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Professional development in Montessori based educational competence for preschool teachers in the context of educational innovation

Vu Hong Hanh

Yen Nghia Kindergarten, Yen Nghia Ward, Ha Noi City, Vietnam

Nguyen Huong Giang

Hoa Mi Kindergarten, Hoang Liet Ward, Ha Noi City, Vietnam

Duong Thi Thanh Huong

3-2 Kindergarten, Ha Dong Ward, Ha Noi City, Vietnam

Abstract--This study explores professional development in Montessori based educational competence for preschool teachers within the broader context of educational innovation. Using a documentary research approach, the study synthesizes international literature from 2011 to 2025, focusing on teacher competence, reflective practice, and pedagogical transformation. The findings show that Montessori professional development is a dynamic and continuous process combining theoretical understanding, practical experience, and ethical growth. Effective programs integrate mentorship, collaboration, and context based adaptation to sustain innovation. The study also highlights Vietnam's early childhood education reform, where the integration of Montessori principles can strengthen teacher competence, enhance reflective capacity, and align local practices with global educational trends. By embedding Montessori philosophy into teacher training and policy frameworks, Vietnam can foster a generation of preschool teachers who are creative, compassionate, and capable of leading educational transformation.

Keywords--Montessori education, professional development, preschool teachers, educational innovation, Vietnam education reform.



1. Introduction

In the era of educational transformation, early childhood education is experiencing a significant shift toward approaches that emphasize creativity, autonomy, and holistic child development. Among these, the Montessori philosophy has proven to be one of the most enduring and adaptable frameworks for modern preschool education. The Montessori approach, originating from the pioneering work of Maria Montessori, views education as a process that supports the natural development of children's intellectual, physical, emotional, and moral capacities through carefully prepared environments and trained educators. The approach prioritizes experiential learning, intrinsic motivation, and respect for individual differences. These principles align closely with current global trends in educational innovation that focus on student centered, experiential, and lifelong learning.

Professional development plays a central role in ensuring that preschool teachers can effectively translate Montessori philosophy into classroom practice. According to Montessori Australia (2011), the quality of a Montessori program depends primarily on the teacher's ability to understand the child, design the learning environment, and facilitate learning through observation rather than direct instruction. This view is reinforced by the American Montessori Society (2023), which emphasizes that well prepared teachers form the cornerstone of authentic Montessori education. Effective professional development, therefore, must not only provide theoretical knowledge but also cultivate the emotional and reflective qualities necessary for teachers to internalize Montessori values such as respect, independence, and order.

Scholars have examined the connection between teacher competence and Montessori professional training from multiple perspectives. Macià Gual and Domingo Peñafiel (2021) argue that the Montessori educator must undergo a dual process of personal and professional formation, as the method requires teachers to act as facilitators of natural development rather than as transmitters of information. Similarly, Lillard (2017) found that the depth of teacher training strongly influences the consistency of classroom implementation and student outcomes. Teachers who participate in structured professional development programs grounded in Montessori principles exhibit higher confidence, stronger classroom management, and greater sensitivity to children's developmental stages.

In recent years, the concept of educational innovation has expanded the scope of Montessori professional development. Randolph et al. (2023) conducted a systematic review demonstrating that Montessori education positively affects children's academic and non academic outcomes when teachers adapt traditional principles to contemporary educational contexts. Efe and Ulutas (2022) explored how public preschool teachers in Turkey initiated Montessori inspired innovations that combined child centered activities with local educational policies, showing that professional development is a dynamic process influenced by social, institutional, and cultural factors.

In the context of Vietnam, preschool education reform has increasingly emphasized autonomy, creativity, and the individualization of learning. These goals resonate deeply with the Montessori philosophy. However, as noted by educational practitioners, Vietnamese preschool teachers often face challenges in accessing structured Montessori training, particularly regarding observation skills, environment preparation, and reflective practice. Strengthening professional development grounded in Montessori principles can therefore play a crucial role in enhancing educational quality and aligning Vietnam's early childhood education with global innovation trends.

This study aims to synthesize existing international research on Montessori based professional development and to discuss its implications for enhancing teacher competence in innovative educational contexts. By analyzing theoretical perspectives and practical experiences, it seeks to contribute insights into how professional learning frameworks inspired by Montessori education can be adapted and applied to the Vietnamese context.

2. Literature Review

The body of literature on Montessori based professional development demonstrates a rich intersection between theory, practice, and innovation. Research has consistently shown that teacher competence is a decisive factor in the success of Montessori programs, influencing not only children's academic and social outcomes but also the sustainability of educational innovation.

Ackerman (2019) provides an overview of the Montessori preschool landscape in the United States, tracing how teacher training programs have evolved from small, specialized institutions to internationally recognized systems. The study highlights that teacher competence in Montessori education requires a deep understanding of child development and the ability to apply pedagogical methods grounded in observation and individualized learning. Similarly, Kayili and Ari (2016) emphasize that Montessori trained teachers display higher classroom effectiveness, particularly in developing social skills and readiness for school. These findings underscore the importance of structured professional development that integrates both theoretical study and practical application.

Several authors have explored the nature and components of Montessori based educational competence. André Roberfroid and Helfrich (2011) describe this competence as encompassing the ability to prepare learning environments, select materials, observe individual progress, and guide children's activities without imposing external control. Macià Gual and Domingo Peñafiel (2021) expand this concept by identifying three interrelated dimensions: pedagogical mastery, reflective practice, and personal transformation. According to their analysis, professional development must cultivate not only technical skills but also an ethical and philosophical alignment with Montessori values.

The literature also points to the importance of mentorship and continuous professional learning. Fadhilah and Supriyanto (2023) stress that supervision and mentoring strategies help maintain the quality of Montessori instruction, ensuring fidelity to pedagogical principles. Teacher supervision in Montessori

settings is viewed as a supportive process that encourages reflection, adaptation, and professional growth rather than evaluation and control. Similarly, Eacott, Muñoz Rivera, Wainer, and Raad (2022) note that collaborative professional networks in Australian Montessori schools have promoted a culture of shared learning and peer reflection, essential elements for sustaining innovation.

In terms of empirical evidence, Buldur and Gokkus (2021) demonstrate that Montessori instruction enhances phonological and print awareness, while Courtier et al. (2021) find positive effects on the cognitive and social development of disadvantaged children. These studies highlight that teacher competence is critical in translating Montessori principles into measurable outcomes. Güzeltaş and Türkoğlu (2025) reinforce this conclusion through a meta analysis showing that the success of Montessori programs depends largely on the teacher's professional preparation and continued engagement with reflective learning.

Recent studies have also examined how Montessori methods can integrate with contemporary educational innovations. Çakır and Yalçın (2022) show that Montessori based STEM activities improve pre service teachers' lifelong learning tendencies, illustrating that Montessori principles remain compatible with emerging pedagogical trends. Sezgin and Şener (2024) observe that children educated in Montessori settings display greater psychological resilience, suggesting that Montessori practices foster emotional intelligence, an essential component of modern education.

At the institutional level, the Association Montessori de France and Institut Supérieur Maria Montessori (2016) established a professional charter emphasizing standards for teacher training, accreditation, and classroom practice. This document aligns with global efforts by the American Montessori Society (2023) and Montessori Australia (2011) to standardize teacher development while allowing contextual adaptation. Such frameworks have inspired similar initiatives in Asia, where Montessori based training programs are being incorporated into national early childhood education systems.

In summary, the literature reveals that professional development in Montessori based educational competence is characterized by five core dimensions: (1) the integration of theory and practice through continuous training, (2) mentorship and collaborative learning, (3) the cultivation of reflective practice, (4) adaptation to local innovation contexts, and (5) personal growth grounded in Montessori philosophy. These dimensions form the foundation for developing professional teachers capable of sustaining educational innovation in diverse cultural settings, including Vietnam.

3. Methodology

This study employs a **documentary research design** based entirely on secondary data from books, peer reviewed journal articles, and official documents indexed in Scopus and Web of Science. The methodological process consisted of four main stages:

1. **Identification:** Relevant materials were identified using keywords such as “Montessori education,” “teacher professional development,” and “educational innovation.”
2. **Selection:** Studies published between 2011 and 2025 that discuss Montessori based preschool teacher competence were included.
3. **Analysis:** Qualitative content analysis was applied to extract recurring concepts, models, and pedagogical strategies.
4. **Synthesis:** Findings were organized into themes representing conceptual understanding, professional development practices, innovation integration, and implications for teacher education.

4. Findings

The synthesis of international research identifies key findings on professional development in Montessori based educational competence for preschool teachers. The overall evidence shows that Montessori professional learning is not a simple technical process but a continuous journey of personal and pedagogical transformation. Four main themes emerge: the conceptual foundation of Montessori competence, the structure of professional development, contextual influences, and implications for innovation.

First, Montessori competence reflects the integration of knowledge, skills, and values. Teaching is seen as a moral and intellectual vocation requiring deep understanding of child development and awareness of human potential. Competence extends beyond instructional skills to include observation, empathy, and reflection. Teachers guide learning by respecting the child’s autonomy and fostering creativity in an environment of freedom and order.

Second, professional development in Montessori education combines theory, practice, and self transformation. Training usually involves philosophical study, observation, supervised practice, and reflection. These elements form a cycle that helps teachers apply Montessori principles in real classrooms. Observation sharpens understanding of children’s needs, while reflection consolidates practical experience into professional growth. This process ensures that competence becomes internalized and sustainable.

Third, mentorship and collaboration are essential for professional growth. Learning takes place within communities of practice where experienced teachers support novices through observation, dialogue, and shared reflection. Collaborative environments encourage innovation, build confidence, and help maintain fidelity to Montessori principles. Schools that promote mentoring culture tend to achieve greater teaching consistency and improved learning outcomes.

Fourth, contextual factors strongly influence Montessori professional development. Institutional support, policy frameworks, and cultural expectations determine the level of success. Effective programs balance universal Montessori principles with national educational standards. In resource constrained settings, community based learning and peer mentoring provide alternative approaches that remain true to Montessori philosophy.

Fifth, innovation plays a central role in maintaining professional competence. Contemporary Montessori educators integrate technology, interdisciplinary projects, and inclusive education into their practice. Digital documentation tools and creative learning activities enhance both teaching quality and student engagement. Teachers who engage in reflective experimentation demonstrate adaptability and resilience in changing environments.

Finally, Montessori professional development also promotes emotional and ethical maturity. The emphasis on self awareness and respect for the child fosters compassion, patience, and moral responsibility. This ethical dimension distinguishes Montessori education from conventional training that focuses mainly on technical ability.

Overall, Montessori based professional development provides a sustainable model for educational innovation. It cultivates teachers who are reflective, adaptable, and capable of guiding learners in complex educational settings. For Vietnam and other developing countries, these findings suggest that professional development should be continuous, reflective, and contextually grounded. Applying Montessori principles to teacher education can balance tradition and innovation while nurturing creative and empathetic educators dedicated to holistic child development.

5. Discussion

The analysis of international research shows that Montessori based professional development has become a significant trend in early childhood education reform across many countries. This model promotes a reflective, humanistic, and innovation oriented approach that enables teachers to develop both pedagogical skills and professional identity. However, the application of this model must always be contextualized. Each country interprets Montessori philosophy according to its own educational structure, culture, and policy priorities. Therefore, in discussing the Vietnamese case, it is necessary to consider both international experiences and the specific characteristics of national education.

5.1. International Experiences

In countries such as the United States, France, and Australia, Montessori professional development has been integrated into teacher education through clear accreditation systems and continuous mentoring. Programs typically combine theoretical study with extensive classroom observation and practical experience. The American Montessori Society (2023) emphasizes that high quality teacher education must cultivate reflective capacity, moral integrity, and mastery of environment design. In France, the Association Montessori de France and the Institut Supérieur Maria Montessori (2016) require teachers to engage in lifelong learning through seminars and peer collaboration. In Australia, Eacott and colleagues (2022) note that Montessori programs have been successfully adapted into public schools through professional networks and teacher communities.

These examples reveal several key lessons. First, professional development must be continuous, allowing teachers to refine their understanding through reflection and mentorship. Second, the training process should integrate Montessori

philosophy with modern innovations, ensuring flexibility and relevance. Third, institutional and policy support is vital for sustaining high quality programs. The success of these systems lies in recognizing the Montessori teacher as both a professional and a learner who evolves through experience, reflection, and community.

5.2. The Educational Context in Vietnam

Vietnam's education system is implementing comprehensive reforms to improve quality, equity, and innovation. The Ministry of Education and Training has issued new teacher standards and competency frameworks that emphasize creativity, autonomy, and lifelong learning. In early childhood education, the curriculum highlights holistic child development and experiential learning. These orientations share deep similarities with Montessori principles, especially in promoting independence, curiosity, and respect for individuality.

However, several limitations remain. Teacher training in Vietnam still focuses mainly on theoretical knowledge and classroom management. Opportunities for reflective practice, observation, and peer learning are limited. In service professional development often takes the form of short workshops that provide information rather than support ongoing transformation. Many preschool teachers have limited access to specialized programs that help them understand and apply Montessori philosophy.

The diversity of educational conditions across Vietnam also presents challenges. Urban schools may have better facilities and resources, while rural areas struggle with inadequate classrooms and teaching materials. Nevertheless, the Montessori approach does not depend solely on expensive materials. Its core lies in the teacher's ability to create an ordered and stimulating environment, to observe children carefully, and to guide learning with patience and respect. These principles can be applied flexibly in both urban and rural Vietnamese contexts if teachers receive proper orientation and support.

5.3. Integrating Montessori Principles into Vietnamese Professional Development

To adapt Montessori based professional development to Vietnam, several practical directions can be proposed.

First, teacher training institutions can include courses on Montessori philosophy, observation skills, and the creation of prepared environments. These topics would complement existing programs and encourage student teachers to adopt reflective and child centered practices.

Second, professional development for in service teachers should emphasize mentorship and collaboration. Experienced educators who have received Montessori training can act as mentors, guiding younger colleagues in reflective observation, classroom management, and individualized teaching. Establishing small professional learning communities within schools or districts would help teachers share experiences and adapt Montessori principles to local realities.

Third, digital transformation offers new opportunities for Montessori professional learning. Online platforms can support mentoring, reflection, and sharing of best practices among teachers nationwide. Digital portfolios, observation videos, and virtual training sessions can extend access to professional development even in remote areas.

Fourth, policy support is essential. The Ministry of Education and Training could recognize Montessori inspired training as part of the official teacher qualification system. Collaboration between Vietnamese universities and international Montessori organizations would help standardize curriculum design, ensure quality control, and promote international exchange.

6. Conclusion

The synthesis of global studies demonstrates that professional development in Montessori based educational competence is a comprehensive process that unites knowledge, skills, and moral understanding. It empowers teachers to guide learning through observation, reflection, and respect for each child's individuality. Montessori professional development is most effective when it combines theoretical study with practical application, mentorship, and ongoing self evaluation. Such an approach creates teachers who are confident, adaptive, and capable of nurturing holistic child development.

For Vietnam, the findings provide meaningful directions in the current era of educational reform. Integrating Montessori principles into preschool teacher training would complement national efforts to promote autonomy, creativity, and learner centered education. Teacher education institutions should introduce modules on Montessori philosophy, child observation, and environment preparation, while in service programs should focus on continuous mentoring and reflective collaboration. Policy makers can further support this integration by establishing partnerships with international Montessori organizations and developing national guidelines for Montessori inspired training.

Adapting Montessori based professional development to the Vietnamese context would not only improve teaching quality but also cultivate a professional culture grounded in respect, empathy, and continuous learning. This alignment between global philosophy and local practice can help Vietnam strengthen the moral and intellectual foundation of its early childhood education system. Ultimately, developing Montessori based educational competence among preschool teachers will contribute to a more humane, innovative, and sustainable model of education that prepares children for lifelong learning in an ever-changing world.

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