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Pedagogical Judgment in Evaluating and Adapting Generative AI Outputs for Teaching English to Young Learners: A Pre-Service Teacher Case Study

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Abstract
This study examines how pre-service English teachers evaluate and adapt generative artificial intelligence (GenAI) outputs for Teaching English to Young Learners (TEYL). Using a qualitative case study design, it involved 48 sixth-semester students enrolled in a Practicing of TEYL course at UIN Salatiga during the 2025/2026 academic year. Data were collected through classroom and peer-based microteaching observations, interviews with 10 students, and analysis of AI-assisted lesson plans and teaching materials. The data were examined thematically, with evidence from different sources compared to support the credibility of the findings. The findings show that students primarily used GenAI to generate initial ideas for lesson plans and activities, including stories, songs, games, role-play, and Total Physical Response (TPR). However, they found that AI-generated materials were often generic and required adjustment to address young learners' developmental characteristics, language proficiency, interactional needs, and cultural contexts. Students revised these materials through lesson planning, peer-based microteaching, feedback, reflection, and subsequent revision. The study's main contribution is a contextual account of AI-mediated pedagogical judgment, showing how pre-service teachers assess and adapt GenAI outputs in relation to the pedagogical demands of TEYL. As the teaching activities took place in peer-based microteaching rather than actual young-learner classrooms, the findings do not establish the effectiveness of the adapted materials with children. The study highlights the importance of preparing pre-service teachers to use GenAI critically while retaining responsibility for pedagogical decisions.
Keywords: *Generative Artificial Intelligence, Pedagogical Judgment, Pre-Service English Teachers, Teaching English to Young Learners, Microteaching*

INTRODUCTION

English language teaching to young learners differs from instruction for adolescents and adults because it must account for children's developmental characteristics. In EFL contexts, children learn through comprehensible input, meaningful interaction, opportunities to use language, and teacher scaffolding, supported by repetition, play, and concrete activities (Nawaz et al., 2024). From the perspective of second language acquisition (SLA), the language development process is influenced by the quality and quantity of input, opportunities for language production (output), interaction, and social support that enable children to use the language in meaningful contexts. The sociocultural perspective also highlights interaction and scaffolding as crucial elements of language development, as a child's abilities evolve through assistance and interaction with more competent individuals (Rigopouli et al., 2025; Alharbi, 2023). Studies on second language acquisition among

children in Indonesia indicate that research into Teaching English to Young Learners (TEYL) is closely linked to learning strategies, media, teaching methods, children's language development, and the specific contexts in which English is learned (Adisti & Marwiyati, 2023; Kusumawardani & Anjaniputra, 2024; Judijanto, 2026). Zaimo

Given these characteristics, English instruction for children requires lesson designs that go beyond a mere focus on language content to also consider the learners' developmental stages and needs. Activities such as songs, games, storytelling, Total Physical Response (TPR), the use of images and concrete objects, and interactive tasks provide children with opportunities to acquire and use the language through experiences suited to their characteristics. Research on TEYL in Indonesia further demonstrates that teaching strategies, media, methods, and learning environments are frequently examined aspects of children's English language acquisition (Suwanto & Rahman, 2022; Andita & Pasca, 2026; Rafidah & Sujito, 2026). Moreover, studies on social interaction in early childhood second language acquisition show that peer conversations, group tasks, teacher interactions, and scaffolding offer vital opportunities for children to receive input, produce output, and obtain language feedback (Xu et al., 2005; Custode et al., 2024 ; Jabir et al., 2026).

The need to tailor instruction to young learners' characteristics highlights the demands placed on prospective English teachers. Beyond English language proficiency, they need to select teaching approaches, materials, media, activities, and assessment methods that suit learners' developmental stages and learning needs (Tsagari & Rousoulioti, 2025). These decisions require teachers to consider not only what to teach and how to teach it, but also whether the technologies they use support their pedagogical purposes. The TPACK framework provides a useful lens for understanding how pre-service teachers integrate technological, pedagogical, and content knowledge when evaluating and adapting AI-generated teaching materials (P. Mishra & Koehler, 2006). In the context of GenAI-assisted TEYL, this interplay is relevant when prospective teachers assess whether AI-generated language is appropriate for young learners, whether suggested activities align with instructional objectives, and whether the proposed use of technology supports meaningful learning. TPACK is used in this study as a sensitizing concept to interpret these evaluative and adaptive decisions, rather than as a predefined coding framework or a measure of teacher competence. The analysis therefore focuses on how students explain and enact their pedagogical judgments as they review, modify, and use GenAI-generated teaching materials during lesson planning and peer-based microteaching.

This study was conducted in the Teaching English to Young Learners (TEYL) course within the English Education Study Program at UIN Salatiga. According to the program curriculum and course syllabus, TEYL is offered as an elective course for students in the upper semesters. The course provides a context for students to explore approaches to teaching English to children at the Early Childhood Education (PAUD) and primary school (SD) levels. Students enrolled in the course therefore engage not only with English language content but also with pedagogical considerations relevant to teaching young learners. This context is particularly relevant to the present study, which examines how prospective English

teachers evaluate and adapt GenAI-generated materials in relation to the developmental, linguistic, and pedagogical needs of children.

The TEYL course at UIN Salatiga introduces students to teaching methods, learning models, instructional materials, and assessment strategies for young learners. Guided by the TPACK framework, students are expected to consider how English language content, pedagogical approaches, and technology can be integrated into lesson planning. Within this context, the study examined how students used GenAI to develop teaching materials, evaluated and adapted its outputs, and refined their lesson designs through peer-based microteaching and feedback. These activities provided a context for examining students' pedagogical judgment, while distinguishing their own decisions from responses to course requirements and instructor guidance.

This situation has become increasingly relevant with the advent of generative artificial intelligence (GenAI) in educational technology. Various GenAI tools, such as ChatGPT, can generate ideas for learning activities, instructional materials, lesson plans, instructions, questions, language games, stories, and even assessment designs within a relatively short time (Zaimoğlu & Dağtaş, 2025). In the context of teacher education, these capabilities offer opportunities for students to develop and explore alternative instructional designs. Systematic studies on GenAI in higher education demonstrate that this technology is utilized across various educational activities, including material preparation, instructional design, assessment, and learning support (Athanassopoulos et al., 2026). However, the literature also indicates that the use of GenAI presents not only opportunities but also issues regarding reliability, dependency, ethics, and the need for AI literacy skills.

In pre-service teacher education, this issue is increasingly critical because student teachers are not merely technology users but prospective pedagogical decision-makers. An AI-generated lesson plan may appear systematic and engaging, yet it might not necessarily align with learners' needs (Vernholz & Sims, 2026; Lammert et al., 2024). In the context of Teaching English to Young Learners (TEYL), for instance, AI might produce activities that are linguistically correct but too difficult for children, games ill-suited to the lesson duration, overly complex instructions, or activities that offer insufficient opportunities for meaningful interaction. Consequently, the quality of GenAI utilization hinges largely on the student teachers' ability to evaluate, modify, and adapt the outputs provided by the technology (Chung et al., 2026).

Research on GenAI in teacher education highlights its potential to support lesson planning and professional learning, while emphasizing the need for AI literacy, ethical awareness, and critical evaluation of AI-generated outputs (Bond et al., 2025; Peng, 2026). These concerns are particularly relevant to Teaching English to Young Learners (TEYL), where materials and activities must reflect children's developmental characteristics, language proficiency, and interactional needs. The TPACK framework offers a useful perspective on how technological, pedagogical, and content knowledge inform instructional decisions (M. Mishra et al., 2022). Other research suggests that pre-service teachers' technological and pedagogical knowledge can influence the quality of their interactions with GenAI. Studies

show a link between AI proficiency and "Intelligent-TPACK" on the one hand, and the quality of prompting strategies and the ability to create more adaptive lesson plans on the other (Tan et al., 2025; Wijanarko et al., 2025). These findings indicate that the quality of AI output is determined not only by the technology's capabilities but also by the user's pedagogical knowledge and judgment. In short, while GenAI can serve as a valuable resource in lesson design, the quality of its application ultimately depends on the competence of the human user (Ganaie, 2026; Cordero et al., 2025). However, further contextual understanding is needed of how prospective English teachers bring these considerations together when evaluating and adapting GenAI outputs for young learners. Addressing this intersection, the present study examines students' pedagogical judgment during lesson planning, peer-based microteaching, feedback, and revision, focusing on their reasoning and adaptation practices rather than measuring competence development or teaching effectiveness.

This issue is highly relevant to the TEYL (Teaching English to Young Learners) course at UIN Salatiga. The TEYL course at UIN Salatiga provides a relevant context for examining how pre-service teachers draw on their knowledge of young learners, instructional design, and TPACK when engaging with GenAI. Rather than focusing solely on whether students use AI, this study investigates how they exercise pedagogical judgment to evaluate and adapt AI-generated materials for teaching English to young learners.

In the context of language acquisition, this issue is crucial because instructional designs for children must foster an environment that facilitates language acquisition through comprehensible input, interaction, opportunities for language use, repetition, and support tailored to their developmental stages. If AI output is not critically evaluated, there is a risk that the resulting lesson plans will prioritize material structure over the children's language acquisition process. Conversely, students with sound pedagogical judgment are expected to view AI output as a starting point, subsequently adapting it to align with developmental characteristics, language proficiency, classroom context, learning objectives, and TEYL principles.

Thus, the use of GenAI in TEYL should not be understood merely as a matter of technological adoption or prompt generation. Existing research has increasingly highlighted the potential of GenAI to support lesson planning, instructional material development, reflection, and other aspects of pre-service teacher education. At the same time, emerging studies suggest that the pedagogical value of AI-generated content depends on teachers' ability to critically examine, refine, and contextualize what AI produces. In TEYL, this issue becomes particularly important because instructional decisions need to account for young learners' developmental characteristics, language proficiency, attention, interactional needs, and learning through play, movement, repetition, and multimodal support (Kuanysheva et al., 2025).

Despite growing research on GenAI in teacher education, less is understood about how pre-service English teachers evaluate and adapt AI-generated instructional content in Teaching English to Young Learners (TEYL). In particular, the process through which they identify pedagogical limitations, assess suitability for young learners, and revise AI-generated

materials for specific teaching contexts remains insufficiently explored. This gap lies at the intersection of GenAI-assisted teacher education and TEYL pedagogy, particularly in the Indonesian EFL context. While existing studies have addressed AI literacy, lesson planning, and reflective practice, further process-oriented evidence is needed to explain how prospective teachers translate these considerations into concrete evaluative and adaptive decisions. This issue matters because AI-generated materials may appear complete and engaging yet fail to accommodate children's developmental characteristics, language proficiency, and interactional needs. Accordingly, this study examines how pre-service English teachers at an Indonesian Islamic university evaluate and adapt GenAI-generated teaching materials through lesson planning, peer-based microteaching, feedback, and revision.

This study uses *AI-mediated pedagogical judgment* to describe how pre-service English teachers evaluate and adapt GenAI-generated materials for Teaching English to Young Learners (TEYL). The concept draws on pedagogical reasoning and teacher judgment but focuses specifically on decisions about whether AI-generated content is suitable for young learners and how it should be revised. Unlike critical AI literacy, which concerns the broader ability to understand and evaluate AI, this concept foregrounds the application of pedagogical considerations to AI-generated teaching materials. TPACK provides a complementary lens for understanding how technological, pedagogical, and content knowledge inform these decisions. In this study, AI-mediated pedagogical judgment is examined through students' decisions to accept, modify, contextualize, or reject AI-generated content in relation to children's developmental characteristics, language proficiency, learning objectives, interactional needs, and cultural contexts. The concept thus offers a context-specific perspective on pedagogical decision-making in GenAI-assisted TEYL without claiming to establish a new theory of teacher competence.

Against this background, this study examines how English Education students exercise AI-mediated pedagogical judgment when evaluating and adapting generative artificial intelligence (GenAI) outputs for Teaching English to Young Learners (TEYL). It addresses three research questions: (1) What characteristics and limitations do students encounter in GenAI-generated materials when designing TEYL lessons? (2) How do students evaluate the suitability of these materials for young learners' developmental characteristics and language-learning needs? and (3) How do students adapt GenAI-generated materials in light of pedagogical, content-related, technological, and contextual considerations?

The study contributes to TEYL and pre-service English teacher education by providing an empirical account of how prospective teachers move from AI-generated ideas to pedagogically informed decisions. Rather than treating GenAI as a source of ready-to-use instructional content, the study highlights an iterative process of evaluation, adaptation, enactment, feedback, reflection, and revision. This perspective positions AI-mediated pedagogical judgment as a complementary process through which GenAI can support, rather than replace, prospective teachers' pedagogical decision-making in TEYL.

METHODS

This study employed a qualitative single-case study design to examine how pre-service English teachers evaluated and adapted generative artificial intelligence (GenAI) outputs for Teaching English to Young Learners (TEYL). This design enabled an in-depth investigation of the process within its educational context (Yin, 2018). The study was conducted in the Practicing of TEYL course at the English Education Study Program, UIN Salatiga, during the 2025/2026 academic year, involving two sixth-semester classes with 25 and 23 students. The unit of analysis was students' pedagogical judgment in evaluating and adapting GenAI-generated teaching materials. The activities examined included lesson planning, GenAI use and evaluation, material adaptation, peer-based microteaching, feedback, reflection, and revision. All 48 students were enrolled in the regular course. Data were collected through classroom observations, analysis of teaching documents, and interviews with 10 students to explore their experiences and reasoning in evaluating and adapting GenAI-generated materials.

Data were collected through classroom and microteaching observations, semi-structured interviews, and document analysis. Observations focused on students' evaluation and adaptation of GenAI outputs, including materials, activities, instructions, and media. Interviews were conducted with 10 volunteers, five from each class, to explore their use of GenAI, reasons for accepting or modifying its outputs, and consideration of young learners' needs. The interviews were recorded with consent and transcribed. The 10 interviews provided in-depth accounts of students' experiences, although voluntary participation may have limited the range of perspectives represented. Documents included lesson plans, activity designs, instructional materials, and learning products. Original GenAI prompts and outputs were examined where available to trace revisions from AI-generated drafts to final materials. The analysis distinguished between adaptations directly traceable to source outputs and students' accounts of their decision-making when those outputs were unavailable.

Data were analysed thematically using NVivo through coding, categorization, theme development, and interpretation. The researcher conducted the coding using a hybrid approach combining inductive codes from the data, such as simplifying language, modifying activities, and contextualizing content, with theory-informed codes based on TEYL principles and TPACK. Related codes were grouped into categories and themes by comparing classroom observations, interviews, and teaching documents. The researcher reviewed the coded data and emerging themes against the evidence. TEYL and TPACK served as interpretive lenses rather than predetermined findings, while AI-mediated pedagogical judgment emerged as an analytical concept for understanding how students evaluated and adapted GenAI outputs to meet TEYL demands.

Trustworthiness was supported through triangulation of classroom observations, interviews, and teaching documents, allowing comparison of students' reported reasoning, observed practices, and instructional products across the two classes. Inconsistencies were considered in relation to their sources and contexts. Participant codes (M1–M10) were used to protect confidentiality. However, no formal procedures for seeking deviant cases,

maintaining an audit trail, or recording reflexive notes were undertaken, which limits the transparency of the analytical process. Permission to conduct the study was obtained from the English Education Study Program at UIN Salatiga. The researcher recruited participants and explained the study's purpose and data use, emphasizing that participation was voluntary and would not affect their course grades.

FINDING AND DISCUSSION

Analysis of observations involving 48 students, interviews with 10 students, and instructional documents showed that students used GenAI primarily to generate initial ideas and drafts rather than ready-to-use teaching materials. They evaluated these outputs against TEYL principles, adapted activities to young learners' characteristics, tested their designs through peer-based microteaching, and revised them based on peer feedback. These findings indicate that GenAI supported an iterative process of pedagogical decision-making rather than merely facilitating lesson-plan generation.

This pattern is particularly relevant to TEYL. A lesson for children cannot be judged only from the linguistic accuracy of its materials. Students also need to consider children's cognitive and language development, their need for interaction and concrete experiences, the comprehensibility of the language input, and opportunities for response, repetition, movement, games, and visual support. The students' lesson plans and teaching practices showed that these considerations were part of the decisions they made when adapting AI-generated materials.

Characteristics of Generative AI Output in TEYL Lesson Design

The analysis showed that students used GenAI mainly at the beginning of the lesson-design process. They asked AI to generate ideas for lesson plans, learning objectives, activities, classroom English, storytelling, songs and movement, TPR, games, role-play, instructional media, and teaching steps. In this respect, AI was useful as a design assistant because it allowed students to obtain several teaching alternatives in a relatively short time.

At the same time, the AI-generated materials were often generic. The plans could look complete and well organized, but they did not necessarily reflect the particular characteristics of the children for whom the lesson was intended. This became clear from the way students described their own use of AI. They did not simply copy the generated materials. Instead, they considered what needed to be changed before the materials could be used in a TEYL setting.

One student, for instance, explained:

"I still use AI when creating lesson plans, especially for brainstorming activity ideas and outlining the steps. However, I don't use the AI output exactly as is; I adapt it to the specific children I'll be teaching—adjusting the content, the language used, and the activities." (M1, participant quote)

M1 explained that AI was mainly used to generate initial ideas and lesson outlines, which were then adjusted to suit the intended learners in terms of content, language, and activities. This account was considered alongside classroom observations and instructional

documents to understand how students worked with AI-generated materials. The researcher interpreted these adjustments as an indication that students were beginning to consider what makes a lesson appropriate for young learners. In this context, "developmentally appropriate pedagogy" is the researcher's interpretation, rather than a term used by M1.

A similar issue appeared when AI generated activities described as "interactive" but which relied heavily on worksheets or lengthy verbal responses. In the students' lesson designs, interaction was more often associated with movement, gestures, concrete objects, pictures, songs, games, repetition, and short responses.

One student stated:

"If the AI suggests an activity that relies heavily on worksheets, I usually modify it. For young children, I prefer activities that involve movement, such as TPR or games. So, it's not that I discard the AI's output; rather, I take the core idea and adapt it to align with the TEYL methods we've studied." (M5, participant quote)

What M5 described was not a rejection of the AI-generated idea. The student kept the basic idea but changed the way the activity would be carried out. From a theoretical perspective, this can be related to multimodality and embodied learning, since the revised activities connect language with movement and other forms of representation. These terms, however, are part of the researcher's interpretation of the students' decisions and were not terms used by M5.

TPR, for instance, links language to physical responses, so children are not always required to produce language directly (Chachlioutaki & Pantidos, 2024). In this study, students' use of movement and TPR can be understood as one way of making AI-generated activities more suitable for the way they understood young children to learn.

The issue also relates to comprehensible input. Language presented to young learners needs to be supported by context, visuals, gestures, actions, and repetition. When students simplified AI-generated instructions or added gestures and visuals, they were making the input easier to follow within the activity. Again, the students did not necessarily describe their decisions using the term "comprehensible input"; the connection is made here to explain the pedagogical reasoning behind their adaptations.

The students' use of TPR and repetition is also consistent with research on TEYL in Indonesia. Studies have shown that combining language, movement, and repetition can support children's vocabulary learning. Research with preschool learners in EFL settings has also reported that songs and TPR can facilitate vocabulary acquisition, particularly when used together (Syafei et al., 2025; Meisuri et al., 2025).

When students changed a worksheet-based activity into a game or movement-based activity, the change was therefore more than a matter of personal preference. It reflected their attempt to make the activity fit the learners they had in mind. What is important here is that the students did not treat the AI output as something fixed. They used their knowledge of TEYL to decide what could be kept and what needed to be changed.

The generic nature of AI-generated materials was also visible in the use of classroom English. AI could produce grammatically correct instructions, but grammatical correctness did not necessarily make those instructions appropriate for young learners. One student teacher explained: *"I once asked AI to generate classroom English for a game activity. It turned out the sentences were too long. After trying them out, I realized it was better to use short instructions like 'Stand up,' 'Make a circle,' or 'Your turn.' So, I learned that teacher language must also be adapted to the children's abilities."* (M8, participant quote)

M8's experience shows how the student evaluated the AI-generated language after considering its use in a teaching situation. The student noticed that the sentences were too long and replaced them with shorter expressions. Teacher language in TEYL functions not only as language input but also as a means of guiding children's actions. Lengthy or abstract instructions may make this more difficult, whereas short instructions supported by gestures, demonstrations, and the activity itself can help children connect language and meaning (Munir, 2025).

The important point from this finding is that students did not evaluate classroom English only by asking whether the sentences were grammatically correct. They also considered whether the children would be able to understand and act on the instructions. This is one of the ways in which pedagogical judgment became visible in their use of GenAI.

Evaluation of AI Output through Principles of Child Language Acquisition

The second research focus shows that students' evaluation of AI-generated materials was closely connected to their understanding of how children learn language. In the data, five considerations appeared repeatedly: comprehensible input, interaction, scaffolding, repetition, and multimodal involvement. These considerations help explain why students kept some parts of the AI output while changing or removing others.

First, students considered whether the language generated by AI was understandable for children. When the vocabulary, sentence structure, or instructions were considered too difficult, they simplified them. This was particularly visible in storytelling activities.

"AI stories are usually quite long. I don't use them all. I choose the important parts, I simplify the vocabulary, then I add pictures and simple questions so that children don't just listen." (M6, participant quote)

M6 described several specific changes: selecting only important parts of the story, simplifying vocabulary, and adding pictures and simple questions. The student therefore did not use the AI-generated story as a complete text. The story was treated as material that still needed to be shaped for teaching. Pictures, gestures, expressions, questions, and repetition can be understood as ways of helping children access the language being presented. The term "scaffolding" can also be used to interpret this kind of support, although it should be noted that the participant did not use this theoretical term when describing the activity.

Second, students considered whether the activity gave children enough opportunity to participate. Children need opportunities to respond, imitate, choose, ask, move, and use simple expressions rather than only listen to the teacher. Research on social interaction in

children's second language acquisition similarly emphasizes conversations with peers, group assignments, interaction with teachers, and scaffolding as opportunities for input, output, and feedback (Xiao et al., 2025; Katamadze et al., 2025).

This consideration was visible when students changed activities that were mainly teacher-led into activities involving pointing, choosing, repeating, acting out, or answering simple questions. In other words, they tried to give children something to do with the language rather than simply receive it.

Third, the findings can be discussed in relation to scaffolding. In TEYL, support can be provided through modeling, gestures, visuals, repetition, sentence frames, answer choices, and gradual assistance (Mechelle et al., 2024). When students provided examples before asking children to respond, for example, they were giving learners a model to follow.

The important change was therefore not simply that the students made an activity easier. They also changed the support available to learners while carrying out the activity. This is one of the points where the students' TEYL knowledge influenced the way they adapted AI-generated materials.

Fourth, repetition appeared frequently in students' decisions about songs, stories, TPR, and games. Young learners need repeated exposure to language forms, but repetition does not necessarily have to take the form of mechanical drilling. TPR, songs, stories, and games can provide repeated language exposure within an activity. Research on TPR and repetition similarly highlights the relationship between movement, language, and vocabulary learning (Triristina & Fikria, 2025).

This helps explain why students modified AI-generated songs and games. They were not simply looking for activities that were "fun." They also considered what language children would encounter repeatedly and whether the activity had a clear learning purpose.

When working with songs and movement, for instance, students considered factors such as song length, vocabulary load, repetition, and movements:

"If the song is too long or contains too much vocabulary, children might lose focus. So, I select the simplest parts and adjust the movements accordingly. AI helps generate ideas, but I decide what is realistic for the children." (M7, participant quote)

M7's statement clearly shows the student's concern with song length, vocabulary, movement, and children's attention. The final sentence is particularly relevant to the role of GenAI in the course: AI generated the possibilities, but the student made the final decision about what was realistic for the intended learners.

This also shows why an engaging activity should not automatically be considered a good language-learning activity. Songs may be attractive to children, but their use still needs to be connected to learning objectives. A systematic review of research on songs in children's language learning also points to the need for careful interpretation of their linguistic impact because the quality of research designs varies (Hamilton et al., 2024). In the present study,

students who connected songs with vocabulary, repetition, pronunciation, listening, or movement were making decisions based on both engagement and learning purposes.

Fifth, students also considered the role of games. In TEYL, games are not simply a break from learning. They still need understandable rules, opportunities for interaction, an appropriate level of difficulty, and a clear connection with language learning. Research on game-based learning among young learners has shown the widespread use of games in EFL instruction, particularly to increase engagement and learning interest (Saputra et al., 2021).

When students simplified AI-generated game rules, they were attempting to make the activities easier for the intended learners to understand and follow. Although the study did not assess these adaptations with actual young learners, the findings show that pre-service teachers considered how activity complexity should match learners' characteristics.

Taken together, these findings show how students brought their understanding of child language learning into their decisions about AI-generated materials. TEYL knowledge was not only something they had learned in class; it was also used when they had to decide whether a particular AI suggestion could actually work for children.

Adaptation through Microteaching: From Planned Pedagogy to Enacted Pedagogy

The third research focus shows that students' adaptation of AI-generated materials continued after the lesson plan had been prepared. The differences became more visible when students actually taught the lesson during microteaching.

A student explained:

"During microteaching, I couldn't follow the lesson plan one hundred percent. There were parts I improvised because the responses from my peers—who were acting as students—differed from what I had imagined. So, while the AI-generated lesson plan served as a guide, I adjusted its implementation to suit the actual situation." (M3, participant quote)

M3's experience shows a clear difference between what had been planned and what happened during teaching. The student expected certain responses but had to improvise when the peers acting as students responded differently. The AI-generated lesson plan therefore remained a guide rather than something that had to be followed exactly.

This experience is relevant to the distinction between planned and enacted pedagogy. A lesson plan can be carefully organized before teaching, but teaching itself involves responses that cannot always be predicted. In TEYL, children may misunderstand instructions, lose focus, finish an activity earlier than expected, or respond in unexpected ways. Teachers therefore need to adjust their decisions while keeping the learning objective in mind.

At the same time, the microteaching setting needs to be considered carefully. The "students" in this activity were peers, not actual young learners. Their responses cannot be treated as equivalent to the behavior, developmental characteristics, language abilities, or attention patterns of children. For this reason, the microteaching data should not be used to claim that the adapted materials were effective for young learners.

What the microteaching does provide is evidence of the prospective teachers' pedagogical reasoning. Students had an opportunity to see how their plans worked in a teaching situation, notice unexpected responses, and make decisions about what needed to be changed. In this sense, microteaching functioned as a practice space in which students could examine the feasibility of their designs.

Improvisation in this context was therefore not simply a failure to follow the lesson plan. It showed that students were beginning to see teaching as something that requires adjustment during implementation. The experience also gave them a reason to return to their lesson plans and reconsider some of the decisions they had made earlier.

Peer-based microteaching formed one stage of students' AI-mediated pedagogical judgment, allowing them to consider lesson flow, clarity of instructions, activity design, and the suitability of materials before potential use in a TEYL classroom. However, peer simulation differs from teaching actual young learners, whose responses, attention spans, and learning needs may be different. The findings therefore provide insight into students' planning, adaptation, and reflection, but cannot establish how the materials would function in authentic classrooms or demonstrate their effectiveness for young learners.

Peer Feedback as a Second Layer of Pedagogical Evaluation

Peer feedback provided another opportunity for students to evaluate their teaching after the microteaching session. One student remarked:

"After the microteaching session, my peers provided feedback. Some noted that my instructions were too long and the transitions between activities were too rapid. Based on that, I revised my lesson plan. So, the process wasn't just about the AI generating content and me using it; there was also feedback and revision involved." (M9, participant quote)

M9's statement illustrates how feedback led to further changes in the lesson plan. The student received comments about the length of the instructions and the speed of transitions and then used those comments when revising the design. This is important because it shows that the students' use of GenAI was connected to other sources of evaluation.

Across the data, students' engagement with GenAI can be understood as an iterative process involving AI-generated ideas, student evaluation, pedagogical adaptation, peer-based microteaching, feedback, reflection, and revision. This model was developed by comparing patterns across classroom observations, interviews, and instructional documents. AI outputs provided an initial point of reference, while students' evaluations and adaptations reflected their own pedagogical decisions. Microteaching and peer feedback offered opportunities to reconsider lesson designs and make further changes. However, the process should not be understood as a fixed sequence followed identically by all students; the available evidence reflects a broader pattern of engagement rather than a uniform trajectory. Reflection and revision were shaped by the course activities, rather than being automatic outcomes of GenAI use. Moreover, peer-based microteaching provided insight into students' planning and decision-making but did not establish the effectiveness of the adapted materials with actual young learners.

The findings also raise a broader point about AI competence in teacher education. Being able to write sophisticated prompts does not necessarily mean that a student can use AI pedagogically. A student may generate a detailed lesson plan but still accept unsuitable content without questioning it. In contrast, a student using a relatively simple prompt may demonstrate stronger pedagogical judgment if they can identify weaknesses in the output, adapt it using TEYL knowledge, and examine the result through practice. Thus, the relevant competence is not only the ability to obtain something from AI, but also the ability to decide what to do with what AI provides.

Cultural Contextualization as Part of Pedagogical Adaptation

Students also adapted AI-generated materials to the cultural context of the learners. Some students noticed that examples generated by AI were too generic or reflected experiences that were not necessarily familiar to Indonesian children.

"When I ask AI to create material about daily activities, the examples are sometimes too generic or reflect the lives of children abroad. I adapt them to the lives of children in Indonesia. I find it easier when the examples relate to their own lives." (M10, participant quote)

M10's statement shows that the student noticed a mismatch between some AI-generated examples and the experiences of Indonesian children. The response was to replace or modify the examples so that they were closer to the children's lives.

For young learners, familiar contexts can make it easier to connect new language with what they already know. In the present study, cultural adaptation was therefore part of the wider process of adapting AI-generated materials. The issue was not that every AI-generated example was inappropriate, but that students recognized situations in which generic or foreign examples needed to be changed.

For example, a "food" lesson can use foods familiar to the children, an "animals" lesson can include animals they encounter, and a "daily activities" lesson can draw on experiences at home or school. Stories can also use settings and situations that are close to children's everyday lives. In these cases, students were adapting not only the teaching method but also the context in which the language was presented.

This finding is important because it shows that the suitability of AI-generated materials depends partly on the classroom context. GenAI can provide a wide range of examples, but it does not automatically know which examples are meaningful for a particular group of children. The teacher therefore remains responsible for making that connection.

Discussion Confirming and Extending Previous Research

The findings are consistent with previous studies that highlight the use of TPR, repetition, songs, games, interaction, and scaffolding in TEYL (Syafei et al., 2025; Meisuri et al., 2025; Triristina & Fikria, 2025; Xiao et al., 2025; Katamadze et al., 2025; Mechelle et al., 2024). In the present study, these practices appeared when students evaluated and adapted AI-generated teaching ideas. Rather than using the output directly, they selected, modified, practiced, and revised it.

This process is important in TEYL because an activity that looks appropriate in an AI-generated lesson plan may not necessarily suit young learners. Students had to consider language level, activity difficulty, opportunities for interaction, and the connection between the activity and the learning objective. AI provided ideas and alternatives, but students still decided what to keep, change, or remove. In this way, their TEYL knowledge became a basis for instructional decision-making rather than remaining only theoretical knowledge (A. R. Adisti et al., 2023).

Looking across the findings, the students' use of GenAI followed an iterative process: GenAI-generated ideas → TEYL-based evaluation → pedagogical and contextual adaptation → lesson planning → microteaching → peer feedback → reflection → revised teaching design. This process is referred to as AI-mediated pedagogical judgment. It describes how students used AI as a source of ideas while retaining responsibility for deciding whether and how those ideas could be used in TEYL (see Table 1).

Table 1. AI-Mediated Pedagogical Judgment Process in TEYL

No.	Process Stage	Student Activity	Pedagogical Function	Evidence Source
1	AI-generated idea	Generating initial ideas through GenAI for lesson plans, activities, language, media, and TEYL materials.	Providing alternatives and resources for instructional ideas.	Interviews, instructional documents
2	TEYL-based evaluation	Evaluating the suitability of AI-generated outputs based on the characteristics and needs of young learners.	Ensuring developmental and language-learning appropriateness.	Interviews, observations, instructional documents
3	Pedagogical and contextual adaptation	Simplifying language, adjusting activities, adding movement and visual support, and contextualizing learning materials.	Transforming generic AI outputs into materials that are more appropriate for learners' needs and the learning context.	Interviews, instructional documents
4	Lesson planning	Integrating the adapted outputs into TEYL and TPACK-based lesson plans.	Connecting technological, pedagogical, and content knowledge in instructional design.	Instructional documents, interviews

No.	Process Stage	Student Activity	Pedagogical Function	Evidence Source
5	Microteaching	Implementing the instructional design through teaching practice.	Testing the feasibility of the instructional design in practice.	Classroom and microteaching observations
6	Peer feedback	Receiving and considering feedback from peers.	Identifying areas for improvement and potential weaknesses in the learning design.	Observations, interviews
7	Reflection	Reflecting on experiences during lesson planning and teaching practice.	Developing pedagogical awareness and decision-making skills.	Interviews, observations
8	Revised teaching design	Revising lesson plans, activities, language, media, or strategies based on evaluation results.	Producing a more responsive and contextualized TEYL instructional design.	Instructional documents, interviews

Table 1 summarizes how students evaluated and adapted GenAI outputs using their TEYL knowledge, then refined their lesson designs through microteaching, peer feedback, and reflection. The stages represent an overall pattern in the data, not a fixed sequence followed by every student.

This also helps explain the contribution of the study. GenAI was not simply used to produce lesson plans more quickly. Its output became part of a process in which students questioned, adapted, tested, and revised teaching ideas. An AI-generated activity may be well written, but students still need to consider whether it is understandable, manageable, relevant to the learners, and connected to the intended learning. The findings therefore extend previous discussions of AI-supported lesson planning by showing the importance of TEYL knowledge as a filter for AI-generated content.

Study Limitations

This study has three main limitations. First, it was conducted in a single institutional and course context, involving 48 students in observations and 10 in interviews. Second, microteaching involved peers acting as pupils rather than actual young learners; thus, the findings reflect prospective teachers' pedagogical reasoning rather than the effectiveness of the materials with children. Third, the GenAI tools, models, and prompting strategies used by participants were not systematically documented or controlled, limiting comparisons of how variations in AI use may have influenced the outputs and subsequent adaptations.

CONCLUSION

This study shows that pre-service English teachers used GenAI as a starting point for TEYL lesson design, while relying on their own pedagogical judgment to evaluate and adapt its outputs. Its main contribution is the concept of *AI-mediated pedagogical judgment*, which describes how prospective teachers make decisions about AI-generated materials through evaluation, adaptation, peer-based microteaching, feedback, and revision. This perspective highlights the importance of integrating GenAI use with TEYL knowledge and opportunities for pedagogical reflection in teacher education. However, the findings are drawn from one course and peer-based microteaching and therefore do not establish the effectiveness of adapted materials with actual young learners. Further research in authentic TEYL classrooms is needed to examine how these pedagogical decisions translate into teaching practice and relate to children's engagement and learning.

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