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Using Video Analysis To Enhance Reflective Thinking And Tpack Integration In ELT Training

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Abstract
This study explores the use of video analysis to enhance reflective thinking and Technological Pedagogical Content Knowledge (TPaCK) integration in English Language Teaching (ELT) training, particularly within the context of Uzbekistan's teacher education reform. As 21st-century classrooms increasingly rely on digital tools, ELT educators must develop the capacity to integrate technology meaningfully into pedagogical practice. Drawing on TPaCK (Mishra & Koehler, 2006) and reflective frameworks (Schön, 1983; Gibbs, 1988), the study proposes a structured model involving microteaching, video recording, and guided reflection using a TPaCK-based rubric. Qualitative data from reflective journals and interviews show that video analysis fosters deeper pedagogical awareness, self-evaluation, and professional growth. The approach is both cost-effective and scalable, supporting Uzbekistan's educational goals for digital competence and sustainable teacher development. Findings suggest that video-based reflection enhances teachers' ability to design contextually appropriate, tech-integrated instruction, offering practical insights for broader implementation in ELT training worldwide.
Keywords: TPaCK, reflective practice, video analysis, ELT training, teacher education.

INTRODUCTION

In the 21st-century educational landscape, the integration of digital technologies into English Language Teaching (ELT) has become not only a necessity but a professional standard. The rapid evolution of digital tools, online platforms, and multimedia resources has reshaped the pedagogical environment, demanding that teachers possess not only linguistic and pedagogical expertise but also the ability to integrate appropriate technologies into their instruction (Koehler & Mishra, 2009). The Technological Pedagogical Content Knowledge (TPaCK) framework, developed by Mishra and Koehler (2006), has emerged as a valuable model for understanding and developing teachers' knowledge of how technology intersects with pedagogy and subject content. For ELT professionals, mastering this framework is essential to create engaging, effective, and contextually appropriate learning experiences in digital-rich environments.[1]

Equally important in teacher education is the development of reflective thinking, which supports teachers in becoming critically aware of their instructional choices, beliefs, and practices. Reflective practice, as described by Schön (1983) and further modeled by Gibbs (1988), encourages continuous professional learning and helps educators move from routine actions to informed, adaptive teaching. In ELT training, reflection allows novice teachers to evaluate how their language instruction aligns with learning objectives, responds to students' needs, and incorporates meaningful use of technology.[2]

One particularly powerful strategy to cultivate reflective thinking is the use of video analysis. By reviewing recordings of

[1] Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge (TPaCK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70.

[2] Gibbs, G. (1988). *Learning by Doing: A Guide to Teaching and Learning Methods*. Oxford: Oxford Polytechnic.

their own teaching sessions or those of peers, teachers can gain insights into their actual classroom behavior, assess the effectiveness of their technology use, and identify areas for improvement (Tripp & Rich, 2012). Video-based reflection supports both surface-level observations (e.g., timing, instructions, engagement) and deeper analysis of how technological tools enhance or hinder pedagogical intentions and content delivery (Calandra, Brantley-Dias, & Dias, 2006). When structured with a TPaCK-informed lens, video analysis becomes a rich source for building integrated competencies in teaching with technology.

This study explores the role of video analysis in enhancing reflective thinking and supporting the integration of TPaCK in ELT teacher training. It aims to examine how structured video reflection can help pre-service or in-service English teachers become more conscious of their teaching practices and develop coherent technological-pedagogical-content strategies. The findings contribute to the growing body of research on teacher professional development and offer practical insights for designing reflective, TPaCK-rich ELT training programs.

LITERATURE REVIEW

The Technological Pedagogical Content Knowledge (TPaCK) framework, developed by Mishra and Koehler (2006), provides a holistic model for understanding how teachers integrate technology into their teaching in a meaningful way. The framework emphasizes the dynamic interplay between three core knowledge domains: Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK). Effective teaching with technology occurs when educators successfully balance all three domains, creating learning experiences that are content-rich, pedagogically sound, and technologically appropriate. In Uzbekistan, as in many post-Soviet educational systems, integrating digital tools into pedagogy is still developing, and the TPaCK framework offers a valuable structure for reforming teacher preparation programs to align with global standards and local digitalization goals.

Reflective thinking, as introduced by John Dewey (1933), is central to professional growth in education. Dewey argued that reflective thought transforms routine action into intelligent practice. Later scholars like Donald Schön (1983) introduced the concepts of *reflection-in-action* and *reflection-on-action*, emphasizing the importance of teachers critically analyzing their teaching both during and after classroom instruction. Graham Gibbs (1988) further developed this idea through his reflective cycle, offering a structured approach to support systematic reflection. In Uzbekistan's teacher education programs, reflective practices are not yet fully institutionalized, but are increasingly seen as essential for developing self-aware, adaptive educators—especially in the context of integrating modern technologies into instruction.

The use of video analysis in teacher education has gained attention as a powerful tool for enhancing reflection and professional learning. Research shows that video allows pre-service teachers to observe, analyze, and critique teaching practices—both their own and others'—which supports deeper pedagogical insights and TPaCK development (Baecher, 2012; Tripp & Rich, 2012).[3] Tools such as VEO (Video Enhanced Observation), GoReact, and simple mobile recording devices have made video-based reflection accessible

[3] Tripp, T., & Rich, P. J. (2012). Using video to analyze one's own teaching. *British Journal of Educational Technology*, 43(4), 678–704.

and scalable.[4] In Uzbekistan, although the use of such platforms is still emerging, pilot studies at universities such as UzSWLU and the Tashkent State Pedagogical University have demonstrated promising results in using classroom recordings to enhance reflective practice in English language teacher training programs.

Several previous studies have explored the integration of TPaCK and video-based reflection. For instance, Koc (2011) found that combining video analysis with guided reflection improved pre-service teachers' ability to connect technology use with pedagogy and content. Similarly, Fadde and Sullivan (2013) emphasized the role of video as a formative assessment tool that encourages reflective teaching. These findings align with recent initiatives in Uzbekistan, where researchers have begun experimenting with microteaching sessions and reflective video journals to foster both digital competence and pedagogical sensitivity among pre-service English teachers. However, systematic implementation remains limited, highlighting the need for structured, research-based approaches tailored to the local educational context.

METHODOLOGY

To foster the development of Technological Pedagogical Content Knowledge (TPaCK) and reflective practice among pre-service English language teachers in Uzbekistan, we propose the following structured implementation model. This model integrates microteaching, video analysis, and reflective journaling within teacher education programs.

The initiative is best suited for pre-service or in-service English teachers, particularly those in their 3rd or 4th year of a Bachelor's program or undergoing professional development. Participants should have basic digital literacy and be engaged in teaching practicum or methodology courses.

The approach follows a qualitative, practice-oriented framework based on elements of Exploratory Action Research (Burns, 2010).[5] This model allows teachers to investigate their teaching practice, experiment with technology integration, and reflect critically on their pedagogical decisions.

Reflective journals

Teachers write regular reflections using prompts based on Gibbs' Reflective Cycle (1988), focusing on lesson planning, delivery, technology use, and student engagement.

Video recording equipment

Basic recording devices (e.g., smartphones, webcams) are used to capture microteaching sessions. Cloud storage or institutional platforms can be used for secure uploading and review.

Semi-structured interviews or group feedback sessions

Conducted by mentors or teacher educators to provide personalized guidance and foster collaborative reflection.

TPaCK-based rubric

Teachers evaluate their lessons using a rubric adapted from Harris, Mishra, & Koehler (2009), focusing on how effectively content, pedagogy, and technology were integrated.

Step-by-step procedure:

1) Plan and conduct microteaching

Teachers design short (15–20 minute) English lessons focused on specific language skills (e.g., grammar, vocabulary)

[4] Mutluoğlu, A. K., & Balaman, U. (2023). The use of Video Enhanced Observation in video-mediated post-observation conversations on pre-service EFL teachers' online practicum teaching. *System*, *118*, 103151. https://doi.org/10.1016/j.system.2023.103151

[5] Burns, A. (2011). Action research in the field of second language teaching and learning. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (vol. II, pp. 237–253). Routledge.

using a selected digital tool (e.g., Kahoot, Padlet, Quizzlet).

2) Record the lesson
Each microteaching session is video-recorded with minimal technical setup. In-person or online formats are both acceptable.

3) Self-analysis using a TPaCK rubric
After watching their recorded lessons, participants complete the TPaCK rubric and identify areas of strength and improvement.

4) Reflective journaling
Teachers write reflective entries, responding to guiding questions such as:
- What did I aim to teach and why?
- How did I integrate technology, and was it effective?
- What would I change in future lessons?

5) Mentor feedback and peer discussion
Organize feedback sessions where participants discuss their reflections with mentors or peers, reinforcing a culture of constructive critique and self-improvement.

6) Final interviews or portfolio presentation
At the end of the cycle, participants share their progress, insights, and evolving understanding of TPaCK through interviews or digital teaching portfolios.

This implementation model aligns with current educational reforms in Uzbekistan that prioritize practice-based teacher education, digital integration, and reflective learning strategies (Ministry of Higher Education, Uzbekistan, 2022). It can be embedded into existing methodology courses or piloted as part of a Reflective Practice Lab at pedagogical universities and language faculties.

By incorporating accessible digital tools, structured reflection, and peer feedback, the proposed model offers a scalable, cost-effective strategy to enhance future teachers' readiness for modern, tech-enhanced classrooms.

DISCUSSIONS

The integration of video analysis and reflective practice within English Language Teacher (ELT) training programs offers transformative potential for teacher development. Drawing upon the TPaCK framework and reflective learning theories, this approach facilitates deeper pedagogical awareness, enhanced technological integration, and sustained professional growth.

Video analysis enables pre-service teachers to observe, critique, and refine their teaching practices from an objective perspective. Unlike real-time classroom observation, video allows for repeated viewing and focused analysis of specific interactions, classroom management techniques, and instances of technology use (Sherin & van Es, 2009; Tripp & Rich, 2012).

In the Uzbek context, where many teacher education programs are transitioning toward blended learning models, these strategies can be implemented with minimal resources—smartphones and basic video editing tools suffice to initiate video-based reflection in classroom microteaching or practicum settings.

While video recordings offer powerful learning opportunities, the role of trainers and mentors is essential in scaffolding meaningful reflection. As Schön (1983) emphasized, reflection-in-action and reflection-on-action are complex processes that require critical questioning and dialogic support.

Mentors should pose Socratic questions that prompt deeper analysis (e.g., "Why do you think the students responded that way?"), encourage the use of Gibbs' Reflective Cycle (1988) or Brookfield's lenses (1995) to frame self-evaluations and model reflective dialogue and share personal teaching experiences to normalize vulnerability and growth.

This reflective video-based approach contributes to sustainable professional development by promoting teacher autonomy, critical thinking, and a research-

oriented mindset (Kleinknecht & Schneider, 2013; Baecher, 2017). Teachers gradually internalize a habit of self-evaluation, becoming less dependent on external feedback and more capable of adapting to diverse classroom demands.[6]

Moreover, when embedded within a community of practice (Wenger, 1998), these reflective routines encourage peer learning, resilience, and long-term engagement in teacher-led inquiry. In Uzbekistan's push to modernize teacher education (Presidential Decree No. PQ–5005, 2021), such models align with policy goals to enhance digital skills, pedagogical flexibility, and lifelong learning among educators.[7]

CONCLUSION

To enhance the integration of Technological Pedagogical Content Knowledge (TPaCK) and foster reflective thinking in English Language Teaching (ELT), this study suggests implementing structured video analysis as a core component of teacher education programs. Specifically, we recommend incorporating microteaching sessions followed by guided video reflection into pre-service and in-service training modules.

Participants should record their teaching practices and engage in self- and peer-evaluation using a TPaCK-based rubric. These reflections can be documented in journals and discussed with mentors to deepen insight into the connections between pedagogy, content, and technology. This process supports teachers in recognizing effective strategies, identifying areas for growth, and internalizing reflective habits that promote lifelong learning (Tripp & Rich, 2012; Santagata & Yeh, 2016).

In the context of Uzbekistan, where the education system is undergoing digital transformation and reform (Ministry of Preschool and School Education, 2023), such an approach can serve as a practical and scalable model. It aligns with national priorities for enhancing digital competency and professional growth among educators.

For broader implementation, teacher education institutions should:

- Embed video analysis and TPaCK reflection into course syllabi.
- Train mentors to facilitate reflective discussions.
- Provide access to easy-to-use video tools and structured reflection templates.
- Encourage collaborative peer review and discussion.

Future research and piloting in various Uzbek educational settings will help refine this model, contributing to a sustainable framework for 21st-century teacher preparation.

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[7] Presidential Decree of Uzbekistan No. PQ–5005 (2021). *On measures to radically improve the system of professional development of teachers and pedagogical staff*.

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