



International Journal of Advance Studies and Growth Evaluation

Digital Reflexivity: Preparing Teachers to Reflect Critically on Technology Use

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Article Info.

E-ISSN: **2583-6528**

Impact Factor (SJIF): **6.876**

Peer Reviewed Journal

Available online:

www.alladvancejournal.com

Received: 25/July/2025

Accepted: 25/Aug/2025

Abstract

As the educational setting is continuously changing due to the impact of digital technologies, a desperate need to promote the idea of digital reflexivity the process of critical thinking about using digital tools in the classroom among the teachers comes to mind. This article merges the Reflective Practice Theory introduced by Schon and the Technological Pedagogical Content Knowledge (TPACK) framework to propose an alternative one on the same, that can enable the educator to follow the same process of (designing, use, reflect and revise) digital practices in a continual cycle what can be called Reflective TPACK Cycle. With a specific focus on digital reflexivity, the choice of the teachers is not the only aspect that is going to be reinforced, but an ethical, cognitive, and pedagogical awareness in a post-pandemic and data-driven setting will also be enhanced (Galvis & Carvajal, 2022; Class, B. (2024).

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Keywords: Digital Reflexivity, TPACK, Technology Integration, Teacher Education, Post-Pandemic Learning, Teacher Agency

Introduction

Operational Definitions

Digital Reflexivity: The analytical study of the timing, means, and purpose of the use of digital tools in classrooms, which is directed at guaranteeing their effectiveness and fairness in education (Galvis & Carvajal, 2022) [8].

TPACK: A model that integrates technological, pedagogical and content knowledge, so as to help in teaching effectively using technology (Mishra & Koehler, 2006) [4].

Technology Integration: A deliberate attempt to use digital tools to enhance learning in a better way than simply deploying technology in a learning context (Class, B. 2024) [10].

Teacher Education: The professional development of educators that follows the systematic pattern and is devoted to critical thinking and informed use of technology (Miles, C. 2021) [7].

Post-Pandemic Learning: Teaching made inclusive, flexible and technology-driven educational practice shaped by the COVID-19 experiences (Galvis & Carvajal, 2022) [8].

Teacher Agency: Empowering teachers to make thoughtful and reflective decisions concerning their teaching, and especially technology (Miles, C. 2021) [7].

Introduction: The Concept of Digital Reflexivity in Education

The high speed of digitalization has transformed a conventional school system into a multi-dimensional digital world. Educators and students have switched to digital platforms, tools and systems and it is noteworthy that not only technology is adopted but also discussed with quite a critical approach in regard to pedagogical, ethical and cognitive implications. Digital reflexivity helps teachers to ask questions concerning the inclusiveness of the tool, the ability to learn and the compliance with pedagogical intentions (Galvis & Carvajal, 2022) [8].

It is a reflective practice, which is based on a wider movement of reflective processes (Schon, 1983) and develops to serve the needs of the digitalized society. Digital reflexivity leads to the formation of an interpretation of the position of digital technologies in the learning process and relations by the

learners. The reflective level of teaching, according to the scholar, results in the redesigning of educational approach to different learners in online conditions (Galvis and Carvajal, 2022) [8].

Objective

This paper looks at how teachers can start thinking more carefully and critically about how they teach online. It explains how using reflective methods-like thinking back on what worked and what didn't-along with helpful frameworks like TPACK, can guide teachers to use digital tools more thoughtfully. It also highlights how support from schools and fellow teachers can help teachers grow, gain better teaching skills, and feel more confident when teaching with technology (Miles, C. 2021 [7]; Class, B. 2024) [10].

Reflective Practice and Technology Integration

According to Schon (1983), reflective practice is the custom of reviewing what you have done and reflecting on what occurred and why. This is what teachers are doing anytime they reflect on how their lesson went and what they may do differently next time. In addition to operating new devices, this type of reflection assists educators in selecting the most appropriate digital tools and strategies to use in their classes.

TPACK and Structured Reflection

The TPACK framework (from Mishra & Koehler, 2006) [6] speaks to how teaching stands out when we teachers put together what they know about the subject, how to teach it and how to employ technology. When teachers take the time to really think and reflect on their own teaching-something like writing journals, watching videos of their own teaching, talking with others-for example, it makes them feel more confident in using technology in a meaningful way.

Supporting Reflective Practice with Digital Tools

Reflection itself can be supported by digital technologies. As an example, 'video-based feedback and dialogic mentoring' applied in the research by Galvis (2025) allowed pre-service educators to gain more information regarding student needs and instructional strategies. The next essential principle is pertinent to the technological process of reflexivity that implies a practice of critical and considered use of digital platforms by educators.

Recent Developments in Digital Reflexivity and Teacher Education

The research shows the contribution of digital reflexivity to adaptive and transformative teaching. Class, B. (2024) [10] highlighted the importance of reflective praxis in the adjustment of TPACK to the pedagogical objectives. Novoa-Echaurren *et al.* (2025) [11] focused on the importance of reflective interaction with the technology in the process of student-centered and inclusive teaching implementation. Miles, C. (2021) [7] also promoted the professional development models, including e-portfolios and peer reflection as one of the ways to formalize digital reflexivity. Almalki (2020) also showed that online reflective journals promote self-regulation and digital tools integration. Also, ten Brink *et al.* (2023) [9] proposed photo-reflexivity as the design process that can enhance critical thinking and visual interaction.

Frameworks for Reflective Technology Use in Teacher Education

1. Schön's Reflective Practice Theory

Reflective practice according to Schon (1983) is both reflection-in-action and reflection-on-action. In online classrooms, this will mean making immediate decisions on the use of technology and reflective assessment on the effectiveness of its use (Galvis, 2025).

2. TPACK Framework

The TPACK model is concerned with the interplay of the kinds of knowledge needed to provide effective digital teaching. Reflective analysis assists teachers in the process of identifying whether a technology will assist in the understanding of content and pedagogical objectives (Mishra & Koehler, 2006) [4].

3. Reflective TPACK Cycle

Reflective TPACK Cycle is equated with: TPACK planning.

Implementation: Oversight of the involved students and application of the technology.

Reflective: To have the possibility to measure the success according to the following tools: journal, video analysis and peer conversation.

Perfection: The lesson on what one has learned the next day (Class, B. (2024) [10])

4. Institutional and Collaborative Reflection

Reflection should occur beyond the individual. Researches suggest personal, social, and institutional layers of reflection. Institutional structures can support teacher agency and co-constructive practices, enabling sustainable digital reflexivity (Miles, C. 2021) [7].

Results and Discussion

The inclusion of reflection in the use of technology is an excellent way of boosting the ability of teachers to think critically about digital pedagogy. Reflective strategies associated with TPACK encourage diversity and responsiveness to diversity among learners (Novoa-Echaurren *et al.*, 2025) [11]. Institutional support systems guarantee such practices as peer dialogue and digital portfolios (Miles, C. 2021 [7]; Almalki, 2020). According to ten Brink *et al.* (2023) and Paulus *et al.* (2025), pedagogical strategies that incorporate digital and visual reflexivity indeed increase the capacity of educators to evaluate and adjust digital practices within dynamic learning environments.

Conclusion

Educators in technology-rich classrooms must have digital reflexivity as a skill. It is possible to make teachers more deliberate, fair, and efficient regarding technology usage through reflective practice assisted by the TPACK framework and institutional structures. With changes in educational contexts, it will be paramount to have digital reflexivity embedded in teacher education (Galvis & Carvajal, 2022 [8]; Class, B. (2024) [10]; Miles, C. (2021) [7]; ten Brink *et al.*, 2023) [9].

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