

## Exploring the Integration of Technology, Pedagogy, and Language Skills (TPALS) in Language Education

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### Abstract

This paper aims to propose the Technological Pedagogical and Language Skills (TPALS) framework, an extension of the widely adopted TPACK model, with a specific focus on English Language Teaching (ELT). TPALS emphasizes the interactive relationship between technology, pedagogy, and language skills development to enhance learning experiences in acquiring English as a second language through the systematic integration of digital tools in the 21st century. Drawing on interviews with pre-service and in-service teachers from Southern India, the study explores the real-world implications of TPALS in English language classrooms. The findings suggest that systematic technology integration, alongside pedagogical strategies, fosters language proficiency while addressing diverse linguistic needs. Moreover, the challenges faced during the COVID-19 pandemic highlight the importance of equipping teachers with appropriate digital literacy skills and training for sustained success in integrating technology into language learning. This paper further explores the potential of multimedia tools, online platforms, and digital resources to create immersive language learning environments and contribute to the development of essential English language proficiency.

*The content and opinions expressed are those of the author(s) and are not necessarily endorsed by/do not necessarily reflect the views of Azim Premji University.*

**Keywords:** English Language Teaching (ELT), TPALS, TPACK, Technology integration, Digital Tools.

## Introduction

As educators continually need to adapt to the dynamic landscape of modern education, the integration of Technology, Pedagogy, and Content Knowledge (TPACK) has emerged as a critical framework. (Mishra, 2008) Building upon the foundation laid by TPACK, this study introduces a new concept, the integration of Technology, Pedagogy, and Language Skills (TPALS), with a specific focus on English Language Teaching (furthermore to be referred to as ELT). The new concept TPALS aims to explore the interactive relationship between technology integration, pedagogical practices, and language skills development to enhance English language learning experiences. The researchers have taken an expedition to introduce and investigate the concept of TPALS, delving into its relevance, impact on English language teaching and explore systematically how the integration of technology can be strategically combined with pedagogical approaches to foster language skills development among English learners. Furthermore, the study examines how TPALS can empower educators to create meaningful and engaging language learning experiences in the digital era.

Based on the interactions with schoolteachers and teacher educators from Tamil Nadu, Andhra Pradesh, Telangana, Kerala and Karnataka, who attended professional development workshops conducted by Regional Institute of Education (NCERT) Mysuru, the researchers made very critical observation on the effective use of technology in their classroom. (Nehru, 2021, 2022) The introduction of technology without proper teacher training or workshops on its utilization for teaching, creating teaching and learning materials (TLMs), designing worksheets, conducting activities, managing online classrooms, motivating learners, and providing student orientation during the COVID-19 pandemic had a significant impact on teaching and learning, and faced a huge learning loss.

Limited access to online platforms, inadequate knowledge of digital tools and TLMs, and the absence of training sessions created anxiety among both teachers and learners. Although technology enabled the continuity of learning, it became evident that the phase of introducing technology and the expectations placed on learning outcomes were futile exercises. It was observed that a systematic integration of technology, pedagogy, and language skills had a more substantial impact on the teaching and learning process.

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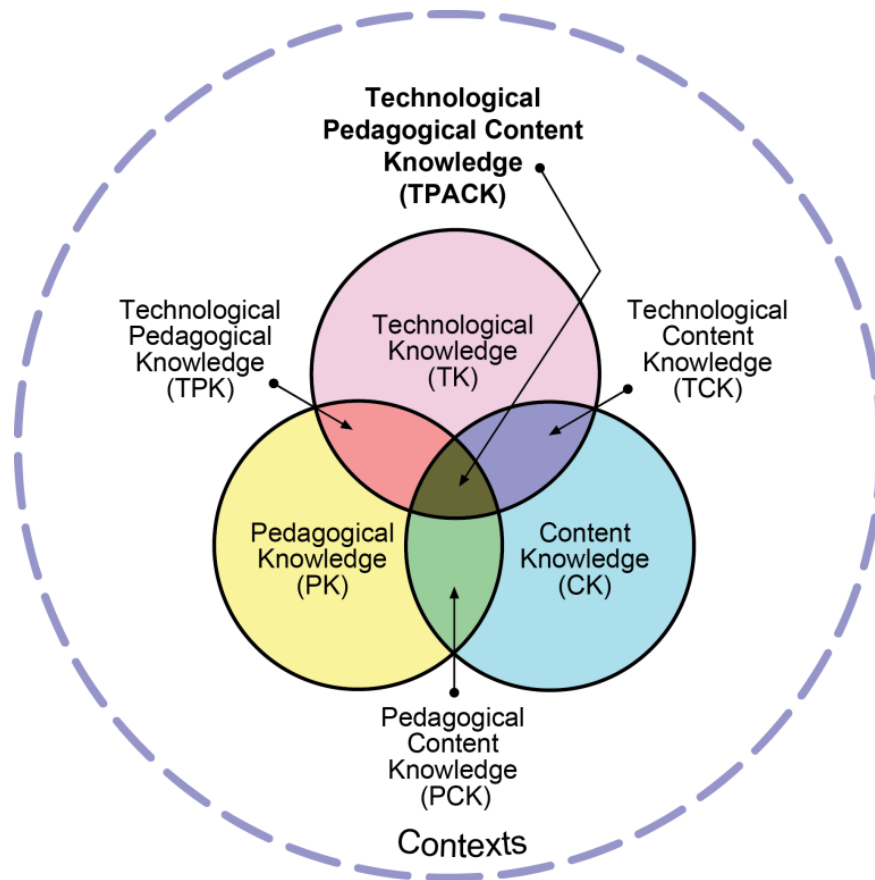
P. Arul Nehru, PhD in English Language Education and Agniva Pal, PhD in Linguistics  
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This integration enables educators to design language learning activities that leverage technology to enhance communication, foster creativity, and promote language proficiency. By effectively incorporating digital tools, interactive multimedia, and online resources, TPALS empowers teachers to address the diverse linguistic needs of English language learners while encouraging active participation and academic language use.

### **Review of Literature**

Researchers from various educational domains have widely embraced the TPACK theoretical framework, recognizing its potential in effectively integrating technology into teachers' practices and yielding promising outcomes. Empirical research findings provide evidence of the widespread implementation of technology in classrooms as a tool for teaching. (Gur, 2015) The rapid transformation of technology in the real world has given rise to new tasks and needs in language learning, thereby reshaping the landscape of language education. (González-Lloret & Ortega, 2014)

The TPACK framework, introduced by Punya Mishra and Matthew J. Koehler in 2006, focusses three essential knowledge domains for effective educational technology integration: Content Knowledge (CK), Pedagogical Knowledge (PK), and Technological Knowledge (TK). These domains overlap, and the cohesive integration of knowledge, skills, and abilities.



The TPACK Image (rights free) © 2012 by tpack.org

Research examining the TPACK profiles of instructors engaged in professional development, which incorporates a holistic focus on pedagogy, content, and technology rather than solely technology training, can provide valuable insights for planning effective professional development programs. Effectively teaching in contemporary classrooms requires a balanced approach that incorporates and harmonizes all three domains. Such insights can have a significant impact on the design and delivery of training initiatives for instructors involved in online learning, aligning them with the evolving needs of 21st-century students. (Benson & Ward, 2013) For instance, the Taiwan project's use of a modified TPACK survey illustrates its effectiveness in evaluating technology use in teacher education programs. (Pamuk et al., 2015) Overall, TPACK enhances communication among educational technology researchers and practitioners, providing clarity in developing, testing, and implementing effective technology approaches. Specifically, Computer-Assisted Language Learning, as the practitioners of the CALL it is a collective

responsibility in promoting digital literacy in a fair and equitable manner that respects learners' educational and technological contexts. (Smith & González-Lloret, 2021)

### **Research Methodology**

Interviews were conducted with pre-service teachers pursuing B.Ed., BA. Ed., BSc. Ed., MSc. Ed., and M.Ed., as well as in-service teachers who attended workshops organized by the Regional Institute of Education (NCERT) in Mysuru. These interviews provided insights into the use of TPALS and the effectiveness of this integrated and interactive framework in teaching and learning the English language. Feedback was collected from participants, and interactive sessions were observed and recorded as part of the data collection process.

Qualitative research was employed to understand the attitudes and opinions of both current and future teachers and language educators.

### **Innovative Pedagogical Approaches**

TPALS explores the array of digital tools and platforms that can be employed to supplement communicative language teaching methods. It examines the potential of language learning apps, virtual classrooms, online language exchanges, and interactive language games to create immersive language learning experiences. By incorporating technology, educators can design activities that cater to individual learning preferences and foster language skills development in a personalized manner. TPALS examines pedagogical strategies that capitalize on technology to engage students in communicative language learning (CLT). It explores flipped classroom models, project-based learning, and collaborative online activities that encourage active participation, critical thinking, and creativity. By adopting such approaches, teachers can foster a learner-centered environment that nurtures language skills through real-world interactions and authentic language use.

### **Teachers' Views on TPALS and the Development of Language Skills**

This study investigates the dynamics of Technological Pedagogical Language Skills (TPALS) and its effective development through pre-service and in-service teachers' experiences. At the core of TPALS lies the development of language skills. This study investigated how technology integration can support language acquisition in listening, speaking, reading, and

writing. Teachers and Educators expressed their views based on their experience that they need to be well informed and given minimum training on the potential use of technology in their classroom. Moving from textbook based teaching to digital material and multimodal text-based teaching created anxiety among teachers and learners. Teachers were left without any proper instruction on how to conduct systematic language assessment online. Banas (2010) highlights the challenges of integrating technology, particularly when teachers consider young learners with limited experience using digital tools. However, it also emphasizes the positive shift in teachers' attitudes toward technology, as they increasingly recognize the value of using digital tools in more meaningful and effective ways, rather than simply as an add-on. These are the results of introducing technology hastily without a proper plan, training, orientation on the nature of technology and its use for teaching and learning.

During the COVID-19 pandemic, teachers and learners were suddenly required to use technology, shifting the physical classroom to an online platform without proper training, orientation, material development, principles of assessment, and so on. This created a significant level of anxiety, stress, and an inability to focus, hindering the achievement of educational goals within the given period. This situation made everyone realize the need to adapt effective frameworks like TPALS as an integrative approach. Even teachers who had the opportunity to attend webinars, where only technology was introduced and discussed, found that most teachers felt it was disconnected from their real teaching process, particularly in teaching language skills. After interacting with the teachers, we must appreciate their sincere effort to continue the learning process during COVID-19. To ensure effective integration of digital tools in language learning, both teachers and students must be thoroughly equipped. Observations on teachers' language efficiency and teaching styles reveal that without proper orientation, digital tools may hinder learning. Teachers need training on creating digital materials, conducting assessments, and providing feedback, while students require clear expectations and guidelines for participation. Since language learning thrives on interaction, workshops are crucial for helping teachers replicate the reciprocal teaching style of face-to-face classrooms using technology. These workshops should focus on fostering peer interaction and communication, ensuring that digital platforms promote active engagement and task completion, enhancing English language skills.

Despite experiencing uncertainty, an inability to lead a normal life, fear, and exposure to daily news that brought various negative effects on mental health, teachers facilitated their learners and attended many webinars on the use of technology for continuous professional development. It is also a very sad reality that, at present, everyone has slowly reduced the use of technology in pedagogical processes. We found that continuous use and experience would have a significant effect on using technology effectively at any given point in time.

The study explored the potential of multimedia resources, speech recognition tools, interactive quizzes, and online writing platforms to facilitate language practice and feedback. Teachers with a wide range of experience expressed that most teachers started using mobiles and laptops for teaching for the first time in their life that revealed that digital literacy must be considered as a functional literacy in the digital era. TPALS recognizes that technology can cater to the diverse teacher communities and language proficiency levels of learners, supporting them in their language learning journey.

## **Conclusion**

TPALS envisioned the convergence of technology, pedagogy, and language skills development in English language classrooms. It is built upon the TPACK framework by emphasizing the integration of language skills, including listening, speaking, reading, and writing, alongside technology and pedagogy. TPALS could be a groundbreaking concept encompassing the integration of technology, pedagogy, and language skills, and by embracing the framework, educators can create dynamic and immersive language learning experiences that cater to the unique needs of English learners in the digital age. The rapid shift to online education during the COVID-19 pandemic highlighted the importance of effective frameworks like TPALS, necessitating further research to understand its impact on teaching and learning outcomes. As educators and learners navigate the challenges of technology integration, future research on TPALS can provide valuable insights into optimizing its use, addressing gaps in training, orientation, and material development for enhanced educational experiences.

Investigating the long-term effects of TPALS implementation can contribute to a comprehensive understanding of its sustainability and adaptability, guiding educators in designing

resilient and effective instructional strategies. The evolving educational landscape requires ongoing research on TPALS to explore its potential enhancements, ensuring its alignment with diverse teaching contexts and evolving technological advancements. Examining the experiences and perceptions of educators and learners with TPALS can offer valuable feedback, informing continuous improvement and refinement of this integrative approach for the evolving needs of education. It is observed that the transformative potential of technology when thoughtfully combined with pedagogical approaches to nurture language skills development and empower learners in their pursuit of English language proficiency.

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