

E-learning successes with English language teachers in under-resourced non-WEIRD contexts

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Abstract

While e-learning has gained prominence globally over the past several years, little is known about the successes English language teachers (ELTs) experience in e-learning environments in non-WEIRD (western, educated, industrialized, rich, democratic) contexts where teacher support is limited or unavailable. This two-stage, primarily qualitative multi-method study specifically aimed to examine the extent to which ELTs found success through e-learning in Afghanistan and Egypt. Survey ($N = 82$) and interview ($N = 15$) data showed that the teachers reported daunting challenges, including institutional malfunctioning, ineffective policies, absence of facilities and technical knowledge, large heterogeneous classes, students' low emotional investment, negative perceptions, and absence of rigorous and systematic assessment. The teachers also narrated their effective coping strategies to resolve the existing tensions, described how they incorporated the success elements, and how they improved student engagement and learning outcomes. The study provides surprising insights about how the move to emergency online teaching in under-resourced non-WEIRD contexts has changed and can inform teaching delivery. We conclude with implications for teachers to develop more effective e-learning environments in such contexts.

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KEYWORDS

autonomous learning, e-learning, online interaction, learning effectiveness, learning engagement, multimedia instructions, non-WEIRD contexts

چکیده

در حالی که آموزش الکترونیک در چند سال گذشته در سطح جهانی اهمیت ویژه‌ای پیدا کرده است، اطلاعات کمی در مورد موفقیت‌هایی که استادان زبان انگلیسی در محیط‌های آموزش الکترونیک در کشورهای توسعه نیافته تجربه می‌کنند، وجود دارد. در این محیط‌ها سطح امکانات و پشتیبانی محدود می‌باشد. این مطالعه دو مرحله‌ای، عمدتاً کیفی و چند روشی بوده که به طور خاص با هدف بررسی میزان موفقیت استادان انگلیسی پیرامون آموزش الکترونیک در کشورهای افغانستان و مصر انجام شده است. داده‌های پرسشنامه از 82 تن از استادان و مصاحبه از 15 تن ایشان نشان داد که استادان با چالش‌های بزرگی از جمله عملکرد نادرست سازمانی، سیاست‌های ناکارآمد، فقدان امکانات و دانش فنی، صنف‌های ناهمگون کلان، سطح کم سرمایه‌گذاری عاطفی محصلان، ادراک منفی و عدم وجود ارزیابی دقیق و سیستماتیک، مواجه شدند. استادان همچنین راهبردهای مقابله‌ای مؤثر خود را برای حل تنش‌های موجود بیان نموده و توضیح دادند که چگونه عناصر موفقیت را در تدریس خود گنجانده و مشارکت محصلان و نتایج یادگیری را بهبود بخشیده‌اند. این مطالعه بینش‌های جدیدی را ارائه می‌کند پیرامون اینکه چگونه حرکت به سمت آموزش آنلاین در زمان اضطرار در کشورهای توسعه نیافته تغییر کرده است و چگونه می‌تواند به آموزش کمک نماید. در اخیر، این مطالعه پیشنهاداتی را برای استادان به خاطر ایجاد محیط‌های آموزش الکترونیک مؤثرتر ارائه می‌کند.

کلید واژه‌ها: یادگیری مستقل، آموزش چند رسانه‌ای، تعامل، اثربخشی یادگیری، آموزش الکترونیک، مشارکت یادگیری، کشورهای توسعه نیافته

1 | INTRODUCTION

Education has dramatically changed worldwide over the past several years, creating tensions by shifting to emergency online teaching. The emergence of these tensions was observed among university teachers in various settings, as found in the study conducted in Libya by Maatuk et al. (2022). However, the extent of opportunities, such as acquiring distance-teaching skills through teacher training programs, was not widely reported, particularly lacking evidence of such support in culturally diverse environments. In pre-pandemic e-learning research, scholarships tended to focus more on WEIRD (western, educated, industrialized, rich, democratic) contexts, which shifted focus away from the challenges in under-resourced contexts. In WEIRD contexts, it was reported that many teachers had difficulty designing

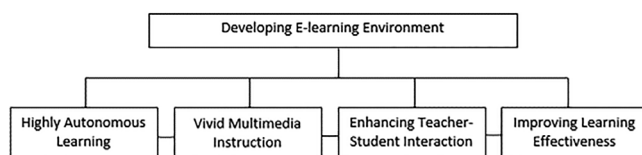


FIGURE 1 Elements to develop an effective e-learning environment proposed by Liaw et al. (2007).

content and structure for effective online classrooms (Compton, 2009). Such challenges are doubled or tripled for the teachers who work in non-WEIRD contexts, due to the lack of resources and under-prepared e-learning infrastructure.

A “one-size-fits-all” approach to online teaching falls short of capturing the complexity and richness of various educational contexts, especially non-WEIRD and under-resourced. This is clear in the scholarly and educational tendencies of place-based (Langran & DeWitt, 2020) and student-centered (Hoidn & Klemenčič, 2020) pedagogies. Moreover, research shows that socio-economic and cultural factors influence the implementation of technology in online education (Maatuk et al., 2022; Mathrani et al., 2022). Acknowledging and addressing these contextual factors can lead to more effective, inclusive, and engaging online learning experiences. In this study, we collected data from Afghan and Egyptian teachers about their efforts to provide effective e-learning educational experiences to students with few resources and less support. This study presents significant insights into how the transition to online education in under-resourced cultural contexts led to e-learning successes and changed teaching practices in these contexts.

2 | LITERATURE REVIEW

Research in language studies has long provided empirical and theoretical investigation of e-learning, but with the recent COVID-19 pandemic, the focus on e-learning increased dramatically. The educational systems in some non-WEIRD countries, such as Egypt and Afghanistan, have limited financial resources and less support and resources for education (see, e.g., Alumbungu & Mpofu, 2023), leading to many challenges before and even more after the pandemic when implementing e-learning. The review of literature focuses on the following themes: the e-learning elements as an analytical lens, online learning challenges, and coping strategies to manage online learning environments.

2.1 | An e-learning analytical lens

We draw from previous studies highlighting the complexities of implementing e-learning, especially in culturally different and under-resourced contexts. Several scholars reported various barriers, such as students’ unfamiliarity with e-learning in Jordan (Jebreen, 2017) and resistance to change to online education in Saudi Arabia (Aljaber, 2018). To respond to these contextual idiosyncrasies, we refer to the work of Liaw et al. (2007) for designing a successful e-learning environment. Although this work pre-dates the current surge in e-learning, its continued relevance is evidenced by the wealth of recent studies drawing on it (e.g., Al-Fraihat et al., 2020; Wang et al., 2023). Figure 1 illustrates the e-learning elements. We use this as a lens to navigate the literature and to analyze our data. This literature review, as well as the first two authors’ positionality and reflexivity as Afghan and Egyptian English language teachers (ELTs) and researchers, address a central concern of how ELTs in relatively similar non-WEIRD educational contexts might create successful e-learning environments.

Promoting autonomous learning is pivotal for e-learning effectiveness (Liaw et al., 2007). For example, Adel Ali and Rafie Mohd Arshad (2018) surveyed over 300 students at an Egyptian institution to understand factors that motivate students to effectively participate in mobile (m)-learning. Their findings indicated that most students drew on learner autonomy to manage m-learning. In another example, Mohd Arrif (2016) conducted a quasi-experimental study in

Malaysia where students were put into two groups, conventional and hybrid learning. The author reported that the e-learning aspect in the hybrid learning group increased students' autonomy to manage the medium of education used to interact with the instructor, receive instructions, and submit work.

Liaw et al.'s (2007) next element of e-learning is multimedia instruction, which, despite challenges like large classes and limited resources, existing research shows has been successfully implemented in Afghanistan and Egypt. Kakar, Sarwari, and Miri (2020) and Sarwari (2018) highlighted Afghan EFL instructors' effective use of multimedia and technology. In Egypt, studies by Diyyab et al. (2014), El-Sakka (2016), and Abdallah (2021) underscored the benefits of modern teaching methods and multimedia. Multimedia instruction has also been found to be effective in other non-WEIRD educational contexts such as Serbia (Tasić et al., 2019), Turkey (Öz, 2015), and Iran (Rahimi, 2011). Since this is not a rich scholarship, our research contributes data on how under-supported instructors in non-WEIRD contexts use multimedia instruction to enhance e-learning.

Liaw et al. (2007) also highlight the importance of teacher–student interaction for e-learning success. While interactions in online language classes can be very challenging (Enkin & Mejias-Bikandi, 2017), it has been proven effective for students' learning. Indeed, research indicates challenges in this area in Afghanistan and Egypt due to factors like large class sizes (Kakar & Sarwari, 2022; Takal et al., 2021). However, strategies like the flipped classroom in Egypt have shown promise (Ahmed, 2016). While existing research in non-WEIRD contexts highlights the importance of promoting interactions in e-learning classes (Dahalan et al., 2012; Yazgan, 2022), nuanced discussions of how instructors in these educational contexts carry out this responsibility with limited resources are lacking; we aim to make this contribution through our findings.

In broader terms, Liaw et al.'s (2007) study focuses on the general efficacy of e-learning implementation and is raised in several recent studies. Nam (2023) studied the efficacy of e-learning at a Vietnamese university; the author reported that continuous assessment of course instruction and design as well as considering students' input promoted e-learning. Salahuddin and Ajmal (2020) found that online learning was very effective at a Pakistani university when the learning management system (LMS) was organized in a way that facilitated communication and eased other course activities such as assignment submission and accessing materials. This is further echoed by other studies, such as Janfeshan and Janfeshan (2021) in Iran and Lien (2021) in Vietnam, which highlighted the importance of using learning management systems and social educational networking platforms to ensure the efficacy of e-learning. Furthermore, other studies citing Liaw et al. (2007) reported the importance of using certain platforms such as social media (Zhang, Liu, & Lee, 2021) and cloud-based applications (Li & Mak, 2022) to provide students with effective e-learning experiences that foster accessibility to materials and communication with other students and the instructor. Although existing research indicates ways that support e-learning efficacy in non-WEIRD contexts, there is a rarity in exploring how instructors in these contexts increase e-learning effectiveness while under-resourced.

2.2 | Online learning challenges

Recent research has highlighted challenges faced by teachers and students due to the unique aspects and limitations of online foreign language education (Golzar et al., 2022; Harsch et al., 2021; Maatuk et al., 2022; and others). Tao and Gao (2022) reviewed articles on the challenges and responses in online language learning, emphasizing activities like promoting online learning and evaluating student development. Harsch et al. (2021) explored the challenges of interaction during the COVID-19 outbreak in a German English language center. They found that students' negative perception of online learning creates a challenge for teachers. In non-WEIRD contexts, Le et al. (2022) found that Vietnamese EFL teachers encountered issues such as creating effective content and increasing students' focus on the course. Taghizadeh and Amirkhani (2022) found that teachers tailored most of their focus to manage challenges such as organization of course content and management of course time and student interactions. Researchers found that such challenges are faced by both experienced and pre-service teachers (Taghizadeh & Amirkhani, 2022). Also,

TABLE 1 Learning challenges.

Learning challenge	Source
Guided learning	Ruiz-Alonso-Bartol et al. (2022)
Social interaction	Ruiz-Alonso-Bartol et al. (2022); Taghizadeh and Amirkhani (2022)
Technological issues	Ruiz-Alonso-Bartol et al. (2022)
Perception of online learning as inferior	Ruiz-Alonso-Bartol et al. (2022)
Creating effective content	Le et al. (2022)
Increasing students' concentration	Le et al. (2022)
Limited time	Taghizadeh and Amirkhani (2022)
Scattered tasks	Taghizadeh and Amirkhani (2022)

online teaching challenges become more difficulty in non-WEIRD under-resourced educational contexts (Alatoom & Khasawneh, 2022).

With the sudden shift to e-learning, studies mainly in WEIRD contexts have documented the experiences of students and teachers transitioning to distance learning. For example, Ruiz-Alonso-Bartol et al. (2022) studied college students' experiences learning Spanish online in the United States. Results reported reduced stress levels over time but varied in individual experiences. Some students appreciated the autonomy, while others missed guided learning and social interactions, and maintained a negative perception toward online learning. A few faced technological issues, and many felt that online learning was inferior to traditional methods. Table 1 demonstrates the learning challenges.

2.3 | Coping strategies to manage online learning environments

Developing effective coping strategies is essential for successfully managing the challenges ingrained in online learning environments. During the COVID-19 pandemic, Taghizadeh and Amirkhani (2022) explored pre-service EFL teachers' online classroom management strategies in Iran, emphasizing time management, organization, and student-centered designs, concluding that "teachers have a key role in building rapport as well as creating a positive, safe, and friendly atmosphere within online classes" (p. 1). The creation by the teachers in this study of a safe and welcoming online community supports Liaw et al.'s (2007) aspects of enhancing teacher–student interaction and improving learning effectiveness. Huang (2013) developed a web-based reading strategy program, receiving positive feedback for its user-friendliness and strategy functions. Furthermore, multimedia instructions enhance learners' cognitive processing (Mayer, 2014). Studies have shown a positive correlation between multimedia instructions and students' academic performance, engagement, and satisfaction (Glomo-Narzoles, 2013; Swan, 2017; Yoon, 2019). Muller and Wulf (2020) highlighted that creating particular online instructional methods bolsters students' metacognition, motivation, and learning perception; this works more effectively than using similar instructions and designs from in-person courses.

Moreover, teachers found benefits in the online format, such as improved teacher–student rapport in small Zoom groups. In another example, Yan and Wang (2022) examined the transition of English teachers in China to online teaching during the pandemic. Using the boundary-crossing learning theory, they identified three stages in the transition: preparation, adaptation, and stabilization. Four strategies—identifying, coordinating, reflecting, and transforming—aided this transition. Teachers' experiences, beliefs, and support systems were crucial in navigating technical, emotional, and pedagogical challenges. Table 2 shows the coping strategies.

There is a solid body of research that concentrates on various e-learning inquiries in non-WEIRD and under-resourced contexts, yet there is a rarity in finding focused investigations of how teachers working in these contexts carry out a mission to make e-learning effective. In this study, we present a case of teachers in two similar contexts,

TABLE 2 Coping strategies.

Coping strategies	Source
Time management, student-centered course design	Taghizadeh and Amirkhani (2022)
Organization	
Web-based reading	Huang (2013)
Multimedia instruction	Glomo-Narzoles (2013); Mayer (2014); Yoon (2019); Swan (2017)
Preparation, adaptation, and stabilization	Yan and Wang (2022)

Egypt and Afghanistan, who taught online during the COVID-19 pandemic, without needed resources. Our study is guided by the following research questions:

- RQ1. What approaches do teachers in non-WEIRD under-resourced contexts report having used to manage e-learning during the COVID-19 pandemic?
- RQ2. What challenges were encountered by this teacher population in formulating an effective e-learning environment?
- RQ3. What factors contribute to this teacher population's management of e-learning?

3 | METHODS

We utilized a two-stage multi-method research design employing a survey ($N = 82$) and semi-structured interviews ($N = 15$). The approach provided both interpretive (actor-centered) and constructivist analyses of data; the two are interconnected and utilized to thoroughly examine the social construction of a phenomenon (e.g., online teaching). The study primarily focused on the analysis of qualitative data due to the nature of the research questions. This approach serves our purpose in prompting ELTs to reflect on their use, if any, of the four elements in their course design and instruction.

3.1 | Research sites

The classes in both contexts were held entirely face-to-face before the COVID-19 global crisis. In 2020, the Ministry of Higher Education (MoHE) in Afghanistan began emergency online teaching in a disruptive environment. It promoted e-learning by creating a Moodle-based structure called Higher Education Learning Management System, which is now used by teachers and students in both public and private universities. This platform offers different affordances, including content sharing (video, voice, text, and picture), sending messages, taking attendance, creating forums, and assignments. The teachers could communicate with students in an asynchronous manner since the LMS did not have video conferencing features. However, e-learning had various encounters in the Afghan context. For example, in a recent survey, the variables of satisfaction and effectiveness of distance learning had the lowest mean values ($M = 2.16$; $M = 3.38$); these variables were primarily rated poorly due to the absence of necessary equipment (Sarwari et al., 2021, p. 151).

In Egypt, the adoption of e-learning has been fraught with challenges, including frequent electricity outages and unreliable internet connectivity. Until a shift was necessitated, the predominant mode of education was traditional, in-person instruction, leaving many teachers without prior experience in e-learning methodologies (Hafez & Kamel, 2015). This lack of experience became a barrier when courses designed for face-to-face delivery were transferred

online without modification. Nonetheless, the forced move to e-learning has gradually gained momentum among students, opening the door to more educational opportunities and challenges (Zalat et al., 2021). Because many Egyptian students now primarily study online, only 57.3% of students have access to the internet, yet the usage of mobile devices reached 94.09% in 2020 (El-Sayad et al., 2021).

3.2 | Data collection

Demographics and contextual information were collected through a 5-point Likert-scale survey adapted from the works of Arnold (2006), Firat (2016), Liaw et al. (2007), and Swan (2003) that precisely meets the needs of the current study. The survey was composed of four constructs. The autonomous learning construct included seven items: "I can provide flexible access to e-learning anytime anywhere for my students," "I support my students to build up independence in learning by removing face-to-face contact," and so on. The multimedia instruction construct consisted of six items, including "I create different infographics to visually represent the information I want to teach in online courses," "I use digital text media instruction to deliver content effectively," and so on. The instructor–student interactions construct included four items: "I send notification and text messages to make students aware of the tasks," "I encourage students to engage in Forum discussion," and so on. Finally, learning effectiveness consisted of six items, including "work to increase students' interaction with context (knowledge, skills, and attitudes)," "I provide personalized instructions for students," and so on.

To validate our 25-item survey, we engaged two field experts, who hold PhDs in educational technology and have co-authored several articles on e-learning, to review its ability to effectively address the research topic. They recommended eliminating items 8 and 17 for not aligning with the survey's focus. A psychometrician from Herat University Research Center then scrutinized the survey for clarity and potential errors, leading to the removal of problematic elements in items 6 and 11. Subsequently, the final version of the survey was distributed online. The survey's reliability was confirmed with a Cronbach's alpha of 0.907, indicating high internal consistency. The alpha values for the sub-constructs were also robust: highly autonomous learning (0.803), multimedia instruction (0.788), teacher–student interaction (0.752), and learning effectiveness (0.768). Moreover, no missing value was observed.

We used a convenience sampling strategy, a non-probability purposive sampling involving the deliberate selection of informants based on their capacities and experiences to explain a particular theme, concept, or phenomenon (Rose et al., 2020). Participants were identified via the researchers' own contacts: 82 ELTs were recruited, 42 from Afghanistan and 40 from Egypt. The participants had different online teaching experiences ranging from less than 1 to 5 years. Both sets of participants hail from urban areas, predominantly in mainstream groups. We also obtained participants' approval prior to the research. Table 3 shows the teachers' demographic profiles from the two contexts.

In our study's demographic section, we reported on teachers' utilization of four key elements. In Egypt, teacher–student interaction was modest ($M = 3.5$, $SD = 0.83$), with the lowest scores reported for student feedback on shared documents ($M = 2.80$). Conversely, in Afghanistan, teacher–student interaction and learning effectiveness scored higher ($M = 4.01$, $SD = 0.81$), with multimedia instruction also receiving a high rating ($M = 3.8$, $SD = 0.80$). Afghan teachers actively used varied instructional methods to engage students, despite difficulties with creating infographics and organizing multimedia content. In Egypt, the highest scores were for learning effectiveness ($M = 4.1$, $SD = 0.51$), particularly for accommodating diverse learning styles ($M = 4.6$). Table 4 details teachers' reported use of each element in both contexts.

To ensure data saturation, we created a grid in which we recorded important ideas itemized by each participant and constantly checked whether they provided new insights or repetitive information. Therefore, we recruited 15 ELTs for the semi-structured interview from the survey respondents: eight ELTs from Afghanistan (T1 to T8) and seven from Egypt (T9 to T15). Table 5 shows interview participants' demographic information. To ensure high representativeness, we purposefully chose most participants with 1 year or less teaching experience rather than other population subsets

TABLE 3 Participants' demographic information.

Demographics		Afghanistan		Egypt	
		Frequency	Valid percent	Frequency	Valid percent
Gender	Female	9	21.4	14	35.0
	Male	33	78.6	26	65.0
Education	BA	9	21.4	9	21.4
	MA/MS	31	73.8	31	73.8
	PhD	2	4.8	2	4.8
Teaching experience	1–5 years	3	7.1	19	47.5
	15–20 years	13	31.0	4	10.0
	5–10 years	26	61.9	17	42.5
Online teaching experience	2–3 years	11	26.2	10	25.0
	4–5 years	1	2.4	0	0
	Less than 1 year	30	71.4	30	75.0

TABLE 4 Teachers' claims to use four elements in E-learning.

	Country	N	Mean	Std. deviation
Highly autonomous learning	Afghanistan	42	3.89	0.766
	Egypt	40	3.76	0.728
Vivid multimedia instruction	Afghanistan	42	3.82	0.805
	Egypt	40	3.74	0.829
Teacher–student interaction	Afghanistan	42	4.01	0.814
	Egypt	40	3.51	0.838
Learning effectiveness	Afghanistan	42	4.01	0.742
	Egypt	40	4.10	0.514
E-learning composite	Afghanistan	42	3.93	0.706
	Egypt	40	3.78	0.590

because they constitute 73.1% of total survey informants (just 20% of interview respondents were above the 1-year category).

Upon completing our initial analysis, we found alignment with Liaw et al.'s (2007) elements, confirming its relevance for our study. Despite its age, the applicability of the work as an analytical lens has emerged again post-COVID-19, as evidenced by its use in recent research to explore various e-learning challenges (e.g., Al-Fraihat et al., 2020; Wang et al., 2023).

We clarified the study's aim during one-on-one interviews: to delve into the effectiveness of online teaching methods. Interviews lasted 20–30 min, focusing on challenges and coping strategies in e-learning, with consideration given to Liaw et al.'s (2007) elements. Conducted in the participants' native languages, Dari in Afghanistan and Arabic in Egypt, the approach fostered a relaxed atmosphere, encouraging teachers to share their experiences and reflections candidly.

TABLE 5 Interview respondents' demographic information.

No	Gender	Age	Teaching experience	Years of teaching online	Education
T1	Male	31	10	2	MA TESOL, USA
T2	Female	41	11	1	MA TESOL, AF
T3	Male	29	9	2	MA TESOL, USA
T4	Male	29	10	1	TEFL, India
T5	Female	29	4	1	English Literature, India
T6	Female	31	9	1	MA TESOL, USA
T7	Male	32	8	2	MA TESOL, Malaysia
T8	Female	28	4	1	BA English Literature, AF
T9	Male	29	4	1	MA Translation, USA
T10	Female	36	9	1	MA English Linguistics, Egypt
T11	Male	32	7	2	MA English Linguistics, Egypt
T12	Female	29	5	1	MA English Linguistics, Egypt
T13	Male	45	10	1	MA English Linguistics, Egypt
T14	Female	27	3	1	MA English Linguistics, Egypt
T15	Female	37	13	1	MA English Linguistics, Egypt

3.3 | Data analysis

Using SPSS 25, we first obtained descriptive and inferential statistics to gauge the extent to which ELTs incorporated Liaw et al.'s four elements, complementing this with the demographic profiles of the teacher participants. Qualitative data were then subjected to content analysis to identify and analyze themes (Selvi, 2020), developing an inductive categorization of instructors' interview responses. Data were transcribed, translated, and read thrice for a deeper understanding and initial coding, noting memos, and employing constant comparison. Initial codes included a range of issues from ineffective e-learning policies to autonomous learning strategies and the use of multimedia to address multiple intelligences. To ensure data trustworthiness, we used credibility and confirmability criteria. A moderator reviewed the data for coding, which we cross-checked, discussing discrepancies to refine codes and themes. A rating agreement minimized subjectivity, with codes averaging above 3.7 on a 0–5 scale being selected. Interviewees also reviewed the refined codes for consistency with their responses. Through triangulation—comparing interpretations from authors, moderators, and respondents—we categorized codes into themes upon identifying significant relationships. This process led to two main themes: the integration of e-learning elements and the enhancement of student engagement and learning outcomes. The coding system and emergent themes are detailed in Figure 2 and Appendix.

4 | RESULTS

We present the results based on the research questions. Two major themes emerged: (1) incorporation of e-learning elements; (2) promoting student engagement and learning outcomes. The first theme includes the following subthemes: E-learning challenges, promoting autonomous learning, integrating vivid multimedia instruction, and cultivating learning effectiveness. The second theme includes enhancing teacher-student interactions and maximizing learning outcomes. See Appendix for the themes, subthemes, codes, and sample participants' quotes. In response to

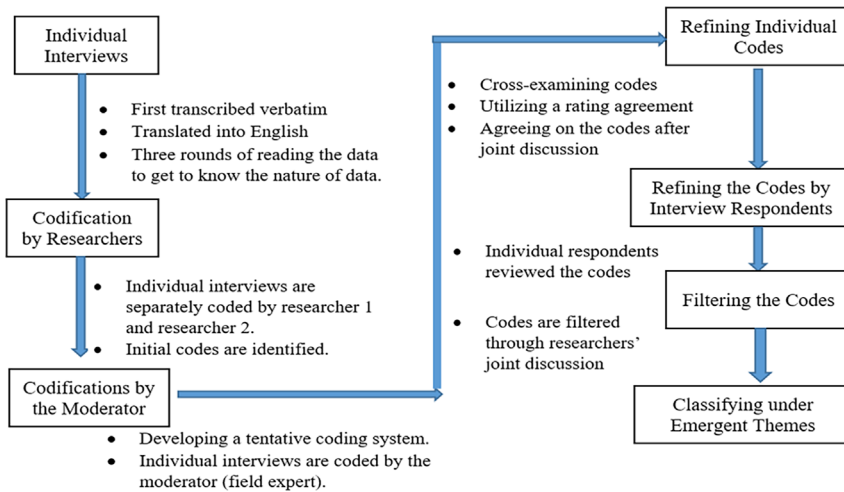


FIGURE 2 Coding system procedure. [Color figure can be viewed at wileyonlinelibrary.com]

RQ1, we provide mean scores from the survey data, while for RQ2 and RQ3, we draw on both the survey and interview data.

To address RQ1, we found the survey participants reported using approaches that align with Liaw's e-learning elements to manage the online learning environment. The elements included autonomous learning ($M = 3.89$ [AF]; $M = 3.76$ [EG]), vivid multimedia instruction ($M = 3.82$ [AF]; $M = 3.74$ [EG]), teacher-student interaction ($M = 4.01$ [AF]; $M = 3.51$ [EG]), and learning effectiveness ($M = 4.01$ [AF]; $M = 4.10$ [EG]).

4.1 | Embracing challenges and optimizing solutions

To address RQ2, we focused on the teachers' reporting of how they faced challenges in promoting autonomous learning, integrated vivid multimedia instruction, and cultivating learning effectiveness. Here, we present teachers' (T1–T8 are from Afghanistan; T9–T15 from Egypt) descriptions of how they embraced the above elements in their classrooms.

4.1.1 | Challenges to manage an E-learning environment

Despite the teacher's proficiency in utilizing key elements in e-learning as its mean value exceeds 3.4, the teachers encountered common hurdles when developing and managing the e-learning environment. This incongruity exists because while teachers may have theoretical knowledge of online teaching, the contextual limitations are out of teachers' control. The hurdles included salient issues such as ineffective e-learning policies, the novelty of e-learning, teachers' limited experience, lack of e-learning facilities, lack of rigorous and systematic evaluation and assessment, and students' negative perceptions toward e-learning (See Table 6). After identifying these challenges, the teacher participants reported various coping strategies to manage poor integrations of the e-learning elements.

Some teachers argued that the e-learning policies aimed at managing language courses did not support and encourage the process (Challenge 1) (see Appendix for a summary of challenges). The teachers realized the top-down nature of institutional functioning and hegemonic ideologies, forcing them to fall behind and struggle to develop a successful e-learning program. For instance, T1 claimed,

TABLE 6 E-learning challenges and coping strategies.

No	E-learning challenges	Coping strategies
1	Ineffective e-learning policies	<ul style="list-style-type: none"> Using motivational strategies to encourage students.
2	The novelty of e-learning and teachers' limited experience	<ul style="list-style-type: none"> Studying how to teach online resources; Colleagues' support.
3	Lack of e-learning facilities	<ul style="list-style-type: none"> Record the sessions and upload them for further access; Categorizing students in terms of facilities and providing individualized instructions; Using free LMS.
4	Lack of rigorous and systematic evaluation and assessment	<ul style="list-style-type: none"> Allocating time for feedback; Using learning analytics in LMS effectively; Encouraging formative assessment using online monitored quizzes, projects, etc. Planning and creating rubrics for each online assignment; Reporting valid scores.
5	Students' negative perception	<ul style="list-style-type: none"> Acculturating e-learning in the community; Conducting an awareness program on the significance and effectiveness of e-learning; Sharing students' e-learning success stories.
6	Teachers' and students' low emotional investment	<ul style="list-style-type: none"> Theorizing e-learning practices considering contextual realities; Adjusting expectations to the available facilities; Incorporating students' needs/interests; Using interactive activities to make learning fun; Highlighting the meaningful connection between what students learn and what they may practice in the future.
7	Large class size	<ul style="list-style-type: none"> Employing cooperative learning; Arranging heterogeneous groups based on their existing proficiencies and skills.
8	Ineffective LMS	<ul style="list-style-type: none"> Selecting LMS after exploring its functionalities and features; Incorporating other technological tools to boost the LMS' functionality and accessibility.
9	Students' lack of technical knowledge and skills	<ul style="list-style-type: none"> Offering training for students; Sharing video tutorials on how to work with LMSs and put in a better e-learning performance.
10	Low degree of students' participation	<ul style="list-style-type: none"> Being flexible about the assignments and the deadlines; Using motivational strategies; Allocating points for each activity; Holding online competitions: essay contests, debates, etc.

Abbreviation: LMS, learning management system.

The administration did not take e-learning seriously, so it influenced my performance as a teacher. The Ministry of Higher Education did not even have specific policies for online teaching, and students exploited this loophole and declined participation. However, I tried to motivate my students to promote a deeper engagement with the e-learning process, yet it was strenuous and demanding.

Most teachers also claimed that the novelty of e-learning and limited experiences with designing and managing e-learning environments resulted in poor performance by both teachers and students (Challenge 2). T2 and T12 emphasized this point by referring to the sources of existing challenges. They took the initiative to develop their technical and teaching skills to the next level by watching video tutorials and studying different resources. The teachers also lowered their expectations, required students to do less work, and demonstrated a degree of flexibility about the assignments' deadlines (T2, T5, T9, and T10). For instance, T9 mentioned:

I believe being flexible with my students was the best way to support them and myself to get accommodated in this new educational setting. I also started finding different online resources and studied more about how to develop my current online teaching practice while maintaining a positive attitude toward the overall process.

In both settings, the primary challenge with e-learning was the absence of adequate facilities, impacting planning and instructional quality. T3 emphasized that proper e-learning tools, like high-speed internet and LMS, enhance student engagement. The Egyptian teachers highlighted institutional shortcomings, frequent power outages, and slow internet connections. These limitations prompted innovative solutions, such as video-recorded sessions and sharing links for flexibility. T7 adapted by categorizing learners based on their available facilities and utilized various channels, including social media, for instruction and resource sharing. T6 also tailored her strategies, considering the unique context and available resources. She commented:

I tried adding more YouTube videos and keeping downloaded files in the department for individual pick-up or sharing them with class representatives to solve internet access [problems]. Moreover, I used Telegram a lot since it was accessible to all. I also talked and sought advice from my colleagues about the platforms and practical strategies they employed in their online classes.

The participants also reported that rigorous and systematic evaluation and assessment were almost absent in both contexts (Challenge 4). T1 claimed, "Nobody evaluated the process and the teacher." This highlights institutional malfunctioning. T4 argued that formative assessment plays a significant role in an e-learning environment in a similar vein. Yet, it is difficult to administer the tests, monitor their reliability, and report valid results. At the same time, some students resort to cheating. Such academic misconduct hampers progress.

The teachers also mentioned some coping strategies to carry on continuous evaluation and assessment to gauge the e-learning process (see [Appendix](#)). They emphasized that allocating time for timely feedback regularly and using learning analytics inside LMS supports the process. Likewise, they underscored the significance of cooperative learning through monitored online quizzes, projects, and assignments. However, the overall process requires careful planning and creating rubrics for each online assignment.

Ultimately, the teachers argued that their students maintained a negative perception due to the above tensions and rampant skepticism about e-learning in society (Challenge 5). They accentuated acculturating e-learning within the community, conducting awareness programs about the significance and effectiveness of e-learning on students' academic performance. They also shared some students' success stories to transform common negative perceptions into more positive ones. For such transformations, the teachers needed to keep different stakeholders in the loop. For instance, T3 argues:

We need to get the parents involved in the process of e-learning. The dominant perception is that face-to-face teaching and learning are more effective than e-learning and online teaching. Thus, the parents should support the process. If we work on students' mindset that e-learning works, it helps them maintain a positive perception. It, in turn, influences their performance.

Afghan teachers reported challenges with online teaching, citing a lack of planning and facilities leading to decreased investment. T1 highlighted the abrupt shift to online teaching without proper planning, using face-to-face syllabi, which demotivated them. Large class sizes posed engagement issues, as T13 found it challenging to communicate with students via email. A significant problem for Afghan teachers was the absence of an effective LMS; T2 mentioned using Telegram, not designed for e-learning. Additionally, Afghan teachers noted students' limited technical skills and their reduced participation in online classes. T7 emphasized students' procrastination as a major obstacle. Despite these challenges, both Afghan and Egyptian teachers devised coping strategies. The rapid transition to online teaching in these under-resourced contexts led to a focus on enhancing e-learning elements, promoting autonomous learning, and improving overall teaching effectiveness.

4.1.2 | Promoting autonomous learning

Self-directed learning is the crucial element of e-learning success. Both groups of teachers reported a comparatively high mean value for providing highly autonomous learning for their students ($M = 3.8$ for Afghanistan; $M = 3.7$ for Egypt). Yet, most participants argued that they had been challenged to trigger autonomous learning due to dominant didactic school traditions and a hegemonic vision of transferring knowledge and skills, a banking model of education. T9 underscored the prevalent learning status quo and its negative impacts on the students' engagement:

When we transitioned to online platforms, we struggled with having students do more work. In my school, all classrooms are teacher-centered, where students come, listen, and maybe participate for just a few minutes, and that's it. So I struggled with having students become more autonomous, especially with asynchronous classes where they do not see me or listen to my instructions. I end up getting half the students not completing the tasks.

Similarly, most teachers acknowledged the stressfulness of the transition phase, which informed their teaching practices. After such a conscious awareness, the teachers decided to be flexible, provide more explicit instructions, and promote cooperative learning to get students up to speed in an e-learning environment (T11 and T7). However, some learners exploited the instructions and took the most convenient route to engage, applying lower thinking levels rather than analytical thinking skills. Some teachers attempted to explore alternatives to encourage students' self-directed and deep learning. T2 explained:

When I prepared a PowerPoint, I tried to specify what to study with clear instructions. For the first time, I noticed students just copy-pasted the content from the textbook or slides on the discussion forum or individual assignment, so I changed this to set up higher thinking level questions and ask students to write using their own words and [respond] to other classmates[comments]. I also try to include analytical questions. The students used different lines of reasoning to respond to the prompts.

Besides these intellectual pursuits to encourage autonomous learning during the rapid move to online teaching in the two under-resourced contexts, the teachers attempted to incorporate creativity and critical thinking to garner students' attention toward well-informed decision-making skills, spark curiosity, and facilitate deep learning. They employed various strategies to attain objectives that formulate and support self-directed learning. They also tried to

establish a significant relationship between students' prior knowledge and the rationale for using the new set of skills in the future. Two Afghan teachers narrated their own experiences:

I used activities to encourage students' critical thinking and creativity. I employ strategies that do not limit students to books and memorization; I try to introduce and employ 21-century skills such as critical thinking, communicative skills, and collaboration. I also try to connect the lesson to students' lived experiences and respond to why they are learning the concept and how [they] can apply [it] in daily life. I demonstrate the significance of a lesson for students (T1).

Two factors are essential in developing self-directed learning. The students should be given the freedom to be creative. It helps students be motivated to do the tasks differently using their own style. The second factor is the passion for e-learning. It assists students in having a more emotional investment in their own learning (T3).

4.1.3 | Integrating vivid multimedia instruction

Multimedia instruction is a key factor in e-learning success, bridging the gap between traditional and online teaching with the right skills and planning (Liaw et al., 2007). Teachers in Afghanistan and Egypt rated their use of multimedia highly ($M = 3.82$ and $M = 3.74$, respectively). Despite challenges in content selection, summarization, recording, and editing, they employed diverse methods to cater to different learning styles, as shared by one teacher each from Afghanistan and Egypt:

I try to be resourceful. I shared different learning websites, mobile apps, YouTube videos, digital texts, [and] PowerPoint. However, I did not receive feedback on whether they were efficient. I also gave students more freedom to get benefits from different instructions based on their learning preferences (T1).

The use of multimedia is significantly important in order to meet students' learning differences and needs. Therefore, I use YouTube videos because everyone can access them for free. I also use some online games to teach students speaking, grammar, and vocabulary (T10).

In Afghanistan, cultural norms restricted female teachers (T2, T5, T6) from video-recording their lessons, a limitation not faced by their counterparts in Egypt. T14 from Egypt utilized various multimedia tools, including self-recorded videos, YouTube content, PowerPoint slides, and educational online games, to enhance her students' learning experience without such cultural constraints.

4.1.4 | Cultivating learning effectiveness

The shift to online teaching necessitated changes in teaching practices to enhance learning effectiveness, with teachers from Afghanistan and Egypt reporting high levels in their virtual classrooms ($M = 4.01$ and $M = 4.10$, respectively). Teachers implemented diverse strategies to meet the varied needs and interests of students in under-resourced settings, carefully planning and selecting topics and tasks tailored to students' proficiency levels. T3 noted that relevance to students' needs enhances engagement and motivation in e-learning. Both teachers and students worked on improving their technical skills, using resources like video tutorials and online courses (T4). Additionally, cooperative learning was encouraged, with assigned group leaders to oversee task progress. Teachers also provided varied opportunities for students to practice and engage with peers' work (T6).

The teacher's involvement plays a pivotal role in enhancing learning effectiveness by interacting and providing feedback because if not, the students lose emotional investment (T7). Effective learning depends on teachers' abilities and students' interests in the topics. Teachers can enhance engagement through interactive activities (T13) and create a positive and welcoming environment by building rapport and restructuring the mindset that every idea is respected and counted (T15).

I let students know that I am open to making any changes to the course to promote effective learning. If they feel they need to learn more about a topic, I can include it or exclude one that does not benefit them (T15).

4.2 | Promoting student engagement and learning outcomes

To address RQ3, we found that an urgent call for online teaching also modified the teachers' practices in the two under-resourced contexts in terms of increasing student engagement and improving learning outcomes. The teachers used several strategies respectively, including but not limited to posing questions, running polls, group conferencing, creating rapport, crafting lesson objectives, developing assessment tools, and tracking the students' progress.

4.2.1 | Enhancing teacher–student interaction

Teacher–student interaction is also a contributing element that ensures students' e-learning success. However, this interaction has previously been reported moderately lower in the demographic section by Egyptian teachers ($M = 4.01$ for Afghanistan; $M = 3.51$ for Egypt). Similarly, the interview participants encountered several tensions while promoting such interactions, especially in the Egyptian context. Students' hectic course loads, multiple overlapping deadlines, and large class size issues resulted in low engagement. For instance, one teacher each from Egypt and Afghanistan shared their experiences:

It is very hard due to [the] large classroom size. However, I still promote this through a Facebook Group accessible to all students where they can ask questions and get answers from their peers and me. I also make announcements and post discussions there (T12).

I was challenged due to students' complaints about the pressure they experienced taking seven online courses with different quizzes and assignments; they had to be prepared to meet multiple deadlines from different courses. The deadlines collided. It negatively influenced their participation and engagement in the e-learning platform (T2).

The teachers also implemented different strategies to enhance the interaction. They created a set of questions in the forum (T1, T4), ran polls (T1) and group conferences (T8, T10), provided feedback (T2, T3, T5, T7, T11), allocated scores for each learning task (T2, T3, T5), created an anxiety-free atmosphere (T3, T6, T10), built rapport (T2, T10, T12), promoted differentiated learning (T1), and selected the most user-friendly and intuitive LMS or social networking platform for dialogic interactions (T9, T12, T14, and T15). For example, T3 stated that he tried to create a friendly atmosphere, restructure students' mindsets, and give them a palpable sense that he would reach out if they had difficulty understanding a concept. He then ensured the learners understood the tasks. However, T6 fostered the differentiation instructions and released the emotionally laden burden of online assignments. She stated:

I tried to pay individual attention to everyone [and] respond to all the inquiries each student had. When possible, I met them individually online to solve their problems. I understood the challenges students were facing during the pandemic; therefore, I tried to comfort them and make them feel at ease even if they could not meet their deadlines (T6).

Due to the lack of an effective LMS and large student numbers, teachers shifted from individualized instruction to cooperative learning, utilizing popular social media for interaction. Considering unique challenges and institutional limits, an Afghan teacher opted for group conferences, while an Egyptian teacher used Facebook for quick and easy communication.

I hold group conferences because the classroom size is large in terms of student numbers; I cannot implement individual conferences. So I divide it into groups and meet with each group twice a semester to ensure that they learned the concepts and respond to questions they cannot ask asynchronously (T8).

Because my institution does not provide any learning management system, I use Facebook as a communication medium between myself and my students. It is free, and most students have Facebook accounts and like to use them for academic purposes (T14).

4.2.2 | Maximizing learning outcomes

Participants concurred that e-learning outcomes should detail the knowledge and skills students are expected to gain and their applicability in future workplaces. To optimize these outcomes amid the shift to online teaching, teachers from Afghanistan (T1, T4) and Egypt (T11, T12) meticulously crafted lesson objectives and selected appropriate materials and platforms. T11 emphasized the importance of aligning topics and instructions with student needs. T4 proactively shared resources and allowed early access to upcoming lessons for eager learners. T2 developed assessment tools to track and affirm learning, giving students feedback on their progress. T3 used multimedia to cater to diverse learning styles, facilitating practice through discussions and online presentations. T4 tailored her approach to the unique context of her online classroom, while T6 focused on creating a low-anxiety e-learning environment and fostering a positive student mindset toward e-learning technologies. In essence, T1 explained the process he went through to help his students achieve successful e-learning outcomes:

First, the objectives and outcomes should be applicable and realistic based on students' needs. I used Bloom's taxonomy and the SMART tool to write those objectives. I also selected the course content, learning activities, and prevailing teaching methods. I believe that well-chosen teaching methods encourage students' engagement; teacher-student rapport should be high in e-learning courses, and it is effective if timely feedback is given and formative assessment is taken regularly. So I analyzed the results to understand whether the learning happened. I found learning gaps and then provided the necessary scaffolding to fill them. Ultimately, I constantly checked and measured the extent I aligned the outcomes with my teaching, students' learning, and the assessment I carried out to measure students' success.

5 | DISCUSSION

Our findings resonate with existing literature, highlighting challenges in under-resourced teaching environments. They also underscore the creativity and adaptability of ELTs in these contexts. Elements discussed in our literature

review were evident in our findings but were more contextualized to the Afghan and Egyptian settings. Using Liaw et al.'s (2007) elements as an analytical lens, we discerned how teachers promoted autonomous learning, such as through group work and topic flexibility. Despite lacking resources like a comprehensive LMS, teachers innovatively used multimedia instructions, leveraging platforms like Facebook for communication and as makeshift LMSs. Although, unlike Freiermuth and Jarrell's (2006) study in which social media had not yet developed to where it is today, or Zhang et al.'s (2021) study that only used current social media platform capabilities to enhance learning enjoyment, the ELTs in our study were surprisingly resourceful. They uploaded videos over text materials, diversified content for student needs, and enhanced accessibility, considering many students' limited internet or technology access.

It is crucial to understand these elements within specific contexts. While our study touched on e-learning nuances in Afghanistan and Egypt, we delve deeper into the strategies of teachers in these resource-limited settings. Notably, despite our teacher participants having graduate degrees from various countries, their diverse educational backgrounds did not directly influence their online teaching methods. Instead, they bridged their academic knowledge with their teaching contexts. Their graduate training equipped them with online teaching tools, but their specific teaching environments guided their application, addressing contextual challenges. This reveals a unique interplay between teachers' academic backgrounds and their adaptability to specific contexts, emphasizing the pivotal role teachers play in tailoring their knowledge to cater to distinct student needs.

5.1 | Embracing challenges and optimizing solutions

Teacher participants in our study struggled with inadequate institutional support, lack of facilities, and a dearth of e-learning experience, which affected their teaching practices. These issues are echoed by Mahdi and Wani (2021), who reported technical, governmental, cultural, and linguistic hurdles in e-learning adoption. Similarly, Harsch et al. (2021) observed that unanticipated roles in Germany disrupted teacher–student interaction, indicating that such challenges are widespread, affecting various educational contexts.

In Afghanistan, Sarwari et al. (2021) identified slow internet, technical difficulties, and increased teacher workload as significant barriers to effective e-learning. These challenges, often entrenched in institutional and sociocultural attitudes, necessitate policy and perspective shifts, particularly in Afghanistan where they contribute to students' negative views on e-learning. Liaw et al. (2007) suggest that positive attitudes can be fostered by presenting e-learning as adaptable, multimedia-rich, and guided by instructors. To enhance online learning in environments with limited resources, Sarwari et al. (2021) advocate for assignment flexibility, student involvement in curriculum design, and comprehensive needs assessments to ensure resource adequacy, aligning with the innovative approaches of our study's ELTs. Golzar et al. (2023) investigated the nuances of the under-resourced context of Afghanistan in terms of ELTs' use of technological pedagogical content knowledge (TPACK) and identity tensions during the in-service career stage. They found that the teachers demonstrated a moderate degree of information and communication technology (ICT). Moreover, a significant relationship was found to exist between TPACK and the teachers' tensions. While integrating technology into online course content and pedagogy, the teachers also reported institutional, pedagogical, and socio-cultural tensions with varying degrees. The tensions include top-down online learning policies, restricted access to expert assistance and basic infrastructure, and greater responsibility.

Autonomous learning has become pivotal in language learning, with online platforms presenting both opportunities and challenges, depending on the expectations of their use. Eneau and Develotte (2012) emphasized the interconnectedness of online learning automation features, challenges, coping strategies, and autonomy development. During the COVID-19 pandemic, Ruiz-Alonso-Bartol et al. (2022) highlighted varied student experiences with online learning, with some relishing self-paced learning and others feeling overwhelmed. In these cases, students were guided to autonomous learning by their teachers' responsiveness to their needs. Our findings indicate that in the under-resourced contexts of Afghanistan and Egypt, this may require teachers to show more resilience and makeshift resourcefulness, such as using Facebook in place of an expensive LMS.

Multimedia instruction, despite its complexities, is lauded for boosting student achievement, as noted by ELTs in our study. Mayer (2014) argued that it enriches learning by streamlining cognitive processes and improving understanding. Research by Glomo-Narzoles (2013) and Yoon (2019) supports its educational advantages. However, multimedia design must account for human working memory constraints, particularly for those with lower capacities (Wiley et al., 2014). Our ELTs highlighted that effective learning hinges on addressing individual learner needs and interests, with emotional engagement, metacognition, and perceived learning effectiveness—shaped by feedback and teaching methods—being key (Müller & Wulf, 2020). Bandura (1986) underscored the role of observational learning in progressing through stages from attention to motivation, facilitating entry into the Community of Practice in online English education.

5.2 | Attributions of improved learning

This study explored factors that teachers believe enhance student engagement and learning outcomes in e-learning. Faced with large classes and numerous deadlines, teachers fostered interaction by using forums, grading activities, and choosing user-friendly platforms to create a stress-free learning space. Ruiz-Alonso-Bartol et al. (2022) suggest small group Zoom meetings for personalized attention can improve teacher–student rapport and peer recognition. Reflexivity and collaborative activities via social apps were found to increase enjoyment and satisfaction with language learning (Zhang et al., 2021). Encouraging student agency and interaction with peers and digital tools, a learner-centered approach in online settings is recommended for boosting interaction (Hsieh et al., 2022).

The teacher participants also noted that they set learning objectives carefully, selected interesting topics and effective LMS, and provided various multimedia instructions to meet learners' needs. They included contextual realities and theorized what they practice. They also attempted to align the learning outcomes with teaching/learning and assessment/feedback. Similarly, Li and Mak (2022) found that various forms of teacher feedback could have a positive influence on students' online learning outcomes. Moreover, the teacher participants emphasized the significance of developing a positive mindset and perception of e-learning affordances to maximize learning outcomes. This aligns with Ruiz-Alonso-Bartol et al. (2022), who argued that students developed a positive perception over time and adapted to the online course design and classroom dynamics.

Our study underscores the resilience of teachers who navigated resource-limited settings to support their students. Despite challenges, they leveraged their educational backgrounds to design courses and communicate effectively. While not all educators may find it easy to bridge the gap between their training and teaching contexts, we spotlight the success stories to inspire and guide others facing similar obstacles. The technology acceptance model suggests that the perceived usefulness and ease of use of technology influence its acceptance. This aligns with Han and Sa (2022), who found that the ease of use of online classes positively affects their perceived usefulness, which, along with ease of use, enhances satisfaction levels. Furthermore, perceived usefulness and satisfaction positively impact the intention to accept online classes. The study suggests that improving the ease of use of online classes and offering continuous training by educators and universities could significantly enhance satisfaction and perceived usefulness of online education.

6 | CONCLUSION

In this study, we investigated the challenges that teachers encounter as they were forced to teach online courses during COVID-19, while lacking major resources and means to facilitate this process. Despite the challenges, we found that teachers incorporated e-learning elements by promoting autonomous learning, integrating multimedia instructions, and cultivating learning effectiveness. They also promoted student engagement and learning outcomes through enhancing teacher–student interactions through, for instance, Facebook, and maximizing learning outcomes, through

means such as assessment and increasing accessibility. We found that teachers played an important role in creating a link between what they learned in their graduate degrees and what they encountered in their teaching contexts.

This study uncovers the unique institutional and pedagogical characteristics within Afghan and Egyptian educational settings, focusing on the e-learning components utilized by ELTs and their strategies for enhancing student engagement and learning outcomes. The study confirms that e-learning is compounded by challenges such as inadequate policies, lack of resources, and negative attitudes. It sheds light on how the shift to online teaching, particularly in resource-poor environments, has transformed teaching methods to foster independent learning, incorporate engaging multimedia content, and improve overall learning effectiveness. Teachers have adapted by critically reflecting on their online teaching methods, creatively integrating e-learning elements, and proactively influencing student learning amidst the challenges of unexpected online teaching scenarios.

6.1 | Implication for theories and practice

Based on our study's insights, we propose the following six pedagogical recommendations for under-resourced contexts. While these recommendations provide a foundation, educators should adapt them to best fit their specific teaching environments.

1. Leverage social media as LMS: Given the absence of traditional LMSs, platforms like Facebook can be effective substitutes for announcements, assignments, and communication, given their widespread use among students.
2. Prioritize instructional videos: Videos can offer clearer instructions than text, especially when synchronous virtual meetings are not feasible.
3. Promote cooperative learning: Introducing activities like group writing and peer reviews can both alleviate the feedback burden on teachers and enhance students' collaborative skills.
4. Utilize student leaders: Engaging student leaders to manage announcements, assignments, and class organization can be motivational and efficient. While it might not align with all institutional policies, it is a valuable strategy where applicable.
5. Offer technological training: Given potential gaps in students' tech proficiency, dedicating a session to familiarize them with the chosen LMS and course procedures can be beneficial.
6. Embrace flexibility: It is crucial for teachers to be adaptable to work requirements, participation, and deadlines. This does not mean compromising on quality but offering varied options for assignments, deadlines, and coursework to accommodate diverse student needs.

6.2 | Limitations of the study and future research

To situate and contextualize the findings, implications, and generalizations of this study, it is essential to identify its limitations. First, the current study only focused on a few success elements that both Afghan and Egyptian teachers employed in their online classrooms. More research is needed to explore other contributing elements across different contexts. Second, we also call for future research to examine different theoretical frameworks. For instance, the Personal, Accessible, Responsive, and Strategic framework was created for online writing instruction (Borgman & McArdle, 2019). Washakie (2021) argued, "When all four enactable elements are implemented simultaneously in the design, instruction, and administration, [online learning] effectively becomes a cohesive experience for students, [and] instructors" (p. 200). In addition, Assess, Design, Develop, Implement, and Evaluate (ADDIE) instructional design could be used as a framework to examine online teaching and learning; ADDIE is a dynamic and recursive process that recognizes critical and pertinent learning content, starting from students' needs and ending with evaluation of the overall process. Third, we suggest using narrative inquiry with narrative frame and scenario prompts to examine

teachers' ideals of e-learning and understanding of actuals and how they reconstruct their professional identities as online teachers and exercise their agency to manage the relevant identity tensions. Finally, this study did not include students' and policymakers' voices and classroom observations. We call for future research to investigate students' as well as teachers' experiences to investigate the topic from various perspectives. We envision this study as an opening for more cross-context studies that work to develop and increase the affordances of e-learning.

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The authors declare no conflicts of interest.

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APPENDIX

CODING SCHEME AND EMERGENT THEMES

No	Themes	Sub themes	Codes	Sample participants' quotes
1	Embracing challenges and optimizing solutions	E-learning challenges	Ineffective E-learning policies	"The ministry did not even have specific policies for online teaching and students used this loophole and minimized their participation." (T1)
			The novelty of e-learning and teachers' limited experience	"I was not prepared or trained by my institution to take on this new experience teaching online." (T12)
			Lack of e-learning facilities	"Students did not have necessary facilities such as smartphones, laptops, and the Internet." (T7)
			Lack of rigorous and systematic evaluation and assessment	"Nobody evaluated the process, the teacher and assessment." (T1)
			Students' negative perceptions	"The dominant perception is that face to face teaching and learning is more effective than e-learning and online teaching." (T3)
			Teachers' and students' low emotional investment	"We did not have a mechanism to control the overall process and it negatively affected our motivation." (T1)
			Large class size	"I try to engage with students through emails but it is also difficult because of large classes." (T13)
			Ineffective LMS	"There is no effective learning management system when teaching an online classroom." (T4)
			Students' lack of technical knowledge and skills	"The students also did not have prior experience and technical knowledge especially when they were supposed to participant in 6 to 7 online courses." (T2)
			Low degree of students' participation	"Students' procrastination and reluctance to participate in online courses were rampant." (T5)
	Promoting Autonomous Learning	Freedom to select the content	"I give students freedom to choose the topic and share his/her idea." (T1)	
		Invoking passion toward e-learning	"The second factor is the passion toward e-learning. It helps students to have more emotional investment on their own learning." (T3)	
		Sharing multiple sources and models	"I shared different sources including videos, digital texts, I want them to study the sources and then share their takeaways in the groups and forum." (T4)	

(Continues)

No	Themes	Sub themes	Codes	Sample participants' quotes
			Cooperative learning	"I started to divide students into groups with varied levels including low, average and advanced. I had the leader to distribute the tasks and students had to study and research to do the task." (T5)
			Self-reflection and peer-feedback	"Moreover, besides being accessible and providing feedback whenever possible, I encouraged self-reflection and peer-feedback to motivate learners." (T6)
		Integrating vivid multimedia instruction	Utilizing multimedia tools	"I use videos to communicate what I want to students better than just emails." (T15)
			Adjusting instructions based on students' needs and learning styles	"The use of multimedia is significantly important in order to meet students' learning differences and needs." (T10)
		Cultivating learning effectiveness	Planning the content and activities based on students' interest	"Selecting the topic according to students' interest and needs. It results in a positive experience and motivates students to engage more in the e-learning process." (T3)
			Teacher's significant involvement in E-learning instruction	"I encouraged students to participants by sharing more resources, being accessible, increasing students' interactions through forum, having students read each other's comments carefully and reply to each comment meaningfully." (T1)
2	Promoting student engagement and learning outcomes	Enhancing teacher-student interactions	Contextual barriers and coping strategies	"Because my institution does not provide any learning management system, I use Facebook as a communication medium between myself and my students. It is free." (T15)
			Collaborative learning	"Group conferences. Because the classroom size is big, I cannot implement individual conferences." (T8)
		Maximizing learning outcomes	Accurate content selection	"I make sure the content of the course meets students' purposes of taking the class." (T13)
			Improving accessibility	"Sharing materials via different social media tools can improve learning outcomes." (T4)
			Promoting assessment	"I make sure I prepare them for the final exam. A few students take my classes as electives, so I also check in with them to make sure they are learning something." (T15)