

A Study on Continuous Teacher Professional Development of University

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ABSTRACT

The teacher's professional development at the university has been highlighted in theory and practice circles. In terms of continuing teacher professional development methods, university models of continuing teacher professional development. The study included three aspects: the education management department, universities, and teachers themselves. This is a mixed-methods approach (qualitative and quantitative), based on the qualitative analysis of the system analysis of the professional development in colleges and universities as well as the model of the professional development system for college teachers. To make the analysis and conclusions of this study more practical and scientific, techniques like path analysis, descriptive analysis, and network analytic hierarchy process are used. Additionally, this study integrates the normative and empirical research. to evaluate the continuing teacher professional development capability in universities, the continuing teacher professional development capability model and the continuing teacher professional development capability assessment system were developed. And, combined with three Henan universities, further addressed the issue of relatively weightiness of assessment indices by applying the Flexible negotiation method and the Analytic Network Process. The results indicate that two components can be used to build a system for continuing teacher professional development: creating a professional learning organization and establishing a growth mode for individual teacher reflection. This research can also be used to summarize the limitations and future directions for further investigation. Conclusion: The path to the personal growth and development of college teachers is built through the creation of professional learning organizations and the reflective teacher personal growth model.

Keywords: University Teacher; Academic Performance; Continuous Teacher Professional Development; Construct Professional Learning Organization; ANP

1. Background

Continuous professional development (CPD) refers to the learning activities that professionals engage in to develop and improve their skills. CPD aims to raise the bar and improve the quality of teaching,

learning, and leadership at all levels. CPD supports teachers' learning from Initial Teacher Education to Headship to improve their professional competence and maximize their potential. CPD boosts teacher motivation, confidence, and commitment to the classroom; learning new skills and applying them in the classroom can result in a more effective teaching environment. The sustained duration of a specific program to provide teachers with adequate time to learn, practice, implement, and reflect on new strategies is one of the key features of effective CPD (Prasanna & Mohammed, 2023).

The position of university teachers was played by people in antiquity, the modern era, and the present as evolution progressively advanced. The professional development of university teachers faces greater challenges in the new century (. The teacher professional development has been highlighted in theory and practice circles. This dissertation examines the continuing professional development of university teachers in a systematic, theatrical, and practical manner. It draws from research conducted in China and other countries; the main points are summed up as follows:

First, to start the conversation about how to continue professional development for teachers, universities developed a model for it. The model included three components: education management departments, universities, and teachers themselves.

Second, four factors were presented that affect the capacity of teachers for professional development: support from higher levers, culture construction, system of education designing, and resources security. The validity of the factors was then confirmed using data derived from questionnaires to over ten Henan universities.

Third, set a department of education management system comprising three modules: Policy Support, Systematic Management, and Economic Security. Examined the obstacle to teacher professional development that originate in universities. Additionally, suggest some tactics to progress the process of teacher professional development. Based on the theory of Career Lifecycle, analysed university teacher professional development emphases in relation to the teacher's career life cycle curve (Burden 1982), (Dongxue *et al.*, 2023).

Fourth, to assess the continuing teacher professional development capacity in universities, the continuing teacher professional development capability model and the continuing teacher professional development capability assessment system were built. Additionally, in collaboration with three Henan universities, the relevant evaluation study completed in this thesis. The issue of relative weightiness of assessment indexes was also resolved by employing the Flexible negotiation method and the Analytic Network Process.

Fifth, the countermeasures for continuing teacher professional development have been discussed, beginning at the level of universities and teachers individually. The continuing teacher professional development system can be built with two aspects: constructing a professional learning organization and establishing growth mode for individual teacher reflection. The dissertation summarizes the contents and recommendation for further study.

Teachers and teacher education have long been a contentious issue and were featured in the 1963 and 1980 World Education Yearbooks. "Education and training of teachers" was the theme of the World Education Yearbook in 1963. "Professional development of teachers" was the theme of 1980 (Hoyle & Megarry, 2005). The corresponding changes in the educational background are reflected in these two theme changes.

This study examines the role of teachers in social change and proposes four measures to enhance the professional development of teachers: the application of new communication and information technology to the professional practice of teaching; To enhance the professional status of teachers by giving them more responsibility and autonomy; to ensure their participation in educational change and partnerships with the community; and to enhance their personal quality and in-service training. In 1998,

the "International Seminar on Teacher Education for the 21st Century" held in Beijing clearly stated that "the core of the current reform of teacher' education is the professionalization of teachers". Training teachers with professional standards has become the goal of international education reform. Teachers in the 21st century need to be highly qualified educational professionals with professional training.

More accomplishments and in-depth research on the actual process of teacher professional development change is being done currently. According to different research frameworks and perspectives, the research on the stage of teacher professional development can be broadly categorized into four frameworks: cognitive development framework, teacher socialization framework, career cycle framework and "concern" framework. The cognitive development framework research focuses on the cognitive aspects of teacher professional development, mainly studying the influence of teachers' levels of cognitive development on their professional behavior and activities. The research on teacher socialization framework is a specific study on the features of the teacher professional socialization stage (Vonk, 1984). The natural physiologic maturation of humans and the natural occupational adaptation serve as the foundation for the study of the career cycle. It focuses on the descriptive study of the characteristics of teachers' career and life stage, the general career cycle, the general human life cycle, and the descriptive study of teaching profession and teachers. The "concern" frame research primarily focuses on investigating the problems encountered at various stages in the process of growing from non-professionals to professional teachers. The primary focus of this type of research is on teachers' professional development.

To provide the most fundamental framework for the seamless development of teacher professional development, this study will explore the regularity of the process of teacher professional development and the process of teachers transition from non-professionals to professionals. It will also construct a framework for teacher sustainable professional development in colleges and universities with the support of relevant theories, and it will investigate effective ways to achieve teacher sustainable professional development from the perspectives of education administration departments, colleges and universities, and teachers. Finally, it will establish an effect evaluation of teacher professional development and conduct research on the countermeasures of teacher professional development. (Little, 2014).

2. Methods

This study builds a model of university teachers' sustainable professional development based on the Porter Diamond model and discusses the model of university teachers' sustainable professional development from the level of education administration departments, universities, and individual teachers. It does this by briefly describing the research background and significance of this study and by reviewing and analyzing the literature. The support system of education management department is established, and its three main supporting modules: policy support, system management and economic security. This study analyzes the role and obstacle factors of colleges and universities in teacher professional development, and further proposes that they should promote the work process of teacher growing professional development, which is by building teacher learning teams. According to the theory of the career life cycle, this study studies the emphases of teachers' individual professional development in each stage of the career life cycle. Based on the empirical research and factor analysis of more than ten Henan colleges and universities, this study identifies four factors that influence college teachers' sustainable professional development ability: higher support, cultural construction, system design and resources guarantee. Based on this, this study develops an index system for evaluating college teachers' capacity for sustainable professional development and uses the network analytic hierarchy process (AHP) for quantitative research, it is done to compare and evaluate colleges and universities empirically. This study discusses the countermeasures for college teachers' sustainable professional development from a theoretical and practical standpoint, starting at the level of colleges, universities, and teachers. It suggests the system of college teachers' sustainable professional

development from the aspects of constructing professional learning organizations and establishing reflective teachers' personal growth modes.

This study primarily examines the professional development of college teachers from three aspects, aiming to provide a theoretical explanation of the relationship between each level and the impact of teacher professional development, and to support it with empirical data. In conjunction with the real-world context of this study, the main research methods are as follows:

2.1 Combine Normative Research with Empirical Research

Normative research: The diamond model of college instructors' ongoing professional development is developed by referring to the most recent research results from both domestic and international research, as well as by building on the findings of previous studies. The effective ways to realize the continuous professional development of college teachers are discussed in three levels that are organically combined to conduct a relatively complete and systematic research on the professional development of college teachers.

Empirical research: Conducted in-depth investigation and interview at numerous colleges and universities in the Province of Henan to assess and examine the state of teachers' professional development. A questionnaire survey and statistical analysis were used. However, this study paper is based on theoretical method research.

This serves as the foundation for the establishment of an evaluation index system for the assessment of the sustainable professional development of college teachers. Three colleges and universities in the province of Henan are taken as practical application cases, and corresponding suggestions are given for the construction of the system of sustainable professional development of college teachers.

2.2 Combine Comprehensive Research with Systematic Analysis

With an interdisciplinary approach, this study paper conducts through research from the perspectives of management, pedagogy, sociology, psychology, and other disciplines, making the research more comprehensive and scientific. A systematic analysis approach is used for the professional development of teachers in colleges and universities, and the three levels pertain to the teacher professional development system that is taken into consideration. The analysis is more comprehensive because it considers the effect of environmental factors and the influence of teachers' personal factors on professional development.

2.3 Combine Qualitative Research with Quantitative Research

Qualitative methods make the analysis more comprehensive, while quantitative methods make the analysis more objective. Therefore, based on the qualitative analysis of the system analysis of the professional development in colleges and universities and on the model of the college teacher professional development system. To make its analysis and conclusions more applicable and credible, this study employs quantitative techniques like path analysis, descriptive analysis, and network analytic hierarchy process.

Enterprises produce products; their purpose is to meet the needs of consumers and continue to create profits so that they can continue growing long-term development. The purpose of the professional development for college teachers is to enhance the quality of their education and train them to be of higher quality. In a sense, students are the "product" of colleges and universities, and the quality of the "product" is directly related to the development of schools. Here, enterprises, colleges and universities are faced with the common topic of how to gain competitive advantages in fierce competition. For the professional development of college teachers, the challenges lie in creating a functional system and

implementing in real-world settings to ensure the sustainable growth of their professional development and to comprehensively improve their professional development capabilities.

According to the diamond model theory, the professional development model of college teachers is divided into three levels and seven facets. The top level is the external factors that does not depend on people's will, which is the opportunity. The second level is the goal orientation of the professional teachers' development colleges and universities; students' needs, material, and environmental conditions. The third level is one of the most important parts to guarantee the smooth development of college teachers. As the core of the model, teacher professional development capabilities lie at the intersection of the second and third levels, indicating that based on grasping opportunities and coping with crises. The overall operation of all the relevant elements (material, manpower, etc.) will help in improving the professional development capabilities of college teachers to the maximum extent; hence improving the learning effect of students in the context of large education (Chen & Yuan, 2021).

Thomas Guskey (2000), an American expert on educational evaluation, pointed out that the systematic approach to professional development forces researchers to view the process from the perspective of the organization's ability to improve problem solving and self-renewal. (DECD, 2018) In fact, Guskey emphasizes the significance of organizational factors for teacher's professional development. Therefore, the assessment of professional development ought to extend beyond the individual activities of educators; rather, it ought to encompass the level that has the greatest impact on the influence on the outcome of professional development and is most amenable to modification by educators: the evaluation of school professional development capacity (DECD,2018).

Based on the review of relevant literature, this study defines the term of professional development ability of college teachers as follows: Professional development ability of college teachers refers to the combination of various cultural, resource-based, and institutional elements that are possessed by colleges and universities in the process of teacher professional development, which can facilitate the level of teacher professional development. Without a doubt, a thorough analysis of the primary factors influencing college teachers' capacity for continuous professional development ability and their empirical validation through research are required to establish a scientific evaluation index system. Based on the construction and analysis of the continuous professional development system of college teachers in Chapter 4, this study summed up the main factors influencing the continuous professional development ability of college teachers, which are as follows: higher-level support, cultural construction, system designing and resources guarantee, and then conducts an empirical investigation and verification analysis in colleges and universities in the Province of Henan.

This study is being conducted using a questionnaire survey and in-depth interview. A combination of literature search and in-depth interview was used to create the questionnaire. A formal questionnaire survey was conducted on the basis that the initial test questionnaire that was qualified, and the reliability and validity were tested using SPSS13.0 statistical software.

Questionnaire design. The author communicated with the administrative management and teachers at colleges and universities on the following open-ended questions: "What factors or behaviors in colleges and universities have you proposed to promote the continuous professional development ability of teachers in the school?" List them in ascending order of importance." According to the collected questionnaire information, a total of 35 influential factors with complete statements were obtained based on the collected questionnaire information. Items with ambiguous semantics and overlapping concepts were gradually eliminated in accordance with the principles of importance, practicability, and universality, and 20 influential factors were chosen to form a questionnaire.

3. Results and Discussion

Effective teachers are created rather than born. Teacher professional development (Xu, 2022) is an organized effort aimed at improving teachers' teaching practice and promoting students' learning

(Guskey, 2000), As a result, the academic community has paid close attention to teachers' continuous professional development, and in addition to emphasizing the importance of teacher professional development, issues such as effective professional development strategies and models have received increased attention. This chapter will look at the strategies and models of teachers' continuous professional development from both organizational and individual levels (Zhang, Admiraal & Saab 2021).

3.1 Establish a Professional Learning Organization

The role of continuing professional development managers and school leaders is critical because they are responsible for encouraging all staff to consider their own learning. The formation of professional learning organizations is one of the most effective strategies for colleges and universities to achieve long-term teacher professional development. Managers of sustainable professional development and school leaders must keep up with the times and demonstrate a strong belief in sustainable professional development. They must develop into "learning leaders" who create a learning environment and atmosphere for teachers and other staff, as well as supervise and evaluate teachers and their teachers the professional development. In a professional learning organization, a teacher is destined to become a learning teacher (Hall & Loucks, 1978).

Professional development is critical to the growth of organizations as well as the development of colleges and universities. Research shows that the most appropriate model of teacher professional development is based on experiential learning, which emphasizes the importance of learning in the workplace, learning by doing, learning together, and applying learning. Dennison & Kirk (1990) proposed a cyclic learning process of "practice, review, study and application" (see Figure 1).

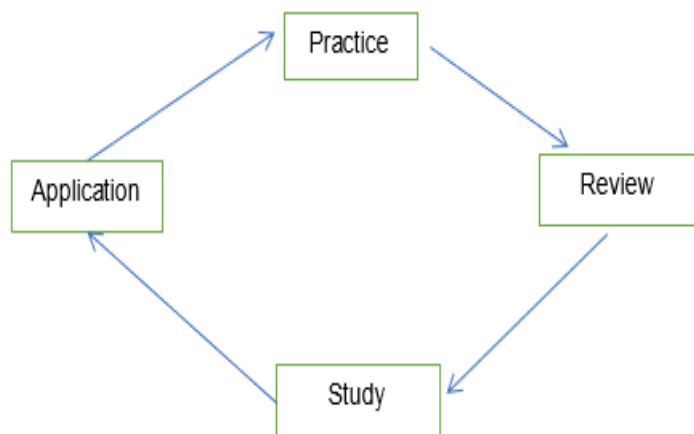


Figure 1: The Professional Learning Organization

The task of continuous professional development in the development of learning organizations is to concentrate on the successful learning methods of teachers. Eileen Carnell describes the common characteristics of teachers who have made significant progress in their learning : (1) they are constantly learning and changing their ideas; (2) The ability to establish cooperative working relationships with students and colleagues; (3) The concept of increasing the effectiveness of teaching and learning; (4) Take a holistic and multi-faceted approach to teaching and interpersonal relationships. The iceberg model of highly efficient teachers developed by the Hay Group illustrates the critical fundamental role of teacher professional characteristics, indicating that professional development based on teacher professional characteristics will have a significant impact on teachers.

The continuous professional development manager's primary responsibility is to encourage and develop professional learning organizations, to facilitate planned learning and development, and recognize various types of learning styles and methods. This can be accomplished through a variety of methods and means, such as (1) providing multiple learning and development opportunities. Including

on the job, closely related to the job and off the job. (2) Teacher research and investigation. (3) Foster a development in which teachers are valued for the work they do. The culture of training and development varies, as do the culture of training and development at various universities. Some universities or teaching and research departments place a high value on all teachers' professional development, which is closely linked with the overall development plan, professional development, and school development. In an efficient school, teachers learn and collaborate with students, forming a learning organization. This type of learning organization has a positive impact on students' learning and reflects many benefits in teacher's work and the overall development of the school. According to the Commission on General Education, "The teachers who do not lose out in teaching are those who collaborate with others, learn together, explore individual ideas, and summarize experiences in a timely manner." They feel supported and respected in their work and personal development. It should be stated that professional learning organizations provide the opportunity to shape learning teachers, which is exactly what the establishment of professional learning organizations in colleges and universities means.

3.2 Establish Reflective Teachers' Personal Growth Model

Reflection is the process of exploring seemingly ordinary educational phenomena that occur around us. It is also a process in which teachers examine and analyze their own professional activities as the object of thought and examine and analyze their own behavior in the profession and the resulting results. Professional development can also be accomplished through reflection. Simultaneously, schools should encourage teachers to constantly reflect on their own teaching experiences and habits for teachers can become professionals. The primary goal of vocational teachers is to encourage teachers to engage in continuous scientific reflection in their specific teaching.

The key to scientific reflection implementation is for teachers use action research to effectively carry out "hypothesis - test" reflective teaching. Teachers must search for information related to the current problem through multiple channels, then establish a solution to the problem and begin to try out a solution, and then continue to collect all types of data or evidence after the trial, finally testing the hypothesis and improving the status quo; Teachers pay close attention to their own teaching process, constantly detecting and discovering a specific problem in their own practice or concept level, and finally defending the problem, diagnosing its causes, analyzing and recognizing its essence. Teachers will begin another cycle of teaching reflection when they observe and analyze the new problems they encounter during this process. Teachers' original habitual thinking will gradually be replaced by reflective thinking with "hypothesis test" as the core, causing teachers to finally break free from the circle of habitual teaching.

To truly become a "reflective practitioner", teachers must ask questions from time to time in classroom and conduct monitoring, forward-looking and critical reflection before, during and after teaching. For example, re-examine the teaching design and evaluate the teaching effect over time; constantly reflect on their own teaching behavior and self-teaching concept problems, try to analyze, correct, and perfect unreasonable behavior and concept, to achieve continuous improvement of their teaching wisdom and understanding.

4. Conclusions

Because of the inclusion of the flexible negotiation coefficient, the evaluation method of professional development ability of college teachers used in this study achieves a balance ratio between evaluation scientific and quantitative evaluation subjects, which differs from the previous evaluation in which the evaluation subject is dominated by the school, the teacher has no say, and the indicator selection is one-sided. Simultaneously, the ANP method is used to determine the index weight, which is reasonable, effective, and simple to operate.

"Teacher major is a major with strong personal characteristics and consciousness, teachers must have sufficient self-specialization," expert Ma Li once said at the international seminar "Teacher Professional Development for Education Informatization" held at Capital Normal University. To obtain the full and improve professional quality, teachers must internalize all external factors into the accumulation of personal development of teachers. The professional development of teachers does not represent the overall improvement of the teachers' professional quality; teachers must have a professional knowledge level, professional skills, professional attitude cultivation and improvement. Professional skills are developed gradually through experience, thought, and practice. Professional knowledge and theories influence and internalize teacher professional skills, which are then integrated with personal application situations (Hu *et al.*, 2021).

Teacher professional development is a critical component of international teacher education reform and a major focus of teacher education practice. College education is critical in developing the skills that society requires. its purpose is not only to impart knowledge, but also to cultivate students' correct value orientation and help them become useful members of society. College teachers play a dual role in terms of the nature and goal of college learning. They must teach students how to behave properly as subject matter experts. Therefore, higher standards are set for college teachers to promote long-term professional development.

5. Declarations

5.1 Conflict of Interest: Not applicable.

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