



Dimensions of Assessment Indicators for Teacher Education Practicum in Taiwanese Teacher Education Centers: A Case Study of Early Childhood Education

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ABSTRACT: An appropriate practicum assessment framework can not only systematically identify preservice teachers' levels of professional development and areas requiring further improvement, but also provide a structured basis for evaluating their professional performance across multiple dimensions of competence. In the context of early childhood education, these assessment dimensions should reflect the core professional competencies required of preschool teachers, including professional knowledge, curriculum and pedagogical practice, child care and guidance, learning environment and classroom management, parent-teacher communication and collaboration, inclusive and differentiated practice, professional ethics and responsibility, and reflective professional development. Establishing clear and observable assessment indicators for each dimension can facilitate a comprehensive evaluation of preservice teachers' ability to integrate professional knowledge and practical skills within authentic early childhood education settings. Furthermore, such an assessment framework can provide teacher education institutions with systematic evidence for examining the extent to which their teacher preparation curricula, practicum experiences, and assessment practices are aligned with the professional competencies required in early childhood education settings. In the context of Taiwan, developing a multidimensional framework for assessing preschool teacher practicum performance may strengthen the connection between teacher preparation and professional practice, support preservice teachers' professional development, and ultimately contribute to the quality and effectiveness of early childhood teacher education.

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1. INTRODUCTION

As the early childhood education environment continues to evolve, the professional role of preschool teachers has become increasingly diverse and complex. In addition to teaching and caring for young children, teachers are expected to respond to professional challenges arising from changes in curriculum models, parent–teacher communication, inclusive education, and the increasingly diverse needs of children and families. In recent years, the shortage of preschool teachers has received growing attention. Although this phenomenon may be associated with working conditions, including working hours, salary levels, and occupational stress, it is also necessary to examine the issue from the perspective of teacher education to determine whether existing teacher preparation and practicum systems adequately address the professional knowledge and practical competencies required in early childhood education settings. From the perspective of early childhood education practice, preschool teachers are expected not only to possess professional knowledge of child development, developmentally appropriate teaching, and curriculum and instruction, but also to demonstrate multidimensional professional competencies in curriculum planning and implementation, learning-environment development, classroom management, child guidance and care, parent–teacher communication, and inclusive education. Moreover, early childhood education is characterized by a high degree of contextual complexity and variability. Teachers must therefore exercise professional judgment in response to individual differences among children, specific educational contexts, and situational demands, while making timely adjustments to their pedagogical strategies and educational practices. Accordingly, preschool teachers' professional competence is not based solely on theoretical knowledge or individual teaching skills but involves the integration and application of knowledge, skills, dispositions, professional judgment, and reflective capacity. From this perspective, the primary purpose of teacher education should extend beyond the transmission of professional knowledge and teaching skills to fostering preservice teachers' capacity to translate what they have learned into appropriate professional practice. Educational practicum, in particular, serves as an important stage connecting teacher education coursework with authentic early childhood education settings. It provides preservice teachers with opportunities to integrate professional knowledge, pedagogical practice, contextual judgment, and reflective learning. Through participation in authentic educational contexts, preservice teachers can develop a deeper understanding of the complexity of early childhood education and progressively develop professional judgment and a sense of teacher professional identity. Accordingly, teacher preparation and practicum assessment for preschool teachers should encompass multiple and interrelated dimensions of professional competence, including professional knowledge, curriculum and pedagogical practice, child care and guidance, learning-environment and classroom management, parent–teacher communication and professional collaboration, inclusive and differentiated practice, professional ethics and responsibility, and reflective professional development. These dimensions not only reflect the actual professional demands of early childhood education but also provide an important foundation for developing a comprehensive practicum assessment framework. Within this context, establishing specific, observable, and assessable dimensions and indicators for practicum assessment is important for determining whether preservice teachers can effectively translate the professional knowledge and competencies acquired during teacher education into professional practice in early childhood education settings. An appropriate assessment framework can not only systematically identify preservice teachers' levels of development and areas requiring further improvement across different dimensions of professional competence but also provide an important basis for teacher education institutions to examine their curriculum design, instructional content, practicum arrangements, and assessment mechanisms. In the context of early childhood education in Taiwan, developing a practicum assessment framework with clearly defined dimensions and operational indicators may strengthen the alignment between teacher education and professional practice, enhance preservice teachers' professional competencies, and ultimately contribute to the quality and effectiveness of early childhood teacher education (Kuo, 2026; Shih, Chen & Ye, 2020; Wang & Shih, 2022).

2. DIMENSIONS OF EDUCATIONAL PRACTICUM ASSESSMENT INDICATORS IN TEACHER EDUCATION CENTERS

2.1 Professional Knowledge

Teaching is a professional practice that entails specific expertise, and teachers' professional knowledge serves as a fundamental basis for effective teaching and professional judgment (Shulman, 1986, 1987). Teachers must not only possess subject-matter knowledge in their respective teaching fields but also keep abreast of the latest developments and emerging trends in their disciplines. Furthermore, they should acquire knowledge from related fields to broaden their intellectual perspectives and optimize their knowledge structures. Shulman (1986) argued that teachers' professional knowledge encompasses not only subject-matter knowledge but also pedagogical content knowledge (PCK), which involves transforming subject matter into forms that are comprehensible and accessible to learners. Grossman (1990) further examined the various components of teachers' knowledge and their application in teaching practice, highlighting the importance of integrating subject-matter knowledge, pedagogical approaches, and an understanding of student learning to organize and implement effective instruction. Accordingly, the continuous updating and integration of professional knowledge enable teachers to develop a deeper understanding of instructional content, respond to students' diverse learning needs, and translate professional knowledge into appropriate teaching practices. Teachers' professional knowledge is therefore not only fundamental to effective teaching but also a core element of ongoing professional growth and the enhancement of teaching quality (Shulman, 1987). The core dimension focuses on the understanding and application of professional knowledge related to child development, early childhood education theories, curriculum and pedagogy, and young children's learning.

2.2 Observation and Understanding of Young Children's Development and Learning

The core of this dimension is the ability to understand young children's development, learning, behaviors, and individual needs through systematic observation. Observation is an integral part of everyday life and professional practice. By continuously attending to events and circumstances in their surroundings, individuals assess situational needs and make appropriate adjustments to their behaviours. In early childhood education and care settings, practitioners frequently engage in informal observations to identify children's immediate needs and monitor the learning environment. For example, they may notice when a child has fallen, when teaching materials have run out, or when children require assistance while tidying up the environment. These everyday observations not only help ensure the smooth operation of educational and care activities but also enable practitioners to respond promptly to children's needs. Furthermore, observation is an important means of promoting professional learning and enhancing practical competence. Practitioners can observe how their colleagues interact with children to gain insights into effective teaching strategies and professional practices, using these observations as a basis for self-reflection and professional growth. Moreover, observation can be incorporated into formal professional development activities. For example, when professional evaluations identify areas requiring further improvement, practitioners can engage in focused peer observation and analytical discussion to reflect on their own teaching practices and continuously enhance their professional knowledge and skills. Therefore, observation serves not only as an essential tool for the daily operation of early childhood education settings but also as an important mechanism for supporting teachers' professional reflection, improvement of practice, and lifelong learning (Neaum, 2016).

2.3 Curriculum Design and Teaching Practice

The core of this dimension in teacher education lies in developing pre-service early childhood teachers' professional competence in curriculum and instruction, enabling them to design, implement, and evaluate developmentally appropriate curricula and teaching activities based on young children's developmental characteristics, learning needs, interests, and individual differences. Developmentally appropriate practice emphasizes that educators should consider the commonalities of children's development and learning, individual variations, and the family, cultural, and social contexts in which children are situated when planning appropriate learning experiences (National Association for the Education of Young Children [NAEYC], 2020). Furthermore, young children's

learning and development are not simply processes of receiving knowledge; rather, they constitute dynamic processes involving active exploration, social interaction, and cultural contexts (Piaget, 1964; Vygotsky, 1978). The development of this professional competence involves not only the acquisition of specialized knowledge of child development, learning theories, and curriculum design but also the integration of theory and practice to help pre-service teachers translate their knowledge into concrete teaching practices and professional judgment. Shulman (1987) argued that teachers' professional knowledge encompasses not only subject matter knowledge but also pedagogical content knowledge, which involves transforming knowledge into forms that are appropriate for teaching. Accordingly, teacher education programs should help pre-service teachers integrate knowledge of child development, curriculum, and instructional strategies so that they can make appropriate curricular and pedagogical decisions in specific educational contexts. Specifically, this dimension can be examined through three interrelated aspects. First, in terms of the development of professional knowledge, teacher education should help pre-service teachers understand young children's physical and psychological developmental characteristics, learning processes, and individual differences while establishing appropriate educational philosophies and curriculum knowledge (NAEYC, 2020; Shulman, 1987). Second, regarding the development of teaching practice competence, teacher education programs should provide learning experiences such as curriculum design, teaching rehearsals, practicum experiences, and practical reflection to cultivate pre-service teachers' ability to translate theoretical knowledge into curriculum planning, instructional implementation, and learning assessment. This perspective is also consistent with Schön's (1983) concept of reflective practice, which emphasizes that professionals need to understand problems and adjust their strategies in the course of action, while deepening their professional judgment through reflection. Finally, in terms of the development of professional judgment and reflective competence, teacher education should guide pre-service teachers in observing and interpreting young children's learning performance, adjusting instructional strategies in response to children's actual responses, and strengthening their ability to address children's diverse needs through ongoing reflection and practice (Schön, 1983). This process not only helps pre-service teachers evaluate the appropriateness of their instructional decisions but also enables them to connect theoretical knowledge, practical experience, and educational values, thereby gradually developing independent professional judgment and the capacity for continuous instructional improvement. Overall, teacher education should extend beyond the transmission of teaching techniques to emphasize the integrated development of pre-service teachers' professional knowledge, practical competence, and reflective capacity. By connecting theoretical learning with practical experience, pre-service teachers can gradually develop a child-centered educational philosophy and cultivate curricular and instructional practices characterized by a clear understanding of educational purposes, sensitivity to contextual factors, and sound professional judgment. In turn, they can create learning environments for young children that are responsive, inclusive, and developmentally appropriate (NAEYC, 2020; Schön, 1983; Shulman, 1987).

2.4 Creating Play and Learning Environments

The core of this dimension lies in teachers' ability to design and create safe, supportive, engaging, and developmentally appropriate play and learning environments that promote young children's exploration, interaction, participation, and learning. Such environments should not be viewed merely as physical spaces in which educational activities take place; rather, they constitute integral components of the educational process that shape children's experiences, relationships, and opportunities for learning and development (Moore, 2014; Shih, 2026a, 2026b; Shih & W, 2016; Strong-Wilson & Ellis, 2007). From a developmental perspective, effective learning environments should reflect young children's developmental characteristics, interests, prior experiences, and individual differences. Developmentally appropriate practice emphasizes the importance of considering children's age-related development, individual characteristics, and social and cultural contexts when planning educational experiences (National Association for the Education of Young Children [NAEYC], 2020). The arrangement of learning areas, selection of materials, availability of open-ended resources, and organization of play opportunities can encourage children to investigate their surroundings,

express their ideas, solve problems, and construct knowledge through firsthand experiences. In this respect, the environment functions as a pedagogical resource that supports children's active engagement and meaning-making rather than simply providing a setting for teacher-directed instruction (Dewey, 1938; Moore, 2014).

Furthermore, a supportive and engaging environment should facilitate social interaction, collaboration, and communication among children and between children and teachers. Vygotsky (1978) emphasized the significance of social interaction in cognitive development, suggesting that learning is mediated through interactions with others and culturally meaningful tools. Similarly, guided participation and social interaction provide opportunities for children to extend their understanding and develop new competencies (Rogoff, 1990). Through shared play, negotiation, observation, and collaborative problem-solving, children can develop language abilities, social competence, emotional understanding, and emerging autonomy. Teachers therefore need to consider not only the physical organization of the environment but also the quality of interpersonal relationships, the accessibility of learning materials, and the extent to which children are encouraged to make choices and participate in decisions concerning their learning experiences (NAEYC, 2020; Vygotsky, 1978). Equally important, creating developmentally appropriate environments requires teachers to adopt a reflective and responsive approach to curriculum planning. Rather than maintaining a fixed arrangement, teachers should continuously observe children's interests, behaviors, and emerging learning needs and adjust the environment accordingly. This approach is consistent with the view that educational experiences should be thoughtfully organized in response to learners' ongoing interactions with their surroundings. It also aligns with the Reggio Emilia perspective, which recognizes the learning environment as an important dimension of pedagogy and emphasizes the relationship between the physical setting, materials, relationships, and children's meaning-making (Dewey, 1938; Strong-Wilson & Ellis, 2007). This process involves evaluating the safety, inclusiveness, flexibility, and educational value of learning spaces and materials while ensuring that children with diverse abilities, backgrounds, and learning preferences have meaningful opportunities to participate. Ultimately, designing and creating effective play and learning environments is a dynamic pedagogical process that integrates environmental organization, developmental understanding, social interaction, and responsive teaching. When thoughtfully planned and continuously adapted, such environments can support children's agency, curiosity, creativity, and holistic development, while providing meaningful opportunities for them to become active participants in their own learning (Dewey, 1938; NAEYC, 2020; Vygotsky, 1978).

2.5 Educational Assessment and Professional Reflection

The core of this dimension is the ability to use appropriate assessment methods to understand and document young children's learning and development, interpret assessment information to inform educational practices, and engage in systematic professional reflection to improve teaching and support young children's learning and development. Over the past several decades, educational reforms have consistently emphasized the importance of preparing a high-quality teaching workforce as a means of improving educational quality. In the post-pandemic era, global attention to educational quality and equity has further underscored the need for teachers to continually advance their professional knowledge and skills through practice. Although some professional development programs have effectively supported teacher learning, further investigation is needed into how specific interactions and dynamic processes within teaching practice constitute opportunities for professional learning. Research on preservice teacher education has highlighted core teaching practices and their role in teacher preparation (Grossman et al., 2009; Kennedy, 2016; Loewenberg Ball & Forzani, 2009). Research on in-service teacher learning has further examined how teachers develop professional judgment and decision-making capacities by noticing and assessing student learning as they sustain, interrupt, or modify their instructional actions (Jiang (蒋衡) & Moghan, 2026; Mannikko & Husu, 2020). Drawing on these perspectives on core teaching practices and learning through practice (Grossman et al., 2009; Jiang (蒋衡) & Moghan, 2026; Loewenberg Ball & Forzani, 2009; Mannikko & Husu, 2020), this paper argues that the development of early childhood teaching practicum indicators can extend beyond the demonstration of teaching skills to encompass how preservice teachers observe, interpret, and respond to young

children's learning in specific contexts. Although in-service and preservice teachers differ in their professional experience and learning needs, attention to instructional interactions, the noticing of learning, and instructional decision-making can provide a useful foundation for understanding preservice teachers' professional learning. Accordingly, practicum indicators can address whether preservice teachers observe children's interests, emotions, behaviors, and peer interactions during play, daily routines, and curriculum activities; understand their developmental characteristics and learning needs; and use these observations to adjust learning environments, activity materials, and instructional support. These indicators can encompass observing and understanding children, curriculum planning and implementation, teacher-child interactions, learning assessment, and instructional reflection and adjustment, thereby capturing preservice teachers' capacity to integrate and apply professional knowledge and skills. Furthermore, informed by the perspective that teachers learn through noticing, judgment, and adjustments to their actions during teaching, this paper proposes translating the processes of observing children's performance, interpreting their learning needs, taking instructional action, and reflecting on and adjusting practice into practicum indicators that can be observed, documented, and used to guide feedback. For example, when children encounter difficulties during play, assessment can examine whether preservice teachers use observational evidence to interpret possible causes, provide appropriate questions, materials, or scaffolding, and continue observing children's responses to review and refine their instructional judgments. Assessment can draw on child observation records, teaching records, reflective journals, and feedback from practicum mentors to illuminate the evidence underlying preservice teachers' instructional decisions and subsequent adjustments. In this way, early childhood teaching practicum indicators can serve both to assess professional performance and to guide ongoing learning from teaching experience, enabling practicum assessment to support professional growth alongside the evaluation of professional competence (Jiang (蒋衡) & Moghan, 2026; Mannikko & Husu, 2020; Shih, 2026c, 2026d).

2.6 Educational Ethics and Professional Development

Professional ethics refers to the ethical norms that practitioners within a particular occupation or profession gradually develop through logical reasoning and ongoing communication and dialogue, drawing on foundational principles of natural moral law and the professional knowledge they uphold. Professional ethics is therefore not static; rather, it is continually examined and revised as professional knowledge develops and practical circumstances change. In this sense, it has the characteristics of "dialogical ethics." According to Hwang, a "code of ethics" consists of explicit ethical standards established by an occupational or professional association to govern its members' conduct in performing their duties and interacting with others. These standards also embody the underlying spirit and substance of the services that each profession is expected to provide (as cited in Lin & Chen, 2004, p. 394). The core of this dimension is the ability to demonstrate professional ethics, responsibility, and commitment to the well-being and rights of young children, while engaging in continuous professional learning, self-reflection, and development to enhance professional competence.

3. CONCLUSION

The quality of education is closely associated with the quality of teachers, particularly their capacity to continuously develop professional knowledge, pedagogical competencies, and instructional strategies. While continuing professional development provides opportunities for teachers to refine and expand their professional competencies throughout their careers, initial teacher education constitutes the foundation upon which these competencies are established. Effective teacher education should therefore integrate theoretical knowledge with pedagogical practice, professional ethics, reflective capacity, and the ability to respond to diverse educational contexts. The implementation of the 12-Year Basic Education Curriculum has further increased the professional demands placed on teachers, requiring them to adapt curriculum planning, instructional practices, assessment approaches, classroom management, and student support to diverse learning needs. Accordingly, strengthening teacher education is essential not only for

preparing competent teachers before entering the profession but also for establishing a foundation for their ongoing professional development and instructional effectiveness. In this sense, teacher education and continuing professional development should be understood as interconnected components of a broader process of teacher professional development, which ultimately contributes to educational quality and student learning (Shih, Chen, & Ye, 2020). Educational quality is closely associated with teacher quality, particularly teachers' capacity to continuously develop their professional knowledge, pedagogical competencies, and instructional strategies. Although continuing professional development provides opportunities for teachers to refine and expand their professional competencies throughout their careers, initial teacher education constitutes the foundation for the development of these competencies. Effective teacher education should therefore integrate theoretical knowledge with pedagogical practice, professional ethics, reflective capacity, and the ability to respond appropriately to diverse educational contexts. Teachers are also expected to respond to increasingly diverse learning needs by adapting curriculum planning, instructional practices, assessment approaches, classroom management, and student support. These evolving professional demands underscore the importance of strengthening teacher education to prepare teachers to respond effectively to changing educational contexts. Accordingly, teacher education is essential not only for developing the professional competencies required before entering the teaching profession but also for establishing a foundation for teachers' continuing professional development and instructional effectiveness. From this perspective, initial teacher education and continuing professional development should be understood as interconnected components of a broader process of teacher professional development. Together, they constitute a continuous developmental process through which teachers progressively develop, apply, reflect upon, and further strengthen their professional knowledge and competencies. Such a continuum of professional development is essential for enhancing teaching quality and, ultimately, contributing to educational quality and student learning (shih, 2025a, 2025b; Shih, Chen, & Ye, 2020).

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