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CHALLENGES AND OPPORTUNITIES: EFL TEACHERS' TEACHING EXPERIENCES WITH ICT-ENHANCED PROFESSIONAL DEVELOPMENT IN HIGHER EDUCATION

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Abstract

The integration of Information and Communication Technology (ICT) in English as a Foreign Language (EFL) instruction has become increasingly significant in higher education. While ICT offers clear opportunities for enhancing teaching and learning, little research has specifically examined how ICT-enhanced professional development shapes classroom practices in this context. This study aimed to investigate how higher education EFL teachers' professional development experiences influenced their use of ICT in the classroom and what challenges and opportunities they perceived for their professional growth. A qualitative case study design was employed, involving classroom observations and semi-structured interviews with eight teachers in a university settings. The findings indicate that professional development plays a crucial role in shaping ICT integration, though its impact was uneven across teachers. At the same time, teachers' experiences revealed a dual reality. While the teachers faced persistent barriers such as limited infrastructure, time constraints, and lack of sustained support, they also recognize clear opportunities for enhancing student engagement, collaboration, and their own professional development. The study underscores the need for institutions to move beyond one-off workshops by developing sustainable, context-sensitive, creating collaborative communities of practice, and embedding continuous mentorship into policy frameworks are critical to bridging the gap between ICT's potential and its classroom reality. These implications highlight how higher education institutions can design professional development and policy initiatives that not only build teachers' digital competence but also foster long-term innovation and improved learning outcomes.

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INTRODUCTION

The rapid evolution of Information and Communication Technology (ICT) has revolutionized educational landscapes worldwide, presenting both challenges and opportunities for teachers and learners alike. This is particularly evident in the context of teaching English as a foreign language (EFL) where ICT offers powerful tools for enhancing language acquisition, expanding access to learning resources, and promoting innovative pedagogical practices (Aprianti, 2017.; Yang, 2019, Azmi, 2017: Mai, 2020; Sabri, 2020). The Indonesian government has long recognized the importance of ICT in education, embedding it within key national policies such as the 2003 Law on the National Education System and the 2005 Law on Teachers and Lecturers, which require teachers to demonstrate ICT competence (Aprianti, 2017). These initiatives were intended to prepare teachers for the demands of a digital era by equipping them

with the abilities and information need to integrate technology meaningfully into their teaching, promoting innovative teaching methods and having access to a wide variety of authentic language materials (Aprianti, 2017; Machmud et al., 2021; Yang, 2019; Jamil et al., 2024).

Despite the policy directions, a gap persists between the desired outcomes and the real implementation of ICT in Indonesian EFL classrooms, particularly in higher education. Many university EFL teachers continue to face obstacles in integrating ICT into teaching and professional development, resulting in uneven outcomes (Kohnke, 2021; Zhang, 2022). This discrepancy is largely attributed to interrlated factors, including limitations in professional development programs, an insufficient understanding of teachers' diverse training needs, practical barriers to effective ICT integration, and limited number studies explicitly addressing the challenges faced by Indonesian EFL teachers in higher education level (Aprianti, 2017; Avillanova & Kuswandono, 2019; Kohnke, 2021; Pelila et al., 2023; Zhang, 2022; Jamil et al., 2024; Sabiri, 2020). Many of the existing research has focused on ICT integration at the primary and secondary school levels, where institutional condition, workloads, and learner profiles differ considerably from those in universities. Studies conducted in other higher education contexts have highlighted similar issues. Libyan university teachers reported persistent challenges with infrastructure and limited training opportunities (Salem & Mohammadzadeh, 2018). While research in Chinese universities has emphasized the critical role of ICT literacy and acceptance in enabling teachers to adapt to evolving instructional demands (Li, 2021). Together, these finding underline the importance of understanding how ICT-enhanced professional development in universities and how such issues manifest in Indonesian higher education.

Professional development is central to the success of the ICT integration. However, many existing programs primarily focus on imparting basic technical skills, neglecting the pedagogical aspects of integrating technology into teaching (Kohnke, 2021; Yang, 2019). This results in teachers lacking the confidence and expertise to effective integration of ICT into their instructional strategies, leading to a discrepancy between their perceived competence and their actual ability to incorporate technological elements into their teaching (Kohnke, 2021; Oyunge, 2021). Professional development programs also tend to lack sustained follow-up, leaving teachers struggling to apply newly acquired skills in real classroom settings (Kohnke, 2021; Oyunge, 2021; Sabiri, 2020). Recent studies reinforce these concerns. Sabiri (2020) found that short-term training often failed to translate into long-term ICT use. While Mai (2020) observed that one-off workshops did not sufficiently prepare teachers for pedagogical integration. Research suggests that programs must move beyond technical training and instead support differentiated needs, collaboration, and long-term application of ICT in classroom practice (Aprianti, 2017; Sabiri, 2020; Azmi, 2017; Jamil et al., 2024).

Another recurring issue is the limited consideration of teachers' diverse needs and preferences. While ICT policies mandate proficiency, the implementation often overlooks variations in teachers; confidence levels, pedagogical orientations, and preferred learning modes. A study on teacher professional development in Indonesia highlighted the importance of considering teachers' needs, suggesting that programs should align with teachers' specific requirements, including areas like classroom management, integrating ICT into classroom discussions, and ensuring that program materials are relevant to their needs (Avillanova & Kuswandono, 2019). Research in other context has also emphasized that teachers' readiness for ICT is multidimensional, shaped not only by technical literacy but also by their willingness to adapt to new platforms and pedagogies (Li, 2021; Salem & Mohammadzadeh, 2018). Jamil et al., (2024) similarly highlight the importance of context-sensitive professional development tailored to teachers' career stages and experiences. More recent findings highlight that teachers' ICT readiness is multidimensional, shaped not only by technical literacy but also by their willingness to adapt to new platforms and pedagogies (Li, 2021; Salem & Mohammadzadeh,

2018). These studies suggest that a one-size-fits-all approach is inadequate; programs should adopt differentiated strategies to accommodate teachers' varied levels of ICT proficiency and pedagogical readiness (Jamil, et al., 2024).

The successful integration of ICT training courses is further challenged by various practical barriers, like insufficient supporting facilities, restricted accessibility to technology and resources, heavy workloads, and time constraints. In Indonesia, restricted usage to stable internet connections and insufficient computer resources have been recognized as significant drawbacks to ICT integration in schools (Avillanova & Kuswandono, 2019). These infrastructural limitations hinder teachers' ability to effectively engage in online professional development programs and utilize technology in their classrooms. Research has consistently highlighted the need for adequate supporting facilities, ranging from stable internet connectivity, sufficient computer resources, and technical support, to facilitate the successful integration of ICT into teaching and professional development (Yang, 2019). Furthermore, heavy workloads and administrative tasks often leave teachers with limited time to dedicate to professional development, hindering their ability to engage in training programs and implement new ICT skills in their teaching (Aprianti, 2017). These practical barriers underscore the need for institutional support and systemic changes to create an environment that facilitates the effective implementation of ICT into EFL teaching and professional development.

Taken together, these challenges and opportunities underscore the need for research that examines ICT-enhanced professional development as experienced by higher education EFL teachers in Indonesia. While policies and global trends emphasize the importance of digital competence, the realities of university contexts reveal tensions between policy ideals, institutional capacity, and teachers' professional needs. Yet, research on ICT integration has predominantly focused on primary and secondary education, leaving the higher education context comparatively underexplored. To address this gap, the present study investigates the lived experiences of Indonesian EFL teachers, focusing on their perceptions of ICT-enhanced professional development, the barriers they encounter in integrating ICT into teaching, and the opportunities they identify for growth. Specifically, it addresses two guiding questions: (1) How do higher education EFL teachers' experiences with professional development programs influenced their use of ICT in the classroom? and (2) What challenges and opportunities do the teachers perceive in using ICT for their professional growth and classroom practices? By examining these questions, the study contributes to a deeper understanding of how professional development can be designed to better support EFL teachers in navigating the demands of digital higher education.

RESEARCH METHOD

Research Design

This research employed a case study design within a qualitative framework. A case study approach is particularly valuable when examining a phenomenon thoroughly and in the context of the real world, such as investigating ICT integration in professional development (Yin, 2018). The qualitative design enabled for a more nuanced comprehension of EFL teachers' actual experiences with ICT-based professional development.

This study focused on the experiences of teachers, which are impacted by a number of contextual elements such as personal attitudes toward technology, institutional support, and the resources that are available. By employing a case study design, the study was able to capture these characteristics in their particular educational setting, providing insights into opportunities and obstacles that are difficult to measure (Merriam & Tisdell, 2016). The kinds of ICT tools employed, the instructors' ICT proficiency, and the perceived efficacy of professional development initiatives are the main variables in this study.

Research Participants

The participants were eight English instructor at a university, all of whom taught in a compulsory English program. This program is a mandatory sequence of English courses for all non-English major students, designed to ensure that undergraduate students develop basic communicative competence in English. Students are required to complete four semester of English instruction, which are organized into four progressive levels aligned with the Common European Framework of Reference for Languages (CEFR).

A convenience sampling technique was employed to select participants, focusing on instructors with experience teaching non-English majors and using ICT in their courses. Convenience sampling is commonly used in qualitative case studies where the goal is to access participants who can provide rich, contextualized information about the phenomenon under investigation (Cohen, Manion, & Marison, 2018). Eight teachers were chosen, each responsible for one or more levels of the program. To enrich understanding, demographic information such as years of teaching experience and levels taught was collected. (see Table 1).

Table 1
Participant Demographics

Participant	Years of Teaching	Professional Background
T1	12 years	B.Ed. in English Education
T2	9 years	B.Ed. in English Education
T3	7 years	M.Ed. in English Education
T4	20 years	B.Ed. in English Education
T5	15 years	M.Ed. in English Education
T6	5 years	B.Ed. in English Education
T7	6 years	B.Ed. in English Education
T8	17 years	B.A. in English Literature

As shown in Table 1, the participants varied in their teaching experience, ranging from 5 to 20 years. Most of them held a B.Ed. in English Education or an M.Ed. in English Education, while one participant held a B.A. in English Literature. This indicates that the group was academically trained either in English language education or literature, providing them with relevant pedagogical and linguistic foundations for teaching in the compulsory English program. Since all participants regularly taught English courses in both online and offline modes, they all possessed at least a basic level of ICT literacy, such as operating PowerPoint, managing online platforms, and using audiovisual tools for lesson delivery. However, their broader ICT expertise varied considerably, ranging from basic use for content delivery to more advanced integration for collaborative and interactive learning. This variation is analysed in detail in the Findings section using the RAT model.

This information provides a clearer picture of the sample, highlighting the diversity of teaching experience and academic backgrounds among the participants. Such variation is central to understanding their perspectives on professional development and ICT use. To guarantee ethical compliance, written permission was acquired from every individual following their request to take part voluntarily in the study.

Instruments

This study made use of classroom observation and semi-structured interviews to collect the data. Classroom observations provided real-time insights into how teachers integrated ICT into their teaching, capturing classroom interactions, student engagement, and contextual factors that cannot be fully obtained through self-report. Observation is widely valued in qualitative research because it allows researchers to capture naturally occurring behaviours of contextual conditions that participants themselves may not fully articulate (Merrian & Tisdell,

2016). A structured observation protocol guided the process to ensure consistency and focus on relevant aspects of ICT use, classroom interaction, and teaching environment.

Semi-structured interviews complemented these observations by giving teachers the opportunity to describe their experiences, challenges, and opportunities in depth. The flexible nature of semi-structured interviews allowed probing of emerging themes while maintaining alignment with the central research questions (Creswell & Poth, 2018). Using both instruments, observations and interviews, created a richer and more comprehensive understanding of the phenomena under investigation while also supporting triangulation data source.

Data Collection

Data collection proceeded in two stages. First, classroom observations were carried out naturally during regular teaching sessions with detailed field notes documenting ICT use, teacher-student interactions, and instructional strategies. Following the observations, semi-structured interviews lasting around 60 minutes were held with each participant to gather deeper insights into their perception, challenges, and opportunities.

Ethical safeguards were strictly observed throughout the process, including informed consent, confidentiality, and the use of pseudonyms to protect participants' identities, as recommended in qualitative research (Cohen, Manion, & Morrison, 2018). To strengthen the study's rigor, observation and interview data were systematically cross-checked through triangulation. This process allowed reported experiences such as difficulties with ICT infrastructure to be verified against actual classroom practices, thereby enhancing the credibility and trustworthiness of the findings (Patton, 2015)

Data Analysis

The data were analysed thematically following Braun and Clarke's (2006) six-phase approach: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. An inductive approach was adopted, allowing themes to emerge directly from the data rather than imposing pre-determined categories. Inductive thematic analysis is especially valuable in under-researched contexts, as it allows the findings to remain closely grounded in participants' experiences (Nowell, et al., 2017)

In addition, the Replacement, Amplification, and Transformation (RAT) framework (Hughes, Thomas & Scharber, 2006) was employed as an analytical lens to categorize the observed patterns of ICT integration in classroom practices. The RAT framework enabled the study to move beyond descriptive coding by positioning teachers' practices along a continuum, from basic substitution of traditional tools to transformative use of ICT for reshaping pedagogy and student engagement. This framework complemented the thematic analysis by providing a structured way to interpret the varying levels of technology across participants. To strengthen credibility, coding was revisited iteratively and emerging interpretations were discussed and refines in light of the research questions. Such iterative coding and reflexivity are important in qualitative research to ensure trustworthiness and alignment with the study's aims (Creswell & Poth, 2018).

RESEARCH FINDINGS AND DISCUSSION

Research Findings

The Influence of Professional Development on ICT Integration

Teacher's experiences with professional development played a significant role in shaping how they integrated ICT into their classrooms. Across the participants, professional development took various forms, including formal workshops, self-directed online learning, peer collaboration, informal mentorship, and conference attendance. Formal workshop, such as flipped classroom and gamification training, were attended by most teachers and were highly valued for building both technical skills and pedagogical strategies. Self-directed online learning through webinars, tutorials,

and online courses, allowed teachers to explore resources at their own pace. Peer collaboration and informal mentorship enabled context-specific learning through co-teaching, classroom observation, and sharing best practices. While conference attendance provided exposure to emerging trends though teachers reported it was less directly applicable to daily teaching. Together, these different forms of professional development shaped not only teachers' confidence with digital tools but also the extent to which they were able to embed ICT into their classroom practices.

Teachers' professional development had a clear impact on classroom practices. Those who attended workshops consistently implemented tools like Padlet, video lectures, Google Docs, and online quizzes, which enhances students participation, collaboration, and engagement.

"The workshop on using Padlet was a game-changer. I used to just give writing assignments, but now my students can brainstorm and comment on each other's ideas in real time." (Teacher 6)

Similarly, flipped classroom workshops led teachers to prepare students before class using video lectured and quizzes, while collaborative writing tools like Google Docs facilitated peer feedback and group work. Online quizzed and digital games made lessons more interactive and engaging. Informal mentorship, personal interest, and motivation also played an important role in ICT adoption, showing that while professional development influenced practice, it was not the only factor shaping how technology was used in classrooms.

However, the link between professional development and classroom practice was not always straightforward. Some teachers learned about new tools but did not apply them immediately due to practical constraint such as large class, limited time, infrastructure challenges, or student readiness.

"I learned about Kahoot in webinar, but with large class I have not used it yet." (Teacher 7)

This reflects the need for more flexible and context-sensitive professional development, where teachers can adapt what they learn to the realities of their teaching environment. Classroom observations revealed wide variation in how ICT was implemented across the participating teachers. Some instructors embraced digital tools creatively, integrating interactive platforms such as online quizzes, collaborative writing applications, and multimedia resources to encourage participation. These approached often helped quitter students to become more active in class.

"When I use interactive tools, students who are usually silent feel more confident to respond. They are more engaged compared to traditional activities." (Teacher 4)

Such practices reflected efforts to move beyond lecture-based methods and to create more student-centered learning environments. ICT was not simply an add-on but a way to diversities and expand learning opportunities. At the same time, a. number of teachers used ICT in ways that enriched their lessons without fully transforming classroom dynamics. For instance, short video clips, online vocabulary application, and quick quizzes were integrated to make explanations clearer and provide students with extra practice. These practice increased efficiency and motivation, though the lesson largely remained teacher-directed.

"Using videos or short quizzes helps to keep students' attention. It makes the class livelier but I still control most of the process." (Teacher 3)

In contrast, other teachers adopted more basic uses of ICT, relying largely on PowerPoint slides. While these tools supported efficiency and content delivery, they were less interactive and did not fully leverage the potential of digital learning.

"I mostly depends on slides. They are simple and save time, but I know they don't really push students to explore language more deeply." (Teacher 2)

These variations suggested that ICT integration did not occur in a uniform way. Instead, teachers' practices could be seen along a continuum, ranging from simple substitution of traditional tools, to enrichment that made lessons more engaging, and in some cases to approaches that reshaped

classroom interaction. The following table summarizes each teacher's professional development experiences, the direct influence in the classroom, the tools used, and level of integration.

Table 2
Professional Development and ICT Integration in Classrooms

Teacher	Professional Development Experience	Classroom Application	ICT Tools Used	Level of Integration
T1	Formal workshops, peer collaboration, webinars	Applied techniques for content presentation and listening practice	PowerPoint, audio recordings	Replacement
T2	Self-directed online learning, formal workshops, conference attendance	Focused on efficient content delivery	PowerPoint	Replacement
T3	Formal workshops, self-directed online learning, peer collaboration	Enhanced vocabulary and visual enrichment, students practice	Multimedia clips, vocabulary apps, Prezi	Amplification
T4	Formal workshops, peer collaboration, informal mentorship	Interactive task and participation, collaborative learning	Online quizzes, digital games, collaborative writing apps (Google Docs)	Transformation
T5	Formal workshops, self-directed learning, conference attendance	Supplemented explanation and provided extra practice	PowerPoint, YouTube videos, online worksheets	Amplification
T6	Formal workshops, peer collaboration, webinars, self-directed learning	Facilitated collaborative task and individualized practice	Interactive whiteboard, Google Docs, online exercises	Transformation
T7	Self-directed online learning, peer collaboration	Focused on efficiency in task management	Slides, digital worksheet	Replacement
T8	Formal workshops, informal mentorship, webinars	Promoted creativity, active participation, reinforcement of learning	Vocabulary platform, digital games, quizzes, Canva projects	Amplification

The difference across classrooms suggested that ICT integration was uneven. Some teachers were eager to experiment with innovative tools, while others preferred to stay with familiar practices. These findings point to the need for a balanced approach to professional development that combines structured training with flexible, informal opportunities. Such diversity ensures that teachers with different levels of expertise and confidence can find relevant entry point into ICT use, making integration more inclusive and sustainable.

Teacher Perspectives on ICT-Enhanced Professional Development

While professional development supported teachers' ICT use, several challenges limited its effectiveness. Many teachers highlighted difficulties such as limited infrastructure, unreliable internet connections, and insufficient institutional support. Large class sized and time constraints also made it difficult to implement interactive activities consistently. For example, some teachers reported that while they wanted to use tools like Kahoot or Padlet, managing over 35 students at once led to technical and organizational difficulties. Similarly, creating digital learning materials required considerable preparation time, which was not always feasible alongside other academic responsibilities.

"The problem is not about knowing the tools, but about having enough time and the right conditions to use them well." (Teacher 7)

Another recurring challenge was uneven student readiness. Some students lacked adequate digital literacy or reliable devices, which made it hard to fully integrate ICT-based activities.

Teachers sometimes needed to balance between engaging students who were digitally savvy and supporting those who struggled. This digital divide often reduced the potential impact of ICT tools and created extra workload for teachers.

"I want to give more online assignments, but not all students can access them easily. I need to prepare alternatives, and that doubles my work." (Teacher 1)

Teachers also point pointed that professional development itself sometimes lacked continuity. One-off workshops raised awareness of tools but did not always provide sustained guidance on classroom application. Without ongoing follow-up, teachers found it challenging to adapt new strategies to their specific teaching contexts. This gap meant that some ICT tools introduced in training sessions remained underutilized.

"After the training, there was no follow-up. I tried my own, but sometimes I was not sure if I was doing it effectively." (Teacher 5)

Despite these challenges, teachers identified several opportunities associated with ICT use. Most agreed that digital tools enhanced students engagement, motivation, and participation. Interactive platforms encourages more active learning and allowed quieter students to contribute in ways they might not in traditional classrooms. For instance, collaborative tools like Google Docs and Padlet supported peer feedback and discussion, giving students a stringer sense of involvement in their own learning. Teachers also valued how ICT facilitated more flexible and diverse teaching approaches. Enabling them to combine synchronous and asynchronous methods, integrate multimedia resources, and provide instant feedback.

Importantly, teachers perceived ICT as not only enhancing their classroom practices but also contributing to their professional growth. Engaging with new tools encouraged them to rethink pedagogy, explore innovative strategies, and expand their digital competence. Some felt that experimenting with ICT fostered creativity and increased their confidence as educators.

"Using ICT makes me feel more up-to-date. It pushes me to think differently about how I design activities." (Teacher 4)

Institutional recognition and student feedback further reinforced the value of ICT adoption. Teachers who experimented with technology often received positive responses from students, which motivated them to continue. They also expressed hope that greater institutional support, such as improved infrastructure, reduce teaching loads, and ongoing professional development, would enable them to maximize ICT's potential. Taken together, these findings highlight that ICT integration is shaped by both constraints and possibilities. While infrastructure, time, and student readiness posed significant barriers, teachers remained motivated to innovate and saw clear opportunities to enrich teaching and learning. The balance of challenges and opportunities suggests that sustainable ICT adoption requires not only individual teacher effort but also structural and institutional support.

Discussion

The findings of this study provide a nuanced perspective on the influence of professional development on teachers' ICT integration, supporting and extending existing research on technology adoption in education. The data revealed that professional development is not a monolithic event but a multifaceted process involving formal workshop, peer collaboration, informal mentoring, self-directed learning, and conference attendance. This mirrors the arguments of Silvhiany (2022), who advocate for a holistic view of professional development that moves beyond single-session training. The teachers in this study who engaged with structured workshops on topics such as flipped classroom and gamification consistently translated this knowledge into tangible classroom practices, such as using collaborative documents, digital games, and online quizzes to enhance engagement. This direct link between training and implementation affirms Zhang (2022) and Pelila, et al. (2023),

who emphasize that targeted, hands-on professional development is crucial for building both the technical competence and pedagogical confidence needed for effective ICT use.

At the same time, the diverse professional development experiences reported by participants ranging from workshop to webinars, peer mentoring, and self-directed exploration correlated with different levels of ICT integration observed in their classrooms. Some teachers remained at the replacement stage, using ICT primarily for efficiency (e.g., PowerPoint), while others advanced to amplification, enriching lesson with multimedia tools, and a smaller group reached transformation where ICT reshaped student participation and interaction. These findings align with research by Lestarina, Nurkamto, and Ngadiso (2022), who used the RAT framework (Replacement, Amplification, Transformation) to describe ICT uptake among Indonesian teachers. Similarly, Masitoh, Fitriyah, and Mumtaza (2024) argue that teachers' professional learning contributes differently to their technological, pedagogical, and content knowledge. This study illustrate that formal workshop often built teachers' technological and pedagogical knowledge, while informal peer collaboration and mentoring strengthened their contextual and practical knowledge. Taken together, the results underscore the importance of recognizing professional development as a layered process, where multiple entry points allow teachers with varying digital readiness to progress along the continuum substitution to transformation (Li, 2021: Mai, 2020).

However, despite these positive influences, the findings also highlight tensions between professional development and classroom realities with a persistent gap shaped less by teacher willingness than by contextual barriers. Several participants acknowledged learning about innovative tools in workshops or webinars but hesitated to implement them due to large class sizes, time constraints, or student readiness. For instance, a teacher who had been introduced to Kahoot admitted difficulty applying it in a class of more than thirty students. It echoed the challenges identified by Avillanova and Kuswandono (2019) and Oyunge (2021). Similarly, unreliable internet connectivity and limited institutional support constrained the extent to which ICT could be embedded into daily lessons (Azmi, 2017; Salem & Mohammadzadeh, 2018). The uneven levels of ICT integration across classrooms, as summarized in Table 1 reflect these systemic challenges rather than individual shortcomings.

These findings also highlight the limitations of tool-centric professional development. A one-off workshop may introduce a potentially transformative platform, but its adoption requires a supportive environment that includes adequate infrastructure, smaller teaching loads, and time to experiment. Kohnke (2021) and Aprianti (2017) argue that without such context-sensitive approaches, professional development risks remaining abstract and detached from real classroom practice. This aligns with Alivi, Norahmi, and Mardiana (2024), who found that sustained professional growth requires continuous support mechanisms, not isolated training events. The present study reinforces this argument, demonstrating that professional development cannot be separated from institutional structures such as teachers need robust infrastructure, follow-up mentoring, and collaborative spaces to translate new learning into practice (Sabiri, 2020: Jamil et al., 2024). Without addressing these systemic issues, even the most carefully designed professional development programs risk reinforcing the gap between what teachers know and what they are able to do.

Building on this, the study reveals a profound duality in EFL teachers' experiences with ICT. The teachers faced significant, often overwhelming, barriers while simultaneously recognizing powerful transformative opportunities. This mirrors a central tension in educational technology research, where the promise of digital tools often clashes with the reality of their implementation. To fully understand this duality, the findings is best understood by examining challenges and opportunities at individual, institutional, and systemic levels.

At the individual level, the findings highlight significant time constraints and a perceived gap in professional development. Teachers in higher education operate under heavy workloads that leave little room for exploring new technologies, a point well-supported by Kohnka (2021). Furthermore,

while teachers may attend workshops, they often find the content too generic and not directly applicable to their specific classroom needs. This leads to a lack of confidence and pedagogical hesitation as teachers struggle to bridge the gap between technical knowledge and meaningful classroom application. The sense of professional isolation further compounds this issue, as teachers lack a readily available network for troubleshooting and sharing best practices (Aprianti, 2017; Sabiri, 2020)

At the institutional level, inadequate technical support and lack of reliable infrastructure like unstable internet connection and outdated hardware are major roadblocks. As Alivi, Norahmi, and Mardiana (2024) and Avillanova and Kuswandono (2019) have shown, resource constraints are a persistent issue. The success of any professional development initiative is fundamentally dependent on the institutional readiness to provide the necessary tools and support. When this support is absent, the teacher's motivation and effectiveness of any training are severely undermined. This demonstrate that institutional priorities play a decisive role in determining whether ICT integration succeeds or stalls (Azmi, 2017; Salem & Mohammadzadeh, 2018; Jamil et al., 2024).

At systemic level, the challenges faced by teachers reflect broader structural issues in how professional development is designed and delivered. Too often, training follows a top-down, one-size-fit-all model that fails to account for the diverse realties of classrooms, leaving teachers uncertain about how to apply what they learn (Sadeghi & Richards, 2021; Avillanova & Kuswandoro, 2019). This study also points to the lack of a strong culture of peer collaboration and knowledge-sharing within institutions, which limits the sustainability of ICT integration. By contrast, research shows that professional learning communities and peer-driven platforms can provide continuous, context-sensitive support and foster innovation (Aprianti, 2017; Jamil et al., 2024).

Despite the challenges, the opportunities for ICT to enhance EFL teaching are substantial. At the pedagogical level, teachers viewed ICT as a means to boost student engagement and motivation. By using interactive tools like online quizzes and games, teachers can transform passive learners into active participants. This aligns with finding from Masitoh, Fitriyah, and Mumtaza (2024), who highlight the efficacy of digital platforms in boosting student engagement. Moreover, ICT enables access to authentic and diverse resources, allowing teachers to move beyond the confines of a textbook and expose students to real world language use. This is not only makes learning more relevant but also promotes learner autonomy, as students can independently explore a wealth of online materials (Li, 2021).

At the professional development level, ICT also offers a chance to revolutionize professional development itself. Technology-based format such as webinars and online courses provide flexible, scalable, and personalized learning experiences. This is particularly valuable for teachers with demanding schedules (Oyunge, 2021). More importantly, ICT can foster a culture of collaboration and peer learning. Online learning communities connect teachers who feel isolated, allowing them to share best practices, co-create resources, and troubleshoot challenges collectively. This peer driven learning model, as highlighted by Silvhiany (2022) and Aprianti (2017), can be more effective and sustainable than traditional, formal training.

At the institutional level, there is also an opportunity to build a more supportive ecosystem for ICT integration. By investing in robust infrastructure and providing dedicated technical and pedagogical support, institutions can demonstrate a commitment to their teachers' professional growth. This institutional readiness, as noted by Machmud et al. (2021), is a critical factor in the success of any technology integration initiatives. Beyond infrastructure, institutions can foster a culture of innovation by allocating time for professional development and encouraging experimentation with new tools.

Building on these insights, the implications of this study extend to multiple stakeholders in higher education, providing a roadmap for transforming the current landscape of ICT integration. For professional development providers, the results are a clear class to action. Instead of generic, one-size-fits-all workshops, professional development program should adopt a differentiated and

contextualized approach that acknowledges teachers' varied skill levels and specific needs (Syahdan, Marwa, & Herlianawati; 2022). This means designing initiatives that are not merely tool-focused but are instead grounded in pedagogical theory, helping teachers understand the "why" and "how" of using technology to enhance learning.

Furthermore, this research underlined the importance of providing continuous and hands-on support for teachers as they integrate ICT into their classrooms. As emphasized by Silvhiany (2022) and Kohnke (2021), mentoring, peer collaboration, and follow-up sessions are crucial in helping teachers sustained their ICT practices and overcome challenges. Institutions should prioritize creating professional learning communities where teachers can discuss knowledge, exchange resources, and collaboratively find solutions for problems. Such communities not only enhance individual competencies but also foster a culture of collaboration and innovation, which is essential for sustainable integration of ICT in education (Li, 2021).

The implication also extend to higher education institutions. The study underscore that ICT integration is not only a pedagogical issue but a systemic issue one requiring a multi-pronged approach. Institutions must prioritize investing in a robust and reliable ICT infrastructure including stable internet and updated hardware, as a fundamental prerequisite for effective technology-enhanced teaching. This investment signals that the institution values and supports its teachers' efforts. Furthermore, creating an institutional culture that promotes innovation, provides adequate time for professional development, and offers dedicated technical and pedagogical support is crucial for fostering a supportive environment (Machmud et al., 2021; Salem & Mohammadzadeh, 2018).

Finally, for EFL teachers themselves, the findings suggest that taking an active role in their professional growth is vital. While institutional support is crucial, teachers can benefit greatly from seeking out peer-to-peer learning opportunities and participating in online learning communities. By engaging in these collaborative spaces, they can build a network of support, share practical solutions to common challenges, and collectively advance their ICT proficiency. The study affirms that teachers' motivation and willingness to adapt are key drivers of successful ICT integration, making their active engagement an essential component of professional growth (Silvhiany, 2022).

CONCLUSION

This study investigated how higher education EFL teachers' experiences with professional development influenced their use of ICT in the classroom and what challenges and opportunities they perceived for their professional growth and classroom practices. The findings provide a nuanced understanding of these two guiding questions, revealing a complex landscape of both constraints and possibilities within a mandatory English program.

Teachers' professional development experiences emerged as diverse and influential. Formal workshops, such as training on flipped classroom and gamification, provided concrete strategies that were often translated into practice, while self-directed exploration, peer collaboration, and informal mentorship created more flexible and context sensitive learning opportunities. These pathways contributed to different levels of ICT integration, ranging from simple tool substitution to transformative classroom engagement. However, the findings also show that the link between training and practice is not always straightforward, as contextual factors often mediate a teacher's ability to implement new skills.

The study also highlighted a persistent duality, a chasm between the promise of ICT and the reality of its implementation. On one hand, inadequate infrastructure, unreliable internet, heavy workloads, insufficient follow-up in professional development, and uneven student readiness were major obstacles. On the other hand, teachers recognized powerful opportunities such as OCT enhanced student engagement and motivation, broadened access to authentic resources, and contributed to teachers' own professional growth by encouraging creativity and pedagogical reflection. Many teachers expressed enthusiasm for more context-sensitive training, sustained mentorship, and collaborative learning communities that could bridge the gap between training and practices.

These findings carry important implications. For theory, the study contributes to understanding of ICT integration by showing how different forms of professional development interact with contextual realities to produce a continuum of classroom practices. This extend existing frameworks by highlighting that teacher learning is inseparable from institutional and infrastructural conditions. For practice, the study emphasize the need for professional development ecosystem that combine structured, hands-on training with sustained support through mentorship, peer collaboration, and communities of practice. Institution must also invest in reliable ICT infrastructure, reduce administrative burdens, and create cultures that encourage innovation. For future research, the findings suggest the value of longitudinal and comparative studies across institutions to trace how ICT practices evolve over time and under varying conditions of professional development and institutional support.

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