



How Do Early Childhood Teachers Design Lesson Plans? A Professional Competency Analysis

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Abstract

This study aims to analyze early childhood education (ECE) teachers' professional competencies in designing lesson plans. A quantitative descriptive approach was employed using a survey method. The participants consisted of 100 ECE teachers from DKI Jakarta and Banten Provinces, selected through purposive sampling. Data were collected using closed-ended questionnaires to measure teachers' professional competence and open-ended questionnaires to examine the lesson plans prepared by the teachers. The data were analyzed using descriptive statistical techniques. The results indicate that 98% of the ECE teachers were female, with 49% holding a high school qualification and 43% holding a bachelor's degree. Teachers aged over 50 years demonstrated higher levels of professional competence compared to younger teachers. In terms of educational background, teachers with diploma-level qualifications exhibited higher professional competence than those holding bachelor's degrees. Teachers with 4–6 years of teaching experience achieved the highest professional competence scores. However, analysis of the lesson plans revealed that most teachers relied heavily on student worksheets, resulting in limited variation and low creativity in learning activities. This study concludes that although ECE teachers demonstrate relatively high levels of professional competence, these competencies are not fully reflected in the quality of their lesson plan design. The findings highlight the need for continuous professional development programs that emphasize creative and innovative lesson planning practices. This study reveals a mismatch between teachers' measured professional competence and their practical ability to design varied lesson plans within the Indonesian ECE context. Future research is recommended to employ mixed-methods or longitudinal designs to explore the underlying factors influencing this mismatch and to examine the effectiveness of targeted professional development interventions in improving lesson plan quality.

Keywords: *Early Childhood Education Teachers; Lesson Plan; Professional Competence; Teaching Experience*



A. INTRODUCTION

Early Childhood Education (ECE) plays a crucial role in laying the foundation for children's cognitive, social-emotional, and moral development, and it requires teachers who are pedagogically and professionally competent to facilitate meaningful learning processes. The pedagogical and professional competencies of early childhood teachers are important for designing learning that is appropriate for children's developmental stages and 21st-century curriculum goals (Novitasari & Fitria, 2021; Pebriannti, 2024).

Despite this recognition, empirical evidence indicates that many early childhood education teachers in Indonesia, commonly referred to as ECE teachers, continue to face challenges in translating their professional competence into high-quality lesson plans and creative learning activities. Instructional practices often remain monotonous and are dominated by worksheet-oriented tasks, limiting opportunities for meaningful and engaging learning experiences (Erika et al., 2024; Ha et al., 2025).

Although professional competence is widely acknowledged as a key determinant of instructional quality, it remains unclear whether ECE teachers with higher levels of professional and pedagogical competence consistently produce lesson plans that are varied, creative, and aligned with early childhood learning principles. This gap points to the need for empirical investigation into the relationship between teacher competence and lesson planning quality (Rademacher et al., 2025).

Previous studies have primarily examined ECE teacher competence in relation to academic qualifications or teaching experience. Other research has focused on broad competency frameworks without directly linking them to the quality of lesson planning practices (Sadaruddin et al., 2025). However, only a limited number of studies have explicitly addressed the mismatch between teachers' professional competence levels and the actual quality of their lesson plans, and none have positioned lesson planning practices as a primary outcome variable within an integrated empirical framework examining teacher competence.

Recent research has increasingly explored various dimensions of ECE teacher competence and instructional practices. For instance, studies on professional development tools, such as structured planning instruments, suggest that teacher support mechanisms can enhance lesson planning effectiveness and alignment with national curriculum objectives (Kristiyanti et al., 2025). Other investigations report considerable variation in teacher competence, with pedagogical skills often associated with qualifications and teaching experience, yet without clear evidence that these competencies translate into higher-quality lesson plans (Jaya S et al., 2023; Aprida et al., 2022; Syarah et al., 2025). Additionally, studies examining ECE teacher competence in curriculum implementation and instructional delivery indicate that pedagogical competence contributes to teaching quality; however, they stop short of directly analyzing how such competence influences the design and creativity of lesson plans (Palupi, 2025; Erika et al., 2024).

In contrast, the present study positions lesson plan quality not merely as a descriptive outcome, but as a concrete manifestation of teacher professional competence. By doing so, it contributes to a more nuanced understanding of instructional quality in ECE settings and addresses existing gaps in the literature. Specifically, this study aims to analyze the role of ECE teachers' professional competence in lesson plan design by examining how age,

educational background, and teaching experience relate to the quality and creativity of lesson planning practices.

B. METHOD

1. Research Design

This study employed a quantitative descriptive research design using a survey approach. This design was selected to provide an empirical description of early childhood education (ECE) teachers' professional competence and its association with lesson planning practices. A quantitative descriptive approach enables systematic measurement of variables, numerical summarization of data, and identification of patterns related to professional competence and lesson plan quality among ECE teachers.

2. Participants and Research Setting

The participants consisted of 100 ECE teachers from DKI Jakarta and Banten Provinces, Indonesia. Participants were selected through purposive sampling based on the following inclusion criteria: (1) actively teaching in ECE institutions, (2) having a minimum of one year of teaching experience, and (3) being directly involved in lesson plan preparation. The participants varied in age, gender, educational background, and teaching experience, which were considered relevant characteristics for examining differences in professional competence and lesson planning practices.

3. Research Instruments

Data were collected using two types of research instruments ([Abdiana et al., 2024](#)):

a. Closed-ended questionnaire

The closed-ended questionnaire was used to measure teachers' professional competence. It consisted of four main indicators:

- 1) mastery of learning materials and concepts,
- 2) mastery of competency standards and basic competencies,
- 3) creative development of learning materials, and
- 4) continuous professional development through reflective practices.

Responses were measured using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

An example indicator item is: *"The teacher is able to design learning activities that are aligned with early childhood developmental stages."*

b. Open-ended questionnaire

The open-ended questionnaire was used to collect qualitative data in the form of lesson plans prepared by teachers. These lesson plans were analyzed to identify variations in learning themes, learning activities, instructional strategies, and the level of creativity reflected in the planning process.

The professional competence questionnaire consisted of 20 items distributed evenly across the four competence dimensions (KP1–KP4), with five items representing each dimension, as shown in Table 1.

Table 1. Distribution of Instrument Items for Each Professional Competence Indicator

Code	Professional Competence Dimension	Number of Items	Item Numbers
KP1	Mastery of learning materials and concepts	5 items	1, 2, 3, 4, 5
KP2	Mastery of competency standards and basic competencies	5 items	6, 7, 8, 9, 10
KP3	Creative development of learning materials	5 items	11, 12, 13, 14, 15
KP4	Continuous professional development through reflective practice	5 items	16, 17, 18, 19, 20
Total		20 items	

4. Validity and Reliability

Instrument validity was established through content validity procedures involving expert judgment by early childhood education specialists. The experts evaluated the relevance, clarity, and alignment of each item with the conceptual framework of professional competence.

Reliability was tested using internal consistency analysis, and the resulting reliability coefficient met acceptable standards for educational research. Only items that were confirmed to be valid and reliable were included in the final data analysis. The validity of the questionnaire instrument was established through content validity, which involved expert judgment from early childhood education specialists to ensure alignment between the indicators and the concept of professional competence. Instrument reliability was tested using internal consistency analysis, resulting in a reliability coefficient that met acceptable standards for educational research. Only valid and reliable items were included in the final data analysis.

5. Research Procedures

The research was conducted systematically through the following stages ([Farisia & Syafi'i, 2024](#)):

- Developing research instruments and conducting expert validation.
- Distributing questionnaires to ECE teachers in DKI Jakarta and Banten Provinces.
- Collecting completed closed-ended questionnaires and lesson plan documents.
- Organizing, coding, and preparing the data for analysis.
- Analyzing the data to address the research objectives ([Anugrah & Rianita, 2025](#)).

6. Data Analysis Techniques

Data were analyzed using descriptive quantitative analysis ([Kurniasari & Kurniawan, 2023](#)). The analysis procedures included:

- Scoring questionnaire responses based on the four-point Likert scale.
- Calculating percentages to describe the distribution of professional competence levels.
- Categorizing scores into levels of professional competence.

- d. Interpreting lesson plan data to identify patterns related to creativity, variation, and instructional focus.

7. Interpretation of Scores

Higher scores indicate higher levels of professional competence. Teachers categorized as highly feasible demonstrate strong mastery of professional competence indicators, whereas those in the less feasible and not feasible categories indicate a need for targeted professional development. Lesson plan analysis was interpreted alongside questionnaire scores to examine whether high professional competence was reflected in the creativity, variation, and instructional quality of lesson planning practices.

C. RESULT AND DISCUSSION

1. Result

The results show that the distribution of ECE teachers involved in this study is relatively diverse. This visualization provides an overview of the participants' profiles, which serves as a contextual foundation for interpreting variations in professional competence across different teacher groups. Figure 1 presents the demographic distribution of ECE teachers based on age.

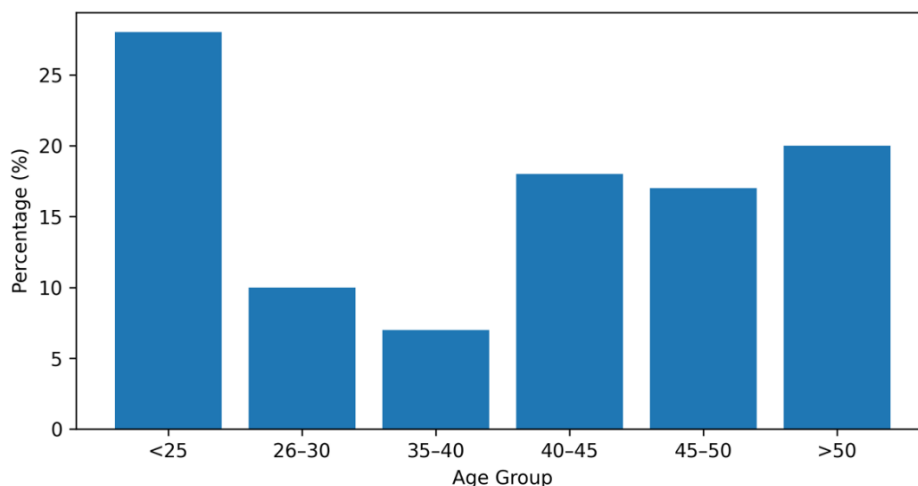


Figure 1. Distribution of ECE teachers Based on Age

The largest proportion of teachers is in the under 25 years age group. This distribution indicates that ECE teachers are predominantly within the productive age range.

Figure 2 presents the demographic distribution of ECE teachers based on educational background.

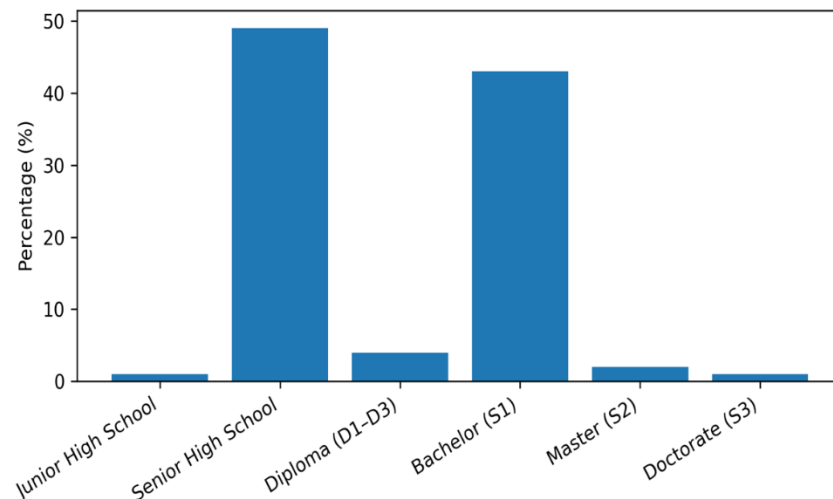


Figure 1. Distribution of ECE teachers Based on Educational Background

This finding reflects ongoing challenges in meeting the minimum academic qualification standards for ECE teachers, despite recent policy efforts to improve teacher education.

Figure 3 presents the demographic distribution of ECE teachers based on gender.

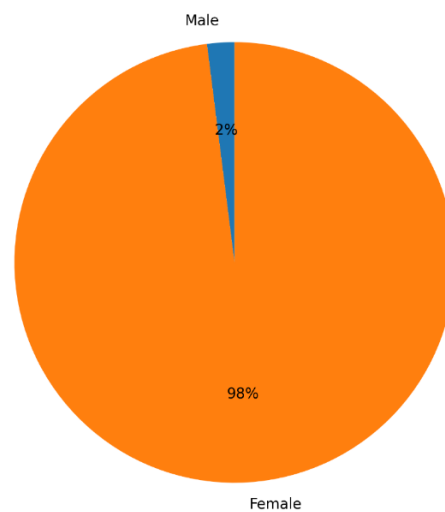


Figure 3. Distribution of ECE teachers based on Gender.

With regard to gender, the ECE teaching workforce is overwhelmingly female. The results indicate that 98% of the teachers are women, while the rest are men. This strong gender imbalance confirms that early childhood education remains a feminized profession in the Indonesian context.

The demographic distribution shows that the ECE teaching workforce is largely female and spans a broad range of age groups, indicating the coexistence of early-career and senior teachers. In addition, the prominence of non-degree educational backgrounds suggests that formal academic qualifications remain uneven across ECE institutions.

In addition, figure 4 illustrates the distribution of ECE teachers' professional competence across different age groups, as measured by the four competence indicators (KP1–KP4). This figure highlights how professional competence varies according to teachers' career stages.

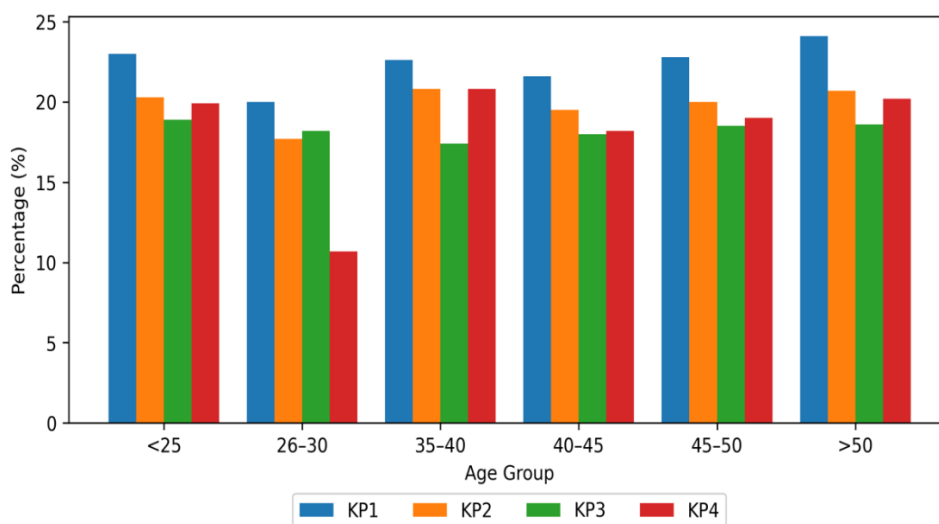


Figure 4. Distribution of ECE Teachers by Four Competence Indicators

Analysis of professional competence across age groups reveals notable variations among ECE teachers. Teachers aged over 50 years demonstrate relatively higher professional competence scores across all indicators (KP1–KP4). Conversely, teachers in the 26–30 years age group show lower competence levels, particularly in KP4, which relates to continuous professional development. Teachers in the 35–40, 40–45, and 45–50 age groups exhibit more balanced competence profiles, indicating a stable phase of professional development during mid-career stages.

These findings suggest that teaching experience accumulated over time contributes positively to professional competence. Senior teachers tend to develop stronger mastery of learning materials and pedagogical practices due to prolonged exposure to classroom contexts. However, the lower competence observed among younger teachers highlights the need for structured mentoring and professional support during the early stages of teaching careers.

2. Discussion

The findings indicate that ECE teachers generally demonstrate moderate to high levels of professional competence; however, this competence is not consistently reflected in the quality of lesson planning practices. This discrepancy suggests that professional competence measured through self-reported instruments may not fully capture teachers' ability to translate knowledge and skills into creative instructional planning (Aprianti et al., 2025). Similar patterns have been reported in recent studies, which emphasize that instructional competence requires structured guidance and practical tools to be effectively implemented in lesson planning (Dahlia & Ira Maisarah, 2025; Kristiyanti et al., 2025).

Higher professional competence among teachers aged over 50 years can be attributed to accumulated teaching experience and prolonged engagement with classroom practices. Teaching experience has been widely recognized as a key factor influencing professional competence development, particularly in early childhood education settings (Palupi, 2025; Faizin & Kurniawati, 2025; Purwanti et al., 2024). Conversely, lower competence levels observed among teachers aged 26–30 years, especially in continuous professional development, indicate that early-career teachers require systematic mentoring and reflective support to strengthen their professional growth (Ha et al., 2025; Kamil et al., 2023; Nurtiani & Fajriah, 2022).

The finding that teachers with diploma-level qualifications demonstrate higher competence in certain indicators than bachelor-degree holders align with studies highlighting the practice-oriented nature of vocational teacher education programs. These programs tend to emphasize applied teaching skills rather than theoretical mastery alone (Gregoriou, 2023; Pebriannti, 2024). ECE teachers continue to rely heavily on worksheets in lesson planning, resulting in limited variation and creativity in learning activities. This supports the present study's finding that lesson planning practices remain largely conventional despite relatively high competence levels (Muslimin, 2023). The use of structured planning tools significantly improves lesson planning quality, reinforcing the argument that professional competence must be supported by concrete instructional frameworks to be effectively enacted (Kristiyanti et al., 2025).

The results of this study have important practical implications for ECE teachers and early childhood education institutions. Professional development programs should move beyond competency certification toward practice-oriented training that emphasizes creative lesson planning, thematic learning, and reflective practice. Teachers need concrete examples, planning templates, and collaborative opportunities to translate professional competence into meaningful learning experiences.

Additionally, ECE institutions are encouraged to implement mentoring and peer-learning systems, particularly for early-career teachers, to support the development of lesson planning competence. Policymakers and school leaders may use these findings as an empirical basis for designing professional development initiatives that prioritize instructional quality rather than administrative compliance.

Despite its contributions, this study has several limitations. First, professional competence was measured using self-reported instruments, which may be subject to response bias. Second, the study was conducted in a limited regional context, which may restrict the generalizability of the findings to other ECE settings. Third, lesson planning practices were analyzed through document review without classroom observation, limiting insights into how lesson plans were implemented in actual teaching practices.

Based on these limitations, future research is recommended to employ mixed-method approaches that integrate surveys, lesson plan analysis, classroom observations, and interviews to obtain a more comprehensive understanding of professional competence enactment. Further studies may also explore intervention-based research designs, such as mentoring programs or structured lesson planning tools, to examine their effectiveness in improving lesson planning quality. Expanding research samples across

different regions and institutional contexts would enhance the generalizability and policy relevance of future findings.

D. CONCLUSION

This study aimed to analyze the role of ECE teachers' professional competence in designing lesson plans by considering differences in age, educational background, and teaching experience. The findings reveal that although ECE teachers generally demonstrate moderate to high levels of professional competence, this competence is not consistently reflected in the quality of lesson planning practices. Teachers over 50 years old and those with 4–6 years of teaching experience showed higher competence levels; however, lesson plans remained largely worksheet-oriented and lacked variation and creativity. The novelty of this study lies in highlighting the mismatch between measured professional competence and its practical manifestation in lesson planning, positioning lesson plan quality as a concrete indicator of professional competence rather than merely an administrative product.

The findings imply that professional development policies for ECE teachers should move beyond certification and competency assessment toward practice-oriented training, particularly in creative and reflective lesson planning. ECE institutions are encouraged to provide structured planning tools, mentoring, and collaborative lesson design opportunities to support teachers in translating competence into meaningful learning experiences. Academically, this study suggests the need for future research to adopt mixed-method approaches that integrate lesson plan analysis with classroom observation to better capture how professional competence is enacted in early childhood education settings.

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