

Tan Yanfang Beijing Normal University

Guided by the concepts of "people-oriented" and "lifelong learning", the professional development of teachers in the new era faces many challenges. Collaboration, integration, and innovation to break away from the old and embrace the new are the general trend. Since 2014, some provinces and cities in China have started to implement the practice of mutual appointment between universities and primary and secondary school teachers. This mechanism has effectively improved the quality of pre-service teacher training and in-service teacher development, becoming a key point for the deep integration of teacher education before and after employment. However, in the practice of the past decade, the overall emphasis on formalities and the lack of internal drive for continuous growth among individual teachers have seriously hindered the long-term effectiveness of the mutual appointment mechanism. Therefore, taking into full consideration the cultural and regional characteristics of China, it is important to explore the establishment of a regional big data dynamic long-term learning pool. This will help continuously activate and serve the training paradigm for pre-service teachers and the internal drive for personalized growth of in-service teachers under the mutual appointment mechanism. Innovating and energizing the mutual appointment mechanism between universities and primary and secondary school teachers within the region is of great significance for the continuous and deep integration of pre-service and in-service teacher training in China.

## **Artificial Intelligence Enabling Teacher Professional Development: Opportunities, Challenges and Paths**

Zhang Xueling Shaanxi Normal University

The deep integration of artificial intelligence and education is forcing the systematic change and upgrading of information technology in education, and the professional development of teachers has become the key hand that pries and catalyzes this process, and it is also an important way to promote the adaptation of teachers to the future of intelligent education. Artificial intelligence brings three new opportunities for teacher professional development: first, it facilitates the creation of an intelligent environment, laying the foundation for teachers' adaptive learning; second, it facilitates the development of intelligent training, making it possible for teachers to develop collaboratively in groups; and third, it facilitates panoramic management and evaluation, providing a basis for teachers' scientific development decisions. While effectively promoting the personalization, ubiquity, precision and intelligence of teachers' professional development, AI also puts forward new requirements for teachers' intelligent educational literacy, makes teachers face new adaptations in the transformation of development methods, and brings new impacts on teachers' development concepts. Facing the triple challenge of AI to teachers' professional development and the reality of AI-enabled teachers' professional development, we should start to construct the practice path of "AI + teachers' professional development" to help teachers' professional development improve quality and efficiency. Specifically, the goal of teacher development should be advanced to emphasize the cultivation of teachers' intelligent educational literacy; the way of teacher development should be upgraded to promote the innovation of teachers' professional development mode; and the concept of teacher development should be innovated to build an ecological environment for teachers' intelligent development.

### **How to Build Master Studios in Primary and Secondary Schools from the Perspective of Collaborative Development? -- Taking the Cultivation of Grassroots Teaching Organizations as an Example**

Xie Yanhong Shandong University of Aeronautics

The goal of school management teachers is not only structural, but also needs to achieve a sense of community condensation. The goal of the construction of the famous teacher studio is not only to activate the teaching resources, but also to realize a kind of community consciousness cultivation. From the perspective of the relationship between team and management, it requires the management departments of primary and secondary schools to integrate resources through creative activities to shape the studio of famous teachers. Taking A famous teacher's studio as an example, this study finds that building a famous teacher's studio through cooperative teaching in primary and secondary schools is a shaping process of teaching identity -- consolidating community consciousness -- reaching collective action -- building collective identity. Primary and secondary schools carry out integrated management innovation from the three dimensions of identity, group and action, and use a variety of teaching management integration tools to shape the teaching identity of master studio, cultivate and

consolidate the sense of community, achieve consistency in collective action, and then form collective identity.

### **Teachers ' Educational Beliefs: Value Implication, Problem Discussion, Connotation Remodeling and Path Orientation**

Xiang Xin China People's Police University

Positive teacher education beliefs are the internal driving force for cultivating excellent teachers. It is of great theoretical value to clarify the essence of teacher education belief for the construction of characteristic teacher education system. In this paper, the correct and firm educational beliefs are the foundation of the subject teacher 's career, the good and strong educational beliefs are the source of the subject teacher 's professional development, and the firm and progressive educational belief promotes the subject teacher 's teaching practice. The three footholds explain the value implication of the teacher 's educational belief; it systematically discusses the problems of teachers ' educational beliefs, such as the confusion of related concepts of teachers ' educational beliefs, the lack of subject characteristics of teachers ' educational beliefs, and the different connotations of subject teachers ' educational beliefs. From the aspects of subject belief led by characteristics, teacher belief and student belief related to influence, integration of curriculum teaching belief, and emphasis on social environment belief, the connotation relationship of teacher education beliefs are reshaped. From the different subject levels of pre-service teachers, teacher educators and training units, the training path of teacher education beliefs is proposed.

### **Development and Practice of Biology Teaching Resources Under the Background of Information Technology**

Hou Hongxia Xingtai University

Li Chenyan Xingtai University

With the rapid development of information technology, its application in the field of education has been continuously expanded and deepened, injecting new vitality and opportunities into the teaching of biology. Information technology not only enriches teaching methods and teaching resources, but also significantly improves teaching quality and learning efficiency, making biology teaching full of new vitality. This article focuses on the innovative development and teaching practice of biological teaching resources in the information environment, analyzes the application status and profound significance of information technology in biology teaching, deeply explores the key role of information teaching resources in stimulating students' interest in learning and improving learning effectiveness, and focuses on studying the development path of biological teaching resources, clarifying the basic principles, goals, and forms of resource development. At the same time, this article also proposes effective application strategies for information teaching resources in biology teaching, realizing the close integration of information teaching resources and biology teaching, providing strong support for teaching practice. To sum up, the research content of this article not only enriches the theoretical system of innovative development and teaching practice of biological teaching resources in the information environment, but also provides valuable

references and lessons for the informatization process of biology teaching, which is of great guiding significance for promoting the innovative development of biology teaching.

### **Teachers' Involvement and Feasible Approaches in Quality Monitoring of Basic Education Curriculum Implementation-- Taking the Chinese Subject as an Example**

Chang Yuhan East China Normal University

Liang Tingting Beijing Normal University

Teachers' participation in the quality monitoring of curriculum implementation is a key point for the quality monitoring of basic education in China to be ultimately realized in the improvement of curriculum and instruction. Through interviews with six frontline Chinese teachers, an in-depth study was conducted to explore the involvement of teachers in the quality monitoring of curriculum implementation and the feasible approaches for their participation. Teachers participate in the whole process of quality monitoring of regional and school curriculum implementation, focus on the feedback and application of the monitoring results, and take into account the characteristics of the Chinese subject, but there are still problems such as different focuses at different levels of monitoring, serious marginalization, and strong limitations on the characteristics of the subject. Therefore, at the present stage of the quality monitoring of basic education curriculum implementation in China, it is necessary to further improve the subject-specific monitoring system and evaluation indicators, and meanwhile to mobilize the initiative of teachers to participate in the quality monitoring of curriculum implementation, and to develop the multiple identities of teachers in order to perform the role of teachers in the quality monitoring of curriculum implementation more effectively, and to promote the enhancement of basic education quality.

### **The Practical Pathway of Carrying Forward Craftsmanship Spirit in Piano Education from the Perspective of Ideological and Political Education**

Zhang Rong Xingtai Normal University

Piano education is an important component of music education. The craftsmanship spirit in piano performance courses embodies the spirit of being willing, capable, skillful, and joyful as pianists, which integrates performance techniques, musical expression, and life values. Cultivating the craftsmanship spirit in piano education is an important approach to implement the educational ideology of integrating ideology and political education into curriculum, and to achieve the fundamental goal of fostering moral character and shaping individuals. Through top-level design, value guidance, and practical exploration, the piano curriculum, by cultivating the craftsmanship spirit, achieves an organic unity of music education and character cultivation, thus nurturing high-quality artistic talents with both moral integrity and competence in the new era.

## **Entity Embedding Cracking Skill Talent Growth Path - Linkage Mechanism Evaluation Model**

Su Xueyuan Zhejiang University of Technology

To build a high-quality industrial talent team and explore the evaluation model of industrial skilled talents, an "eight chain linkage" evaluation model is constructed for on-site engineers. Starting from the education chain that analyzes the growth path of workers, the industry chain that highlights the working mode of the digital age, the supply chain that serves top-down collaboration, the talent chain that facilitates personal development, the professional chain that adapts to job integration, the promotion chain that focuses on career planning, the innovation chain that stimulates team vitality, and the value chain that reflects the matching of contribution and return, this study conducts an analysis of the essential elements of talent evaluation in the "education chain professional chain talent chain", the derived elements of talent evaluation in the "industry chain innovation chain supply chain", and the elements of talent evaluation results in the "value chain promotion chain". It clarifies the evolution of school enterprise cooperation organizational forms, conflicts and deficiencies in industry university research cooperation, and clarifies the connotation of on-site engineer type talents facing new forms of manufacturing industry. Value and point out practical difficulties, through theoretical construction and practical analysis, Clarifying the skill indicators of on-site engineers and constructing a skill talent evaluation model.

## **Multi-Dimensional Learning Portrait of Doctoral Students in the Field of Vision of Multiple Roles**

Li Yue Huzhou Normal University

Gao Luan Huzhou Normal University

The doctor of education is the top talent in the field of education, and it is an important human support for the construction of a powerful country in education. Postgraduate education with a doctoral degree provides an important path for the cultivation of composite and professional talents in education, teaching and education management. This study takes 6 part-time doctoral students as the main research subjects, and relevant research is carried out through semi-structured interviews and the collection of physical materials such as coursework. In the data analysis part, this study explores the multiple roles played by doctoral students in combination with role theory, deeply analyzes the degree of their role conflict and the response to role conflict, and portrays their learning portraits. The study found that teaching doctoral students is not only a "professional multi-faceted person" in the workplace city, but also a "learning climber" in the learning (university) field, or a "support guardian" in the family field. Saving doctoral students present a multi-dimensional learning portrait when dealing with role conflicts: steadily enterprising, burden-bearing forward, and struggling to adapt, and free to cope. Based on the characteristics of multi-dimensional learning portraits and combined with existing research results, the researchers put forward suggestions from the three dimensions of training institutions, tutors and educational doctoral students, in order to improve the quality of educational doctoral training.

## **An Evidence-Based Teaching Model with a Focus on Practical Skills Development -- A Study on Training Education Masters at American Relay Graduate School of Education**

Tian Wenhui Yanbian University

Jin Shumei Suqian University

The Relay Graduate School of Education (RGSE), as a new type of independent institution for training masters of education who would become teacher in elementary and secondary schools, has been highly praised by the National Council on Teacher Quality (NCTQ) for its unconventional teaching method, which centers on practice and involves instructors from the RGSE, in-campus tutors, and masters in education. The program has equipped the post-graduates with valuable experience of clinical practice. It has an "evidence-based" principle, tutors from Graduate College and in-campus advisors provide feedback on students' teaching performances through field observations, videos, and assignments. The post-graduates revise their performance and improve their teaching skills through tutors' and advisors' guidance. Day by day, a teaching method based on scientific research evidence has been formed, and its concept and implementation are important reference and revelation for the improvement of teaching ability of Chinese masters in education.

## **The Content Knowledge of Six Chinese Early Childhood Education Teachers Who Teach English as a Foreign Language**

Shi Xiaobo Henan Normal University

Xu Liangyuan Henan Normal University

The widespread acknowledgment of content knowledge (CK) as a pivotal element in both effective teaching and student learning is well-established. Yet, despite ongoing efforts by researchers to precisely define CK across various subjects and educational levels, a detailed comprehension of the CK possessed by early childhood education (ECE) teachers, particularly those teaching English as a foreign language (EFL), remains scant. Addressing this gap, our study utilized a qualitative approach—namely, stimulated recall classroom observation—to explore the different categories and subcategories of CK among Chinese EFL teachers in kindergartens. Participating in the research were six EFL teachers, of whom two had a background in English and four in ECE. Our findings underscore the multifaceted nature of CK in the realm of ECE EFL teaching, identifying three main categories: knowledge of first language acquisition, knowledge of second language acquisition, and linguistic knowledge. Notably, we observed distinctions between teachers with English and ECE majors, especially in the most frequently mentioned CK subcategory and in the subcategory of how first/native language is learned. The study not only sheds light on these variances but also offers valuable insights for future research and practical applications within ECE EFL teacher education.

## **The Logical Path for the Construction of Cross-Border Professional Learning Community among Teacher Educators: A Study on the Educational Goals of Gert Bista**

Zhang Yanyan Tianshui Normal University

Wang Zhaojing Northwest Normal University

The first priority for the strategy of empowering China through education is to establish a high-quality teacher education system. However, the quality of teacher education is inextricably linked to that of teacher educators. It is, therefore, of paramount importance to investigate the professional development and enhancement of teaching standards among those responsible for educating future teachers. In accordance with the tenets of the "class" essence theory from Marx, The embodied practical logic from Merleau-Ponty and the value logic of the teachers' community with a shared future, this study employs Bista's triple education goals of qualification, socialization and subjectivity to construct a three-dimensional spiral model of "mission commonality, knowledge sharing, and action association" and a practice model of "four-dimensional integration, four-dimensional integration, and four-way linkage" for cross-border professional learning of primary and secondary school teacher educators. The objective of this study is to enhance the cross-border teaching and learning capacity of teacher educators, elevate the quality of pre-service teacher training and teacher in-service training, and subsequently furnish a reference path for the development of high-quality teachers and the professional advancement of teacher educators.

### **High Quality and Balanced Education: Theoretical and Empirical Perspective for Improving Chinese Public-Funded Teacher Education System**

Qian Wanbo Beijing Normal University

He Wenjie Capital Normal University

Huan Yujia Beijing Normal University

Wang Qing Beijing Normal University

Li Qiong Beijing Normal University

To build a high-quality teaching workforce and promote a national system of quality and balanced basic public services, ultimately aiming to establish an education powerhouse, it is necessary to explore a balanced and high-quality national system for public-funded normal students education. Based on policy texts and research data, this paper defines the public-funded normal students education system (national, provincial and city and county levels) from the teacher education system with Chinese characteristics, especially the position and role of the three-level public-funded normal students education system in the teacher education system with Chinese characteristics, as well as the core characteristics of balanced and high-quality it builds. It also focuses on the relationship between state-funded and locally state-funded teacher education systems at the national, provincial, and city/county levels, their respective training systems and coordination. Based on survey data, this paper analyzes the challenges in the promotion, protection, and fulfillment of public-funded normal students education policies; it



also identifies deficiencies in the selection, training, and development of public-funded normal students education. Based on the "balanced and high-quality " of teacher education, the author believes that the three-level state-funded teacher education system should be improved in three key aspects. First, the system should explore a three-tiered structure at the national, provincial, and county levels, integrating educational forces at these levels to form a smooth-running publicly funded teacher mechanism. The policy network, consisting of national publicly funded teacher candidates, provincial publicly funded teacher candidates, and county-level superior teacher plans, supports the creation of mechanisms such as a national digital platform, national policy standards, provincial supply-demand coordination, and long-term county-level assistance. The goal is to establish a comprehensive public-funded normal students education system that supplements all educational levels especially focuses on rural areas.

### **An Exploration of Current Professional Standards for Teachers in Scotland in the Context of Teacher Education Integration**

Liu Xiaojie Zhejiang Normal University

The integration of teacher education is a key initiative to improve teacher quality and the quality of basic education. An integrated system of professional standards for teachers provides supporting standard requirements and assessment systems for the integration of teacher education. The Teachers' Professional Standards 2021, published in Scotland in August 2021, runs through the whole process of pre-service and post-service professional development of teachers. This article uses textual analysis to make a more detailed analysis of Teachers' Professional Standards 2021, and finds that this system of standards has the following advantages: it focuses on the articulation of the various stages of professional development; it highlights the professional characteristics of expansion; and it emphasises the concept of student-centredness. Based on this, the article puts forward the inspiration for the construction of a teacher professional standard system that is compatible with integrated teacher education in China: grasping the dynamics of different stages of teacher professional development; clarifying the coherence of the competence of teachers in different roles; and highlighting the expansion of the professional competence of teachers in the new era.

### **Classroom Teaching Innovation and Application Based on Augmented Reality Technology**

Chen Gaoyu Zhejiang Normal University

Ma Haiyan Zhejiang Normal University

Zhou Yueliang Zhejiang Normal University

In the wave of digitization, information technology in education application faces problems such as poor presentation, weak teaching perception, and formalization of technology. Augmented Reality (AR) technology provides new ideas for classroom teaching with its combination of reality and fiction, real-time interaction, and three-dimensional registration. This study aims to solve the bottleneck problem in basic education teaching by analyzing AR technology solutions in depth. By clarifying the differences in teaching based on AR glasses, it innovates the organization of classroom teaching, stimulates students' potential for active

learning and cooperative learning, and proposes the basic mode and strategy of AR teaching. As a result, the experience and sense of presence of basic education teaching will be continuously enhanced to make up for the shortcomings in the application of information technology education at the basic education stage, and to promote the continuous improvement of the quality of basic education teaching.

### **Research on Cross-Border Cooperation of Physical Education Teachers in Primary and Secondary Schools from the Perspective of Social Capital Theory**

Wang Yuanlin Beijing Normal University

Liu Tianbiao Beijing Normal University

This paper deeply discusses the cross-border cooperation research in the field of primary and secondary school physical education teacher education, takes the social capital theory as the starting point, takes the cross-border cooperation in primary and secondary school physical education teacher education as the research subject, and researches from three new perspectives: social reciprocity and trust, social relationship network construction, and social capital transformation, in order to provide theoretical references for the reform and development of primary and secondary school physical education teacher education. So as to improve the teaching ability and teaching quality of physical education teachers in primary and secondary schools. Research methods: literature analysis, case analysis, logical analysis. Research results: (1) Social reciprocity and trust promote the cross-border cooperation of physical education teachers in primary and secondary schools. (2) Construct the social relationship network of cross-border cooperation in primary and secondary school physical education teacher education. Operation mechanism: The social relationship network should build a teacher education system composed of government, schools and physical education teachers. At the government level. (3) Cross-border cooperation in primary and secondary physical education teacher education enabled by social capital conversion. Research conclusion: The research shows that social capital plays an active role in the cross-border cooperation of physical education teachers in primary and secondary schools. First of all, social reciprocity and social trust are the premise of cross-border cooperation in primary and secondary physical education teacher education. Secondly, the construction of social relationship network is the key to cross-border cooperation of primary and secondary school physical education teachers. Finally, the transformation of social capital enables the cross-border cooperation of physical education teachers in primary and secondary schools. The study emphasizes the importance of establishing long-term and stable cross-border cooperation, and points out the direction of future research in this field, that is, to further explore how different types of social capital affect cross-border cooperation in physical education teacher education, and how to maximize the role of social capital.

### **Group 3 October 27, 2024, First Half 14:00-15:30**

#### **A Narrative Study of Early Childhood Teachers' Professional Care**

Zheng Yue Xingtai University

Hou Hongxia Xingtai University

Song Wenxia Xingtai University

As child abuse incidents of kindergarten teachers occur from time to time in today's society, the professional care of kindergarten teachers has become an important issue of moral concern in China. In this thesis, through the narrative research, based on the "circle of care" in Nell Noddings' theory of caring, a hierarchical evolution of "care for-look after-take good care of-be concerned with" was constructed. From the foundation stage of professional caring to the budding stage, then to the development stage, and then to the forming stage, the analysis is based on the four specific paths of "role modeling, dialogue, practice, and recognition", which reflects the pursuit of "person-centered" professional ethics by kindergarten teachers. It reflects early childhood teachers' pursuit of the "human-centered" professional ethics. It reveals the simple professional ethics of an ordinary teacher, with a view to triggering the resonance and self-reflection of practitioners in the education sector.

#### **Types of Teacher-student Relationship and Social-emotional Competence of Junior High School Students: A Latent Profile Analysis**

Bao Chengyuan Zhejiang University

Wang Jing Zhejiang University

In the post-pandemic era, psychological problems bring more pressure and challenges to teenagers, so teachers need to pay attention to and improve students' social-emotional competence. Good teacher-student relationship is the key factor to improve social-emotional competence. Taking 1361 junior high school students as samples, the study investigated the association between the types of teacher-student relationship and students' social-emotional competence by latent profile analysis. The findings were as follows: (1) Junior high school students had four types of teacher-student relationship: alienation, generality, positive conflict and positive harmony. (2) Junior high school students with different types of teacher-student relationships showed significant differences in all dimensions of social-emotional competence, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. Those who built "positive harmony" teacher-student relationships showed the highest levels of social-emotional competence, followed by those who built "positive conflict", "generality", and "alienation" teacher-student relationships in that order. It was suggested that teachers can improve students' social-emotional competence in three ways: by developing a positive and interactive relationship with them, improving classroom teaching wit and focusing on high-risk students.

## **The Realistic Situation and Adjustment Strategy of Professional Competence Development for Normal Students --Empirical analysis based on survey data of 8, 0536 normal students**

Ding Haoran Northeast Normal University

Li Guang Northeast Normal University

Teachers are the foundation of education and the source of promoting education. Only by relying on a high-level teaching team can we provide education that satisfies the people. Since the 18th National Congress of the Communist Party of China, the country has attached great importance to the construction of the teaching staff. In 2022, the Ministry of Education and eight other departments jointly issued the "New Era Basic Education Strong Teacher Plan", outlining the goal of building a high-level teacher team, which is to cultivate and cultivate a high-quality, professional, and innovative teacher team. As the reserve force of the teaching team, the professional ability of normal students determines the level of professionalization of the future teaching team. Therefore, enhancing the professional abilities of teacher trainees is crucial for the future construction and high-level development of the teaching staff. This study provides an in-depth analysis of the essential connotations and constituent elements of the professional abilities of teacher trainees, and conducts a survey of 80536 teacher trainees from 68 higher education institutions in China. It is found that there are generally problems in the development of teacher trainees' professional abilities, such as a lack of teaching motivation, outdated and repetitive course content, dull teaching by teachers, and shortcomings in subject understanding and research innovation abilities. Suggestions are proposed to strengthen interest cultivation, improve course settings, and optimize teaching modes.

### **How to "Jointly" Improve the Teaching Ability of Teacher Educators in Weak Local Institutions**

Liu Ningning Xingtai University

The teaching ability of teacher educators in local normal universities is one of the key factors affecting the quality of teacher training. In this study, 160 teacher educators from a weak normal university in the "Teacher Education Collaborative Quality Improvement Plan" were selected as the research objects. The teaching ability of teacher educators was investigated by means of questionnaire survey and interview. It was found that the university level attached importance to the improvement of the teaching ability of teacher educators, but the teaching ability of teacher educators was still weak in practical work. The development of each dimension of teaching ability is not balanced and it is difficult to establish a connection between the new curriculum concept of basic education and its own teaching. According to the synergy theory, it is necessary to combine the internal and external systems of the school, improve the U-U-S (high-level normal university -- local weak university -- local basic education schools) cooperation mechanism, create a collaborative platform, realize resource exchange, joint teaching and research, exchange and mutual learning, and aim at the problem to jointly promote the teaching ability of teacher educators in local weak colleges and universities.

## **Analysis of the Reasons for the Diversification of Employment Choices of Normal Students in Local Undergraduate Colleges**

Wang Xiaojuan Xingtai University

The employment choice of normal students in local undergraduate colleges has a far-reaching impact on the development of local education. Exploring the reasons for the diversification of normal students' employment choices is helpful to improve the efficiency of local normal education. By investigating the normal students in local undergraduate colleges and universities, this paper examines the relationship between the ascribed factors such as gender, major, grade, source of students, family economic conditions, as well as the self-induced factors such as learning experience and teaching skills, and the "employment choice" of normal students. The chi-square test and other analysis found that girls, liberal arts majors, lower grades, students from cities, and students with better family economic conditions are more likely to choose postgraduate entrance examination; students with higher satisfaction with learning experience and teaching skills are more likely to teach. To promote normal students to teach as much as possible, it is necessary to pay attention to classified guidance, carry out targeted education and services; optimize curriculum teaching, improve the learning experience of normal students; strengthen the training of teaching skills and enhance the self-efficacy of normal students.

## **Teacher Professional Development in Singapore STEAM: Model, Pathways and Implications**

Liu Yaping Beijing Normal University

In the tide of global education reform, teacher professional development is an effective way to improve the quality of teachers, and it is also a difficult problem to be solved in all countries. In recent years, Singapore has been attaching greater importance to STEAM education. STEAM teacher professional development directly determines the quality of STEAM education. STEAM Teacher Professional Development in Singapore aims to provide the best education for prospective and serving teachers to become STEAM teaching professionals for the 21st century. Singapore has built a "Teacher Growth Model" to provide STEAM teachers with an operational framework for professional development. Based on this, Singapore aims to strengthen STEAM teacher professional development by building a multi-dimensional professional development consortium, promoting the deep integration of ICT and STEAM, and designing sustainable characteristic development projects. In the implementation of localized STEAM education, China can learn from the reform trend and experience of STEAM teacher development in Singapore. For example, it pays attention to the multi-linkage, technical support and project guidance of teacher professional development.

## **A Study of German Teacher Education Policy in the Context of Digitization in the Post COVID-19 Pandemic**

Luo Shuwen Shanghai Normal University

Under the multiple pressures of the post-epidemic era and the impact of the global wave of digital transformation of education, the digital transformation of education in Germany has made rapid progress, and it has constructed a blueprint for contemporary teacher education with the goal of integration. At present, the reform of teacher education in Germany presents three major characteristics: first, based on the actual demand for full-time basic education, the government has vigorously supported the development of teacher education in all states and elevated the improvement of teacher education quality to the will of the nation; second, the education departments of all states have broken down the barriers, presenting a new situation of active cooperation and close communication between the government, colleges and universities as well as other social sectors; third, the digital competence standard for teachers has become a new impetus for the professional development of teachers. Thirdly, the digital competence standard for teachers has become a new impetus for teachers' professional development, and the Arbeiten in multiprofessionellen Teams has become a new topic in the development of teachers' educational competence in Germany. This study attempts to systematically investigate the content, characteristics and effectiveness of the policy implementation of German teacher education in the context of digitization, to explore the understanding of contemporary German society about teacher education, to explore the implementation mechanism of the teacher education policy under the cooperation of various subjects, and to analyze the characteristics, advantages and disadvantages of the digital transformation of Germany's teacher education with the aim of providing a model solution for our country.

## **Research On the Mechanism Guarantee of Endogenous Development of Rural Teachers --Based on the Perspective of Teaching Community**

Zhang Huishan Zhejiang Normal University

Yu Xiangjun Zhejiang Normal University

Liu Dan Jindong District Experimental Primary School

It focuses on the construction of teaching and research organizations of small-scale rural schools in the post-epidemic era, and promotes the endogenous development of rural teachers with the concept of education community, aiming to provide a guarantee mechanism for the endogenous development of rural teachers and provide practical basis for policy makers. Based on the results of a dynamic survey of small-scale rural schools, the main problems facing the endogenous development of rural teachers at present include uneven distribution of educational resources, limited professional development, and unclear career growth paths. Based on this, three suggestions are put forward: First, policy-driven and financial incentives should be used to broaden the boundaries of educational resources and optimize the allocation and sharing of urban and rural resources; Second, cross-regional education community pairing to lead the new impetus for regional education and research cooperation; Third, relying on the education

community, explore and construct multiple paths for the endogenous development of rural teachers; Through the above measures, to create a supportive environment for rural teachers, stimulate their internal power, so as to promote the overall improvement of rural education quality.

### **Cross-border Learning for Teachers Based on Human- machine Collaboration in the Age of Digital Intelligence Era**

Wang Yuqing Nanjing Normal University

Qiao Xuefeng Nanjing Normal University

In the context of the digital intelligence era, the rapid development of generative artificial intelligence technology has opened up new horizons for collaborative cross-border learning with human-machine collaboration. Teachers not only need to possess profound subject knowledge and excellent teaching skills, but also need to be transformed into "complete educators" who integrate educational practice, academic research and social participation. This study aims to explore how teachers can cross the boundaries between disciplines and technologies and collaborate with AI, and then build a strategic framework to promote teachers' cross-boundary growth. The study points out that teachers should take the initiative to break through the boundaries of existing knowledge and skills, and cultivate the ability of cross-disciplinary integration in order to implement the concept of "complete educator", and that AI technology has the potential to be applied in the promotion of teachers' professional development, and teachers should utilize these technological resources to deepen the understanding of disciplinary knowledge, and to expand their teaching methods and strategies. Through the systematic analysis of the dialogue learning mechanism of human-machine collaboration, the study proposes multi-dimensional strategies including personalized learning path design, intelligent feedback and support system, and the establishment of cross-border learning communities, so as to optimize the teaching process and improve the quality of education with data-driven methods.

### **Teaching Development of Higher Vocational Teachers in Guangdong-Hong Kong-Macao Greater Bay Area from the Perspective of Artificial Intelligence: Orientation, Status and Strategies**

Tang Lei Guangzhou Preschool Teachers College

You Hongmiao East China Normal University

The development of vocational education teachers' teaching from the perspective of artificial intelligence should be positioned as the leader of vocational education teaching innovation, the builder of digitalized vocational education ecology, and the cultivator of high skilled talents. However, through data mining and relevant literature analysis of the Teaching Development Index (2023 edition) of vocational college teachers in Guangdong Province, it is found that there are problems in the development of intelligent teaching among vocational college teachers in the Guangdong-Hong Kong-Macao Greater Bay Area from the perspective of artificial intelligence, such as the inability to meet the needs of digitization, the imbalance of vocational education ecology, and the urgent need to improve teachers' artificial intelligence capabilities. We should build a development pattern with distinct regional characteristics and collaborative sharing, accurately reshape the practical form of vocational education and

teaching in the Greater Bay Area, and attach importance to the development of artificial intelligence literacy among vocational teachers in the Greater Bay Area, in order to promote the teaching development of vocational teachers in the Guangdong-Hong Kong-Macao Greater Bay Area.

### **High School Chemistry Mobile Learning Based on the Combination of Bilibili Website and Wechat Public Platform Model Exploration and Practice**

Wang Buning Taiyuan 61 Middle School

Su Yuejiong Central China Normal University

Zhang Wenhua Central China Normal University

Mobile learning is a new learning mode based on mobile Internet technology to meet the learning needs of learners with the advantages of mobility, timeliness, interactivity, anytime and anywhere. It is an important way for individuals to realize lifelong learning and also the development trend of future education. This paper introduces mobile learning based on the combination of Bilibili website and wechat public platform into the chemistry teaching of senior high school, follows the design principles of mobile learning resources supported by Bilibili and wechat, and understands the production mode of chemistry mobile learning resources for senior high school students based on Bilibili website and wechat public platform. Develop the Bilibili video account and wechat public account, which are famous as "slimming, not fertilizer", and try to form a high school chemical mobile learning model based on the combination of Bilibili website and wechat public platform. After four years of operation practice, it is found that this model can mobilize the enthusiasm and autonomy of students' learning, meet the needs of students' personality development, and help students choose to learn and repeat learning. It is expected to provide reference for the teaching of front-line teachers, promote the improvement of school teaching quality, and help the fair and modern development of education.

### **Realistic Hidden Worries and Innovation Path of Teacher Education Practical Curriculum in the Technological Era --Based on Bergman's Philosophical Perspective of Technology**

Wu Sidan East China Normal University

The practical curriculum of teacher education in the technological era is undergoing innovation. Based on the perspective of technology philosophy of Albert Borgmann, the practical curriculum in the current technology era faces the worry of "de-subjectivity", which means that normal university students rely passively on technical tools instead of choosing their own choices, the worry of "de-presence", which means one-way participation instead of multi-subject collaborative interaction, and the worry of "de-contextualization", which means that the experience content is preset instead of dynamically generated. From the perspective of Bergman's philosophy of technology, the above hidden worries come from the fact that the expansion of the functions of modern technological tools forces the retreat of traditional educational tools, and the technical tools characterized by reducing the burden weaken the participation of the subject and the separation of the field and situation of educational practice



in virtual simulation technology tools. The practical curriculum of technology-enabled teacher education needs to reflect and balance the relationship between human and technology, and highlight the existence value of the subject; Protect the traditional educational tools and maintain the presence and participation of the subject; Integrate the virtual and real education field and pay attention to the embodied experience of normal students.

### **Reasoning-Equilibrium Teaching Method: An Analysis of J. John Loughran's Teacher Education Thought**

Gao Yaqi Hebei Normal University

In the practice of science teachers and science teacher educators, J. J. Loughran, an Australian scholar, deeply analyzed the dilemma of dialogue between teachers' professional knowledge and teaching practice, and proposed the reasoning-equilibrium teaching method, that is, the teacher education method that explores pedagogical reasoning and seeks pedagogical equilibrium. Pedagogical reasoning is a complex way of thinking to explore and clarify the teaching practice supported by teachers' professional knowledge. Pedagogical equilibrium is an ideal state to adapt or reconstruct teachers' professional knowledge and teaching practice. Pedagogical reasoning is the focus of exploring pedagogical equilibrium. In view of this, he advocated that the rational thinking of pedagogical reasoning should be cultivated in teacher education to support the development of teachers' professional knowledge, the improvement of teaching practice ability, and the construction of pedagogical equilibrium. J. Johnson Loughran's reasoning-equilibrium teaching method is of great significance to the research of teacher-educator practice and student teachers' teaching practice.

### **Theory and Practice - A Study on Reading Lessons in Public Elementary Schools in China and Switzerland**

Zhao Hong University of Geneva

Christophe Ronveaux University of Geneva

Innovation in the theory and practice of subject teacher education stands as an imperative response to the exigencies posed by economic globalization and societal evolution. How are classes conducted? How is teaching interaction achieved in the classroom, what should be taught, and how should learning be organized? To address this series of questions, we propose the educational theory of "teachers' teaching tools", which serves as a conceptual framework guiding our empirical observations in educational practice. Our study, grounded in comparative analysis, examines parallel case studies conducted in public elementary schools in China and Switzerland and illuminates the crucial role of teachers' tools within the classroom black box. The inquiry further sheds light on the efficacy of teachers' teaching methods and teaching tools in fostering students' critical thinking abilities and nurturing innovative cognitive processes. We posit that innovation in educational practice serves as the foundation of educational theoretical advancement, which is simultaneously enriched and refined through experiential insights garnered from pedagogical implementation.

## **A Review on the Image System of Geography Textbooks for Primary and Secondary Schools**

An Tongdan Hebei Normal University

As one of the most important non-language systems in geography teaching materials, image system has the functions of presenting geographical things and phenomena intuitively and simply, and conveying geographical knowledge. This paper takes the relevant literatures from CNKI, EBSCO and Web of Science as objects, and combs them from three perspectives: image, geography teaching materials and geography teaching materials image system. From the perspective of research content, Chinese and foreign scholars mainly pay attention to four issues of geography textbook image system: the function, type, application and comparative study of geography textbook image system. From the perspective of research methods, domestic scholars mostly use the comparative method to discuss images in the scope of geography teaching, and the research scope is relatively wide, but the depth is not enough. However, most foreign scholars design experiments to demonstrate the impact of images on teaching from the perspective of psychology, with sufficient evidence, but most of them are compared with their own geography textbooks. In short, the breadth and depth of comparative study of geography textbooks need to be further expanded, especially the improvement of related image theory, the development of research tools, and the comparative study of different national geography textbook image systems.

## **A Multi-Case Study on the Development of Interdisciplinary Teaching Capacity among Primary and Secondary School Teachers**

Qiu Shiping Beijing Normal University

Huang Yuqi Beijing Normal University

Zhang Zhizhen Beijing Normal University

With the promulgation of the "Compulsory Education Curriculum Standards (2022 Edition)", primary and secondary school teachers in China face the challenge of conducting interdisciplinary teaching activities. Due to the emphasis of the 21st century curriculum reform on teaching methods that inherently involve interdisciplinary approaches, such as Comprehensive Practical Activities and Project-Based Learning, a considerable number of teachers have developed strong interdisciplinary teaching capacities. Unveiling the characteristics and influencing factors of their development has practical values. This study adopts the research paradigm of teacher teaching expertise development and has formed an analytical framework for interdisciplinary teaching cognitive abilities, interdisciplinary curriculum development capabilities, and interdisciplinary teaching practice abilities. Based on the stages of development of interdisciplinary teaching expertise, four teachers from a certain district in Beijing were selected as case studies. Through three rounds of semi-structured interviews to collect data, combined with the analysis of interdisciplinary curriculums developed by the teachers, the study describes the characteristics and manifestations of interdisciplinary capabilities among advanced beginners, skilled practitioners, and expert teachers. Based on the findings, suggestions for the development of teachers' interdisciplinary capabilities are proposed.

## **Strategies for Teachers to Promote Students' Social-Emotional Competence**

Xu Rong Gannan Normal University

Liu Guanting Gannan Normal University

Xiao Ye Gannan Normal University

Huang Guozhen Gannan Normal University

Wang Jinling Gannan Normal University

With the acceleration of economic globalization, social-emotional competence has become an important development direction for the education systems of various countries, an inevitable trend in the current reform of basic education, and a necessary condition for students' happy life and sustainable development. The Physical Education and Health Curriculum Standards for Compulsory Education (2022 Edition) explicitly calls for focusing on the core qualities of student development, cultivating the necessary character and key abilities for students to adapt to the future, and promoting the all-round development of students. Teachers, as important mentors for students on their way to school, are a direct source of influence on the development of students' social-emotional competence. In view of this, the purpose of this paper is to discuss how teachers can effectively base on the main position of classroom education to promote the development of students' social-emotional competence, and help students acquire the ability to have a positive relationship with the self, others and the collective.

### **Utilizing CSMS for Accurate Diagnosis of the Teaching Characteristics of Elementary School Mathematics Emotional Intelligence Classrooms**

Zuo Quansheng Heshan Shaping Street NO.1 Primary School

Ding Yuhua Jiangmen Educational Research Institute

Against the backdrop of the 2022 edition of the elementary school mathematics curriculum standards, traditional classrooms urgently need to improve in order to meet the needs of modern development. Drawing on the experiential practices of emotional and intellectual mathematics classrooms in Jiangmen City and the experimental data from the provincial-level project "Research on the Teaching Practice of Elementary School Mathematics Big Unit Based on 'csms' Regional Promotion," this study summarizes the content and implementation strategies of emotional and intellectual mathematics classrooms in elementary schools. It proposes an overall approach with the framework of designing units as a whole, integrating "emotion + intellect" throughout the units, and utilizing the CSMS analysis tool for dynamic control. In terms of implementation strategies, pilot programs were conducted in six schools, with recorded lesson examples covering grades one through six. Typical cases of emotional and intellectual classrooms were selected, and precise teaching characteristics of emotional and intellectual mathematics classrooms in elementary schools were refined based on CSMS analysis. Through practice, a diagnostic index of "four shifts" gradually emerged: teaching design transitioning from "individual" to "whole," teaching behavior shifting from "passive teaching" to "active learning," learning processes moving from "surface level" to "depth," and classroom evaluation transforming from "criticism" to "appreciation."

## **Action Research on Optimizing Effective Classroom Questioning Based on CSMS + Knowledge and Action Theory**

Wang Jianhui Guangzhou Dongfeng Experimental School

CSMS is a classroom teaching indicator system based on artificial intelligence and big data technology, which can objectively and specifically quantify the evaluation of teachers' classroom teaching. It not only responds to the concerns of the times, but also meets the national requirements for cultivating students' core competencies in the new era. Classroom questioning is a crucial aspect of classroom teaching. Effective classroom questioning can promote emotional communication between teachers and students, strengthen effective interaction between teaching and learning, and improve students' learning skills; At present, the common perception among students in mathematics classrooms is that the classroom is dull and boring, and the teacher's class is not attractive. The reasons for this are insufficient directionality of classroom questioning, superficial questioning, lack of artistry in questioning, insufficient openness to questions, and overly singular evaluation methods. This study conducts process analysis using the data provided by the CSMS big data analysis system to extract effective questioning paradigms: creating a relaxed learning environment, designing high-quality questions, cultivating students' habit of actively asking questions, selecting the right timing for classroom questioning, and responding to students' answers in a timely manner, thereby cultivating students' critical thinking, innovative thinking, and communication and cooperation abilities.

## **The Dilemma and Countermeasures of Integrating STEM Education into the Practice of Science Teaching in Primary Schools**

Zhang Xue Tianjin Normal University

STEM education is an interdisciplinary approach to education that aims to improve students' practical and problem-solving skills. Integrating STEM education into the practice of science teaching in primary schools plays an important role in improving students' scientific literacy. However, in the practical application of STEM education, there are still problems such as the lack of STEM education textbook resources, the weak interdisciplinary knowledge and teaching ability of teachers, the limitation of primary school students' cognitive development, the imperfect evaluation mechanism, and the high cost of school input. In order to solve these problems, schools should vigorously develop primary school science STEM education materials and resources, strengthen STEM education and training for primary school science teachers, pay attention to students' individual differences and cognitive levels, establish a diversified STEM education evaluation system, and increase government and social investment in STEM education.

## **An Analysis of The Professional Quality of Chinese Basic Education Teachers in The New Era -- From the Perspective of Novice Teachers**

Wu Qiong Shaanxi Normal University

Teacher professional development is usually divided into two stages: "pre-service" and "in-service", and the "novice" stage, as the beginning of the "on-the-job" stage, is a period of connecting the past and the future. Therefore, the growth and professional development of "novice teachers" are very important for the whole process of teachers' career. Since the 21st century, great changes have taken place in China's society and education, and the requirements for teachers' quality have also changed. Therefore, this study focuses on how novice teachers view the professionalism of basic education teachers in the context of the new era. The results found that: "discipline literacy" and "general literacy" is a novice teachers think "important" and missing "quality," support "and" ethics "is" more important but think not too lack "quality," whole education "" communication "and" development "is" not too important and lack " quality. In addition, according to the literacy view of novice teachers, it can be divided into three categories: emotional, cognitive and functional, and factors such as educational background, learning period, and gender will affect the type distribution of teachers. In view of the above research results, this paper is discussed in depth.

### **Multi-party Collaboration among Academy of Education, Enterprise, Schools and Monitoring Centers to Promote Provincial Practice in the Digital Transformation of Teaching and Research**

Li Haidong Guangdong Academy of Education

Zhan Chunqing Guangdong Academy of Education

Liu Junmin Noobie Technology (Guangzhou) Co., Ltd

Zhuang Haiyan Futian District Basic Education Quality Monitoring Center, Shenzhen City

Liu Hui Shenzhen Baomin Primary School

The digital transformation of teaching and research is not only an inherent requirement to strengthen and improve the basic education teaching and research work in the digital era, but also an important measure to accelerate and promote the high-quality development of basic education. Considering the actual needs of teachers' individual personalized development and the scaled high-quality development of the teaching team in the new era, it is necessary to empower the high-quality development of teaching and research with artificial intelligence technology. This article aims at four key teaching and research scenarios, including individual teachers' independent teaching and research, collaborative teaching and research among teachers, inter-school joint teaching and research, and urban-rural supporting teaching and research. Based on the perspective of symbiosis theory, an open, collaborative, and linked digital teaching and research system is constructed, with teaching and research institutions as the main body, quality monitoring departments as the link, enterprises collaborating, and high-quality primary and secondary schools as the practical bases for teaching and research. This system is designed to address issues such as the imbalance of traditional single teaching and

research service supply and the inaccuracy of scaled teaching and research assistance. Based on this, the establishment of a multi-subject and multi-technology collaborative teaching and research mechanism and the construction of a multi-strategy hybrid collaborative teaching and research model are aimed at achieving diversified supply of teaching and research services, scaled expansion of teaching and research audiences, and precision-driven teaching and research decision-making.

### **Teacher's Role and Function in Participating in School Culture Construction and Empowerment Concepts: A Case Study of a County School in China**

Huang Tengyao Beijing Normal University

School culture construction is a significant topic in China's educational modernization and school development, as well as an important component of teacher-school educational practices. This study aims to explore the role and function of teachers in school culture construction, with a focus on analyzing the process of teacher role construction from the perspective of teacher empowerment. It is essential to clarify the educational practices of teacher-school culture construction and promote teachers' professional autonomy. J County Schools, as newly established educational experimental schools in China, are collaborating with University B and J County Education Research Institute to advance the theoretical conceptualization and practical construction of J School culture, with teachers as the main agents for capacity building and practical activities. Using role theory and teacher empowerment theory as the theoretical framework, this study conducts a case study based on teachers from J County Group Schools. Data on the roles and empowerment of teachers in school culture construction are collected and analyzed through interviews, physical collection methods, and semi-participatory observation. The study identifies six typical roles of teachers in school culture, namely "practitioner and innovator," "organizer and facilitator," "learner and miner," "reflector and maintainer," "interlocutor and sharer," and "collaborator and communicator." The corresponding functions of these roles are summarized. The study also analyzes the process of teacher role construction through the perception of psychological and structural empowerment practices, identifying the empowering effects of "guidance, adjustment, and reconciliation" in promoting teacher role practices. Furthermore, it proposes empowerment strategies focused on improving teachers' perception of structural and psychological empowerment in relation to school leadership. Taking the school culture construction practices of newly established schools in Chinese counties as a typical example, this study outlines the development path of school culture construction in county schools under the guidance of collaboration between universities and local education research institutes. It establishes six major roles and their functions for teachers participating in school culture construction, and analyzes the process of teacher role construction from an empowerment perspective. The findings aim to provide insights and guidance for teacher participation in school culture construction, particularly in terms of role functions and empowerment strategies.

## **The Development Process, Selection and Training Mechanism of Finland's Research-Oriented Teacher Education Model Under the Trust Culture Orientation and Experience Enlightenment**

Peng Aonan Central China Normal University

The key in China's teacher education reform is how to cultivate high-level teachers with both outstanding professional qualities and a spirit of practical innovation. After decades of reform, the Finnish teacher education has not only developed a research-oriented teacher training mechanism at the master's and doctoral levels but also maintained a high retention rate and sense of identity among teachers based on a culture of trust. The Finnish research-oriented teacher education model mainly consists of two parts: first, a selection-training mechanism that emphasizes the cultivation of teachers' rigid capabilities, including a combination of rigorous and specialized pre-service teacher selection, and a long-term theoretical-practical balance in pre-service teacher training; second, a trust-based cultural orientation that catalyzes teachers' professional identity. The formation of this culture of trust depends on Finland's social, political environment, and historical cultural traditions, which are difficult to directly replicate in other countries or regions. Furthermore, there is still controversy over how Finnish teacher education achieves a balance between practical and academic elements. Despite certain limitations, the Finnish experience still has enlightening implications for China's teacher education reform: firstly, upgrading the educational level of the teaching staff should be gradual and progressive; secondly, reforming the selection mechanism for teacher trainees to accurately select those who are enthusiastic and suitable for teaching; thirdly, balancing the theoretical and practical components of teacher training programs; and fourthly, cultivating a culture of trust among teachers to enhance their professional identity.

## **Strategies for Improving Digital Literacy of Teacher Trainees Based on the National Smart Education Platform for Primary and Secondary Schools**

Lian Xiangyi Zhejiang Normal University

Lan Min Zhejiang Normal University

In the wave of digital education, the digital literacy of teacher trainees is crucial for improving the quality of teaching and adapting to future educational changes. The National Wisdom Education Platform for Primary and Secondary Schools, as an important digital resource, provides significant support for the enhancement of teacher trainees' digital literacy, but the current research on the problems, difficulties, and challenges it encounters in the development and enhancement of teacher trainees' digital literacy is not clear. Therefore, this study plans to analyse the current status of teacher trainees' digital literacy through a mixed-methods research design based on digital literacy theory and the Ministry of Education's digital literacy framework with questionnaire data and interview data. Taking Zhejiang Normal University as an example, this study reveals the challenges that teacher trainees may encounter in practice, such as information screening and technology operation, raises relevant issues, and explores relevant countermeasures in order to effectively enhance the digital literacy of teacher trainees. The study aims to provide practical guidance and policy suggestions for the reform of teacher education, which is of great significance for the promotion of education informatisation.

## **Teacher Childness: Value and Connotations**

Liu Hangyu Beijing Normal University

In contemporary society, the primacy of instrumental rationality and the utilitarian pursuit of academics impose excessive pressure on both students and teachers. Education that is grounded in a human-centric vision places the utmost emphasis on the centrality of human beings within the educational context, with teachers and children being recognized as the essence of this paradigm. Research on children has given rise to the field of child studies. This study constructs the concept of "Teacher Childness" by interdisciplinary linking of child studies and teacher education. Childness, regarded as the root of humanity and the bridge connecting adults and children, encompasses two dimensions within teachers: one concerning the teacher's self-awareness, that is, the teacher's own childlike nature, which includes the recollection of the teacher's own childhood experiences and the retention of childlike qualities; the other concerning the teacher's understanding of children, that is, the teacher's recognition and care for children, including the understanding of the connotations of children's development and the mastery of child-related knowledge. Teachers should engage in dialogue with children as "teachers who were also children." Teachers are the slightly older children among students, without the need to kneel or squat, or to cede power to children, but rather to be with children as a child. The value of the Teacher Childness lies in establishing the tranquility of the teacher's soul, returning to the essence of education through "regaining the true heart and being a real person." Furthermore, Teacher Childness serves as an intrinsic motivator for teachers' lifelong learning and professional development, aiding in better understanding student dynamics and fostering truly egalitarian teacher-student relationships. Teacher Childness not only reflects teachers' introspection on their own childlike qualities but also represents a comprehensive understanding of present and future children. These intertwined aspects synergistically contribute to teachers' professional growth and the enhancement of educational quality.

### **The Value Implications, Realistic Dilemmas and Practical Paths of Cultivating Top Innovative Talents in Teacher Trainees**

Liu Xu Beijing Normal University

Dong Hui East China Normal University

As an important reserve of innovative teachers and a force to lead the innovative development of education in the future, the construction of a training system for outstanding and innovative talents of teacher education with Chinese local characteristics and world-class level has become a key support for the continuous deepening and upgrading of specialized and creative fusion education for teacher education students. Through a questionnaire survey on 1003 teacher trainees in six universities in the east, central and west, it is found that the internal and external cognition of teacher trainees' dual-creation education is unbalanced and presents multi-dimensional and complex characteristics, the dual-creation participation is ineffective and there are multiple real-life differences and contradictions, and the school's dual-creation education support and dual-creation participation dilemma perception have become an important factor influencing the cognition of the teacher trainees' dual-creation education and their participation behaviors. Therefore, we should adopt the following paths to help teacher



trainees' creative self-concept and dual-creation cognitive level grow continuously, promote the extensive development and in-depth popularization of specialized and creative fusion education for teacher trainees, promote teacher trainees' openness to learning and practical application of dual-creation knowledge, strengthen the systematic support for teacher trainees and their dual-creation practical skill cultivation, and build a co-creative ecological environment with multi-party collaboration to reduce the teacher trainees' perception of difficulties to help them develop a systematic cultivation system for the teacher trainees. The systematic cultivation of outstanding innovative talents.

## **Group 4 October 27, 2024 Second Half 16:00-17:30**

### **Generative Artificial Intelligence Technological Literacy Development for University Faculty: Practical Reflections and Framework Study**

Jiang Shan Shanghai Open University

Qi Boya Shanghai Open University

Zhang Haoyue Shanghai Open University

With the deep integration of AI technology in the field of education, mastering generative AI technology has become a core element for college teachers to enhance their professional literacy. Adopting the action research method of practice reflection, this study analyses and constructs a framework for the development of generative AI technological literacy among university teachers that includes four dimensions: comprehension and expression, practice and innovation, ethical practice and critical thinking, and lifelong learning, based on an generative AI technological literacy training programme that covers 70 participants and 32 hours of training, and collects feedback on the training through in-depth interviews with the seven participating teachers. The study further optimises the training curriculum design. The study further optimises the design of the training curriculum and proposes specific optimisation paths: strengthening thematic training on human-computer interaction and ethical practice, creating scenarios and tasks to drive practical application, promoting practical innovation through innovative projects, and promoting lifelong learning and critical thinking in seminars and exchanges. This framework and curriculum optimisation strategy provides a systematic path for university teachers to learn and apply generative AI technology to promote their professional development and teaching innovation.

### **Research on the Influence Mechanism of Students' Willingness to Teach in Affiliated Normal Universities: An Empirical Study Based on the FIT-Choice Framework**

He Zhaoying Beijing Normal University

Liu Na Beijing Normal University

Zhu Han East China Normal University

In recent years, the Ministry of Education and other departments in China have issued policy documents related to teacher education to put forward systematic and comprehensive work requirements for pre-service teacher training, and the willingness of pre-service teachers to teach determines the stability of the teaching team. The subordinate normal universities undertake the important task of training pre-service teachers, and the research on the deep mechanism behind teaching plays an important role in teacher education. In view of the poor teaching willingness of students in some subordinate normal universities, this paper explores the influencing mechanism of students' willingness to teach in subordinate normal universities through empirical research methods. The results show that: (1) The survey results show that the overall intrinsic value, personal value and social value of the students in the subordinate normal

universities have different degrees of influence on the students' willingness to teach, and the influence of intrinsic value and social value is positive, while the influence of personal value is negative. Compared with intrinsic value, the marginal impact of social value on the willingness of students in the subordinate normal universities to teach is more significant. (2) Students' categories, grades, parents' teaching expectations, policy understanding and policy recognition had different degrees of influence. (3) For students who are at a disadvantage in their willingness to teach, the motivation of social value has the greatest marginal impact on their willingness to teach. For students with a moderately low level of willingness to teach, there was little difference in the marginal effect of the three types of motivation to teach. For the students who are at the upper middle level of teaching intention, the social value and intrinsic value of teaching motivation have a greater impact on the teaching willingness of students in the subordinate normal universities. For students who are at the middle and higher level of teaching intention, intrinsic value motivation has the greatest marginal impact on teaching intention. In the future, it is suggested that the subordinate normal universities should focus on four aspects: strengthening policy publicity and supervision to stimulate the motivation of normal students, strengthening teachers' original intention of educating people and deepening the foundation of vocational belief education, strengthening the willingness of teachers to teach through home-school linkage and supporting the cultivation of future teachers in an all-round way, and taking the second classroom as a position to build the cornerstone of normal students' willingness to teach.

### **Analysis Research on the Demand of New Teacher's Induction Education in Colleges with Industry Characteristics**

Cai Huiyuan Nanjing University of Aeronautics and Astronautics

Xiu Qiaoyan Nanjing University of Aeronautics and Astronautics

The 20th National Congress of the Communist Party of China clearly pointed out that China's education has entered a stage of high-quality and sustainable development. This indicates that improving the level of educational practice has become the main theme of the current development of the education industry, and strengthening the quality of higher education is the core task of promoting a high-level education system at this stage. New teachers themselves are the backbone force for universities to achieve their own sustainable development, and analyzing their induction education needs has become a core task in the construction of university teaching staff. As of the end of 2023, the ratio of gross enrollment rate in higher education in China is 60.2%, an increase of 0.6 percentage points compared to the previous year, which has enabled the expected educational goals of the 14th Five Year Plan to be achieved ahead of schedule. At the same time, there are 2.0749 million full-time teachers in higher education nationwide, an increase of 97100 compared to the previous year. Faced with the increasing amount of data, the construction of university teaching staff, especially the growth path of new teachers, has become an academic focus, and research on the induction education of new teachers in universities has sprung up like mushrooms after rain. However, despite this, induction education still faces some practical challenges. Specifically speaking of industry characteristic universities, these universities cultivate various professional talents to meet the needs of characteristic industries, so they have higher requirements for newly hired teachers. However, a large proportion of teachers in colleges with characteristics have not received teacher training, so targeted induction education is needed to help them adapt to the

role of teachers. This study elaborates on the problems existing in the current induction education of colleges with characteristics and analyzes the actual needs of new teachers, based on which the following improvement strategies are proposed: establish clear and distinctive educational objective that align with industry characteristics, design systematic and industry-specific educational content, adopt flexible and diverse educational forms that fit industry characteristics, and improve assessment and feedback mechanisms to strengthen industry-specific guidance. Design induction education that meets the needs of new teachers at colleges with industry characteristics, ensuring it is tailored to the requirements of new teachers.

### **The Composition and Training Strategy of Kindergarten Teachers' Literacy Under the Background of Local Education**

Lu Baojun Hanshan Normal University

Local education is the basic carrier and way to inherit and create local culture, national culture and world cultural diversity. Based on the question of what kind of literacy kindergarten teachers need in local education, this study extracts the literacy characteristics of 27 kindergarten teachers such as cultural identity through the grounded theory analysis of the behavioral events of 20 kindergarten teachers in G province, and constructs the literacy model of kindergarten teachers including six characteristics : personal characteristics, skill literacy, cultural literacy, knowledge literacy, career development literacy and organizational literacy. From the perspective of universities, kindergartens and kindergarten teachers, this paper puts forward the promotion strategy of empowering kindergarten teachers ' literacy based on the model.

### **Factors Influencing Teachers' Intentions to Protect Online Privacy: A Perspective Based on the Theory of Planned Behavior**

Zhao Dandan South China Normal University

Wu Minyu South China Normal University

Zuo Huang South China Normal University

Luo Yuqiao Ghent University

In the context of the information age, the prevalence of self-media not only promotes the dissemination of knowledge, but also brings about serious consequences such as educational and teaching misconduct and student privacy leakage. Therefore, research on enhancing teachers' awareness of online privacy protection is particularly necessary and urgent. Based on this, this study intends to explore the influencing factors of teachers' willingness to protect online privacy based on the perspective of the theory of planned behavior. Previous studies in the literature have shown that teachers' attitudes, subjective norms and perceived behavioral control of online privacy protection all have some influence on teachers' willingness to protect online privacy. This study intends to verify the relevant hypotheses based on the data through scale development and assessment, on the basis of which it provides theoretical support and practical suggestions for strengthening teachers' awareness of online privacy protection.

## **How to Prevent Teachers' Online Posting Behaviors from Anomie --Based on the Perspective of Privacy Computing Theory**

Wu Ming South China Normal University

Zhao Dandan South China Normal University

Luo Yuqiao South China Normal University

Zuo Huang South China Normal University

The development of online digital media has brought teachers a broader space for expression. However, due to the lack of effective regulation and the double-edged sword characteristics of the Internet, teachers' online publishing behavior gradually shows a disorderly trend, which in turn leads to a series of negative impacts that damage the image of teachers. Based on this, how to effectively prevent the moral anomie of teachers' online publishing behavior has become an urgent problem to be solved. Based on the theory of privacy-preserving computing, this study adopts qualitative research methods such as interviews to deeply analyze the characteristics of current primary and secondary school teachers' online publishing behaviors: (1) There are three main types of risks perceived by teachers in online publishing behavior: privacy leakage, professional image damage and public opinion pressure; (2) There are three main types of benefits perceived by teachers in online publishing behavior: professional fulfillment, teaching resource sharing and social identity. (3) The process and mechanism of teachers weighing the risks and benefits of online publishing behavior mainly include content screening, audience control and platform selection. Based on the above research results, this paper proposes corresponding prevention strategies to promote the standardization of teachers' online publishing behavior, and further optimize the construction of teachers' ethics and teaching style in the Internet era.

## **The Dynamic Formation Process and Development Path of Teachers' Digital Resilience**

Wang Ruoning Northwest Normal University

In the post-epidemic era, teachers should have the ability to respond to major shocks in teaching and form a new stable teaching state by using digital technology, namely digital resilience. Digital resilience includes the absorptive force in the face of digital teaching risks, the adaptive force in the face of teaching technology pressure, and the transformative force in the face of teaching mode transformation. Teachers with digital resilience are conducive to improving their digital literacy and obtaining technical support for professional development; to actively updating themselves and obtaining digital learning consciousness for professional development; to improving their digital teaching ability and obtaining endogenous motivation for professional development. Based on the resilience theoretical model of Knoop, this paper will reveal the dynamic development process of teachers' digital resilience, and put forward that teachers can develop digital resilience through three aspects: developing individual traits, seeking environmental support, and changing coping strategies.

## **AI-Enabled Teachers First - Measuring and Optimizing the Current Status of AI-TPACK for Secondary School Language Teachers in the Perspective of Artificial Intelligence**

Lin Shuxin Beijing Normal University

With the rapid development of Artificial Intelligence technology, the field of education is undergoing profound changes. This study focuses on the current status of the professional competence of secondary school language teachers in the context of AI empowerment. Through the literature review, it was found that there is a relative lack of attention to the group of secondary school language teachers in existing studies. Based on this, this study relies on the AI-TPACK theory and technology acceptance model, and empirically analyses a total of 171 secondary school language teachers from Zhejiang Province, Shandong Province, Henan Province, and Sichuan Province as a sample using literature research, Delphi method, questionnaire survey and interviews. The study found that there were significant competence differences in AI-TPACK among secondary school language teachers, especially in the application of AI technology knowledge, which was weak. In addition, the study revealed the influence of factors such as gender and age on the level of AI-TPACK. Although most teachers are open to AI technology, they still face many challenges in the actual application process, such as the lack of necessary training support and opportunities to practice the technology. In response to these problems, this paper proposes a series of improvement strategies: enhancing teachers' initiative and improving their technological competence; deepening their subject knowledge and strengthening their pedagogical competence; promoting integration and innovation, and establishing a support network and a cooperation mechanism; improving the incentive mechanism through continual reflection and improvement; and providing personalised guidance and continuous tracking and evaluation. These strategies will not only help to solve the existing problems, but will also further promote the informatisation process of secondary language education in China, laying a solid foundation for the cultivation of talents to meet the needs of the future society.

### **The Development of Team based Teaching and Research Path for Primary School Chinese Teachers Empowered by CSMS Big Data:**

#### **A Case Study of F Primary School in Shenzhen**

Xiao Hong Shenzhen Futian District Fuhua Primary School

This study is based on the case of Shenzhen F Elementary School, and explores the development of primary school teaching and research paths under the background of CSMS big data to empower. The purpose of research is to reveal how big data technology innovates the traditional teaching and research model, and helps teachers' teams in accurate teaching, in -depth cooperation and sustainable professional growth. Studies first emphasize the importance of data empowerment education and teaching, and explain the help of CSMS big data in front -line Chinese teaching. Secondly, research reveals new types of teaching and research driven by CSMS big data. Taking Shenzhen F Elementary School as an example, the teacher team explains the sharing and in -depth discussions with the help of the teacher team to strengthen the spirit of knowledge exchanges and collaboration with the help of data reports. Furthermore,

study clarifying the continuous iteration of teaching and research models supported by big data. The teacher team rely on data feedback to perform real-time teaching adjustments, and through the "teaching-evaluation-reflection-improvement" closed-loop trail monitoring effect, the dynamic optimization and continuous upgrade of teaching and research activities are achieved. Finally, study clarifying that big data empowering teaching and research has a positive role in promoting the professional development of teachers.

### **The Design and Practice of New Mathematics Teaching in Junior Middle School Supported by Intelligent Technology --Take the Square and Proportional Functions as Examples**

Li Xiaolin Guangzhou Zhixin Middle School Nansha School

Huang Anjin Guangzhou Nansha District Education Development Research Institute

Zhuo Jianmin Guangzhou Zhixin Middle School

Intelligent technology has injected new vitality into modern education and promoted the innovation and transformation of teaching methods. At present, the research on the deep integration of artificial intelligence and teaching implementation process is still in its infancy, and there are few studies exploring its performance and impact in mathematics. Based on Guangzhou primary and secondary school artificial intelligence teaching platform, Tencent Zhiying and other intelligent technology platforms, this paper analyzes the entry point of the integration of new mathematics teaching and intelligent technology in junior high school, and explores the application and feasibility of intelligent technology in junior high school mathematics teaching process. Through preparing lessons, teaching, evaluating lessons, listening and other links, this paper studies the teaching design process of "three stages and eight steps" in the new teaching of junior middle school mathematics supported by intelligent technology, which provides practical teaching experience for the new teaching of junior middle school mathematics, and is expected to improve the teaching quality of junior middle school mathematics teachers and the learning efficiency of students.

### **The Role of Teachers in the Digital Age: Enhancing Digital Literacy to School Bullying**

Chai Xuetong South China Normal University

Yao Xia South China Normal University

He Tian South China Normal University

The development of the Digital Literacy for Teachers standard reflects the importance of teachers' digital literacy in preventing cyberbullying in the context of the digital age. This standard not only improves the quality of education, but is also key to protecting students from cyberbullying. Teachers with a high level of digital literacy are able to more effectively utilize digital tools for educational activities, identify potential cyberbullying risks in a timely manner, and take appropriate interventions. Based on this, a series of practice paths from a psychological perspective are proposed, including teacher training, school policy development and the

establishment of home-school cooperation mechanisms, in order to systematically improve teachers' digital literacy and build a safe and supportive learning environment for students.

### **A Case Study of Teachers' Interdisciplinary Teaching Expertise Development from a Social Construction Perspective**

Tian Ye Beijing Normal University

Huang Yuqi Beijing Normal University

Zhang Zhizhen Beijing Normal University

With the promulgation of the 2022 edition of China's Compulsory Education Curriculum Standards, primary and secondary school teachers are facing the challenge of conducting interdisciplinary teaching activities and there is an urgent need to enhance their interdisciplinary teaching capabilities. Teaching expertise offers heuristic insights into exploring and studying teachers' interdisciplinary teaching abilities. Guided by the social constructivist perspective, teaching expertise is not solely about the development of knowledge and skills at the individual level, but also the result of group interactions and negotiations among teachers in a social environment. Against this backdrop, this study selected four teachers from a certain district in Beijing as the research subjects, employing a multi-case study method and primarily adopting the social constructivist perspective as the theoretical lens. Combining three rounds of semi-structured interviews, an analytical framework for the social constructivist view of teachers' interdisciplinary teaching expertise was established. Furthermore, based on the analytical framework, the interview contents were summarized and analyzed to explore the development characteristics and influence mechanisms of the case teachers' interdisciplinary teaching expertise.

### **An Exploration of Ways to Improve the Resilience of Primary and Secondary School English Teachers from the Perspective of Learning Theory**

Lu Hongyan Gansu University of Political Science and Law

Education has entered a new stage of development, and the the quality assurance of English teachers in primary and secondary schools is also facing unprecedented challenges. Learning is the main form of improving the professional development of teachers and an important way to enhance teacher resilience. The formation, maintenance, and improvement of teacher resilience are not only the inducement, processing, and result of teacher subjective transformation, but also the external support and cultivation of teacher growth, and also the driving force and reference for promoting student learning. Learning is a fundamental activity in the process of education. Focusing on the core issues of learning research, this paper aims to explore effective ways to improve the resilience of the English teachers of the primary and secondary schools, by combining qualitative and quantitative methods, and exploring the internal logics and external mechanisms of improving the resilience of the English teachers of the primary and secondary schools, in order to help them successfully respond to the changes in education in the new era, and lead the high-quality development of primary and secondary school English education.



## **A Study on the Model of Education Practice of Science Teachers**

Zhao Wenqing Guangxi Normal University

Practice-oriented teacher education has attracted wide attention both at home and abroad. In recent years, "inquiry practice" has promoted the development of practice-oriented science teacher education. This puts forward new requirements for the theoretical construction and practical exploration of science teacher education, and urgently needs to explore a practical education model suitable for science teacher education in our country. Based on this, this study takes the project of "Xinghua Innovative Practice Teacher Class" as a case study, and studies its innovative practice education model of scientific teachers built in various aspects of training concept, training goal, system design, curriculum setting, teaching implementation, university-primary and secondary school organic connection, and evaluation system. This paper probes into the new mode of integrating the "double practice" of science teacher training and "double discipline" of science teacher.

### **Constructing Evaluation Criteria for Large-Unit Instructional Design under the Leadership of "Output-oriented" Teaching Paradigm**

Nan Xiaoqian South China Normal University

Wang Hong South China Normal University

Zhang Qian South China Normal University

Large-unit teaching is an important exploration to realize the structuring of teaching content, and front-line teachers suffer from the lack of standard guidelines to see the whole picture of large-unit teaching, which results in the fragmentation of knowledge, disconnection between teaching and evaluation, etc. Therefore, the construction of a set of evaluation standards for large-unit teaching design is urgent; the "Output-oriented" teaching paradigm is a way to change the teaching-learning relationship, promote students' innovation and problem-solving ability, and enhance students' creativity, and improve their ability to learn and learn. Therefore, it is urgent to construct a set of evaluation criteria for large-unit teaching design; the "output-oriented" teaching paradigm is a teaching concept that changes the relationship between teaching and learning, promotes students' creativity and problem-solving ability, and can be an effective carrier for the implementation of large-unit teaching. Based on the "output-based" teaching paradigm, this study uses text analysis to refine the evaluation points of the evaluation indexes of large-unit instructional design, interviews more than 10 teachers in Guangdong Province to further revise the evaluation indexes, and then uses the Delphi method to prove the scientific, reasonable and complete evaluation indexes, and finally constructs a large-unit instructional design evaluation index that contains 6 primary indexes and 25 secondary indexes. Finally, we constructed the evaluation standard of large-unit instructional design with 6 first-level indicators and 25 second-level indicators. As a result, the study puts forward the suggestions of taking the analysis of teaching background as the premise, the setting of teaching objectives as the grip, the design of teaching tasks as the focus, the structuring of teaching content as the core, the evaluation of teaching implementation as the basis, and the evaluation of assignment design as the means.

## **Identity Construction of Teacher Educators in Higher Education: A Perspective on “Legitimate Marginal Participation”**

Mu Wenqing Hebei Normal University

Bai Mei Hebei Normal University

"Legitimate peripheral participation, " as carried by the community of practice, emphasizes the social learning process during participation, forming a centripetal movement where newcomers actively engage in practical activities to become core members. University teacher educators face issues such as unclear identity affiliation, limited professional demands, and unfair evaluation systems, leading to their dilemma of identity misplacement, passive involvement, and discourse absence. Therefore, from the perspective of "legitimate peripheral participation, " the construction of the identity of university teacher educators should establish a teacher education community, acknowledge the legitimate identity of teacher educators; collaborate on developing and sharing a knowledge base to promote tacit knowledge intergenerational inheritance; reform the evaluation system by focusing on self-assessment and formative evaluation; and root in educational practice to make the strengthening of education a common pursuit.

## **Quality Analysis and Prospects of Autism Spectrum Disorder Educational Research in China from the Perspective of Evidence-Based Practice**

Liu Hongmei Beijing Normal University

Hu Xiumei Beijing Normal University

Chen Xinyu Beijing Normal University

"Based on the perspective of evidence-based practice, this study screened 112 research articles on autism spectrum disorder (ASD) education in China from 2017 to 2023, including 77 single-subject studies and 35 group studies. The quality of these studies was evaluated according to the internationally recognized Research Procedures and Standards Manual (Fifth Edition) published in 2022. The results show that the overall quality of the literature has improved year by year, with more than half of the articles meeting or partially meeting the standards. In single-subject studies, the data presentation was standardized, confounding factors were strictly controlled, but the rigor of experimental design needs further enhancement. In group studies, random allocation of groups and stability of participant composition were observed, although significant baseline differences between groups remain. Future researchers should continue to adhere to evidence-based practice procedures and standards, with efforts focused on validating research data, standardizing experimental design, expanding research pathways, and improving social validity, to promote the high-quality development of ASD education research in China.

## **Evidence Based Internship Guidance: A New Path for Improving the Reflective Ability of Teacher Trainees in Teaching**

Li Ji Xueming Guangdong Experimental High School

Educational internship is an important educational practice activity that promotes the transformation of teacher trainees from student identity to teacher identity. Research shows that it is difficult for teacher trainees to improve their teaching reflection ability in current educational internships. The root cause is that the frontline teachers of internship schools mostly rely on intuitive judgment and personal experience when guiding normal students, lacking a clear, easy to operate, and referenceable system. This study introduces evidence-based practice into educational internship guidance, aiming to enable frontline teachers to combine scientific research evidence, form intervention plans, collect data, evaluate effectiveness, improve practice, and promote the improvement of teaching reflection ability of normal students.

## **The Cognitive-Emotional Dialectics of Pre-Service Teachers in Teaching Practicum**

Tian Lixian Hebei Normal University

This study explores the cognitive-emotional dialectics of pre-service teachers during their teaching practicum. We collected data through questionnaires, interviews, and students journaling, and conducted an in-depth analysis of the formation process of professional identity experienced by student teachers during their internship. At the emotional level, student teachers experienced a wealth of emotional experiences during their internship, including excitement, challenges, anxiety, etc. These positive and negative emotional experiences are not only affected by the internship environment and mentor guidance, but also mediated by the individual's agency and emotional regulation ability. At the same time, these emotional experiences also affect student teachers' attitudes and emotional investment in the teaching profession. At the cognitive level, student teachers understand and reflect on their emotional experiences through cognitive activities, forming their understanding of the role of teachers. Through interactions with mentors and colleagues, student teachers gradually establish a cognitive framework for educational practice and combine it with their own emotional experiences to form a deep understanding of the teaching profession. Future educational internships should focus on student teachers' perezhivany to foster their professional identity development.

## **Dual Education Collaboration Advances High Quality Development of County Teacher Education System: Connotation, Ideal, Current Situation, and Strategies**

Xiao Liangyong Yunnan Normal University

Cha Shijun Yunnan Normal University

Liu Shenglan Yunnan Normal University

Dual education coordination ' can effectively solve the problem of ' acclimatization ' between external assistance and local transformation in frontier ethnic areas, consolidate and

reconstruct the county teacher training system, create a good county education ecology, and promote the high-quality development of county teacher education system. However, its theoretical connotation and value still need to be clarified. From the perspective of its theoretical value, from county teacher training to county teacher education, such a system should be reflected in the core characteristics of localization, learning center and pre-service and post-service integration. Its content involves the design of collaborative subjects at the macro level, the construction of collaborative elements at the meso level and the guarantee of collaborative forms at the micro level. However, in the process of practice, there are still many practical difficulties in the three levels of policy implementation, subject coordination and individual consciousness. Therefore, give organizational incentives and institutional guarantees, and deepen policy implementation; strengthen the local construction of the vertical and horizontal mechanism and promote organic coordination; the creation of "third space" empowered by technology and the promotion of role reconstruction are feasible strategies to help the high-quality development of county-level teacher education system.

### **The "U-G-S-S" Teacher Education Model and its Mechanism Construction Based on the Quadruple Helix Theory**

Lin Limin Henan University

Wang Ping Henan University

The 'U-G-S-S' model of teacher education is a new model in which universities, the Government, primary and secondary schools and social forces work together to train teachers. Social forces, as the fourth party, represent a social resource that can participate in the process of teacher training and help to improve the quality of teacher training in addition to universities, government and primary and secondary schools. The quadruple helix Theory provides a solid theoretical support for the participation of social forces in the collaborative training of the Cooperative Training of Normal University Students and the construction of the "U-G-S-S" model of teacher education. On the basis of relevant theoretical discussions and practice combing, it is proposed that a vision-led mechanism, an incentive-driven mechanism, an organizational leadership mechanism, a supervision and control mechanism, a communication and consultation mechanism, and an operational guarantee mechanism should be established to link the main bodies and the internal elements, to promote the integration of the resources of each element, to cooperate with each other, and to maximize the functions and effects of the main bodies, so as to achieve the goal of synergistic cooperation in the end.

### **Positive Leadership as a Lens to Understand How Principal Gratitude Expression Affects Teacher Knowledge Sharing: The Mediating Roles of Psychological Capital and Autonomous Motivation**

Xiong Rui Beijing Normal University

Zhang Yufeng Beijing Normal University

Purpose-Teacher knowledge sharing has been a concern, especially in VUCA environment, but there has been a lack of research on how principal positive leadership can contribute to teacher knowledge sharing. Therefore, the purpose of this study was to probe the influence of principal gratitude expression as a pivotal performance of positive leadership on teacher

knowledge sharing and whether teacher psychological capital and autonomous motivation mediate this relationship. Design/methodology/approach-Using hierarchical regression analysis and bootstrap methods in SPSS 27.0 with valid answers from 606 teachers in 85 primary and secondary schools from 18 Chinese provinces and cities, this study mainly analyzed the chain mediating effect of teacher psychological capital and autonomous motivation between principal gratitude expression and teacher knowledge sharing. Findings-The results revealed that principal gratitude expression had a significant positive predictive effect on teacher knowledge sharing; this kind of positive leadership affects teacher knowledge sharing through a chain mediating effect of teacher psychological capital and autonomous motivation. Practical implications-The findings carried a message for school principals and policymakers regarding the significance of nurturing the principal's sense of gratitude expression. And it is of great value to help teachers build their own knowledge sharing platform. Originality/value-To the best of the authors' knowledge, this is the first study to examine the connection between leader gratitude expression and employee knowledge sharing, specifically in the educational context. The finding further explained the roles of teacher psychological capital and autonomous motivation. Besides, this study complemented the theoretical motivational path of EASI.

### **Digital Technology Empowers the Growth and Development of Physical Education Teachers in Local Colleges and Universities**

Li Ajian Xingtai University

Mobile learning is a new learning mode based on mobile Internet technology to meet the learning needs of learners with the advantages of mobility, timeliness, interactivity, anytime and anywhere[1]. It is an important way for individuals to realize lifelong learning and also the development trend of future education[2]. This paper introduces mobile learning based on the combination of Bilibili website and wechat public platform into the chemistry teaching of senior high school, follows the design principles of mobile learning resources supported by Bilibili and wechat, and understands the production mode of chemistry mobile learning resources for senior high school students based on Bilibili website and wechat public platform. Develop the Bilibili video account and wechat public account, which are famous as "slimming, not fertilizer", and try to form a high school chemical mobile learning model based on the combination of Bilibili website and wechat public platform. After four years of operation practice, it is found that this model can mobilize the enthusiasm and autonomy of students' learning, meet the needs of students' personality development, and help students choose to learn and repeat learning. It is expected to provide reference for the teaching of front-line teachers, promote the improvement of school teaching quality, and help the fair and modern development of education.

### **Generative AI-Empowered Virtual Agents with Reflective Guidance: Revolutionizing Communication Training for Future Educators**

Mingzi Zhang Zhejiang Normal University

Min Lan Zhejiang Normal University

This study proposes a virtual teaching assistant system based on generative artificial intelligence, aiming to enhance pre-service teachers' communication skills through intelligent

interaction and guided reflection strategies. The system integrates three core modules: contextual awareness, intelligent dialogue, and reflective feedback, utilizing multimodal perception and natural language processing technologies to provide users with personalized communication training experiences. The closed-loop design of the system ensures an organic combination of communication practice and metacognitive reflection, not only addressing the limitations of traditional communication skills training methods but also offering a scalable solution for digital training in future education. Theoretically, the system design incorporates Carkhuff's model of interpersonal helping relationships and Allas et al.'s guided reflection strategies, promoting a deep integration of technology and educational theory. Future research will further optimize the collaboration mechanisms between system modules and validate the system's effectiveness in various educational settings through empirical studies.

### **A Narrative Inquiry into the Identity Construction in Teachers' Socialization Process from an Identity Conflicts Theory Perspective**

Ao Narentuya Capital Normal University

Guo Yufei Capital Normal University

**Purpose-**Teacher knowledge sharing has been a concern, especially in VUCA environment, but there has been a lack of research on how principal positive leadership can contribute to teacher knowledge sharing. Therefore, the purpose of this study was to probe the influence of principal gratitude expression as a pivotal performance of positive leadership on teacher knowledge sharing and whether teacher psychological capital and autonomous motivation mediate this relationship.

**Design/methodology/approach-**Using hierarchical regression analysis and bootstrap methods in SPSS 27.0 with valid answers from 606 teachers in 85 primary and secondary schools from 18 Chinese provinces and cities, this study mainly analyzed the chain mediating effect of teacher psychological capital and autonomous motivation between principal gratitude expression and teacher knowledge sharing.

**Findings-**The results revealed that principal gratitude expression had a significant positive predictive effect on teacher knowledge sharing; this kind of positive leadership affects teacher knowledge sharing through a chain mediating effect of teacher psychological capital and autonomous motivation.

**Practical implications-**The findings carried a message for school principals and policymakers regarding the significance of nurturing the principal's sense of gratitude expression. And it is of great value to help teachers build their own knowledge sharing platform.

**Originality/value-**To the best of the authors' knowledge, this is the first study to examine the connection between leader gratitude expression and employee knowledge sharing, specifically in the educational context. The finding further explained the roles of teacher psychological capital and autonomous motivation. Besides, this study complemented the theoretical motivational path of EASI.

## **Constructing High-Quality Art Teacher Education System**

Han Nuo Beijing Normal University

The establishment of a high-quality art teacher education system serves as the cornerstone for cultivating an excellent art teacher workforce, which in turn constitutes the fundamental guarantee for implementing aesthetic education infiltration and enhancing the country's cultural soft power. This system is a robust framework jointly constructed and mutually supported by pre-service training, in-service development, governance, and academic systems. From disciplinary, societal, national, and temporal perspectives, the high-quality art teacher education system is endowed with distinct high-quality characteristics. In constructing this system, the principle of the whole driving the parts and the parts synergistically promoting the whole should be adhered to, ensuring comprehensive high-quality development of the art teacher education system. The action orientations for constructing a high-quality art teacher education system encompass focusing on the professionalization of art teachers, optimizing the supply structure of art teacher education, adapting to the trends of artistic development in the current era, and rationally drawing on international experiences in building art teacher education systems.

