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Teachers' Technology Integration Practices in EFL Context: Tension Between Teachers' Pedagogical Beliefs and Classroom Practices

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In line with technology integration policies and language curricula in Kuwait and many other countries, language teachers are expected to integrate digital technologies into instruction to facilitate meaningful interaction that can lead to language learning. However, little is known about teachers' actual classroom practices with technology in the Kuwaiti context in which ministerial initiatives were taken for technology integration. Assuming that beliefs and classroom practices are logically multivariate and interrelated, this study examined teachers' pedagogical beliefs about language learning and teaching, as well as how they are enacted in their technology integration practices. Data were collected through semi-structured interviews with three English as a Foreign Language (EFL) teachers and triangulated with classroom observation. Findings revealed that teachers are predominantly inclined to embrace a behavioristic /transmissive approach to language learning and teaching. Despite recognizing the potential of constructivist approaches, teachers primarily used technology for content delivery and structured drills rather than fostering interaction or student autonomy. Such an approach seems to impact how teachers use technology in the class, subsequently lessening its potential. Teachers' positive beliefs about other approaches (e.g., constructivism and social constructivism) are not necessarily present in their practices when technology is embedded in their classrooms. This study highlights a critical gap between teachers' pedagogical beliefs and their actual classroom technology use, pointing to institutional and training-related barriers that hinder effective integration.

Keywords: computer assisted language learning (CALL), teachers' beliefs, technology integration practices, English as a foreign language (EFL)

INTRODUCTION

In today's fast-paced and globalized world, many countries are increasing their investments in technology integration in education, believing technology will catalyze better education, pedagogical changes, and educational reforms. Kuwait is one of these countries in which the integration of technology in the education sector has been a prominent objective, especially given the New Kuwait Vision 2035. A range of ongoing

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initiatives were considered by the Ministry of Education, including plans to integrate artificial intelligence (AI) laboratories and interactive smartboards in government schools (Kuwait News, 2024). The Ministry has also offered incentives and rewards for teachers implementing technology in their classrooms (Ministry of Education, 2003).

Despite substantial investments, a persistent gap remains between policy expectations and the actual use of technology in classrooms. Previous research has indicated that technology integration in Kuwaiti government schools has been largely unsuccessful (Alfelaij, 2016). Moreover, providing access to digital tools does not necessarily result in meaningful pedagogical transformation (Al-Awidi & Aldhafeeri, 2017; Buhamad et al., 2024). Studies have also found that teachers' use of technology tends to be limited to lesson preparation, content presentation, and direct instruction delivery (Al Sharija et al., 2012; Alharbi, 2012, Alkhezzi & Abdelmagid, 2011). The use of technology for constructivist practices and fostering student-centered learning remains limited. This has been attributed to teachers' lack of readiness to implement technology effectively, both technically and pedagogically (AlAwidi & Aldhafeeri, 2017).

In the broader literature, previous studies argued that teachers are the change agents (Ertmer & Ottenbreit-Leftwich, 2010) and decision-makers (Borg, 2003) who can influence the way technology is integrated into classrooms (Chen, 2008; Ding et al., 2019; Ertmer, 2005; Levin & Wadmany, 2006). Their beliefs meaning "what second and foreign language teachers at any stage of their career think, know or believe in relation to various aspects of their work" (Borg, 2003, p.83) have been identified as significant factors that can affect the way teachers integrate technology. It has been reported that the same technological tool can be used differently by different teachers exhibiting variations in their pedagogical beliefs including behavioristics, cognitive and social constructivist orientations (Ding et al., 2019; Chan & Elliott, 2004; Chen, 2008; Tondeur et al., 2017).

Congruent with findings from the Kuwaiti context, the wider literature also indicates that teachers are not effectively using technology to support student-centered pedagogies (Bice & Tang, 2022; Gracia et al., 2020), but rather considering it as a productivity tool to support traditional teacher-centered teaching tasks, often contradicting educational technology policy, which eventually created tension between policy and teachers' technology integration practices (Abedi, 2024). Discrepancies were also reported, suggesting that teachers do not consistently enact their espoused beliefs and exhibit a misalignment between their beliefs and practices (Chen, 2008; Ding et al., 2019; Mama & Hennessy, 2013). One possible explanation for this discrepancy is a lack of knowledge or understanding of how teachers' pedagogical beliefs about language learning approaches can be established through the use of technology (Bice & Tang, 2022) or the fact that some teachers may be driven by what is politically accepted as an effective pedagogy without knowing how to implement it (Ding et al., 2019).

While the existing literature has significantly enhanced our understanding of teachers' technology integration practices, several areas remain underexplored and warrant further investigation. Assuming that beliefs and classroom practices are logically multivariate and interrelated, only a limited number of studies (e.g. Ding et al., 2019;

Levin & Wadmany, 2006) have qualitatively examined teachers' beliefs about language learning and their classroom practices with technology. Although some research has explored these issues globally (e.g. Chen, 2008; Ding et al., 2019; Ertmer, 2005), there is a lack of in-depth, context-specific studies in Kuwait where educational reforms are being implemented. As such, this study is guided by the following research questions:

- What are EFL teachers' beliefs about English language teaching and learning?
- What are the technology integration practices of EFL teachers?
- To what extent do teachers' beliefs about English language teaching and learning influence their technology integration practices?

By exploring the teachers' beliefs and classroom technology integration practices, the study can provide valuable insights that inform policymakers in Kuwaiti schools. The findings could also help to bridge the gap between theoretical frameworks for language learning and the practical realities of technology use, fostering a more dynamic and effective learning environment for students in Kuwait.

LITERATURE REVIEW

Teachers' beliefs and language learning

Beliefs are central constructs in language learning, referring to choices consistent with attitudes. These beliefs are influenced by psychologically held understandings of the world (Pajares, 1992; Richardson, 1996). They guide people's behavior; individuals interpret new information based on preexisting ideas (Puchata, 1999). Pajares (1992) defined belief as a 'conceptual tool' and an "individual's judgment of the truth or falsity of a proposition" (Pajares, 1992, p. 316). Argyris and Schon (1974) argued that teachers' beliefs are complex, proposing an individual theory of action with an espoused theory and a theory-in-use. The former includes stated beliefs, "statements teachers made about their ideas, thoughts, and knowledge" (Basturkmen et al., 2004, p. 244). The latter includes tacit beliefs underlying classroom practices.

In language learning contexts, teachers' beliefs are "ideas and theories that teachers hold about themselves, teaching, language, learning, and their students" (Richards & Schmidt, 2010, p. 586). According to Borg (2003), a teacher's belief is "what second and foreign language teachers at any stage of their career think, know or believe about various aspects of their work" (Borg, 2003, p.83). Sociocultural factors can influence it, including schooling, professional work, classroom practice, and contextual factors. For example, teachers' personal experiences as second language learners can influence their practices.

Teachers' classroom practices are governed by their understanding of how language should be taught, serving as a filter for instructional judgments and decisions (Kagan, 1992; Pajares, 1992). Teachers with traditional pedagogical beliefs implement behaviouristic practices (e.g., drill and practice, repetition, memorization), placing the teacher at the center (Chan & Elliott, 2004, Chen, 2008). Conversely, teachers with social constructivist principles use pedagogies (e.g., group work, collaborative learning) that allow students to co-construct knowledge (Chan & Elliott, 2004; Deng et al., 2014;

Ertmer et al., 2012). Teachers with traditional beliefs act as authorities and organize teacher-centered activities. Teachers with constructivist beliefs act as facilitators, encouraging active learning and self-constructed meaning (Becker, 2000).

In examining teachers' beliefs and practices, Jonson (1992) argued that teachers' beliefs about language learning are deeply intertwined with their teaching practices. Her framework identifies belief categories influencing how teachers view language teaching and learning. Teachers' content pedagogical beliefs are categorized into three orientations: skill-based (focuses on memorization and repetition), rule-based (focuses on the intellectual understanding of grammar), and function-based (focuses on learners' target language use). These categorizations coexisted in a single teacher's belief, suggesting these orientations are not mutually exclusive.

Pedagogical practices with technology

Pedagogical practices with technology refer to how teachers use technology in classrooms (McKnight et al., 2016). These practices are often classified as behaviouristic/transmissive or constructivist-based pedagogies (Kim et al., 2013; Levin & Wadmany, 2006; Tondeur et al., 2017; Tondeur, 2020). Studies show that teachers' pedagogical practices with technology are influenced by their beliefs about language learning (Chen, 2008; Ding et al., 2019; Ertmer et al., 2012; Levin & Wadmany, 2006; Liu et al., 2017).

In the field of SL/FL, studies on teachers' pedagogical beliefs and technology integration practices found that those with behavioristics/transmissive beliefs use technology for teacher-centered practices (Chan & Elliott, 2004; Chen, 2008; Levin & Wadmany, 2006). They use technology to reinforce learning through repetition and feedback, often delivering content but rarely promoting higher-order thinking skills (Kim, 2008). PowerPoint is often used to present information (Alharbi, 2012; Li, 2020) and teachers remain at the center of the interaction (Zhong & Shen, 2002). Ding et al. (2019) reported that teachers with behaviorist beliefs employ skill-based and rule-based practices, using technology for vocabulary drills and grammar teaching. Li (2020) found teachers use technology as a tutor for grammar tutorials and individualized feedback. Li et al., (2019) found that technology use negatively facilitated communicative classroom discourses, as teachers used it for direct instruction rather than spontaneous interaction. Moorehouse (2023) found that teachers use technologies such as digital activities, book creation Apps, and interactive digital sheets and quizzes, however, teachers have embedded these technologies to support their regular classroom teaching practices. Donnelly et al., (2011) classify these practices as "contented traditionalists", representing technology use alongside traditional teaching practices.

In addition to the behaviouristic orientation, Levin and Wadmany (2006) observed additional orientations namely cognitive and social constructivism. The former emphasizes technology's role in organizing and processing information to enhance cognitive development. The latter views technology as a means to support active, student-centered learning through exploration and collaboration. Empirical studies found that teachers who hold constructivist stances, believing in the power of student-centered approaches, would use technology more effectively (Ertmer et al., 2012; Kim

et al., 2013; Tondeur et al., 2017). Examples of these teachers' practices are reported in previous studies (e.g. Ding et al., 2019; Li, 2020; Inan & Lowther, 2010). For example, Ding et al. (2019) found that teachers used PowerPoint for function-based practices to promote genuine student interaction by inserting YouTube videos and encouraging discussion. Li (2020) also found that teachers use technology as a cognitive tool, with PowerPoint promoting students' interaction and creative thinking skills. In these examples, technology is a learning tool that promotes student-centered pedagogies (Inan & Lowther, 2010). Donnelly et al., (2011) classify these practices as "creative adopters," representing technology use for student-centered teaching and meaningful learning.

Although behaviouristic/ transmissive and constructivism pedagogies appear opposed, teachers often hold both contradictory beliefs simultaneously, switching between student- and teacher-centered methods (Bice & Tang, 2022; Ding et al., 2019), with these beliefs potentially changing over time (Levin & Wadmany, 2006). Ding et al. (2019) and Whyte et al. (2022) found most teachers in their study held mixed primary and secondary beliefs, with some favoring repetition and structural language teaching, while others emphasized students' communicative competence. Levin and Wadmany (2006) documented varied pedagogical beliefs along a continuum from teaching as transmission to knowledge facilitation. Their three-year study revealed changes in teachers' beliefs and practices due to technology use, with fewer behaviorist beliefs over time. Initially, teachers used more direct instruction and structured activities, but after experiencing technology, they adopted practices focusing on collaborative learning, emphasizing coaching, modeling, reflection, and exploration.

Studies on teachers' pedagogical language learning beliefs and technology integration practices suggest teachers hold varied beliefs influencing classroom behaviors. These beliefs cannot always be classified dichotomously as behaviorist or constructivist; several can coexist, reflecting complexity. Pedagogical beliefs are determinant factors in teachers' technology integration practices—they could align with or misalign how teachers use technology. Technology is not a unitary concept; "it means different things to different teachers, and the practices associated with each conception lead to quite different outcomes" (Levin & Wadmany, 2006, p.170). The relationship between pedagogical beliefs and technology integration practices is not static but socially co-constructed and can shift over time due to external factors (Li, 2020).

English language teaching and technology: The Kuwaiti context

In the Kuwaiti government school system, English is taught as a foreign language (EFL) from first to twelfth grade, providing 12 years of formal instruction in 45-minute lessons five times weekly. In 2002, the English curriculum was developed to follow multiple approaches, including content-based, skill-based, and task-oriented (The ELT National Curriculum, 2011). Tryzna and AlSharoufi (2017) state that the modernized curriculum balances communicative and structural approaches. English language teaching emphasizes three main goals: linguistic, cognitive, and affective. Linguistic goals focus on teaching language skills specified as assessable competencies. Cognitive goals aim to develop skills such as predicting, defining, logical reasoning,

comparing/contrasting, justifying opinions, decision-making, and differentiating fact from opinion. Affective goals include fostering students' pride in Islam through carefully selected texts and dialogues and enhancing collaborative and interactive skills, self-awareness, self-confidence, empathy, and public speaking skills.

The main goals for teaching English in Kuwaiti government schools align with the Ministry of Education's aims, particularly "bridging the digital gap between the reality of the current general education requirements and dealing with advanced technology in various fields of scientific, practical and private life" (Hussein et al., 2011). The Ministry promotes digital literacy and educational technology through initiatives and policies, implementing plans to equip schools with modern technological resources (Kuwait News, 2024). The English language supervision team's objectives include encouraging teachers to use information technology to explore diverse knowledge sources and interact with their community and the world, qualifying learners to use advanced technology in their lives, and guiding some to specialize in information technology (Hussein et al., 2011). Despite these initiatives, research suggests limited technology use for learning in most Kuwait public schools (Alfelaij, 2016). For example, Al Sharija et al. (2012) found that secondary school teachers use various technologies, though EFL teachers' use tends to support traditional pedagogies. Other studies found that teachers report high technological knowledge but limited understanding of deploying technology for pedagogical goals (Al-Awidi & Aldhafeeri, 2017). Al Quenaei et al. (2021) found that teachers report minimal use of technology in the classroom claiming that teaching efficacy is the strongest determinant of that use behavior followed by perceived ease of use and perceived usefulness.

One possible explanation for the limited use of technology in language instruction is the influence of teachers' pedagogical beliefs about language learning (Ding et al., 2019; Levin & Wadmany, 2006; Tondeur et al., 2017). However, little is known about the specific perspectives held by language teachers in Kuwait and how these beliefs may relate to their technology integration practices. To address this gap, the present study investigates the relationship between teachers' pedagogical orientations and their use of technology in language teaching within the Kuwaiti context.

METHOD

Design of the Study

A case study approach was employed. As a research strategy, the case study involves an in-depth exploration of "a particular contemporary phenomenon within its real-life context using multiple sources of evidence" (Robson, 1993, p. 146). The case study was selected as a research strategy since it allows researchers to examine the nuances and dynamics of a specific case or a few cases in detail. This is particularly useful when dealing with complex issues where context is crucial (Yin, 2018). Given the study's focus on how teachers' beliefs shape their classroom technology practices, a qualitative case study approach was chosen to provide in-depth insights that could not be captured through purely quantitative methods. In this paper, the contemporary phenomenon will be the use of technology in Kuwaiti primary schools, considering broader sociocultural

contextual features that may affect technology use, including teachers' beliefs about language learning (Attia, 2011; Li, 2020).

Research Procedure and Participants

Before data collection began, ethical approval was granted[1], and a short description of the study was sent to the Kuwaiti Ministry of Education and principals of primary schools outlining the study's purpose, methods, and potential impacts. After receiving grant access from the Ministry of Education and principals of some primary schools, English language teachers were contacted initially to gauge their interest in the study. An information sheet and consent form were sent to inform participants about the study procedure, that their participation is voluntary, and that there is no penalty for non-participation or withdrawal at any stage. Participants were also informed about how their data will be used and that their identities will remain confidential. Those who indicated a willingness to participate were subsequently sent a detailed description of the study procedure. Participants were selected based on purposive sampling to ensure variation in teaching experience and perspectives on technology integration. The three selected teachers included Ms. Arwa (27 years old, 5 years of teaching experience), Ms. Safa (33 years old, 11 years of teaching experience), and Ms. Sarah (36 years old, 14 years of teaching experience). They were female teachers teaching in government schools where English is taught as a foreign language (FL). To ensure confidentiality, these names are pseudonyms used to protect the teachers' identities.

Data collection

The data was collected through classroom observation and in-depth semi-structured interviews with three teachers in three different primary schools in Kuwait. Before visiting teachers' classrooms, face-to-face interviews were conducted in teachers' meeting rooms to elicit their beliefs about language teaching and learning (Appendix A). The recordings were transcribed verbatim, and pseudonyms were used to present interview data. Classroom observations (Appendix B) were also conducted in teachers' actual classrooms (the researcher visited the classrooms for half an hour) twice per week for one academic semester (two-and-a-half months). Interview questions were piloted with two pre-service teachers, and some ambiguous questions were amended for the actual study. Observing notes and interview transcripts were checked with the research participants to ensure trustworthiness. Including multiple data sources—self-reported beliefs (interviews) and observed classroom behavior (observations)—enhances the reliability of the findings by allowing for cross-verification of stated and actual practices. Moreover, it is essential to mention that teachers can engage in instructional practices that are at odds with their professed epistemologies to transmit the knowledge and deliver the curriculum (Many et al., 2002). Therefore, adding observation as a method of data collection was essential to understand how their reported beliefs are demonstrated in their practices.

[1] This research is granted by The Public Authority for Applied Education and Training (PAAET), research no. BE-23-08

Data analysis

Within-case and cross-case analyses were conducted (Stake, 2006), developing an in-depth and comprehensive understanding of each teacher's beliefs and technology integration practices and identifying similarities and dissimilarities among the three cases. The within-case analysis focused on developing an in-depth and comprehensive understanding of individual cases' beliefs and technology integration practices. In contrast, the cross-case analysis focused on identifying the similarities and dissimilarities among the three cases.

To analyze teachers' beliefs, teachers' responses in the interview data were used as the main sources of evidence. Following Levin and Wadmany (2006), teachers' beliefs were categorized as behaviouristic-orientated, cognitive constructivism-orientated, and social constructivism-orientated. Observational notes were taken according to how technology was used in each stage of the lesson (warmup/lead-in, the presentation, and the wrap-up stage), taking into consideration the multiple roles (tool-tutor-medium) that technology can play in the classrooms (Levy, 1997). Technology as a tool refers to teachers' use of technology to enhance and support the teaching and learning process. When used as a tutor, technology can deliver instructional content to students guiding them through different exercises and providing them with ongoing feedback. As a medium, technology facilitates human communication.

The data was analyzed using thematic analysis (Braun & Clarke, 2006). The data analysis process started with familiarization; the interviews, data, and observation notes were read thoroughly multiple times to get an overall idea of the content. Then, coding and analyzing interview data according to the broad pedagogical practices framework (Levin & Wadmany, 2006). This framework was used to emergent preliminary themes to classify and understand identified teachers' beliefs about language learning along a continuum of traditionalist (teacher-centered) and constructivist (student-cantered), shedding light on the diverse ways in which teachers use technology inside their classrooms

Two main practices were conducted to enhance coding reliability: (1) the principal researcher coded the same data one month after the first coding, and (2) the data coding of transcripts was also checked by a second coder for blind coding of 25% of the randomly selected teachers' extracts. The principal researcher and a second coder agreed on the codes assigned to 87% of teacher's extracts. To enhance the study's validity, data from interviews and classroom observation were both considered to get a better understanding and interpretation (i.e., triangulation).

FINDINGS

Teachers' Beliefs About Language Learning, Technology Use, and Technology Integration Practices

The following sub-section provides within case analysis for each case. Each case analysis includes an analysis of teachers' beliefs about (a) language learning and (b) technology use followed by (c) a description of their technology integration practices as observed in their classroom.

Case 1 Ms. Arwa

Beliefs About Language Learning

Ms. Arwa, a 27-year-old teacher with five years of experience, teaching grades 2 and 4, believes language learning is best achieved through memorization, accuracy, and repetition. She emphasizes mastering grammar and pronunciation before interaction. She explains, "I believe students best learn the language when they memorize what I explained in class." She holds a strict approach and doesn't tolerate errors, stating, "To learn the language properly, they need to master accurate grammar." According to her, interaction should come only after students develop a solid foundation in grammatical rules and pronunciation, "I do not think interaction is the key (…) before interacting with people, students need to learn the main principle of a specific language including accurate grammar and correct pronunciation". Her methods involve structured exercises, individual practice, and repetition until correctness is achieved. She describes her approach: "I deliver the lesson and model exercises, then I make sure that students practice it individually. If they did not perform it correctly, I will ask them to repeat until they get it right."

Beliefs About Technology Use

Ms. Arwa views technology as a beneficial tool providing structured learning materials, aiding students in reinforcing grammar and vocabulary through repetition. She finds drill-and-practice exercises particularly useful, stating, "Technology is helpful—it provides me as a teacher with unlimited materials (…) students can engage in drill and practice activities to enhance their vocabulary and grammar knowledge". She also values audio materials for improving pronunciation, explaining, "the audio materials on the web can help students repeat many times, enhancing their pronunciation." She favors beginner-level apps focusing on spelling, where students repeatedly fill in missing letters until they master word formation, saying, "I like the apps for beginner learners which focus on spelling; students can practice filling the spaces until they know how to write the word correctly." Additionally, she appreciates platforms with automated feedback that help students recognize and correct their mistakes, noting, "some websites/apps have automatic critical feedback which helps students realize their mistakes and errors, correct them and enhance their accuracy". Her beliefs align with a behaviorist orientation, viewing technology as a tutor that reinforces structured learning through repetition and correction.

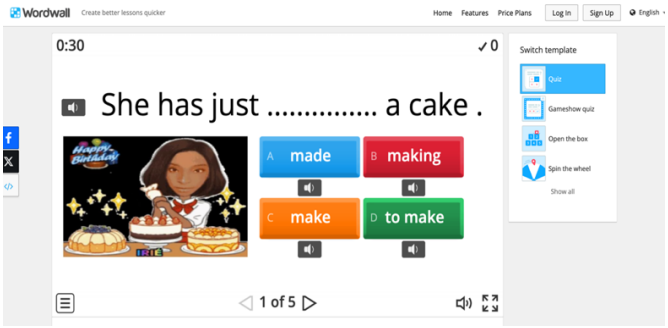
Technology Integration Practices

Ms. Arwa's technology integration practices align with her beliefs about language learning, emphasizing structured learning and repetition. Her use of technology represents technology as a tutor, reinforcing accuracy through structured exercises and controlled practice. Observations showed technology was primarily used to display content, model pronunciation, and facilitate drill-and-practice activities.

In a second-grade lesson about "body parts," Ms. Arwa played a YouTube song introducing different body parts. Students pointed to corresponding parts as they heard them, reinforcing memorization through repetition. She used the 'Spinning the Wheel

App' to select students to answer comprehension questions. In her presentation stage, she displayed vocabulary on-screen with audio recordings to model pronunciation. For grammar instruction, she used PowerPoint slides to explain rules and designed interactive drill-and-practice activities using Wordwall (see Screenshot 1).

Her classroom interactions were largely teacher-led, with technology supplementing direct instruction. This structured approach reflects her belief in explicit modeling and accuracy-focused repetition, as she stated, "I deliver the lesson and model exercises, then I make sure that students practice it individually. If they do not perform it correctly, I ask them to repeat until they get it right."



Screenshot 1
Grammar exercise using Wordwall

Case 2 Ms. Safa

Beliefs About Language Learning

Ms. Safa, a 33-year-old teacher with 11 years of experience, teaching grades 3 and 5, values group work and social interaction as essential for language learning. She shares, "Since childhood, I have loved group work, and I believe we learn together." While acknowledging memorization's role, she believes interaction is key for developing communicative competence, explaining, "I can't deny memorization's role, but interacting with others can help us a lot, especially in developing communicative competence."

She uses a flipped learning approach, where students prepare at home before class discussions. She describes: "I ask my students to read materials I sent from home and then come to engage in classroom discussion about the topic we want to study." While believing structured practice is necessary, she emphasizes frequent interaction to develop language skills. "I think my students can develop their language, especially speaking, when they talk with each other and memorize dialogues and practice frequently."

Beliefs About Technology Use

Ms. Safa views technology as a powerful tool for fostering social interaction and structured practice. She integrates it into her classroom to enhance collaboration,

stating, "Technology plays a significant role in enhancing social interaction in my classroom; once a week, students bring their iPads and interact to work on different iPad-based activities." She also supports virtual platforms for students to engage with native speakers, explaining, "The best way for students to learn the language is by interacting with native speakers virtually. Apps such as Cambly and Duolingo are helpful." While valuing interaction, she sees the importance of structured exercises for grammar practice, stating, "Working on different structured exercises on the iPad helps students drill and practice grammatical rules, which could improve accuracy." Her beliefs reflect both behaviorist and social constructivist orientations, viewing technology as both a tutor (for structured practice) and a medium (for social interaction).

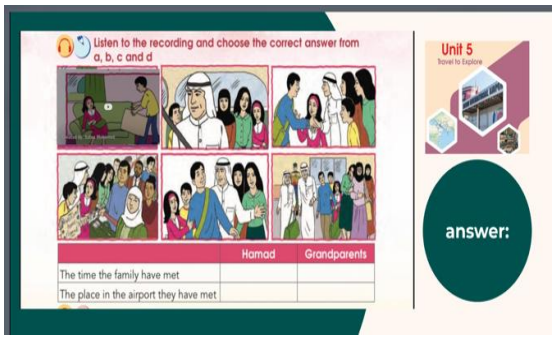
Technology Integration Practices

Despite Ms. Safa's stated beliefs in constructivist approaches and technology as a tool for social interaction, her classroom practices showed a misalignment. While she emphasized group work and collaborative learning in interviews, observations indicated technology was primarily used in a behaviouristic manner for drill-and-practice activities rather than fostering authentic interaction or independent exploration.

In her lessons, vocabulary was introduced in a structured format, with words presented alongside audio files for pronunciation. She provided links to an online dictionary for pronunciation practice (see Screenshot 2). However, despite claims about using technology to enhance interaction, observed lessons primarily involved teacher-led explanations and controlled practice. Her PowerPoint slides often featured textbook exercises copied directly from the coursebook, and she relied on the whiteboard to record student responses rather than leveraging digital tools for collaborative engagement (see Screenshot 3).

These practices contrasted with her stated beliefs about promoting authentic interaction and independent learning through technology. While she described technology as supporting social interaction, her implementation focused more on structured grammar and vocabulary exercises, reinforcing a behaviorist orientation rather than a social constructivist approach.

Screenshot 2
Presenting vocabulary with dictionary links



Screenshot 3
Presenting textbook on PowerPoint

Case 3 Ms. Sarah

Beliefs About Language Learning

Ms. Sarah, a 35-year-old teacher with 14 years of experience, currently teaching grades 5 and 6, emphasizes an individualized approach to language learning, tailoring instruction to students' learning styles and promoting self-directed learning. She explains, "My way of teaching is about understanding every student's needs. I design classroom activities according to my student's learning styles (…) I think learning a language depends very much on self-learning."

Her method includes project-based learning, where students work independently on assignments using reference materials. She describes her approach: "I usually ask students to work on projects individually at home (…) at the end of the class, I assign homework and provide reference materials to guide them." She believes regular exposure to online materials aids language acquisition, stating, "Students learn the language by interacting with materials on the web, whether electronic books, websites, or YouTube videos, this input can trigger language development especially if students get exposed to them regularly." While supporting self-directed learning, she acknowledges the role of memorization in developing language structure, noting, "Learning a language starts with memorization of language structure and without practicing these structures the child will face difficulty in speaking correctly."

Beliefs About Technology Use

Ms. Sarah sees technology as a tool enabling students to learn independently, exploring language resources at their own pace. She states, "Students can develop their English skills by interacting with online audio and video materials; they can read and listen anytime and choose materials matching their learning styles." She highlights the usefulness of search engines, explaining, "Google is a great search engine. Students can search for and read materials related to language learning, including vocabulary in context (e.g., concordance) or grammar explanation."

She encourages using structured online resources, saying, "Websites such as 'Learn English' or BBC English can help students develop their language skills

independently." Additionally, she appreciates grammar-checking tools like Grammarly and Microsoft Office, stating, "Grammarly and Microsoft Office are great tools that help students realize their mistakes independently and improve accuracy." She values technology's ability to provide repetition and practice, adding, "Students can interact with the technology and repeat activities as many times as they wish, helping them practice the language." Her beliefs align with behaviorist and cognitive constructivist orientations, viewing technology as both a tutor (for structured learning) and a tool (for self-directed exploration).

Technology Integration Practices

Similar to Ms. Safa, Ms. Sarah's classroom practices showed a gap between her reported beliefs and actual technology use. She identified as a behaviorist-cognitive constructivist, emphasizing independent learning, but her technology use was mainly behaviorist, focusing on controlled drills and content presentation rather than self-directed exploration.

Observations showed technology was used to deliver structured content, not student-driven learning. Vocabulary was introduced with a structured sequence: presenting target words, pronunciation drills, and online resources for reinforcement. Although she mentioned technology enabling self-paced learning, activities were teacher-led, with students passively absorbing information. Like Ms. Safa, she used PowerPoint slides for textbook exercises and the whiteboard for answers and explanations (see Screenshot 3).

Her beliefs about technology fostering independent learning and critical thinking were not fully reflected in her practices. Instead, her approach aligned with technology as a tutor, reinforcing grammar and vocabulary through structured exercises. While she valued technology for independent study, this was largely absent from her teaching methods.

Cross-case summary

Three main teachers, namely, Ms. Arwa, Ms. Safa, and Ms. Sarah represented three different beliefs about language learning used technologies in a similar pattern following a highly structured approach that exhibited a teacher-centered and behaviouristic orientation (see Table 1). The cross-case analysis suggested that all three teachers used PowerPoint as the main presentational tool to display the content of the lesson to students (i.e., as a supplement to their teacher-centered instruction). Furthermore, classroom observation revealed that there were no instances of using technology to support content-rich language activities that engage students in interaction and communication. Although Ms. Safa and Ms. Sarah held mixed beliefs as behaviouristic/social constructivism and behaviouristic/cognitive constructivism, declaring their strong positive beliefs about constructivist approaches when implementing technology, their classroom practices showed a strong single belief orientation towards a behaviouristic approach, emphasizing the use of technology as a supplemental tool to drill and practice grammar and vocabulary and to present content from the textbook. Their claims about their inclination towards using technology to support students' autonomous learning and social interaction were not evident in their

technology integration practices. Overall, while Ms. Arwa's technology integration practices were consistent with her behaviorist beliefs, both Ms. Safa and Ms. Sarah demonstrated misalignment between their stated beliefs and their classroom practices.

Table 1
Cross-case analysis

Teachers	Teaching methods	Conceptions of language learning	Technology integration practices
Ms. Arwa	Memorization Drill and practice Demonstration Modelling Individual learning Error corrections	Behaviouristic orientation	The teacher displays videos on YouTube/pictures on PowerPoint. Choose students to answer questions individually by Spinning the Wheel App The teacher displays new vocabulary words on PowerPoint accompanied by pictures and audio. The teacher uses activities on different websites to drill and practice grammar.
Ms. Safa	Memorization Drill and practice Group work Social interaction Flipped classroom Collaborative talk	Behaviouristic / Social constructivism orientation	The teacher uses a Smartboard to practice listening and match activities. The teacher uses PowerPoint to present pictures/audio. Teacher uses websites to drill and practice grammar Use Quizlet to have a vocabulary game. Use an online hangman game to practice spelling. Use FlipQuiz to display some lesson-related questions.
Ms. Sarah	Self-learning Project-based learning Comprehensible input Memorization Drill and practice	Behaviouristic / Cognitive constructivism Orientation	Displays the reading passages of the textbook on PowerPoint. Displaying grammar explanations on PowerPoint followed by filling the space exercises (copied from the students' textbook). Uses some pictures to explain the meaning of vocabulary and for difficult abstract words, she uses short videos on YouTube to present a scene, students will deduce the meaning from what they are watching.

DISCUSSION

The findings indicated that teachers simultaneously hold contradictory beliefs, combining behaviouristic and constructivist pedagogical beliefs. While this duality of beliefs has been observed in prior research (Ding et al., 2019; Levin & Wadmany, 2006), our study provides further evidence that teachers' technology integration practices often align more closely with their behaviorist inclinations, despite their verbal support for constructivist principles. Three main categories for teachers' beliefs about language learning were observed: (1) behaviouristic orientation, (2) behaviouristic /social constructivism orientation, and (3) behaviouristic /cognitive constructivism orientation. However, the predominant technology integration practices among the three teachers tended to be "contented traditionalists" (Donnelly et al., 2011), meaning that technology is primarily used to support and complement traditional classroom practices such as direct instruction.

Consistent with previous research (Garcia et al., 2020; Ding et al., 2019; Levin & Wadmany, 2006; Li, 2020), the findings assert the complexity of classroom practices and the interconnection between teacher's espoused beliefs and their technology integration practices. Although language teachers in this specific sociocultural context

held positive views on language learning pedagogies, including constructivism and social interaction, they leaned towards behaviorism and a traditional language learning and teaching perspective. English language teachers in the current study predominantly employed transmission pedagogy, emphasizing skills and knowledge transmission from the teacher to the students and appreciated the use of technology as a productivity tool to improve the efficiency of routine traditional classroom activities that focus on drill and practice (Abedi,2024; Ding et al., 2019; Li et al., 2019; Li,2019; Moorehouse, 2023). Technology is often used as a supplemental tool (Bice & Tang, 2022) or a tutor for one way of communication, reflecting a behaviorist perspective to provide grammar tutorials and individualized feedback. This finding coheres with previous studies (Abedi, 2024; Ding et al., 2019; Kim, 2008; Li, 2014; Li et al., 2019), indicating a prevalent pattern of teachers' technology integration practices that focus on streamlining traditional classroom practices rather than creating opportunities for student-centered learning. Moreover, the study by Bice and Tang (2022) highlights that teachers often view technology as an integral part of their instructional strategies rather than as an optional supplement. Their research indicates that when teachers perceive technology as essential for enhancing learning experiences, they are more likely to implement it in ways that support student-centered learning. This finding undermines the assertion that technology is primarily used to support traditional, transmission-based pedagogies.

The findings also revealed that the positivity in teachers' pedagogical beliefs about constructivism and social interaction did not impact their classroom practices when using technology. Kim et al., (2013) reveal that teacher beliefs about technology can lead to varied integration practices. They found that teachers who embrace constructivist beliefs are more likely to utilize technology in ways that promote active learning and student engagement rather than merely as a means to deliver content. This suggests that the relationship between teachers' beliefs and technology integration practices is complex and not solely aligned with traditional pedagogies. Contrary to Kim et al., (2013), our findings suggested that teachers with constructivist beliefs use technology to mimic their counterpart teachers with traditional/behaviouristic beliefs. In line with previous studies (Abedi, 2024; Ding et al, 2019; Li, 2014), we found that across the three teachers, there was little evidence to suggest teachers use technology to actively encourage students to construct knowledge or engage in social interaction. Teachers' actual classroom practices indicated that students had limited involvement in the instructional process and rarely engaged in social interaction with their peers when teachers in the classroom integrated technology. In the few instances where constructivist pedagogies, such as the implementation of group work and some student-centered activities, were observed, technology is often left behind. Teachers often use technology affordances to automate drill and practice activities. Other interactive activities involving active student interaction are conducted in the classrooms without using technology. Agreeing with Bice and Tang (2022), we believe that this can be attributed to teachers' limited understanding of how their pedagogical beliefs about language learning approaches can be established through technology.

Overall, the findings indicated that although teachers' pedagogical beliefs represented a mixture of perspectives, they appeared to value technology as a supplemental and

productivity tool to support existing traditional classroom practices rather than as a learning tool (Inan & Lowther, 2010) to extend students learning and collaborative activities. Prestridge (2017) illustrates how teachers' pedagogical orientations can evolve when they recognize the potential of technology to enhance learning outcomes. Prestridge notes that teachers who focus on student learning outcomes often find innovative ways to integrate technology into their practices, which can lead to more interactive and engaging learning experiences This finding suggests that the limited use of technology for social interaction may not be an inherent characteristic of technology itself, but rather a reflection of teachers' current pedagogical beliefs and practices.

By observing the actual classroom practices of teachers and comparing them with their declared beliefs about language learning, the findings also revealed discrepancies and tension between the two. Teachers' technology integration practices do not mirror their pedagogical beliefs about language learning. This corroborates Zhao-Cun and Li (2019), indicating that there can be a divergence between teachers' beliefs about creative pedagogy and their actual implementation in practice. Their findings suggest that teachers may hold positive beliefs about the potential of technology to enhance learning but may not always translate these beliefs into practice due to various constraints. This highlights the complexity of the relationship between beliefs and practices, suggesting that the assertion of limited student engagement with technology may not capture the full picture of teachers' intentions and capabilities. There is also no synergy between teachers' integration practices and the Kuwait Ministry of Education's expectations regarding how teachers should use technology. Teachers' limited use of technology for direct instruction and implementing drill and practice activities appear to contradict the core objectives of the Ministry of Education, which emphasize learners' creativity and active exploration of diverse knowledge and interaction with the wider community (Hussein et al., 2011).

CONCLUSION

In conclusion, this study has explored teachers' beliefs about language learning and their technology integration practices. The findings have provided valuable insights into the complex relationship between teachers' beliefs about language learning and their actual practices regarding technology integration in EFL classrooms. While some teachers expressed positive attitudes toward the potential of technology to enhance language learning, the findings revealed a persistent disconnect between these beliefs and their classroom practices. Specifically, teachers tended to rely on a structural approach to language instruction, which often constrains the full utilization of technology's interaction and communicative affordances.

These findings provide implications for policymakers. Professional development courses are recommended to develop teachers' pedagogical and technological knowledge. To strengthen professional development, we recommend hands-on workshops that model constructivist, student-centered technology use, combined with collaborative lesson planning sessions where teachers can design and share technology-based activities. Micro-analysis of classroom practices highlights the importance of understanding teachers' pedagogical beliefs and exercising caution in assuming these

directly guide practices with technology. Teacher educators should inculcate constructivist pedagogical beliefs and teach designing technology-based activities to enhance student interaction. Teachers should articulate their beliefs and examine their translation into technology use. Raising awareness that technology is not a unitary concept is crucial; teachers must understand it as a tool supporting different teaching objectives. Training courses should present empirical evidence on using tools for various language skills. While findings are specific to Kuwait, the tension between beliefs and technology integration is not unique, informing discussions elsewhere. This tension should raise policymakers' awareness that translating policy plans or beliefs into practices is complex. Initiatives should disseminate the ministry's vision about technology use and engage in training courses combining beliefs, technology, and classroom practice.

This study has limitations. The small sample size of three English teachers from Kuwaiti government primary schools limits generalizability. This limited sample can lead to unreliable or inconsistent results, as they may not capture the diversity of experiences and perspectives present in the broader teacher population. Additionally, with so few teachers, the study's ability to identify significant relationships or patterns is reduced, and the findings are more susceptible to bias or the influence of unique characteristics of the selected individuals. Therefore, while the study offers valuable insights, its conclusions should be interpreted with caution, and future research should aim to include larger and more diverse samples to enhance the study's validity and applicability. Another limitation is the reliance on qualitative methods, including self-reported interviews and classroom observations over a short period which could introduce potential biases and may not fully capture the complexity of teachers' technology practices. The study also lacks students' perspectives, which could provide a more comprehensive understanding of technology's impact in the classroom.

Future research should include a more extensive and diverse sample of teachers from different school types and subjects to enhance generalizability. Longitudinal studies observing teachers' technology use over time could provide deeper insights into how practices evolve. Incorporating students' perspectives would offer a more holistic understanding of technology's effectiveness in language learning. Future research should also examine the impact of prior pedagogical training on teachers' technology integration practices. There is a need to explore differences between in-service and pre-service teachers' technology integration practices. Incorporating knowledge from both groups could help expand understanding of how to help teachers develop their technology integration practices.

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ETHICAL STATEMENT

The current research complies with the ethical regulations of research work by which volunteer participants could withdraw from the study at any point in time and their identifying data would be kept anonymous. The authors declare no competing interests.

DECLARATION OF GENERATIVE AI

AI tools were not used in preparing this manuscript.

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Appendix A: The interview schedule

Beliefs about learners and teaching:

1- Can you tell me about the way you've learned a language when you were a student?
2- Do you think you're schooling experience have had an impact on your present teaching styles?
3- How would you define effective language teaching?
4- What teaching methods do you implement in your regular classroom?
5- What teaching resources do you use in your classroom to teach language?
6- How do you see your role in the classroom?
7- Can you describe how you teach language related skills.
8- Can you describe how you teach areas of linguistics knowledge (e.g., vocabulary, grammar).
9- Where did you learn strategies to teach language related skills and areas of linguistics knowledge?
10- Tell me more about your colleague in your professional life?
11- How do you define learning?
12- What are the best ways to learn a language? What inspired your answer?
13- What kinds of learning styles and strategies do you encourage in learners?
14- What kinds of learning styles and strategies do you discourage in learners?
15- What kinds of students do best in your classes?
16- What roles are students expected to assume in your classrooms?

Beliefs about technology:

17- Can you talk about the role of technology in your classroom?
18- What do you think of using technology in your EFL classes? Prompts: What technology do you think is beneficial for you as a teacher/your students?
19- What benefits do you see in the use of technology?
20- What limitations do you see in the use of technology?
21- Do you think student can learn the native language from using technology? How ? can you suggest websites and different ways for using technology to develop language learning?
22- Which technologies do you use inside the classrooms? Prompts: How long have you been using them? How do you use them? (i.e. your purposes).

Appendix B observation form

Classroom Observation Form

Teacher's name:
Class:
Date and time:

Review section	Description /comments
Warming up: Subject matter content (what content teachers teach) TEACHING METHODS (uses relevant teaching methods, aids, materials, techniques, and technology)	
Presentation Subject matter content (what content teachers teach) TEACHING METHODS (uses relevant teaching methods, aids, materials, techniques, and technology)	
Wrap up Subject matter content (what content teachers teach) TEACHING METHODS (uses relevant teaching methods, aids, materials, techniques, and technology)	

Strength observed:

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Overall comment on how technology was used in classrooms

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