

Reflections and Analysis on the Response of Local Normal Universities to Teacher Education Professional Certification in the Context of the New Era

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Abstract

The certification of teacher education programs is a key national initiative aimed at enhancing the quality of undergraduate education and cultivating world-class teachers in the new era. It also serves as a crucial external evaluation mechanism for teacher education universities, fostering improvement, development, and reinforcement through assessment. The implementation of teacher education certification will undoubtedly advance the growth of local teacher training institutions and supply a greater number of highly qualified teacher candidates for local primary and secondary education. This paper uses the certification of teacher education programs as a starting point to analyze the challenges and opportunities it presents to local normal universities, particularly in areas such as the management of educational practice, the quality monitoring system, and the curriculum framework. It explores how local normal universities can adapt their educational philosophy, adjust their training objectives, and revise graduation requirements based on local needs. By implementing targeted reforms in response to certification standards, these institutions can achieve their expected training goals, promote new developments in teacher education, and provide valuable insights for the advancement of teacher education in local normal universities.

Keywords

Local normal universities; Teacher education programs; Professional certification; Undergraduate teaching; Normal students.

1. Introduction

The primary objective of teacher education professional certification is to establish a robust quality assurance system for teacher education, enhance the overall competence of teachers, and cultivate exemplary educators for the nation.[1-3] The certification aims to determine whether the program meets established quality standards for talent development in both the present and foreseeable future.[4-5] However, many local teacher education programs in China continue to face various challenges that hinder their potential for growth. Therefore, it is imperative to use professional certification as a catalyst, guided by the principles of certification, to uncover the core elements of program development at local normal universities, overcome developmental bottlenecks, and advance the construction of teacher education programs. This approach will ultimately revitalize teacher education in local normal universities.[6-7]

In January 2018, the Opinions of the Central Committee of the Communist Party of China and the State Council on Comprehensively Deepening the Reform of Teacher Team Construction in the New Era was released, offering a comprehensive and detailed explanation of the guiding ideology, strategic significance, fundamental principles, and target objectives for the construction of the teacher workforce. It outlined specific requirements for enhancing teachers' overall quality, professional competence, innovative capacity, ideological and political

awareness, as well as their ethics and professional conduct.[8-9] Despite significant improvements and progress in the reform of the teacher education system during the new era, several challenges remain. Professor Gan Zhaoliang observed that although reforms in teacher education institutions have advanced rapidly in recent years, the level of teacher professionalization has not seen a commensurate improvement.[10] As the certification of teacher education programs transitions from a construction-oriented evaluation model to a quality-focused certification framework, the aim is to establish a self-regulatory mechanism within the profession centered on improving the quality of talent development. This will enable teacher education programs to respond swiftly to evolving demands for teacher competency and continuously enhance the effectiveness of talent cultivation within the profession.[11-13] Both central and local governments have consistently emphasized the importance and urgency of fostering moral character and enhancing the training of teacher candidates, addressing the key questions of 'whom to educate, what kind of individuals to educate, and how to educate them.' These questions pertain to the objectives and models of teacher education. The training of teacher candidates must fully implement the Party's education policies, align with the major strategic needs of national and regional basic education reform, and contribute to the construction of the teaching workforce. It is essential to implement relevant national teacher education policies, formulate training objectives that align with the institution's mission and distinctive features, and adjust curricula, teaching methods, partnerships in practice, pedagogical activities, and assessment systems to meet societal needs and support national and regional development. Local normal universities, in particular, should seize the opportunity provided by teacher education certification to enhance the quality of their teacher education programs. By following an educational path that aligns with the local economy and emphasizes unique regional characteristics, these universities can cultivate a high-caliber future teaching workforce, strengthen their reputation, expand their influence, and better serve various stakeholders. This, in turn, will contribute to the development of the regional economy, culture, technology, and humanities - an endeavor of paramount importance.

2. Overview of On-Site Evaluation for Teacher Education Professional Certification

On-site inspection is a crucial step in the certification of teacher education programs, serving to further validate the program's self-evaluation report. The basic process is as follows: the Higher Education Evaluation Center of the Ministry of Education commissions an expert panel to conduct an on-site inspection of the program seeking certification. During the inspection period, the expert panel holds various meetings, including preparatory meetings, face-to-face discussions, briefing sessions, evaluation meetings, and feedback sessions. The program is thoroughly assessed through in-depth interviews, classroom observations, site visits, document reviews, diagnostic analyses, and discussions. Document review includes examination of graduation theses/designs, test papers, internship reports, and student teaching portfolios. In-depth interviews involve conversations with students, faculty members, program leaders, university administrators, heads of relevant departments, employers, alumni representatives, and other stakeholders. Site visits include visits to educational practice bases, review of teaching archives and supplementary materials, and inspections of teaching facilities such as simulation classrooms, maker labs, microgrid training rooms, and collaborative innovation centers. The inspection aims to comprehensively assess whether the certification principles of student-centeredness, outcome orientation, and continuous improvement have been effectively implemented, and whether the process of promoting program development, improvement, and strengthening through evaluation has yielded significant results. As shown in Figure 1 below, expert on-site inspection methods are categorized into six distinct types.

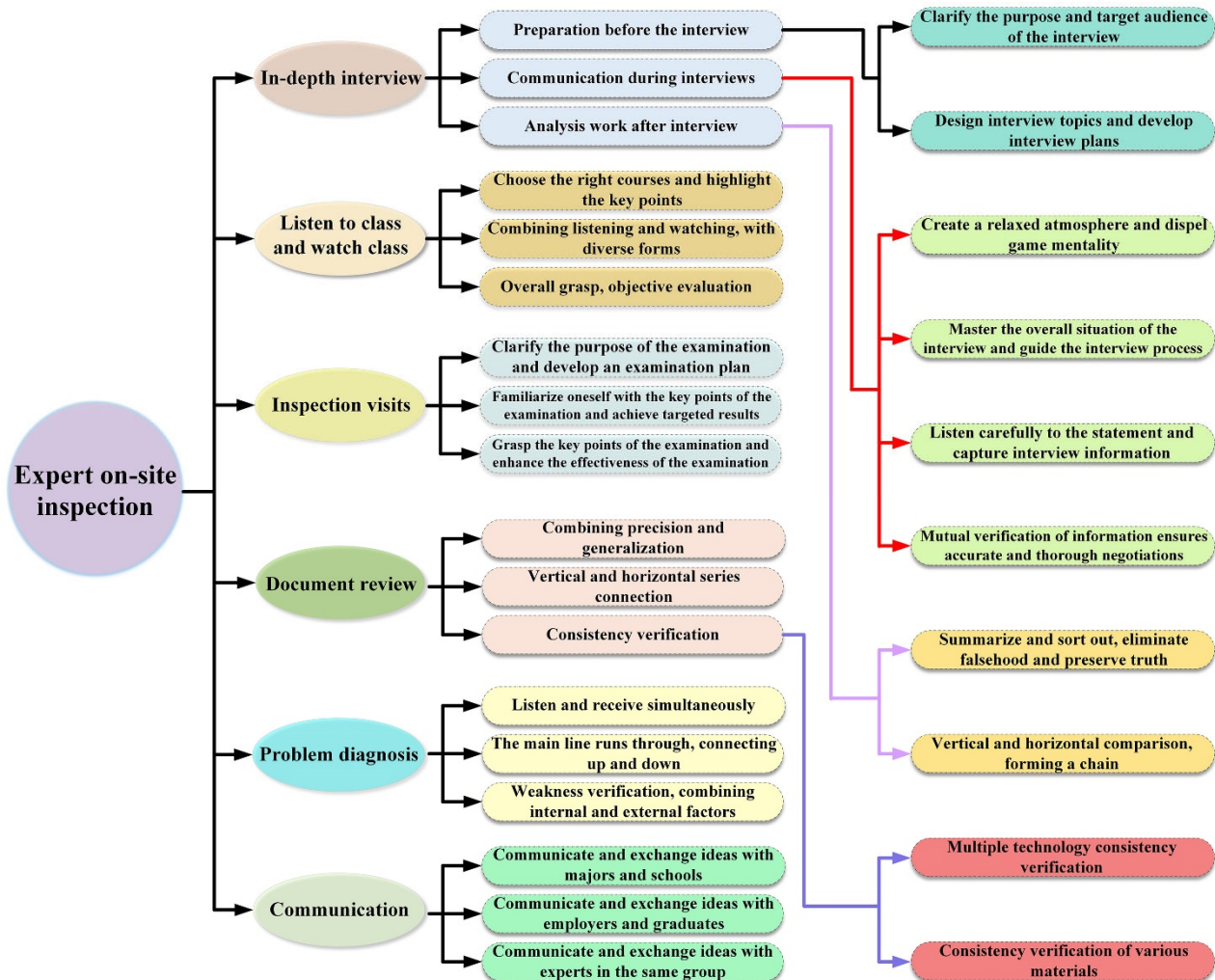


Figure 1. Expert on-site inspection method.

3. Challenges and Corresponding Improvement Measures in the Development of Teacher Education Programs at Local Normal Universities

It is widely recognized that the uneven and insufficient development of normal universities across different regions and levels in China is a major factor limiting the improvement of teacher education quality.[14-15] Significant disparities exist among these universities in terms of basic educational conditions, including teaching facilities, funding, resources, and faculty engagement in teaching. In some universities, the teaching conditions and resources are not commensurate with the scale of their educational programs.

Local normal universities should focus on five key dimensions in alignment with national professional certification standards: achieving training objectives, meeting societal needs, providing adequate educational resources, ensuring effective quality assurance, and satisfying both students and employers. They should also address the demands of regional economic and talent development by offering resources, funding, and policy support to foster the enthusiasm, initiative, and creativity of full-time faculty in teacher education. Additionally, local normal universities should strengthen their foundational disciplines, broaden their educational scope, and emphasize their distinctive professional characteristics. This requires conducting systematic research and exploration across different levels - such as programs, disciplines, courses, and teaching practices - from a systemic and institutional perspective. They should also explore the potential for growth and development within teacher education programs,

promoting curriculum optimization, strengthening practical training, and shifting the teaching focus from a 'teaching-centered' approach to a 'learning-centered' model to facilitate the continued development of local normal universities.

3.1. Challenges in the Development of Science and Engineering Teacher Education Programs at Local Normal Universities

There is often a significant gap between the professional development and teaching management practices of local normal universities and the standards required for professional certification, leading to low quality in teacher training and incomplete training models for teacher candidates.

Firstly, the quality monitoring system requires further improvement. While the management framework for the teaching process and the internal evaluation system in most local universities is generally established, there are discrepancies between actual implementation and the management standards, particularly in the area of educational internship management. The management is insufficiently standardized, lacks experience, has an inadequate basis for evaluation, and requires improved quality management methods.

Secondly, the experimental conditions and infrastructure need further enhancement. Local normal universities often face insufficient funding for certain programs, with funding structures that are not well-aligned and resource planning that is inconsistent. As a result, the experimental facilities and equipment are often inadequate to meet student needs. Therefore, it is essential for relevant departments, including academic colleges, asset management offices, finance departments, network centers, and libraries, to collaborate in accelerating the development of experimental facilities for teacher candidates and ensuring their training needs are met.

Thirdly, the management of educational practice is not sufficiently standardized. Educational practice is a critical component of the certification process for teacher education programs. However, in most local normal universities, the management of the educational practice process lacks standardization, and the systems for evaluation and improvement are incomplete. Furthermore, the proportion of student teaching in the overall practical training process is too low. Many universities also suffer from inadequate standardization of teaching practice management records and materials.

Fourthly, the construction of a 'growth guidance' system for students remains underdeveloped. Due to various constraints, local normal universities often lack adequate training programs to address both the common and individual needs of teacher candidates offered by secondary colleges. The student guidance and support system is insufficient, with limited assistance for graduates in areas such as employment, graduate school entrance exams, and interview preparation. Additionally, the tracking and feedback mechanisms for graduates are not well-established, and there is a lack of evaluation regarding the societal reputation of teacher candidates and the career development of alumni. Therefore, local universities should enhance the detailed management of teacher candidates, standardize and diversify extracurricular activities, such as student clubs and social practice opportunities, promote personalized student development, improve the guidance and support system, and strengthen connections with alumni through public teaching resources, joint research project applications, and other collaborative efforts.

3.2. Improvement Measures for the Development of Science and Engineering Teacher Education Programs at Local Teacher Training Colleges

To address the underdevelopment of science and engineering teacher education programs in local teacher training colleges, improvements should be made in the following areas. Firstly, local teacher training institutions must deepen their understanding of the principles of teacher

certification by applying the student-centered, outcome-oriented, and continuous improvement approach to all aspects of teacher education. This will help align talent cultivation objectives, graduation requirements, and course content, and standardize the achievement of educational goals. Secondly, a problem-oriented approach should be adopted to drive professional teaching reform based on the certification framework. Focus should be placed on key areas to address shortcomings by implementing effective remedial measures, increasing funding, optimizing curriculum structure, improving the monitoring system, and enhancing laboratory and experimental facilities to elevate the overall quality of teacher education. These measures should not only creatively incorporate certification standards into teaching practices, such as through case-based learning, but also reflect the strategic use of information technology to enhance students' independent learning capabilities and efficiently integrate classroom instruction with extracurricular guidance to maximize learning outcomes. Thirdly, science and engineering teacher education programs should focus on developing more national or provincial-level key disciplines, experimental demonstration centers, and key laboratories. A robust disciplinary foundation is essential for supporting professional development and ensuring quality outcomes. Fourth, a serious, dedicated, and rigorous teaching style should be promoted within the professional education process. In faculty development, institutions should implement the practice of pairing experienced teachers with newer faculty to foster mentorship and professional growth, cultivating a deep commitment to teaching among educators. Fifth, programs must strengthen their connection with basic education, emphasizing research on teaching practices to develop distinctive strengths, particularly in the application of micro-experiments and instructional methods that cater to student growth. By establishing a national or provincial influence, these programs can transform their research into curricula and teacher training practices, effectively promoting their adoption and application in primary and secondary schools, thereby improving the service effectiveness of local basic education..

3.3. Challenges in the Development of Liberal Arts Teacher Education Programs at Local Teacher Training Colleges

In the operation of local teacher training colleges, liberal arts teacher education programs often differ from certification standards in areas such as training objectives, graduation requirements, curriculum design, and practical training. These discrepancies hinder the development of a student-centered teacher education system, the establishment of a robust quality assurance framework, and the overall improvement of teacher education quality. The specific issues are as follows:

Firstly, the establishment of graduation requirement indicators lacks scientific rigor, and the implementation of moral education concepts is insufficient. Humanities programs at local teacher training colleges often provide incomplete interpretations of key graduation requirements, such as comprehensive education and reflective learning. These interpretations fail to fully align with certification standards and inadequately support training objectives. The coverage of graduation requirement indicators is relatively narrow, and the integration with the curriculum system is weak. Additionally, the evaluation mechanisms for assessing graduation outcomes lack diversity, which negatively impacts the breakdown, implementation, and objective evaluation of the teacher education process.

Secondly, insufficient emphasis is placed on cultivating students' ability to 'learn to reflect.' Many local teacher training colleges exhibit shortcomings in understanding the relationship between teacher candidates' awareness of domestic and international trends in basic education and their professional development. The cultivation of innovative thinking and an international perspective among teacher candidates is not given adequate attention, which impedes a deeper understanding of certification standards and compromises the achievement of training objectives.

Thirdly, the student learning guidance and support system is underdeveloped. Local teacher training colleges often prioritize teaching over providing learning guidance and services to teacher candidates. As a result, graduates receive limited support in areas such as organizing campus cultural activities for secondary school students, which affects their comprehensive educational abilities.

Fourthly, the construction of the educational practice teaching system is not standardized. There is a need for local teacher training colleges to better standardize their management of educational practice and to monitor the quality of each phase of the teaching process. Inconsistent management of educational internships not only affects the effectiveness of practical training but also compromises the fulfillment of training objectives and graduation requirements, particularly in the area of internship documentation. During on-site inspections of educational practice materials, some colleges were found to have disorganized and improperly archived internship materials. Moreover, while some programs aim to train middle school teachers, most internship placements are in primary schools, which contradicts the program's objectives. This indicates a lack of effective mechanisms to place students in middle school internships, aligning with the training goals..

3.4. Measures to Improve the Development of Liberal Arts Teacher Education Programs in Local Teacher Training Colleges

Local normal universities should fully recognize the gap between their humanities programs and national certification standards, and implement corresponding improvements. First, graduation requirements should be analyzed against relevant benchmarks, with secondary indicators refined and integrated into tertiary indicators to achieve comprehensive alignment with certification standards. This alignment is essential for supporting training objectives. A diversified evaluation mechanism should be established, broadening assessment channels and refining indicators throughout the teacher training process to ensure minimal redundancy. Second, further research should be conducted on meeting graduation requirements and improving curriculum support. With students at the center, courses that foster innovative thinking and a critical spirit among teacher candidates should be expanded. This will cultivate their critical thinking skills and innovative spirit, promoting reflective consciousness, broadening their international perspective, and enhancing the alignment between curriculum design and graduation requirements. Third, efforts should be made to expand learning opportunities beyond the traditional classroom setting by enriching cultural and extracurricular activities. A variety of measures should be employed to unlock teacher candidates' potential during training, allowing them to gain valuable experience in campus culture and social practice. This will help develop their awareness and fundamental skills for holistic education after employment. Fourth, a comparison with the Ministry of Education's teacher education and certification standards should be further explored. A student-centered, outcome-oriented approach should guide reforms in teaching methods. Classroom instruction should focus on discussion- and inquiry-based teaching to increase students' initiative, enthusiasm, and effectiveness in participation. Simultaneously, the overall positioning of students' graduation theses/design projects should be improved, with increased emphasis on educational internships and the cultivation of innovative thinking. This will promote the development of research skills among teacher candidates, laying a foundation for their future professional growth. Fifth, course objectives should be refined to better support graduation requirements, with an increased emphasis on formative assessments. The proportion of process-based evaluations should be enhanced, and exam structures adjusted to encourage diverse and innovative assessment methods. These measures will foster a shift in students' thinking patterns and improve their comprehension abilities. Regular reflection and evaluation of various aspects of talent cultivation should be conducted, with the results used to drive

continuous improvement in the quality of teacher training programs. Ultimately, these efforts will ensure the achievement of both course objectives and graduation requirements.

4. Conclusions

To mitigate the challenges posed by the growing emphasis on teacher education certification in local teacher training colleges and transform these challenges into opportunities for development, several reforms must be implemented. On one hand, liberal arts teacher education programs should emphasize their unique educational strengths and characteristics. They must align with the educational aspirations of teacher candidates, respond to the reform and development of national and regional basic education systems, and contribute to the construction of teacher teams. Based on regional basic education, these programs should adopt a scientifically sound and reasonable educational approach, with a focus on emotional teaching. This will foster a professional identity characterized by a love for teaching, support for teaching, and a commitment to serving local communities. The programs should balance disciplinary knowledge with teacher education, integrate theoretical and practical teaching, and aim to develop graduates with a solid academic foundation, strong literacy skills, and adaptability. On the other hand, teacher education programs in the arts and sciences should adhere to principles of practical education and a competency-based approach. They must explore innovative teaching methods to cultivate a high-quality and professional teaching workforce for the new era, which demands higher standards of teacher preparation. To meet these new demands, teacher candidates need not only a strong theoretical foundation but also advanced practical skills. Institutions should develop and implement plans to strengthen practical education, including education internships and training manuals tailored to specific professional needs. These plans must be put into action through the development of effective strategies to enhance the practical training of teacher candidates. In the context of classroom teaching, a practical education and competency-based approach should be adopted. This includes integrating classroom instruction with practical training, enhancing the practical components of classroom teaching, and strengthening the connection between theoretical content and teaching practice. Special attention should be given to practical aspects during the teaching process, particularly by enhancing practical training modules that develop basic teaching skills. Extracurricular activities should also be leveraged to improve teacher candidates' professional competence, teaching skills, and classroom abilities. The development of teacher training skill centers will further support the enhancement of teaching skills, providing an optimal environment for teacher candidates to improve their competencies. Finally, schools must prioritize teacher certification efforts and provide institutional support to ensure the continuous improvement of teacher education programs. Institutions should promote an understanding of certification concepts, standards, and requirements across the entire faculty, and issue guidance documents aligned with certification standards. Furthermore, establishing specialized research centers dedicated to teacher certification will enable the exploration of best practices in teacher certification. These efforts will be of significant importance in improving the quality of teacher training and supporting the achievement of training objectives and graduation requirements.

Author Contributions

Hongyu Fu and yuandong Mo contribute equally to the work.

CRediT Authorship Contribution Statement

Hongyu Fu: Writing -original draft, Investigation, Formal analysis, Data curation. yuandong Mo: Writing - review & editing, Supervision, Resources, Project administration, Methodology, Funding acquisition, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

No data was used for the research described in the article.

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