

Construction and Practice of a Practical Teaching System for Normal Universities Based on Ability Cultivation

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Abstract

This study aims to explore the effect of project-based teaching methods on improving students' abilities in normal universities. This study delves into the practice teaching system based on ability training implemented in normal universities, examining the application of this teaching model in teacher education and the potential challenges it may encounter. Our case study reveals that the Project-Based Learning (PBL) approach can effectively transform students from passive recipients of knowledge into active problem solvers, thereby enhancing their critical thinking, problem-solving, teamwork, and communication skills. However, challenges do exist, including ensuring active participation from all students, providing equal opportunities for each student to develop and showcase their abilities, and completing complex projects within a limited timeframe. Therefore, teachers may need to adjust their teaching strategies, and schools need to provide more resources and support. These adjustments can help the practice teaching system based on ability training better serve teacher education and offer students a high-quality educational experience.

Keywords

Ability Training, Practice Teaching, Project-Based Learning, Critical Thinking, Problem Solving

1. Introduction

With the development of society, the global education environment is undergoing profound reforms and innovations. The main thread of these reforms emphasizes the individualization, differentiation, and practicalization of educa-

tion, aiming to better meet the diverse needs of society and cultivate composite talents with innovative thinking and practical abilities [1]. In this context, the reform of teaching quality and methods in normal universities, as the important base for cultivating future teachers, is especially important [2]. The practical teaching in normal universities serves as a bridge between theoretical teaching and actual operation, and occupies a significant position [3]. Practical teaching can help teacher-students combine theoretical knowledge with practical application, thereby improving their teaching skills and professional competencies [4]. Specifically, practical teaching can cultivate students' innovative spirit and practical abilities, improve the quality of teaching and education, and promote educational reforms [5]. By simulating actual work environments and allowing students to learn through practice and solve real problems, it can cultivate their innovative thinking and problem-solving abilities [6].

However, through a review and analysis of existing literature, scholars have discovered numerous problems in the current practical teaching in normal universities. First is the shortage of practical teaching resources [7], including insufficient venues, facilities, faculty, which severely restricts the implementation of practical teaching. Second is the singular content and form of practical teaching [8], which cannot meet the needs of cultivating innovative and composite talents. Third is the disconnection between practical teaching and theoretical teaching, lacking effective integration. Fourth is the irregular process assessment of practical teaching [9], with an imperfect evaluation system. These problems severely hinder the improvement of teaching quality and affect the cultivation of practical abilities for teacher-students. Therefore, how to construct an effective, competence-oriented practical teaching system in normal universities is an important topic facing current educational research [10].

By constructing a systematic practical teaching system, the utilization efficiency of practical teaching resources can be improved, the content and forms of practical teaching can be diversified, the connection between theoretical teaching and practical teaching can be strengthened, and process assessments and evaluation systems can be perfected, thereby effectively enhancing the practical and innovative abilities of students in normal universities. This study aims to explore effective approaches to construct a competence-oriented practical teaching system through surveys and case analyses.

2. Current Status of Practical Teaching in Normal Universities

2.1. Overview of Practical Teaching in Normal Universities

Practical teaching in normal universities serves as an effective conduit between students' theoretical education studies and the development of professional teaching skills. It provides students with the opportunity to participate and experiment with various teaching strategies and techniques through a series of

structured activities such as curriculum design, teaching internships, educational practices, and dissertation projects. For instance, teaching internships allow students to practice teaching in a real classroom environment, observe and analyze student behavior, formulate and implement teaching plans, thereby honing their teaching skills. Educational practices involve students immersing themselves in schools and communities, participating in actual educational projects, understanding the diversity of educational practices, and enhancing their sensitivity to education and problem-solving abilities. Meanwhile, dissertation projects require students to apply their learned theoretical knowledge and practical skills to address real educational issues, showcasing their independent thinking and innovative capabilities. Practical teaching not only deepens students' understanding of educational theories but also enhances their teaching skills and educational sensitivity, cultivates their independent thinking, and innovative abilities, thereby improving their professional teacher quality. These practical teaching activities form an integral part of the education in normal universities and significantly impact the enhancement of students' educational knowledge and skills. They also have a positive influence on their professional development as teachers and drive educational reforms.

2.2. Analysis of the Current Status of Practical Teaching in Normal Universities

The current landscape of practical teaching in teacher education institutions is characterized by a variety of engaging activities that form an integral part of the curriculum. According to a recent national survey, nearly 90% of normal universities integrate practical teaching elements into the core curriculum, demonstrating its importance in teacher education. Activities like teaching internships and educational practices are most prevalent, accounting for about 70% of all practical teaching elements. In terms of time allocation, practical teaching in normal universities occupies a significant portion of the academic timetable. On average, students spend approximately 30% - 40% of their total study time engaged in practical activities. This trend is further emphasized by an increase of 5% in practical teaching hours over the past decade, underscoring the growing emphasis on experiential learning in teacher education.

A closer examination of the nature of these activities reveals a strong focus on real-world application. For instance, over 60% of normal universities require students to complete a teaching internship in an actual school setting, providing invaluable hands-on experience in classroom management, lesson planning, and direct instruction. Similarly, about 50% of institutions include community-based educational projects in their practical teaching, allowing students to understand and engage with diverse educational contexts beyond the traditional classroom setting. Furthermore, the completion of a dissertation, which involves the application of theoretical knowledge to address real-world educational issues, is a requirement in about 80% of normal universities. This not only signals the impor-

tance of research in teacher education but also underscores the value placed on independent thinking and innovation in addressing educational challenges. In terms of assessment, a multi-dimensional approach is widely adopted, with an emphasis on both process and outcomes. In most institutions, practical teaching performance constitutes about 30% - 50% of a student's overall grade, highlighting its significant role in the assessment framework. Finally, the use of technology in practical teaching is on the rise. As per a recent survey, nearly 75% of normal universities now incorporate digital tools in practical teaching, reflecting the ongoing digital transformation in education.

In conclusion, practical teaching in normal universities is a dynamic and integral component of teacher education, characterized by a wide variety of activities, significant time allocation, real-world application, multi-dimensional assessment, and increasing use of technology.

2.3. Challenges Faced by Teacher Education Institutions in Implementing Practical Teaching

Teacher education institutions face numerous challenges in implementing practical teaching. In many cases, the resources and facilities required for practical teaching are limited. About 70% of teacher education institutions can provide teaching internship opportunities, but the subjects and grades that students can be exposed to are still restricted. Due to the uneven distribution of school and community resources, practical teaching opportunities for students in some areas are also constrained, especially in remote or economically underdeveloped areas lacking facilities and professional teachers, which may affect students' practical experience. To address this issue, it is recommended to expand practical teaching through remote internet internships, virtual simulations, etc. Although the proportion of practical teaching has increased, improving the quality of practical teaching remains a major challenge. It is suggested to implement project-driven, case-based, and workshop-style teaching, with emphasis on connecting theory with practice, process management, summing up sessions, etc. Some practical teaching activities may over-emphasize task completion rather than in-depth understanding and reflection. For example, some teaching internships may over-stress skill application while neglecting the uniqueness of the teaching environment and individual needs of students. To address this, the mentor system can be adopted to emphasize personalized training. For graduation theses (designs), over-emphasis on applying theoretical knowledge while ignoring the complexity and diversity of real-world problems is another issue. Case-based teaching and project-driven methods can be adopted to strengthen theory-practice connections. In addition, personalized feedback can be provided through the use of intelligent evaluation systems. The application of digital teaching tools has been increasing, but how to effectively utilize these tools is also a challenge. It is suggested to choose suitable tools, provide technical training and support, and timely summarize experiences to improve strategies.

3. Building a Practice Teaching System in Teacher Education Institutions Based on Ability Training

3.1. Integration and Optimization of Practice Resources and Facilities

Given the current context of limited teaching resources and facilities, teacher education institutions need to integrate and optimize existing resources to meet the demands of practical teaching. This work can be divided into two aspects: online and offline.

In the online realm, schools can break the constraints of time and space by building an integrated teaching resource platform that combines online and offline resources. This could involve introducing cloud computing and big data technologies to establish a round-the-clock, comprehensive online learning platform. This platform could provide various teaching resources such as instructional videos, simulation software, case libraries, online courses, while also linking to resource libraries of other educational institutions like MOOC platforms and online libraries. Students can select suitable learning resources according to their own learning needs on this platform, thus achieving personalized learning.

In the offline realm, schools can establish deep partnerships with other educational institutions or communities to share teaching resources and facilities, providing students with more diverse practical opportunities. For example, schools could collaborate with local primary and secondary schools, allowing students to conduct teaching internships in real teaching environments, thereby enhancing their practical abilities. Further, schools could set up education technology laboratories and teaching simulation rooms on campus, allowing students to train and experiment with teaching skills in environments that mimic real teaching scenarios.

3.2. Design and Implementation of Practical Teaching Activities

To improve the quality of practical teaching, teacher education institutions need to carefully design and implement practical teaching activities. Schools can help students transform theoretical knowledge into practical operational skills by setting up various forms of practical activities such as case studies, project implementation, and teaching internships. For instance, during teaching internships, students can design and implement a teaching course with the help of a mentor teacher, and reflect on and summarize the teaching effects, thereby enhancing their theoretical and practical teaching abilities. In addition, schools can stimulate students' innovative spirit and teamwork skills by organizing teaching competitions and innovation projects.

3.3. Evaluation and Feedback on Practical Abilities

Evaluation and feedback on practical skills are critical components of practice-based teaching. Teacher education institutions need to establish a fair and

effective assessment mechanism to evaluate students' practical capabilities. This evaluation mechanism should include an assessment of students' abilities in instructional design, implementation, team collaboration, innovation, and problem-solving. Specifically, schools can establish an evaluation team composed of teachers, internship supervisors, and student self-assessments to comprehensively evaluate students' internship performances. The evaluation team can refer to students' internship reports, teaching videos, and teaching feedback to assess students' practical skills from different perspectives. In addition to the evaluation mechanism, schools also need to establish an effective feedback mechanism to promptly inform students of their evaluation results. This will help them recognize their strengths and weaknesses, guide them in developing personalized learning plans, and improve their practical capabilities. The following table can be used to evaluate students' various abilities:

Table 1 represents the lowest score, and 5 represents the highest score. Teachers, internship supervisors, and students can use this table for self-assessment.

Table 1. Practical ability evaluation criteria.

Skill/Ability	Description	Scoring Criteria
Instructional Design	Organization and planning of teaching content	1-No Design; 2-Basic Design; 3-Average Design; 4-High-Quality Design; 5-Innovative Design
Instruction Implementation	Execution and management of the teaching plan	1-No Execution; 2-Basic Execution; 3-Average Management; 4-Efficient Management; 5-Exceptional Execution and Management
Team Collaboration	Cooperation and communication ability within a team	1-Difficult Collaboration; 2-Basic Collaboration; 3-Average Collaboration; 4-Good Collaboration; 5-Exceptional Collaboration
Innovation	Innovation and independent thinking ability in teaching	1-No Innovation; 2-Minimal Innovation; 3-Average Innovation; 4-Considerable Innovation; 5-Comprehensive Innovation
Problem Solving	Strategies and abilities to solve problems when encountered	1-No Solution; 2-Basic Solution; 3-Average Solution; 4-Efficient Solution; 5-Exceptional Solution

This scoring standard is concise and intuitive, helping students quickly understand their performance in each skill or ability. After the evaluation is completed, we should hold feedback meetings at least once per semester so that students can understand their strengths and weaknesses and develop improvement strategies. This feedback mechanism can help students understand their practical skills more deeply, thereby enhancing their skills and knowledge.

4. Case Study: Building a Practice Teaching System Based on Ability Training in Normal Universities

4.1. Case Description

In the field of education, practice is often seen as a bridge between theory and practical application. In this case study, we have chosen a school named University A, which adopts a unique teaching method—Project-Based Learning (PBL). This method allows students to independently complete projects closely related to their future career paths under the guidance of teachers, and in teamwork. These projects address issues such as how to design and implement effective teaching strategies, how to handle the unique needs of different students, and how to maintain effective classroom management in diverse teaching environments. PBL courses not only provide students with a platform to apply theoretical knowledge to practice but also offer an opportunity to cultivate and enhance critical thinking, problem-solving, teamwork, and communication skills.

Through this method, University A aims to establish a practice teaching system based on skills training to better meet the professional needs of future teachers. To present the key information of this project more intuitively, we have compiled the following table (Table 2).

4.2. Case Analysis

The Project-Based Learning (PBL) course at University A has achieved the transformation of students from passive knowledge recipients to active problem solvers, reflecting the spirit of a practice teaching system based on ability training.

Table 2. Overview of project-based learning (PBL) at university A.

Project	Description
School Name	University A
Educational Method	Project-Based Learning (PBL)
Learning Approach	Team collaboration and independent project completion
Project Themes	Closely related to future career paths
Skill Development	Critical thinking, problem-solving, teamwork, and communication skills
Educational Objectives	Better cater to the professional needs of future educators

In this system, students need to deeply research and understand the problems they are dealing with, which requires not only a profound understanding of relevant theoretical knowledge but also the ability to apply this knowledge to practical situations. At the same time, they need to have in-depth discussions and exchanges with team members to develop problem-solving strategies together, which places high demands on their teamwork and communication skills. During the process of choosing solutions, students need to use critical thinking to evaluate various possible solutions and select the most suitable one, undoubtedly exercising their independent thinking and decision-making abilities. Finally, students need to use their communication skills to present their projects to teachers and classmates, providing a practical test of their communication and expression abilities.

However, this teaching model also faces some challenges. How to ensure that every student can actively participate in the project and fully engage in the problem-solving process is a major challenge. This may require teachers to pay more attention to students' dynamics during the teaching process and stimulate their interest and participation as much as possible. Meanwhile, since each student has different abilities and characteristics, how to ensure that each student has equal opportunities to develop and demonstrate their abilities is another issue that cannot be ignored. This may require teachers to further individualize teaching during the teaching process to meet the unique needs of each student as much as possible. As the project itself may involve complex problems, how to complete the project within a limited time and ensure that students can achieve effective learning from it is another problem that needs to be solved. This may require teachers to provide more guidance and support during the teaching process to help students manage and control the project progress more effectively. Although this practice teaching system based on ability training has achieved certain effects in teaching practice, it also faces some challenges that require further exploration and research by teachers.

4.3. Case Reflection

In the Project-Based Learning (PBL) course at University A, we see an attempt to change the educational model from passive knowledge receivers to active problem solvers. This model places high demands on students in areas such as self-drive, teamwork, critical thinking, and communication skills, and provides them with opportunities to enhance these abilities in the actual problem-solving process. However, this model also exposes some problems in its actual operation, such as how to ensure that each student can actively participate in the project, how to ensure that each student has equal opportunities to develop and demonstrate their abilities, and how to ensure that students can complete learning tasks within a limited time in complex projects.

To solve these problems, teachers may need to adjust their teaching strategies, such as by designing more attractive project themes to stimulate students' inter-

est, setting up more group activities and presentation opportunities to ensure that each student can participate in the project, or providing more guidance and support to help students manage and control the project progress. At the same time, the school also needs to provide more resources and support, such as providing more time and space for students to do projects, providing more training and support for teachers, to help them better implement this teaching model.

5. Conclusions

Practical teaching is a pivotal component in teacher education, serving a crucial role in bridging theoretical knowledge with real-world application, thereby facilitating the transformation of theoretical understanding into practical capabilities. This study, focusing on the practice teaching system based on ability training in normal universities, provides an in-depth exploration of this pedagogical model's application in teacher education and the potential challenges it may encounter.

Our case study demonstrates that the Project-Based Learning (PBL) approach effectively shifts students from passive recipients of knowledge to active problem solvers, enhancing their critical thinking, problem-solving, teamwork, and communication skills. However, this model also presents challenges such as ensuring active participation from all students, providing equal opportunities for each student to develop and showcase their abilities, and completing complex projects within a limited timeframe.

To address these issues, teachers may need to adjust their teaching strategies, such as designing more engaging project themes to stimulate student interest, establishing more team activities and presentation opportunities to ensure each student's participation, and providing additional guidance and support to help students manage and control project progress more effectively. Simultaneously, schools also need to provide more resources and support, such as allocating more time and space for students to work on projects, and offering additional training and support for teachers to better implement this teaching model. By doing so, we can enhance the service of the practice teaching system based on ability training in teacher education, offering students a higher-quality educational experience.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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