Technological Formation Competencies Levels of EFL Teachers in the Scope of Technology Supported Teacher Development

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Abstract

Structuring information and communication technologies is a process that encompasses all the skills that people of the 21st century must acquire (Hinds & Kiesler, 1995). Skills such as understanding the internal structure and amount of technology, separating it from the personal or the total of the field, closely following the developments in order to keep up with the development and completion of technology, and being able to update oneself frequently in this sense are effective techniques in using information communication technologies correctly (Allen & Potts, 2016).

According to Koehler and Mishra (2009), the effective and efficient use of technology and technological tools and equipment in education and training is possible by having sufficient knowledge, using it in a healthy way, and using it effectively not only in educational life but also in daily life. The technological pedagogical content knowledge model, which consists of the transfer of technology and pedagogical and content knowledge concepts, is one of the approaches based on the integrated use of educational environment technology and technological tools in teaching (Koehler, Mishra, & Cain, 2013).

A framework known as technological pedagogical content knowledge (TPACK) outlines the abilities and knowledge educators need to successfully incorporate technology into their lesson plans (Mishra & Koehler, 2006). English as a foreign language (EFL) instruction is one of the many educational contexts where TPACK has been extensively implemented. Lack of resources, training, support, and confidence are just a few of the difficulties EFL teachers encounter when utilizing technology to improve language learning outcomes for their students; thus, developing EFL teachers' TPACK is crucial for improving their professional competence and sustainability in the era of information and communication technology (ICT) (Mishra & Koehler, 2006).

Features of the technological pedagogical content knowledge (TPACK) model, with the addition of technological composition to pedagogical content knowledge by Shulman (1986), includes four new knowledge domain dimensions, consists of technological content knowledge (TAK), pedagogical content knowledge (PCK), technological pedagogical content knowledge (TPACK), and technological pedagogical knowledge (TPK) dimensions (Mishra & Koehler, 2006). Additionally, there are connections between these three knowledge domains as TPACK requires teachers to have a comprehensive understanding of how to use technology to support the learning of diverse learners as well as a variety of pedagogical strategies and content

representations in a range of contexts. Kong, Lai, and Li (2023) assert that TPACK demands that teachers have a flexible and creative mindset in order for them to use technology to design and carry out innovative and fruitful educational projects.

According to Niess (2005), effective and efficient use of TPACK can be achieved thanks to the three dimensions:

1. Trying to teach a specific subject in the context of technology-education integration.
2. Developing strategies and methods by taking into account the technological readiness of the students.
3. Having knowledge about the technological integration infrastructures and physical hardware and software of the subjects to be selected.

Developing EFL teachers' TPACK can be attained through embedded learning within multiple activity systems, which are social and cultural contexts that influence human actions and interactions that are mediated by roles, rules, tools, and goals (Engeström, 1987). A study by Chen et al. (2022) examined how embedding instructions within three interactive activity systems (online collaboration, online teaching, and online learning) could improve TPACK and explored issues in online teaching by participating in online communities of practice and professional development courses. It has been concluded that TPACK improves teachers' understanding and competence in technology integration by using a range of online resources such as digital platforms, multimedia content and online assessment tools to address inconsistencies, all in all, facilitating the development of educators' TPACK (Abubakir & Alshaboul, 2023).

In addition to helping teachers adapt to the changing demands of online teaching and learning environments, Chen et al.'s (2022) study demonstrates how TPACK can support English language teachers in understanding the complex relationships between technology, pedagogy, and content in various activity systems and develop collaborative practices among English language teachers. The study found that TPACK improves teachers' professional development and sustainability by encouraging them to use technologies such as blogs, wikis, podcasts, and digital storytelling to create engaging and original assignments that can improve students' language proficiency (Wang, 2022). Using tools such as videoconferencing, online forums, and social media to communicate and collaborate with teachers from different cultures and contexts enriches the teaching and learning experiences of EFL teachers, making TPACK an invaluable framework for EFL teacher development in the 21st century (Chuang et al., 2022).

Keywords: EFL teachers, teacher development, technology, TPACK