THE EFFECTIVENESS OF ONLINE TUTORIALS (TUTON) IN ENHANCING COMPETENCE OF PGPAUD STUDENTS AT UNIVERSITAS TERBUKA

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Abstract

This study investigates the effectiveness of online tutorials (tuton) in improving the pedagogical competence of students in the Early Childhood Education Teacher Education Study Program (PGPAUD) at Universitas Terbuka (UT). Using a qualitative descriptive approach, the study analyzes student reflections and perceptions from the online tutorial *Media and Learning Resources for Early Childhood* course. This study explored around 75 students' responses from three classes who took *Media and Learning Resources for Early Childhood* course online tutorials which were held on April to June 2025. The results reveal that the provisions of online tutorials significantly supports the students' mastery of content, creativity in media usage, and professional readiness. Nevertheless, issues such as limited real-time interaction and time-management difficulties were noted. The study recommends integrating live webinar sessions to enhance interactivity and learning outcomes.

Keywords: distance education, tutorial online, PGPAUD, pedagogical competence, media for early childhood, Universitas Terbuka

1 BACKGROUND

The rapid advancement of information and communication technology (ICT) has transformed the landscape of education worldwide, enabling the emergence of flexible, accessible, and learner-centered approaches such as open and distance learning (ODL). In Indonesia, Universitas Terbuka (UT) serves as a pioneer of ODL, offering higher education opportunities for students who are geographically dispersed, employed full-time, or require flexible learning schedules. Among its many programs, the Early Childhood Teacher Education Program (PGPAUD) holds a crucial role in preparing future educators who can foster holistic child development through innovative and pedagogically sound practices.

Pedagogical competence is one of the core competencies required of early childhood educators. According to the National Association for the Education of Young Children (NAEYC, 2020) and the Indonesian Ministry of Education (Permendikbud No.137/2014), pedagogical competence encompasses the ability to understand child development, design age-appropriate learning experiences, utilize educational media effectively, and engage in reflective teaching

practices. In the era of digital transformation, early childhood teachers are expected not only to master conventional teaching strategies but also to integrate technology and media creatively to support children's learning. Therefore, developing these competencies through flexible and accessible learning modalities is essential, particularly for PGPAUD students who are often adult learners balancing work, family, and study commitments.

To support the development of these competencies, Universitas Terbuka provides Online Tutorials (Tuton) as a key component of its learning support system. Tuton is a structured online tutorial conducted over a semester, consisting of weekly modules, asynchronous discussion forums, assignments, and tutor feedback. It is designed to encourage independent learning while maintaining meaningful interaction with tutors and peers. Through Tuton, students are expected to deepen their conceptual understanding, engage in reflective discussions, and apply theoretical knowledge to practical contexts—skills that are directly related to pedagogical competence.

However, despite its potential, the effectiveness of Tuton in developing professional competencies such as pedagogical skills remains an area requiring continuous evaluation. Several studies (e.g., Moore & Kearsley, 2012; Garrison, 2020) suggest that online learning environments often face challenges in fostering deep learning due to limited real-time interaction, varying digital literacy levels, and differences in student engagement. Specifically, for PGPAUD students who need hands-on experience in designing and using media for early childhood education, the absence of synchronous learning opportunities may hinder their ability to translate theory into practice. Furthermore, time management difficulties and limited digital skills can also impact learning outcomes and satisfaction.

Given these considerations, it becomes important to examine whether Tuton, as currently implemented, effectively supports PGPAUD students in mastering pedagogical competencies—particularly in selecting and designing media, developing learning plans, and engaging in reflective practice. This research focuses on analyzing students' experiences, perceptions, and reflections regarding their participation in the Tuton for the course Media and Learning Resources for Early Childhood. By exploring their insights, this study seeks to identify both the strengths and areas for improvement in UT's online tutorial model, contributing to the enhancement of online learning design for teacher education programs in Indonesia and beyond.

Ultimately, the findings of this research are expected to provide valuable input for improving the quality of distance education at Universitas Terbuka, aligning it with global best practices

in online learning and ensuring that PGPAUD graduates possess the pedagogical competence needed to meet the demands of 21st-century early childhood education.

2 LITERATURE REVIEW

2.1 Distance Education and Online Tutorials

Distance education has evolved significantly over the past few decades, shifting from correspondence learning to technology-mediated online environments. According to Moore and Kearsley (2012), distance education is characterized by structured learning in which the teaching and learning processes are separated by time and place but connected through technological and instructional systems. One of the central concepts in distance education is Transactional Distance Theory (Moore, 1993), which posits that the quality of distance learning depends on three interrelated variables: dialogue, structure, and learner autonomy. When well-balanced, these elements can reduce the psychological and pedagogical distance between tutor and learner, leading to more meaningful learning experiences.

In the context of Universitas Terbuka (UT), the Online Tutorial (Tuton) system represents an essential component of its Open and Distance Learning (ODL) model. Tuton serves as a structured and interactive learning platform delivered through UT's Learning Management System (LMS). It is designed to guide students through weekly modules, promote engagement through discussion forums, and assess learning through assignments and tutor feedback. The platform embodies the principle of autonomous learning (Anderson, 2017), enabling students to manage their learning pace while still receiving guidance and feedback from tutors.

Furthermore, research by Garrison, Anderson, and Archer (2000) introduced the Community of Inquiry (CoI) framework, which emphasizes three key dimensions in online learning: cognitive presence, social presence, and teaching presence. These elements must coexist to foster meaningful learning in online environments. Within Tuton, cognitive presence is built through weekly activities and reflective tasks, teaching presence is facilitated by tutors' guidance and feedback, and social presence emerges through peer interaction in asynchronous forums. However, the absence of synchronous sessions may limit real-time interaction, which is crucial for building a stronger sense of community and collaboration (Lowenthal & Dunlap, 2018).

In addition, Anderson's Interaction Equivalency Theorem (2003) highlights that effective learning can be achieved as long as one form of interaction—student-content, student-teacher, or student-student—is highly developed. In the Tuton model, student-content interaction is prioritized through structured modules and media, while tutor support and peer collaboration

are provided through online discussions. Nevertheless, challenges remain in sustaining high levels of engagement and ensuring equitable access to digital resources (Means et al., 2020).

The increasing reliance on digital learning also demands enhanced digital literacy among students and tutors. According to UNESCO (2021), digital competence includes the ability to navigate online platforms, critically engage with content, and use technology for meaningful learning. For PGPAUD students—who are future educators—this literacy is essential not only for their academic success but also for integrating technology into early childhood learning environments. Hence, evaluating the effectiveness of Tuton in fostering both pedagogical and digital competencies is crucial to ensuring the success of distance teacher education programs. Overall, the literature suggests that well-structured online tutorials can effectively support student learning, provided they incorporate interaction, reflection, and scaffolding. However, balancing flexibility with engagement remains a persistent challenge, especially for adult learners managing multiple roles (Knowles, 1984). This study therefore examines how UT's Tuton facilitates these components to enhance PGPAUD students' pedagogical competence.

2.2 Pedagogical Competence in Early Childhood Education

Pedagogical competence refers to the integrated knowledge, skills, and attitudes required to design, implement, and evaluate effective learning experiences. In the context of Early Childhood Education (ECE), pedagogical competence is multifaceted, encompassing understanding of child development, mastery of instructional strategies, creative use of educational media, and reflective professional practice (Bredekamp, 2019; NAEYC, 2020).

According to Shulman (1987), effective teaching requires Pedagogical Content Knowledge (PCK)—the combination of subject matter expertise and pedagogical strategies tailored to learners' developmental needs. For early childhood educators, this means being able to design play-based, inquiry-driven, and developmentally appropriate learning experiences that nurture cognitive, emotional, social, and moral growth.

In Indonesia, the Ministerial Regulation No. 137/2014 outlines the standards of teacher competence, including pedagogical, professional, social, and personal domains. Among these, pedagogical competence is considered foundational, covering the ability to understand children's characteristics, plan and implement learning, use appropriate media, and assess learning outcomes. For PGPAUD students at Universitas Terbuka, these competencies are embedded in the curriculum, particularly through courses such as *Media and Learning Resources for Early Childhood*.

Modern pedagogical competence also requires proficiency in digital pedagogy—the ability to leverage technology to enhance learning. Mishra and Koehler's (2006) Technological Pedagogical Content Knowledge (TPACK) framework emphasizes the integration of technology into pedagogy and content knowledge, highlighting the need for educators to creatively design learning experiences using digital tools and media. In this regard, online tutorials like Tuton can serve as a dual platform: both as a learning medium and as a model for integrating technology into teaching practice.

Furthermore, research indicates that pedagogical competence develops through reflective practice and collaborative learning (Schön, 1983; Loughran, 2010). Reflection enables educators to analyze their teaching experiences and adapt strategies for improvement, while collaboration fosters peer learning and professional dialogue. Tuton's asynchronous discussion forums provide opportunities for reflection and knowledge sharing, aligning with these theoretical perspectives.

For early childhood educators, media literacy is another critical component of pedagogical competence. Effective use of media—whether digital, print, or manipulative—supports multisensory learning and engages children in meaningful exploration. As UNESCO (2018) notes, the use of developmentally appropriate digital media can enhance creativity, critical thinking, and communication among young learners when guided by informed and competent educators.

However, developing these competencies in a distance learning environment presents unique challenges. Without face-to-face interaction and immediate feedback, students may struggle to contextualize theoretical knowledge into practice. Therefore, online tutorial systems must be designed to promote experiential learning, scaffolded tasks, and constructive feedback, enabling students to internalize and apply pedagogical principles effectively.

3 METHODOLOGY

This study employed a qualitative descriptive research design, which is appropriate for exploring participants' experiences, perceptions, and reflections in a natural setting. The qualitative descriptive approach focuses on providing a rich and detailed account of phenomena as perceived by participants, without imposing complex theoretical interpretations (Sandelowski, 2000). This approach was chosen because the primary aim of the study was to understand how PGPAUD students perceive the effectiveness of online tutorials (Tuton) in developing their pedagogical competence, particularly in areas such as knowledge acquisition, media utilization, and professional readiness.

3.1 Participants

The participants of this study were 75 undergraduate students enrolled in the Early Childhood Teacher Education Program (PGPAUD) at Universitas Terbuka (UT). They were the respondents of the research and also the students who actively participated in the online tutorial for the course *Media and Learning Resources for Early Childhood* during the April–June 2025 semester. The participants represented a diverse group in terms of geographical location, professional background, and teaching experience. Most were practicing early childhood educators who balanced work, study, and family responsibilities, reflecting the typical profile of UT's distance learners.

3.2 Data Collection Procedures

Data were collected through two primary sources:

1. Written reflection prompts, which were part of the course activities in the online tutorial (Tuton). Students were asked to reflect on their learning experiences, focusing on how Tuton helped them understand course content, develop pedagogical skills, and apply media in early childhood education.

2. Semi-structured follow-up interviews, conducted online via Google Meet or telephone, to gain deeper insights into their learning processes, challenges, and perceived benefits of Tuton. Each interview lasted approximately 30–45 minutes and was audio-recorded with participants' consent.

Both instruments were designed to capture students' perspectives in their own words, allowing for flexibility and depth of responses. To ensure data credibility, participants were informed about the study's purpose, and voluntary participation was emphasized. Ethical clearance was obtained from the university, and anonymity was guaranteed.

3.3 Data Analysis

The collected data were analyzed using thematic analysis, following the six-step process outlined by Braun and Clarke (2006):

1. Familiarization with the data through repeated reading of transcripts and reflections.

2. Generating initial codes to label meaningful segments of text related to learning experiences and competence development.

3. Searching for themes by grouping codes into broader categories, such as *knowledge acquisition*, *media competence*, *learning flexibility*, and *professional growth*.

4. Reviewing themes to ensure internal consistency and accurate representation of the data.

5. Defining and naming themes that captured the essence of participants' experiences.

6. Producing the report, supported by representative quotations from participants to illustrate key insights.

To enhance the trustworthiness of the findings, several strategies were applied:

- Triangulation of data sources (reflections and interviews).

- Member checking, where participants reviewed the interpretations to confirm accuracy.

- Peer debriefing with colleagues familiar with qualitative research and distance education.

3.4 Researcher Role

The researcher acted as a facilitator and interpreter, maintaining reflexivity throughout the research process. As an academic affiliated with Universitas Terbuka, the researcher was aware of potential bias and ensured objectivity by systematically coding data and validating themes with peers.

3.5 Limitations

While the qualitative approach provided rich contextual understanding, the small sample size limits generalizability. However, the study's strength lies in its depth of insight, offering practical implications for improving UT's Tuton design and implementation.

4 FINDINGS AND DISCUSSION

This section presents the major findings of the study derived from written reflections and semi-structured interviews with PGPAUD students at Universitas Terbuka (UT). The thematic analysis yielded four dominant themes: (1) knowledge and media competence, (2) learning flexibility for working students, (3) limited interaction and the need for webinars, and (4) preparation for professional practice. Each theme is discussed in relation to existing literature and theoretical frameworks.

4.1 Knowledge and Media Competence

A central finding of this study is that participation in Tuton significantly enhanced students' understanding and application of pedagogical knowledge, particularly in selecting and utilizing learning media appropriate for early childhood education. Many participants indicated that Tuton modules, assignments, and discussion forums improved their ability to align media with children's developmental needs:

"I became more confident in selecting media suitable for PAUD teaching. The examples and discussions helped me understand which materials are appropriate for different age groups."

This finding aligns with Shulman's (1987) concept of Pedagogical Content Knowledge (PCK), which emphasizes that effective teaching requires both subject matter understanding and the ability to convey it using suitable pedagogical strategies and media. In early childhood education, selecting media is not merely about aesthetics but ensuring developmental appropriateness, safety, and alignment with learning objectives (Bredekamp, 2019; NAEYC, 2020).

Through Tuton's structured activities, students engaged with theoretical concepts and applied them to practical contexts. For example, weekly assignments required them to design lesson plans integrating specific media types (e.g., picture cards, digital storytelling, recycled materials). The asynchronous discussion forums allowed them to share ideas, receive peer feedback, and reflect on the effectiveness of their chosen media. This process supported cognitive presence—one of the key dimensions in Garrison's Community of Inquiry (CoI) framework (2000)—where learners construct meaning through continuous reflection and interaction.

Moreover, the development of media competence also reflects progress in digital literacy, an essential skill for 21st-century educators (UNESCO, 2021). Exposure to online resources, tutorials, and digital examples encouraged students to explore new tools, thus enhancing their readiness to integrate technology into their teaching. This outcome suggests that Tuton not only facilitates knowledge acquisition but also cultivates creative and reflective practitioners capable of designing media-rich learning environments.

4.2   Learning Flexibility for Working Students

Another prominent theme concerns the flexibility that Tuton offers. Participants appreciated the asynchronous nature of Tuton, which allowed them to manage learning around professional and personal responsibilities:

"I could learn during break time at school, which made Tuton very practical and manageable for me."

This flexibility is particularly important for UT students, many of whom are adult learners balancing multiple roles as teachers, parents, and students. According to Knowles' (1984) andragogy theory, adult learners value autonomy, relevance, and flexibility. Tuton's self-paced structure supports these principles, enabling learners to control when and how they engage with materials.

Furthermore, the Transactional Distance Theory (Moore, 1993) emphasizes that learner autonomy and instructional structure are key to managing the "distance" in online learning. In

this study, the clear weekly structure and accessible resources helped students stay organized and engaged. However, while flexibility supported participation, it also required strong self-regulation and time management—skills not all students possessed. Several participants admitted struggling to balance work deadlines with Tuton assignments, suggesting the need for additional scaffolding in planning and pacing.

From a pedagogical perspective, this flexibility supports differentiated learning and equitable access, allowing students from various regions and time zones to participate meaningfully. It demonstrates that well-structured online tutorials can expand access to professional education, especially in a geographically diverse country like Indonesia.

4.3   Limited Interaction and the Need for Webinars

Despite the benefits, one consistent challenge identified was the lack of synchronous interaction. Students valued the asynchronous forums but expressed a desire for real-time discussions with tutors and peers:

"While Tuton is informative, live sessions would improve engagement and make learning more interactive."

This finding highlights a gap in social presence, one of the three critical elements of the Community of Inquiry (CoI) framework (Garrison, Anderson, & Archer, 2000). Without opportunities for immediate dialogue, students may feel isolated or disconnected from the learning community. Synchronous sessions, such as Tuweb (Tutorial Webinar), could strengthen this presence, fostering deeper understanding through direct questioning, collaborative discussions, and real-time feedback.

Moreover, synchronous interactions can enhance teaching presence by allowing tutors to clarify misconceptions, model pedagogical practices, and build rapport with students. Studies by Lowenthal and Dunlap (2018) indicate that combining asynchronous and synchronous methods results in higher student satisfaction, motivation, and retention.

Students' suggestions to incorporate Tuweb demonstrate their recognition of the value of multimodal engagement. A blended online approach—integrating asynchronous flexibility with synchronous interactivity—could help balance autonomy with community building. For UT, this implies the need to redesign Tuton structures to include optional live sessions, guest lectures, or virtual workshops, particularly in practice-based courses like early childhood media and pedagogy.

4.4   Preparation for Professional Practice

The final theme concerns how Tuton activities prepared students for professional roles as early childhood educators. Participants emphasized that assignments and discussions required them to design, evaluate, and reflect on lesson plans integrating various learning media. This process enhanced their creativity and confidence in applying theory to practice:

"The assignments made me think critically about how to design media-rich activities that are suitable for children in my class. I now feel more prepared as a PAUD teacher."

This finding aligns with constructivist learning theory (Piaget, 1973; Vygotsky, 1978), which posits that learning is most effective when learners actively construct knowledge through authentic tasks and social interaction. By engaging in real-world problem-solving and peer discussions, students internalized pedagogical concepts and developed professional habits of reflection and adaptation.

The National Association for the Education of Young Children (NAEYC, 2020) emphasizes that competent early childhood educators must demonstrate skills in designing integrated learning experiences, using media effectively, and engaging in continuous reflection. The Tuton's task-based and reflective design supports these competencies, making it a valuable tool for professional preparation.

Moreover, the online environment itself modeled digital pedagogical practices, encouraging students to envision how similar tools could be used in their own classrooms. By navigating online discussions, uploading media-based assignments, and exploring digital learning resources, students simultaneously developed technological pedagogical content knowledge (TPACK) (Mishra & Koehler, 2006), a framework essential for modern teaching.

4.5   Summary of Findings

Overall, the findings suggest that Tuton effectively supports the development of pedagogical competence among PGPAUD students through:

- Knowledge and media competence: Building theoretical understanding and creative media use.

- Learning flexibility: Supporting adult learners' diverse schedules and needs.

- Reflective practice: Encouraging critical thinking and professional growth.

However, challenges persist, including limited social presence and opportunities for real-time interaction, which may impact motivation and depth of understanding. Addressing these issues through synchronous enhancements (e.g., webinars, live discussions) and learning support mechanisms (e.g., time management workshops) could further optimize Tuton's effectiveness.

These findings reinforce the relevance of the Community of Inquiry framework for evaluating online learning in teacher education. They also highlight the applicability of Transactional Distance Theory in understanding the balance between structure, dialogue, and autonomy in distance learning environments. For early childhood education, the integration of PCK and TPACK frameworks demonstrates how online tutorials can foster essential professional competencies in both traditional and digital contexts.

In conclusion, Tuton at Universitas Terbuka serves as an effective medium for developing PGPAUD students' pedagogical competence, especially in knowledge acquisition and media integration. Yet, continuous improvement—particularly through synchronous components and reflective scaffolding—is needed to ensure holistic competency development that meets the standards of 21st-century early childhood education.

5   CONCLUSION AND RECOMMENDATIONS

This study concludes that Online Tutorials (Tuton) at Universitas Terbuka (UT) serve as an effective learning medium for developing pedagogical competence among students in the Early Childhood Teacher Education Program (PGPAUD). Through structured online modules, reflective discussions, and task-based learning, Tuton provides opportunities for students to deepen their understanding of pedagogical theories, enhance their skills in selecting and designing age-appropriate learning media, and cultivate reflective teaching practices essential for professional growth.

The findings demonstrate that Tuton contributes significantly to three key dimensions of pedagogical competence:

1. Knowledge and Media Competence, as students gain theoretical understanding and practical skills in utilizing educational media for early childhood learning.

2. Learning Flexibility, which supports adult learners who balance academic, professional, and personal responsibilities.

3. Professional Readiness, as students develop confidence in designing media-rich lessons and implementing them in authentic teaching contexts.

However, despite its overall effectiveness, several limitations were identified. The asynchronous nature of Tuton, while beneficial for flexibility, tends to reduce real-time interaction and social presence—elements crucial for deeper engagement and collaborative learning. Some students also reported difficulties in managing time and maintaining consistent participation, especially those with full-time teaching commitments. Additionally, varying

levels of digital literacy affected students' ability to navigate the online platform and utilize digital media optimally.

Drawing on these insights, several recommendations are proposed to enhance the quality and impact of Tuton:

1. Integrate Synchronous Webinar Sessions (Tuweb): To strengthen interaction and social presence, UT should complement asynchronous discussions with periodic live webinars. These sessions can facilitate direct dialogue, clarify complex concepts, and foster a stronger sense of community among students and tutors. Synchronous engagement also aligns with the Community of Inquiry (CoI) framework, which emphasizes the importance of cognitive, social, and teaching presence in online learning.

2. Provide Time-Management and Self-Regulation Training: Given the autonomous nature of distance learning, structured orientation or mini-courses on time management, self-directed learning, and motivation strategies can support students in maintaining consistency and avoiding procrastination. This training can be integrated into the initial Tuton sessions or provided as supplemental modules.

3. Enhance Digital Literacy Support: To ensure equitable learning outcomes, UT should offer digital literacy workshops or tutorial videos to help students navigate the learning management system (LMS), access online resources, and utilize educational media effectively. This initiative will empower PGPAUD students to become technologically competent educators, aligning with the demands of 21st-century teaching.

4. Incorporate Reflective and Collaborative Activities: Encouraging students to engage in peer review, group projects, and reflective journals can further develop their critical thinking and collaborative problem-solving abilities. Such activities align with constructivist approaches that emphasize active participation and reflection.

5. Continuous Evaluation and Innovation: UT should regularly evaluate Tuton's design and implementation using student feedback and learning analytics. Integrating emerging technologies such as interactive multimedia, gamification, and virtual simulations can enhance engagement and authenticity in pedagogical training.

In conclusion, Tuton has proven to be a valuable and flexible platform for cultivating pedagogical competence in PGPAUD students. By integrating synchronous elements, strengthening support systems, and fostering digital and reflective skills, UT can further enhance the quality of its distance education programs. These improvements will ensure that

future early childhood educators are not only knowledgeable but also adaptable, reflective, and digitally literate—ready to meet the evolving challenges of early childhood education in the digital era.

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