

## Analyzing the Elements of Effective Professional Development in Teacher Education

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### Abstract

The purpose of this study is to identify the components of effective professional development in teacher education. Information is analyzed in a descriptive way in this study. A systematic review of papers published in the teaching, teacher professional and teacher education journal identifies key components that contribute to successful teacher education. Teacher education is important dimension for promoting effective professional growth. Effective professional development is identified as crucial for educators to develop the necessary pedagogical skills for teaching field. The elements of teacher education include collaboration, learning experiences, cooperation, deliberation, active learning, modeling; coaching, mentorship and support mechanisms, feedback and reflection, continuous involvement, and a focus on student outcomes are found. These factors enhance instructional effectiveness and ultimately resulting in continued improvements in the quality of teaching. Effective professional development should be regular, context-sensitive, and focus toward improving teaching techniques. Similarly, integrating the use of technology and new teaching practices is very important in contemporary teacher education. Teacher education programs are evaluated and adapted on a continuous basis to meet the changing demands of teachers. The findings indicate that recent trends in professional development for teachers emphasize enhancing teaching skills, classroom management, and subject matter knowledge. The approach to teacher education should be collaborative and collegial learning environment. The future researchers should do research on culturally responsive teaching in teacher education and the effect of understood bias training on teacher attitudes and practices.

**Keywords:** Teacher education, elements, professional development, collaborative learning, learning outcomes

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## **Introduction**

Teacher education is essential to supporting teacher professional growth by providing teachers with the knowledge, skills, and behaviors required for effective teaching. It includes both pre-service and in-service training, with the goal of preparing teachers for the challenges of modern classrooms and promoting continual professional development. Teacher education programs train learners to be effective teachers by contributing necessary knowledge and skills through coursework and hands-on practice. Effective professional development for teachers is important to improve educational practices, student results, and instructional quality (Koponen et al., 2019). Good professional development is distinguished by unique components that promote continuous learning and collaboration among teachers. Schools can establish a culture of continuous enhancement by combining extended, collaborative, and content-focused training that actively involves educators and develops an environment of support. This technique not only improves teachers' skills but also results in greater educational outcomes for students (Department of Education, 2017).

Mishra and Koehler (2006) state that a sound basis in teacher education makes sure that teachers are not only professionals in their fields, but also adept at pedagogy, managing a classroom, and technological integration. Loucks-Horsley et al. (2010) highlight that career growth in teacher education focuses lifelong learning, pushing teachers to stay present on developing educational practices, education programs, and evaluation methodologies. Zawacki-Richter, Marín, Bond, and Gouverneur (2019) argue teachers improve their instructional skills and adapt to varied student needs through seminars, collaborative learning, and reflective practices. Darling-Hammond et al. (2017) emphasis professional development should be ongoing, content-focused, and relevant to teachers' needs and instructional goals.

Maslow (1943) stated that motivation is the primary drives in teacher education for professional development. Hammond et al. (2017) conclude that teacher education programs frequently emphasize critical thinking, understanding of culture, and interpersonal skills as necessary for creating welcoming and conducive atmospheres for learning. In an era of rapid technological breakthroughs and altering educational paradigms, teacher education focuses the development of digital literacy and innovative teaching methods. Golob (2012) mentions this comprehensive strategy not only enables teachers to grow professionally, but it also enriches student learning experiences, hence improving educational quality overall.

Holloway (2006) states teacher education plays a crucial role in effective professional growth by improving teachers' subject-matter expertise, pedagogical content knowledge, and teaching abilities. Desimone and Garet (2015) argue that effective teacher education programs prioritize both subject knowledge and

instructional strategies, including classroom management and socio-emotional learning, to foster a supportive environment for all students. Therefore, teacher education is essential for enhancing teaching quality and student outcomes, beginning with pre-service training and continuing through ongoing professional development. It fosters a culture of lifelong learning among teachers by focusing on both subject mastery and pedagogical skills. Furthermore, Effective teacher training programs integrate academic knowledge with hands-on experience through student teaching, enabling teachers to apply theoretical principles in real classrooms. Professional development for teachers should be relevant, collaborative, and continual over time.

Golob (2012) argue that knowledgeable teachers provide their pupils with constructive criticism in the classroom. Tynjala and Heikkinen (2011) mention that work-based learning should incorporate many types of expert knowledge, such as conceptual, practical, self-regulatory, and socio-cultural, in order to guarantee the best possible development of expertise in the field of teacher education and teacher growth. These include promoting collaborative learning, providing personalized support modified to individual teacher needs, and integrating reflective practices into development programs. Additionally, strong partnerships among policymakers, local governments, schools, and teacher education institutions are very important for the continuous professional growth of teachers.

Teacher education for professional development is important, yet it has several obstacles. These could include a lack of infrastructure, low prospects, insufficient training, and unwillingness to change in educational institutions. Meeting the diverse needs of teachers is challenging, especially with the rapid integration of technology in education, which necessitates ongoing training for teachers to effectively utilize digital resources. To address these challenges and enhance teacher professional development, it is important to apply best practices and evidence-based strategies. However, gaining new professional identities and transforming one's professional progress are challenging tasks that require a long time and efforts (Ericsson, Krampe & Tesch-Romer, 1993). As a result, programs for teacher education must change to accommodate the changing requirements of both teachers and students. Funding excellent programs for teacher education is not only useful for individual teachers but also essential for achieving larger educational objectives. However, there are still gaps in our understanding of how these factors interact across different educational situations. By analyzing these factors, this study hopes to provide a framework for policy and practice, ensuring that professional development activities are both effective, and adaptable. Such insights are critical for addressing issues in teacher preparation and continuous skill development, especially in light of changing educational expectations. In this context, the main purpose of this study is to identify the components of effective professional development in teacher education.

## **Literature Review**

Various definitions of professional growth can be found in the literature. According to the OECD (2009), professional development activities are those that enhance a person's teaching abilities, knowledge, competence, and other attributes. Darling-Hammond et al. (2017) state enhancing teacher practices and students' learning outcomes constitutes good professional development. It may involve things like emphasizing instructional practices to enhance teachers' learning within the confines of their classrooms and encouraging teacher collaboration to exchange ideas and advance their own learning. Furthermore, Scher and O'Reilly (2009) define professional development as having three main outcomes: short-term effects on teachers' knowledge and beliefs; middle effects on changing how they teach; and long-term effects on raising student accomplishment. According to definitions, professional development activities help teachers meet their needs in relation to their work as educators.

Peters (2020) highlights policies, processes, and programs created to give teachers the skills, attitudes, and knowledge necessary to carry out their duties in the classroom, school, and larger community are referred to as teacher education. It includes both pre-service education, which prepares new teachers, and in-service education, which continues to advance professionals. Teacher education is defined as "all the formal and non-formal activities and experiences that help to qualify a person to assume responsibilities of a member of the educational profession or to discharge his responsibilities more effectively (Goods Dictionary of Education, as cited in Mohanty, 2003).

Thurlings and Brok (2017) claimed that there are three distinct categories of professional development. The first is coaching, which involves developing an experienced individual to support another individual through peer coaching and peers feedback. The second is collaborating, which involves larger groups working together on a common objective or product, like in a community of practice or lesson study (Patton & Parker, 2017). The third category is assessment, which can be formative or summative. In this case, collaboration occurs between individuals involved in the learning process to evaluate their own learning, such as through peer assessment and peer review (Coenders & Verhoef, 2019). It indicates for the review study of learning outcomes through professional development which features of professional development contribute to successful teacher learning. McFadden and Williams (2020) conclude that between student learning and teacher knowledge, abilities, attitudes, and network has positive and co-relationship.

## **Methods and Process**

This study is based on a literature review. Secondary data are used in this study. This work employed two methods: a teaching-experience-based approach and a

qualitative approach, supported by a literature review. Similarly, Dumaguit (2017) defines thematic approach as the act of integrating and combining various subjects, topics, and issues. The term "themes" refers to the study's key concepts, which are developed by categorizing and grouping similar types of data. Secondary sources from research reports, papers, articles, journals, and authentic book review are applied to perform the study. The information is analyzed in a descriptive method in this study.

## **Result and Discussion**

The study is based on qualitative research approach. Results and discussion are mentioned in a descriptive manner below:

### **Elements of Teacher Education for Effective Professional Development**

The goal of the diverse field of teacher education is to prepare future educators for their jobs in the classroom using a variety of approaches. The components of teacher education for effective professional growth are outlined below:

**Content Knowledge.** Shulman (1986) stated that to effectively teach concepts to pupils, prospective instructors must acquire a thorough understanding of the subject matter. This aspect of teacher preparation places a strong emphasis on subject-matter knowledge and the capacity to link disparate ideas within the field. Furthermore, Pennuel, Gallagher and Moorthy (2011) argue teacher-focused professional development has been shown to improve academic performance. Content-focused professional development usually focuses on courses specific to a certain subject. This type of professional development allows teachers to assess student work, test new curricula with their students, or focus on a specific aspect of pedagogy or content-area for student learning.

Johnson and Fargo (2014) state to address children's diverse needs in various settings, teacher professional learning that is context-specific, job-embedded, and content-based is especially important. Buysse, Castro and Peisner-Feinberg (2010) highlighted that adults approach learning with a focus on the cultural and linguistic experiences of their students, which is why these professional development opportunities adapted to specific content and context should be used as a source for new models. These opportunities for professional learning for teachers are made for teaching content learning to particular student populations with targeted strategies to support their achievement.

**Efficiency-Based Education.** Efficiency-Based Education seeks to improve learning outcomes while conserving resources, time, and effort. It focuses on enhancing student performance by providing personalized learning experiences based on data insights. Desimone (2009) and Darling-Hammond (2017) argue that teacher

preparation courses should prioritize the development of fundamental competencies such as topic knowledge, pedagogical skills, and classroom management in order to prepare instructors for a variety of educational situations. Competency-based education guarantees that teachers fulfill the needs of 21st-century learners and keep up with changing production expectations.

**Integration of Technology.** The use of technology in the classroom has become essential in the digital age. For the purpose of increasing student engagement, enabling personalized learning, and helping students acquire digital literacy skills, teachers need to be adept at using technology into their lessons. Mishra and Koehler (2006) believe that professional development efforts should provide instructors with opportunities to research and employ modern technology in the classroom, such as educational apps, virtual reality, and artificial intelligence. They found that effective adoption of technology into teacher education is critical for modern classrooms, particularly remote and mixed learning situations. Technological competency improves teachers' employability and capacity to engage students effectively.

**Lifelong Professional Development.** Lifelong professional development is the ongoing process of acquiring and upgrading skills and information throughout one's life and career. It can include both formal and informal learning opportunities, assisting workers in adapting to changing employment responsibilities and technologies. Avalos (2011) emphasizes how continual learning opportunities, such as workshops, certifications, and higher degrees, help teachers grow and adapt. Lifelong learning helps that teachers keep up with contemporary approaches and norms in the educational field.

**Collaboration, Teamwork and Mentorship.** With the growing emphasis on teaching as a collaborative community activity in schools, it is critical to recognize that teacher collaboration is a crucial component of well-designed professional development (Allen et al., 2015). According to him, "collaboration" makes sense for teachers to engage in a variety of ways, from one-on-one or small-group conversations to school-wide collaboration to exchanges with other professionals outside of the school as part of well-designed professional development. Professional development enabled by technology, like the web-mediated coaching program that Allen et al. (2011) examined, can also promote cyber collaboration, which has the potential to raise student accomplishment. Landry et al. (2009) argue that technology made it easier to include teamwork and other effective components of professional development in the professional learning design, like modeling and active learning. Similarly, Lave and Wenger (1991) concluded that cooperative learning and mentorship in teacher education programs help to create networks of professionals and peer learning. Therefore, building partnerships with qualified educators improves teaching techniques and opportunities for career growth.

**Continuous Learning.** Schon (1987) stated that teachers can improve their professional development and adjust to shifting educational environments by adopting a continuous learning culture. To become more effective in the classroom, aspiring teachers must have the chance to reflect critically on their own methods, ask for and receive feedback from others, and contribute in continuous education. Darling-Hammond et al. (2017) conclude that continuous learning improves teachers' ability to adapt to changing pedagogical approaches, resulting in higher classroom engagement and student achievement. Similarly, Gay (2018) mentions that to remain instructionally relevant, the incorporation of developing technology in education demands continuing professional development. Lifelong learning helps teachers handle varied student needs and promotes diversity and justice in education.

**Reflective Practices and Feedback.** Two more powerful strategies for effective professional development are reflection and feedback. Schon (1983) argued that reflective practice in teacher education promotes self-evaluation and continual improvement. Teachers who use reflective techniques can adjust to problems and enhance their methods for teaching. These are frequently used in coaching and mentoring settings, but they are not exclusive to them. Similarly, Darling-Hammond (2017) highlights that professional development approaches linked to improvements in student learning often include built-in time for teachers to consider, get feedback on, and adjust their practices by setting out specific time for reflection and/or feedback. Despite being two different techniques, reflection and feedback together support teachers in carefully approaching the expert visions of practice that they may have seen modeled about during professional development. Banks (2016) argue that reflective techniques recommended in professional development assist educators in critically evaluating and improving their teaching methods. Therefore, effective professional development programs should be based on reflection and feedback mechanism for conducive teacher learning.

**Active Learning.** Both the content and the methods of teacher learning must be considered when creating professional development opportunities. Trotter (2006) presents a summary of many theories pertaining to adult learning and development and highlights issues that are pertinent to the design of professional development for teachers as: i) Adults should select their learning options based on interest and their own classroom experiences/needs; ii) learning and development should be centered on reflection and inquiry; and iii) adults bring experiences to the table that should be used as resources for new learning. These subject areas offer a broad framework that aids in the explanation of why active learning experiences included in teacher professional development are beneficial for promoting the learning and development of students. Additionally, active learning is a "umbrella" component that frequently includes modeling and the usage of models as well as coaching, feedback, reflection, and teamwork (Trotter, 2006; Buczynski & Hansen, 2010).

**Use of Models and Modeling.** Research has shown that teacher learning and student achievement are positively impacted by professional development that makes use of models of successful practice. Teachers are better able to anchor their own learning and development on a practical vision when they use models of instruction and curricula. A few examples of the different types of modeling are instructional videos or written cases, lesson and unit plans, peer observations, and curriculum materials such as sample exams and student work samples (Darling-Hammond, 2017).

**Coaching and Expert Support.** The experts can play in assisting in the direction and facilitation of teachers' professional development. Experts, who are usually educators themselves, perform this crucial role in their work with educators by using the kinds of professional learning tools is mentioned above. Shaha and Ellsworth (2013) offer a web-based professional development platform that allows teachers to interact with information through forums, communities, goal-setting, and videos without the need for specific expert help. Powell et al. (2010) examined the coaching model as an example of expert help that enhanced student learning. This is in line with past studies showing that teachers who receive coaching are more likely than those who receive more conventional professional development to implement desired teaching approaches and apply them effectively. When considered collectively, the research indicates that knowledgeable advocates can be quite helpful in effective professional development.

**Pedagogical Proficiency and Knowledge.** To meet the varied needs of their students, teachers must have a thorough understanding of curriculum design, instructional methodologies, and educational theories. Enhancing teachers' pedagogical content knowledge, or the ability to combine pedagogical approaches with subject matter knowledge, should be the main goal of professional development programs. Shulman's (1987) research emphasizes the role that educational content knowledge plays in creating meaningful learning experiences. In a similar vein, Darling-Hammond (2017) contend that this dimension is concerned with providing aspiring educators with the knowledge of instructional strategies, procedures, and strategy they need to effectively support student learning. It requires familiarity with lesson planning, classroom management, curriculum design, and assessment procedures.

**Culturally Responsive Teaching.** According to Gay (2018), training in culturally responsive teaching prepares teachers to effectively work in diverse classrooms. Acknowledging students' cultural backgrounds allows teachers to build inclusive and equitable atmospheres for learning. Furthermore, he states that in order to foster inclusive learning environments that respect and appreciate the variety of their pupils, teachers must have cultural competence where all students feel valued and respected, and teachers must use culturally responsive teaching approaches. This dimension focuses on overcoming prejudices, gaining an understanding of cultural differences, and putting culturally responsive teaching methods into practice. Gay



emphasis professional development should raise awareness of cultural differences, support reflective behaviors, and offer techniques for modifying instruction to suit the requirements of a variety of learners. Thus, using culturally sensitive pedagogy can improve academic achievement and student engagement, especially for marginalized students.

**Communities of Collaborative Learning.** Working together, educators can maximize their collective efficacy and advance their careers. Initiatives for professional development should give educators the chance to cooperate with one another, exchange best practices, and work together to solve problems. Teachers can assist one another, share resources, and work together to solve problems when they establish strong professional learning communities in their schools (Hargreaves & Fullan, 2012). Collaborative learning culture, thus, improves teacher morale and job happiness, which eventually benefits the learning outcomes of students.

According to the Department of Education (2017), the following seven category or domains, which together make up thirty-seven strands that relate to more specialized aspects of teacher education for professional development are as follows:

**Category 1: Pedagogy and Content Knowledge** consists of seven strands:

1. Content knowledge and how it relates to different curriculum areas
2. Knowledge and teaching and learning principles based on research
3. Intelligent application of information communication technology (ICT)
4. Methods for advancing numeracy and literacy
5. Techniques for fostering higher-order thinking abilities, such as critical and creative thinking
6. In teaching and learning, mother tongue, Filipino, and English
7. Techniques for communicating in the classroom

**Category 2: Education Environment** is divided into six strands:

1. Security and safety for learners
2. Control of the activities and organization of the classroom
3. Equitable learning environment
4. Encouragement of student involvement
5. Advancement of purposeful learning
6. Controlling the behavior of students

**Category 3: Diversity of Learners** is divided into five strands:

1. Gender, needs, strengths, interests, and experiences of the learners
2. The socioeconomic, linguistic, cultural, and religious backgrounds of the learners
3. Students with exceptionalities, talents, and disabilities
4. Students in challenging situations
5. Students from native ethnic groups

**Category 4: Curriculum and Planning** is divided into five strands:

1. Organizing and supervising the teaching and learning process
2. Matching learning objectives with learning competencies
3. The responsiveness and relevance of educational initiatives
4. Expert cooperation to improve instructional strategies
5. Resources for instruction and learning, including ICT

**Category 5: Evaluation and Reporting** consists of the following five strands:

1. Developing, deciding upon, arranging, and applying evaluation techniques
2. Tracking and assessing the development and accomplishment of learners
3. Comments to enhance education
4. Notifying important stakeholders on the needs, development, and accomplishment of learners
5. Improving programs and methods for teaching and learning through the use of assessment data

**Category 6: Professional Engagement and Community** is divided into four strands:

1. Creating learning settings that adapt to the needs of the community
2. Including parents and the larger school community in the educational process
3. Ethics in the workplace
4. School rules and regulations

**Category 7: Personal Growth and Professional Development** is divided into five strands:

1. Teaching philosophy
2. Teaching as a profession with dignity
3. Professional relationships with colleagues
4. Professional reflection and learning to enhance practice
5. Goals for professional development

Finally, comprehensive teacher education programs should include essential components to effectively prepare educators to meet the diverse needs of students in contemporary classrooms.

## **Conclusion**

To enhance student achievement and effective teaching, teacher education for professional development should prioritize reflective practice, technological integration, cultural sensitivity, pedagogical expertise, and collaborative learning communities. Many researches indicate that while professional development programs emphasize teaching skills and classroom management, they increasingly adopt collaborative strategies, cooperative learning in a collegial environment. Teacher education for professional growth is a complex process that requires careful

consideration of the changing needs of teachers and students. Emphasizing high-quality training, addressing systemic challenges, incorporating diverse pedagogical strategies, and new technology and socio-cultural competencies are essential for empowering teachers. Dynamic and learner-centered approaches enhance instructional quality for all students and equip teachers for success in their careers. It is concluded that content-focused approaches, active learning, collaborative learning, pedagogical knowledge, coaching, reflective practices, feedback, integration of technology, modeling and culturally responsive learning are the essential components of teacher education for effective professional development. To support this development, policymakers should think to establish standards that will guide the creation, assessment, and financing of professional development programs for educators. Furthermore, Local governments are encouraged to facilitate technology-based professional learning opportunities. Finally, adequate research and funding are essential to equip teachers with the necessary tools to address the changing demands of students.

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