

Development Status of Quality Assurance System for Teacher Education in Chinese Applied Undergraduate Universities

Lingyun Qu^{1,2,a,*}

¹*School of Education, Philippine Women's University, Ermita Manila, Metro Manila, Philippine*

²*College of Education, Qingdao Hengxing University of Science and Technology, Qingdao, Shandong, China*

^a*2021t1612@pwu.edu.ph*

^{*}*Corresponding author*

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Abstract: After more than 30 years of development, the internal quality assurance of Chinese higher education has gradually formed a higher education quality assurance system that includes both external and internal guarantees, based on the quality management practices of foreign universities. However, the current teaching quality assurance system in Chinese universities has not been fully established. Due to differences in levels and educational directions, China's higher education, especially undergraduate education, does not have universal experience in quality assurance. Many local colleges and universities have problems such as narrow business scope, weak professional foundation, low comprehensive quality, and weak innovation ability. This study investigates and analyzes the quality assurance system of teacher education in Chinese applied undergraduate universities, reveals the main problems currently existing, and proposes improvement suggestions. According to survey data, about 75% of students and teachers believe that teaching quality needs to be improved, and about 60% of respondents point out the problem of uneven distribution of educational resources. Based on these data, this article proposes suggestions such as strengthening the construction of the teaching staff and optimizing the allocation of educational resources to improve the quality of teacher education. This study provides important references for education policy makers and university administrators.

1. Introduction

As the backbone of the basic education teaching staff, teacher education plays a crucial role in improving the comprehensive quality of Chinese teachers and promoting the improvement of educational quality. A major measure in the reform and development of teacher education in China is of great significance in improving the quality of teachers. Currently, higher education majors in China are certified nationwide, and teacher education majors in major universities have a clearer

understanding of the certification standards at different levels and have accumulated some experience in classroom teaching reform. However, teacher education majors in Chinese universities are still in the early exploratory stage and their development is not yet mature enough. In this context, it is necessary to explore the mechanism for ensuring the quality of teacher education in normal universities, not only in theory but also in practice.

This article first introduces the background and significance of the research, and then reviews relevant research literature at home and abroad. Then, this article provides a detailed description of the sources and steps of the experimental data, and analyzes the collected data. Subsequently, the article puts forward specific improvement suggestions, and finally summarizes the entire text and proposes future research directions. This article has a compact structure and detailed content, aiming to comprehensively explore the current situation and improvement measures of the quality assurance system for teacher education in Chinese applied undergraduate universities.

2. Related Works

Experts have conducted specialized research on the education quality assurance system. Hidayah A pointed out that the improvement of internal quality in education relies on effective quality management, which provides support for students' learning success [1]. Arifudin O used a case study method, and the results showed that despite the determination to improve research quality, there was a lack of specific policies. Internal quality assurance is achieved through the examination of results and publications, internal quality audits, and administrative controls, based on the principles of continuous improvement and quality standard improvement [2]. Khamidi A conducted an evaluation of the quality assurance system for Rudlotun Naxiyin High School in Moyokoto City, including scope, stages, influencing factors, and implementation obstacles. The results showed that the quality assurance system of the school was well implemented and adapted to the existing educational procedures and standardization [3]. Rahminawati N proposed nine action steps: establishing management commitment, forming a quality improvement team, participating in communication and socialization, establishing quality awareness, forming a quality control circle, drawing quality education maps, preparing drawing tools, collecting and analyzing drawing data [4]. Lathifah Z K analyzed the development of an internal quality assurance system model for Islamic boarding schools based on the 2020 education unit certification tool. Using research and development methods, data was collected through interviews, observations, and literature review, and analyzed in a loop [5].

Idris A analyzed the implementation of the internal quality assurance system in primary schools [6]. Kayyali M studied academic and non academic quality, internal quality control methods (such as faculty development, curriculum design, self-assessment), and external quality assurance (such as accreditation, benchmarking, regulatory frameworks) [7]. Vorobyova O analyzed the methods of using ISO (International Organization for Standardization) international standards to ensure the quality of higher education, and compared the basic principles of ESG (Environment, Social Responsibility, Corporate Governance), ISO 9001:2015, and ISO 21001 [8]. Carvalho N's research findings indicated that internal and external quality assurance were crucial in improving the quality of cross-border higher education [9]. Phumphongkhochasorn P pointed out that educational institutions need to be effectively managed to ensure the provision of high-quality education. To achieve this goal, it is necessary to establish a sound internal and external quality assurance system, obtain the trust of parents and society through external quality certification, and promote the high-quality development of Thai society [10]. Sugesti T explored the management of internal quality assurance systems in higher education through literature research. The results indicated that this system was crucial for improving the quality of higher education [11].

Tarigan T M explored the background and dynamics of implementing internal quality assurance systems in several national Islamic universities in Indonesia. He found that there were differences among schools in adhering to the principles of Total Quality Management [12]. Tamrat W explored the practices, challenges, and prospected of accreditation, external quality auditing, and internal quality assurance in higher education in Ethiopia. The results showed that despite the existence of quality assurance tools and mechanisms, practices and policy directions at the national and institutional levels were inconsistent and lack coordination, which affected the effectiveness of quality assurance [13]. Asiyai R I discussed the best practices for quality assurance in higher education in Nigeria, emphasizing the importance of high-quality and high standard educational institutions establishing a positive public image globally [14]. Janssens L explored the extent to which the European higher education quality assurance framework supports sustainable development and transformational learning. Qualitative analysis found that most quality assurance frameworks fail to support sustainable development transformation learning, with the exception of the UK framework which provides specific guidelines on sustainable development education [15]. Although existing research has achieved certain results in the field of education quality assurance system, there are still bottlenecks. The main problems include a lack of specific policy support, insufficient coordination between internal and external quality assurance systems, differences in the implementation of comprehensive quality management principles in some schools, and inconsistent practices and policy directions of quality assurance tools and mechanisms at the national and institutional levels. In addition, most studies are limited to case analysis and fail to provide widely applicable specific operational guidelines and evaluation criteria, resulting in certain limitations in practical applications.

3. Methods

3.1. Existing Problems in Teaching Quality

There are many problems with the teaching quality of engineering majors in normal universities. Due to factors such as the positioning and development history of the school, there are many common problems compared to other majors in normal universities and engineering colleges, such as insufficient teaching staff, inadequate experimental equipment, and lack of funding. This has a significant impact on improving the teaching quality of engineering majors in normal universities.

In the development process of schools, basic education disciplines and majors are generally regarded as their foundation and core majors. Later, with the development of the school, it continuously absorbed engineering majors from other colleges or established new engineering majors based on core majors. The absorbed or newly established engineering majors will also add more similar majors according to social needs. In this process, there are more and more engineering majors in universities, and most of the relevant teachers are merged or drawn from similar majors during the professional absorption process. As a result, the number of teachers in engineering majors is far from meeting the professional needs, which makes it difficult to arrange professional courses for professional teachers in teaching management and operation. Often, there are problems such as heavy teaching tasks for professional teachers, excessive arrangement of professional courses, and mismatch between teaching content and majors, which seriously affect teaching management and operation.

3.2. Strategies for Building an Education Quality Assurance System

- (1) Refer to the constituent elements of the internal quality assurance system in universities
Since 2003, China has conducted a large-scale evaluation of the level of undergraduate teaching,

and many universities have established internal evaluation organizations and gradually formed their own internal quality assurance mechanisms. Some scholars believe that the internal quality assurance system of universities should include five aspects: background assurance - standardization of the purpose and quality of training; investment guarantee - construction of teaching staff team; process assurance - effective supervision and management of the training process; achievement assurance - evaluation of teaching outcomes; mechanism assurance - evaluate, provide feedback, and continuously improve every aspect of quality assurance. This factor based standard can not only become a complete education quality assurance system, but also provide a certain reference for a relatively independent teaching process - on-the-job internship [16-17].

(2) Strengthen quality monitoring to ensure continuous improvement of teaching activities

To establish a higher education supervision and guarantee system that is in line with the characteristics of the teaching profession, it is necessary to combine modern teaching management concepts with OBE (Outcome based Education) concepts and the laws of teaching work, formulate a set of simple and scientific quality standards for each teaching link, and combine them with relevant systems and norms to implement them in teaching practice. Specifically, a set of teaching documents can be established, such as professional training objectives and professional training plans, which combine the completion of training objectives with the implementation of training plans, and dynamically adjust and optimize them based on the evaluation results. At the same time, it is necessary to establish a multi-level listening system, allowing college leaders, professors, department heads, and others to attend classes in depth, allowing teachers to conduct more listening, promoting teaching research and mutual learning. The school establishes a teaching inspection system, conducting irregular teaching inspections on students and organically linking it with the school's monitoring system. Applying the information officer system, the school supervision system, teaching evaluation values, and other tools to the teaching process promotes dynamic monitoring of teaching. Secondly, the school establishes various teaching evaluation systems, such as setting up evaluation indicators related to teaching quality in various teacher professional courses, textbooks, functional rooms, and so on, to ensure the effective operation of each module. The school also establishes an exam management system to systematically evaluate, provide feedback, and summarize the quality of test papers and exams. In addition, it is necessary to establish a management system that includes classroom practice management, primary school practice activities, holiday practice activities, and professional internships. Every school should establish its own practice management system and make different and targeted arrangements based on the characteristics of the major [18].

(3) The influence of market economy on the cultivation of normal students

This refers to special targets. Under the conditions of a planned economy, normal university students do not have to worry about their future prospects or face the challenge of choosing a career. But under the conditions of a market economy, with the formation of a talent market (for normal universities, it is a teacher market), two situations have emerged: one is that graduates from non normal majors will compete for teaching positions. This competition is a competition of quality. Whether graduates of teacher education majors can occupy the teacher market depends entirely on quality to win. The training objectives not only have external forms, but also internal quality. Secondly, graduates from teacher training programs face the challenge of being unsuitable teachers (whether due to competition failures, adjustments to educational structures, or other reasons). In this situation, while improving the quality of teacher education, we should also pay attention to cultivating and developing students' adaptability, that is, career transfer ability, which is also very valuable for a high-quality teacher education student.

(4) Reward excellence and punish inferiority, scientifically monitor and evaluate

In process management, it is also necessary to achieve good results through incentive

mechanisms and reward and punishment measures. In addition to having systematic indicators, standardized quality standards, and a sound assessment and management mechanism, each subsystem and staff in the teaching quality assurance system must also have clear reward and punishment measures in place. The selection, treatment, and responsibilities of personnel in each system must be clearly defined, and those who cannot fulfill their duties according to regulations will have their various benefits reduced or even dismissed, truly achieving the goal of rewarding diligence and punishing laziness, rewarding excellence and punishing inferiority. While scientific monitoring and evaluation are the basis for rewards and punishments, so there needs to be a scientifically effective evaluation method, also known as quality assessment standardization. This type of evaluation includes student evaluation, peer expert evaluation, management cadre evaluation, and social supervision and evaluation, among others. To ensure a more fair and impartial evaluation process, a two-level arbitration system can be established. If there are objections to evaluations that the school's teaching supervision team did not participate in, they can be resolved. Arbitration shall be conducted by the school's teaching supervision team, otherwise a separate arbitration organization shall be formed by the decision-making and command system to be responsible for arbitration.

4. Results and Discussion

4.1. Experimental Data Sources and Steps

The experimental data is sourced from a questionnaire survey conducted by students and teachers majoring in teacher education at Chinese applied undergraduate universities. Firstly, designing and distributing questionnaires covering teaching quality, educational resources, faculty, student feedback, and other aspects. Secondly, collecting and organizing questionnaire data for statistical analysis. Then, by combining qualitative and quantitative data, the researchers explore the current situation and existing problems of the quality assurance system for applied undergraduate teacher education. Finally, based on the analysis results, improvement suggestions are proposed.

4.2. Experimental Results

Table 1: Survey data on the current status of teaching quality

Survey Project	Survey Respondents	Options	Percentage (%)
Teacher Satisfaction with Teaching Staff	Teachers	Very Satisfied	10
		Satisfied	30
		Neutral	40
		Dissatisfied	15
		Very Dissatisfied	5
Adequacy of Experimental Equipment	Students	Very Adequate	8
		Adequate	25
		Neutral	35
		Inadequate	22
		Very Inadequate	10
Funding Assurance	Teachers and Students	Very Adequate	12
		Adequate	28
		Neutral	38
		Inadequate	18
		Very Inadequate	4

The data in Table 1 indicates that teacher training institutions still need to strengthen their faculty development. The survey on the adequacy of experimental equipment shows that only 8% of students believe that the equipment is very sufficient, 25% of students believe it is sufficient, 35% of students think it is average, 22% of students think it is insufficient, and 10% of students think it is very insufficient. This reflects that the problem of insufficient experimental equipment is quite common. In terms of funding security, 12% of survey respondents believe that funding is very sufficient, 28% believe it is sufficient, 38% believe it is average, 18% believe it is insufficient, and 4% believe it is very insufficient, indicating that insufficient funding is still the main constraint on improving teaching quality.

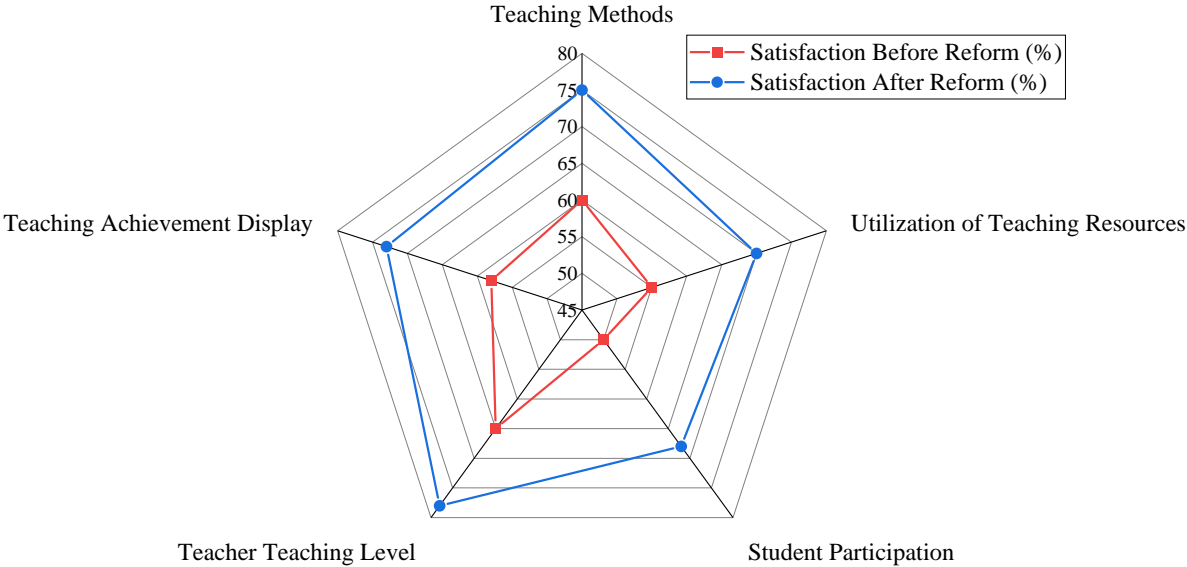


Figure 1: Evaluation of the effectiveness of teaching reform measures

By comparing the satisfaction data before and after the teaching reform in Figure 1, it can be seen that the teaching reform measures have significant effects in improving teaching methods, optimizing the utilization of teaching resources, increasing student participation and teacher teaching level, further proving the important role of teaching reform in improving teaching quality.

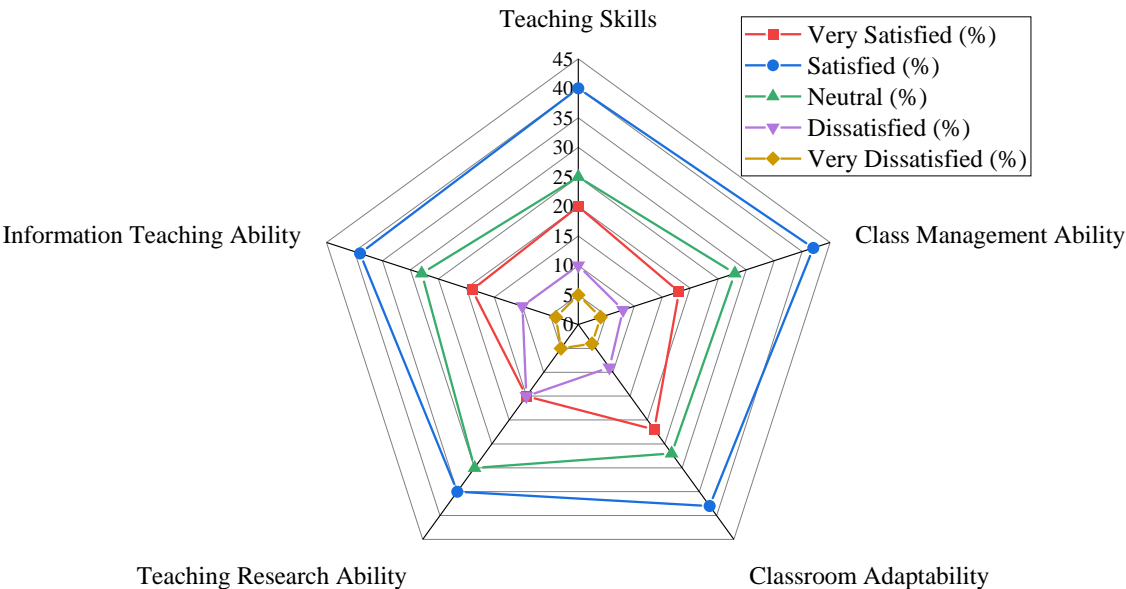


Figure 2: Evaluation of vocational ability development for teacher education students

According to the evaluation data of vocational ability training for teacher trainees in Figure 2, it can be seen that the current training effects of teacher trainees in teaching skills, class management ability, classroom adaptability, teaching research ability, and information technology teaching ability are uneven. These data indicate that although teacher training students have achieved certain results in vocational ability development, there is still a need to further strengthen the cultivation of teaching and research abilities, as well as information technology teaching abilities.

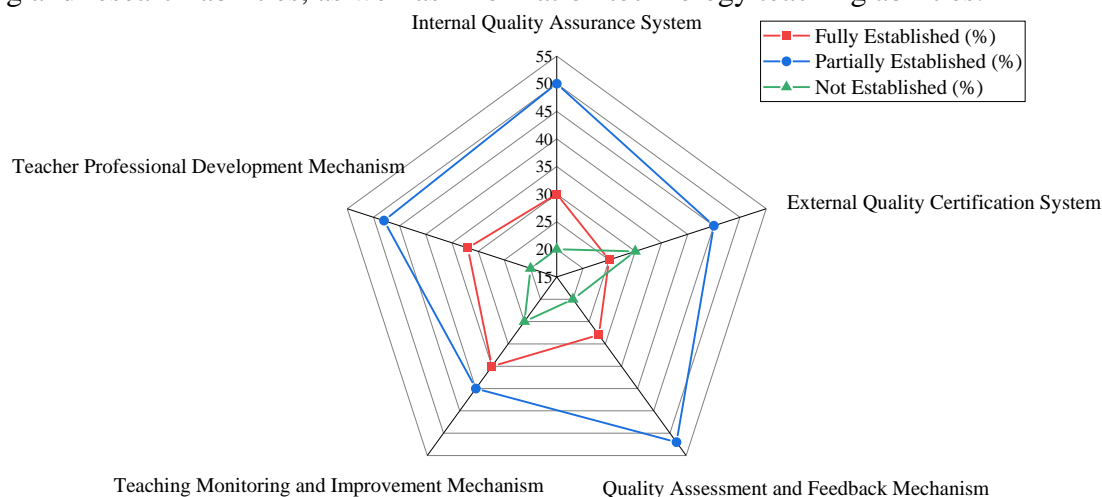


Figure 3: Current status of quality assurance system construction in teacher education

The survey results in Figure 3 show that various normal universities have made certain progress in the construction of education quality assurance systems, but overall they have not been fully improved. 30% of the internal quality assurance systems have been fully established, 50% have been partially established, and 20% have not yet been established. 25% of external quality certification systems have been fully established, 45% have been partially established, and 30% have not yet been established. 28% of the quality assessment and feedback mechanisms have been fully established, 52% have been partially established, and 20% have not yet been established. 35% of the teaching monitoring and improvement mechanisms have been fully established, 40% have been partially established, and 25% have not yet been established. 32% of teachers' professional development mechanisms have been fully established, 48% have been partially established, and 20% have not yet been established. These data indicate that although normal universities have made some progress in the construction of quality assurance systems, there is still a need to further improve various mechanisms, especially external quality certification systems and quality evaluation and feedback mechanisms.

Table 2: Evaluation of the effectiveness of the school enterprise cooperation training model

Evaluation Project	School-Enterprise Cooperation Mode (%)	Traditional Mode (%)
Teaching Skills	78	65
Class Management Ability	75	62
Classroom Adaptability	72	60
Teaching Research Ability	70	58
Information Teaching Ability	74	63

From the comparative data between the school enterprise cooperation training model and the traditional training model, it can be seen that the school enterprise cooperation model has significant advantages in improving the vocational abilities of teacher trainees. The satisfaction rate of teaching skills is 78% under the school enterprise cooperation mode and 65% under the

traditional mode. The satisfaction rate of class management ability is 75% under the school enterprise cooperation mode and 62% under the traditional mode. These data indicate that the school enterprise cooperation model is superior to the traditional training model in improving the teaching skills, class management ability, classroom adaptability, teaching research ability, and information technology teaching ability of normal students, further proving the important role of school enterprise cooperation in the vocational ability cultivation of normal students, as shown in Table 2.

4.3. Discussion

This study reveals the current situation of the quality assurance system for teacher education in applied undergraduate universities in China, and proposes specific improvement suggestions. The main findings include the need to improve teaching quality and the issue of uneven distribution of educational resources. We believe that strengthening the construction of the teaching staff and optimizing the allocation of educational resources are the key to improving the quality of teacher education. These findings have significant implications for education policies and practices, and can guide relevant institutions to improve their teaching quality assurance systems. The limitation of the study lies in the limited sample coverage, and in the future, the research scope should be expanded to conduct more in-depth comparative analysis.

5. Conclusion

Teaching quality is the lifeline of educational reform and development. At present, while expanding the scale of normal universities, special attention should also be paid to the quality of teacher training. To improve the quality of teacher training, it is necessary to determine the training objectives of teacher training institutions, clarify the talent training standards of teacher training institutions, and establish and improve the teaching quality assurance system of teacher training institutions. This study systematically investigated the current status of the quality assurance system for teacher education in Chinese applied undergraduate universities and found significant problems in teaching quality and educational resource allocation. Through questionnaire surveys and data analysis, this article reveals that about 75% of students and teachers believe that teaching quality needs to be improved, and about 60% of respondents point out uneven distribution of educational resources. Based on these findings, this article proposes specific improvement suggestions such as strengthening the construction of the teaching staff, optimizing the allocation of educational resources, and improving the teaching quality evaluation system. These suggestions aim to improve the quality of teacher education and have important practical significance. Although the study has limitations in sample size and data depth, its results provide valuable empirical evidence for education policy makers and university administrators. Future research should further expand the sample coverage, delve into the quality assurance issues of universities in different regions and levels, and explore more effective improvement measures to promote the sustainable development of teacher education in China.

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