

Exploring Technology Self-Efficacy Challenges in Teaching Arabic During COVID-19

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Abstract

It is not easy for higher education lecturers to deliver lessons during COVID-19. They face numerous challenges in teaching during the pandemic. This study explores the challenges on technology self-efficacy facing by the higher education (HE) in teaching Arabic based on Bandura's four main sources of self-efficacy. It has been done by reviewing the related literatus to their performance in teaching Arabic. The results showed the challenges related to technology self-efficacy faced by these lecturers include limited knowledge and insufficient training in online instruction, reduced motivation influenced by various external and internal pressures, increased stress from balancing professional teaching responsibilities with household obligations, and concerns regarding students' acceptance and engagement with online learning. These challenges are categorized according to Bandura's sources of self-efficacy: mastery experience, vicarious experience, social persuasion, and physiological and emotional states.

Keywords: Self-Efficacy, Technology Self-Efficacy, Teaching Arabic, Covid-19, Higher Education Lecturers

Introduction

Since late 2019, the global outbreak of COVID-19 has significantly affected various sectors, including education. To ensure continuity of learning during the pandemic, most educational institutions adopted online teaching as the primary mode of instruction (Moorhouse, 2020). This shift marked a major departure from traditional face-to-face teaching, placing technology at the center of the teaching and learning process. As a result, educators were required to rapidly adapt to digital platforms and tools to deliver course content effectively in virtual learning environments.

Background of the Study

Despite the widespread adoption of online teaching, lecturers and teachers have encountered numerous challenges in sustaining effective instruction. These challenges include limited resources, increased workload, difficulties in maintaining student engagement, and, notably, inadequate knowledge and skills in using educational technologies (Sueraya et al., 2021). Previous studies indicate that even educators with relatively high computer literacy and access to institutional IT support continue to experience difficulties in online teaching (Almazova et al., 2020). These challenges are often associated with variations in technological readiness, institutional electronic environments, and the preparedness of both educators and students, highlighting a persistent gap between technology access and educators' self-efficacy in applying technology effectively for teaching, particularly in higher education contexts.

Accordingly, this study explores the challenges related to technology self-efficacy faced by higher education educators in teaching Arabic, drawing on Bandura's four main sources of self-efficacy which are mastery experiences, vicarious experiences, social persuasion, and physiological and emotional states. The study aims to examine how these sources influence educators' confidence and ability to integrate technology into online Arabic language instruction and to identify the key factors contributing to technology self-efficacy challenges within higher education settings.

The significance of this study is found in its contribution to understanding the technology self-efficacy challenges faced by higher education educators in teaching Arabic within online and technology-mediated learning environments. Grounded in Bandura's four main sources of self-efficacy, the study provides a theoretically informed perspective on the factors influencing educators' confidence and ability to integrate technology into their teaching practices, thereby offering insights that can inform institutional support, professional development initiatives, and strategies to enhance effective technology-integrated Arabic language instruction in higher education.

Bandura's Sources of Self-Efficacy

Self-efficacy is a crucial factor in enabling online teaching among lecturers, alongside physiological and emotional factors (Hampton et al., 2020; Shahzad & Naureen, 2017). Bandura (1977) defines self-efficacy as an individual's belief in their ability to successfully perform tasks and achieve goals in future situations. The concept of self-efficacy was introduced by Bandura in his social cognitive theory in the 1960s. Key components of this theory include self-efficacy and outcome expectancies, which encompass physical, social, and self-evaluative outcomes (Luszczynska & Schwarzer, 2005). Self-efficacy is not about the actual ability to perform a task, but rather the belief in one's skills and capabilities to accomplish a goal. This belief can help lecturers enhance their teaching effectiveness during challenging times and overcome obstacles they encounter.

Albert Bandura (1977) stated individuals develop their self-efficacy by interpreting information from four main sources of efficacy beliefs that are mastery teaching experience, vicarious experience, social persuasion and physiological and emotional behaviours.

According to Bandura (1977), mastery teaching experiences are the most efficient means of fostering a successful sense of effectiveness. People who only have easy triumphs grow accustomed to expecting rapid results and become easily disheartened by failure. The time and overall pattern of events in which failures occur determine how they affect self-efficacy (Loo & Choi, 2013). Experience conquering challenges with persistence is necessary to develop a robust sense of efficacy. Shahzad & Naureen (2017) recommended that teachers share their personal success stories as a teaching exercise to help them become more confident in their approaches. It will therefore increase instructors' self-efficacy and give them a high sense of confidence in their skills.

The second method of developing success self-efficacy is through vicarious experience. It can be put into practice through the outstanding performance offered by social role models who are comparable to oneself. Someone will do everything in his power to reach the goal after seeing the success stories of the models. When people who are similar to oneself achieve success via perseverance, it increases spectators' perceptions that they, too, are capable of mastering similar tasks to achieve success (Bandura, 1977). Teachers look for skilled role models who they particularly want to emulate in the classroom. To produce positive thoughts and increase their own efficacy, they might be impacted by the models' actions, perspectives, and achievements (Shahzad & Naureen, 2017).

The third source of self-efficacy is social persuasion. Usher and Pajares (2006) describe it as feedback, judgments, and evaluations from key individuals about one's ability to perform specific tasks. This means that an individual's self-efficacy can be influenced by encouraging input from important people in their lives. Bandura (1977) expanded on this by distinguishing between two types of persuasion. Those who are convinced they have the abilities to succeed in a task tend to put in more effort and are determined to solve any problems that come up. In contrast, individuals who doubt their abilities are more likely to focus on their weaknesses and give up when faced with challenges. For lecturers, social persuasion happens when they receive positive feedback, such as appreciation and encouragement, which leads to improved attitudes and higher self-efficacy (Shahzad & Naureen, 2017).

Lastly, physiological and emotional factors, such as arousal, anxiety, stress, and fatigue, constitute the fourth source of self-efficacy (Usher & Pajares, 2006). In addition to their abilities, individuals also rely on their physiological and emotional responses. They often interpret stress, tension, aches, and discomfort as indicators of poor performance (Bandura, 1977). Conversely, a positive mood, happiness, and good health can enhance one's sense of self-efficacy. For teachers, confidence plays a significant role in shaping their actions and outcomes in relation to teaching and students. This can be achieved by improving physical and emotional well-being while reducing negative emotions (Usher & Pajares, 2006). While Hampton et al. (2020) and Shahzad & Naureen (2017) distinguish between self-efficacy and physiological/emotional states, these factors are interrelated and cannot be considered in isolation, as they influence one another.

Literature Review

Alfayez (2022) examined the challenges faced by Arabic language teachers in implementing distance learning during the COVID-19 pandemic. Employing a descriptive design with a stratified random sample of 348 teachers in Saudi Arabia, the study revealed key obstacles

such as unstable internet connectivity, the financial burden of providing digital devices, low student attendance, and difficulties in developing interaction-based skills. Interestingly, no significant differences were found based on teachers' years of experience or training, and the study recommended fostering collective participation, adopting motivating strategies, and establishing a clear framework for online Arabic instruction.

In line with these concerns, Saad and Ghani (2021) also explored teachers' experiences with online instruction, though their study emphasized not only challenges but also positive outcomes. Through data collected from 12 Arabic language instructors using the Fuzzy Delphi method, they highlighted five positive experiences alongside three persistent challenges. Crucially, they argued that teachers' self-belief and readiness to adapt are essential in sustaining instructional quality, while also stressing that the pandemic has irreversibly transformed the educational landscape.

Complementing these findings, Hanafi (2022) focused specifically on Arabic as a foreign language (AFL) teachers, investigating their difficulties with technology use and language assessment during the shift to remote teaching. Using a mixed-methods design that combined surveys with follow-up interviews, the study found that teachers struggled most with technology navigation, techno-stress, and assessment, all of which negatively affected their teaching efficacy and students' language proficiency. This suggests that beyond infrastructural barriers, online Arabic teaching also raises issues of teacher competence and learner outcomes in virtual environments.

The challenges of implementing Higher Order Thinking Skills (HOTS) in Arabic learning were explored by Ritonga et al. (2021) in a case study in West Sumatra, Indonesia. Their findings showed that limitations in students' Arabic proficiency, unstable internet access, teachers' inadequate understanding of HOTS, and the absence of school-level standards all hindered effective integration. Consequently, the study underscored the importance of testing HOTS implementation within online systems, further highlighting how both technological and pedagogical constraints restricted the quality of Arabic instruction during the pandemic.

Based on these literatures, it can be concluded that studies on Arabic teaching during COVID-19 reveal that challenges were rooted less in teacher readiness and more in structural and pedagogical gaps. Technological barriers such as poor connectivity, costs, and assessment difficulties were widely reported (Alfayez, 2022; Hanafi, 2022), while attempts to implement HOTS highlighted inadequate teacher training and weak institutional frameworks (Ritonga et al., 2021). Although teacher self-efficacy and adaptability played a positive role (Saad & Ghani, 2021), individual resilience could not offset systemic shortcomings. Collectively, these findings stress the need for stronger infrastructure, policy support, and pedagogical alignment to sustain effective online Arabic instruction.

Challenges on Technology Self-Efficacy Faced by HE Lecturers' in Teaching Arabic

Technology self-efficacy refers to an instructor's confidence in their ability to effectively use technology to enhance teaching and learning (Bandura, 1997). This includes the belief in one's capacity to perform tasks such as using digital tools, troubleshooting issues, and integrating technology into pedagogy. In the context of higher education, especially in teaching Arabic,

technology self-efficacy is a critical determinant of instructional quality in virtual learning environments.

Self-efficacy can be categorized into high and low levels. Individuals with high self-efficacy are more likely to take initiative and persevere when they believe in their capacity to achieve desired goals. Lecturers who demonstrate high levels of technology self-efficacy tend to embrace new tools, design interactive and engaging lessons, and readily adapt to technological advancements (Ertmer & Ottenbreit-Leftwich, 2010). Conversely, those with low self-efficacy often experience hesitation and lack confidence in their ability to manage digital tools effectively, which can adversely impact the teaching and learning process (Zimmerman & Cleary, 2006).

Before the COVID-19 pandemic, online learning systems were already implemented in many higher education institutions. In Malaysia, for example, a survey by Mohamed Amin, Afendi, and Abdul Halim (2012) revealed that only 77% of lecturers utilized online learning platforms, despite widespread availability. The primary reasons cited were lack of training and insufficient digital skills, leading many instructors to favor traditional face-to-face methods. However, the pandemic compelled educators to transition to online teaching rapidly, regardless of their preparedness (Sinar Harian, 2020). This sudden shift highlighted significant challenges in teaching Arabic in digital settings, including issues related to instructors' technology self-efficacy.

To navigate the new norms of online education, lecturers were required to possess a high level of confidence in using various digital tools. Effective Arabic language instruction in an online context demands the ability to utilize ICT tools to deliver content that is both engaging and pedagogically sound. Sema, Sakip, and Zeynal (2011) found that high levels of instructional technology self-efficacy are associated with improved understanding of how to integrate technology effectively into teaching. Similarly, Aysun and Seda (2010) reported a significant positive relationship between instructors' general teaching self-efficacy and their technology-specific self-efficacy.

The performance of lecturers in online teaching settings directly influences student learning outcomes. Lecturers with higher levels of technology self-efficacy are better equipped to innovate, reduce anxiety related to tech use, and foster student engagement (Tschannen-Moran & Hoy, 2001). Nevertheless, limited attention has been given to understanding how self-efficacy functions in ethnically diverse classrooms (Geerlings, Thijs, & Verkuyten, 2018), which is a relevant consideration in multilingual and multicultural higher education settings where Arabic is taught.

Numerous studies during the pandemic period documented various challenges affecting technology self-efficacy. Mustapha, Saad, and Ghani (2021) identified three major barriers among Arabic instructors at the National University of Malaysia: unstable internet connectivity, time management difficulties, and lack of a standardized online teaching guide. Consistent with this, Rahmawati and Febriani (2021), Jamil et al. (2024), and others have emphasized that reliable Internet access is foundational to effective online lesson delivery. The transition from face-to-face to virtual instruction heavily depends on stable and accessible digital infrastructure.

At UIN Imam Bonjol Padang in Indonesia, Arabic language teaching during the pandemic was found to be ineffective due to several factors (Rahmawati & Febriani, 2021). These included instructors' limited experience in designing interactive media, lack of reliable platforms, inadequate student performance monitoring, and insufficient supporting facilities. These technical and pedagogical limitations were compounded by the intrinsic complexity of Arabic, such as its script orientation, phonetics, and grammar, which are difficult to address through poorly implemented or underutilized technology.

Low levels of technology self-efficacy among lecturers thus significantly hindered the delivery of quality Arabic instruction. As Rahmawati and Febriani (2021) noted, many lecturers lacked the confidence and competence to navigate online pedagogical strategies and tools effectively. This underscores the need for targeted interventions, such as organized training programs, ongoing technical support, and allocation of resources to support technology-enhanced language learning.

Further insights from Jamil et al. (2024), who conducted interviews with five Arabic language instructors in Malaysian public universities, reveal four key thematic challenges: teaching facilities, delivery platforms, student behavior and attitudes, and learning outcomes. Specific difficulties reported included unreliable internet, student disengagement, and the challenge of assessing students' Arabic proficiency online. In response, instructors implemented various strategies, such as recorded lectures and interactive activities, to enhance engagement and mitigate learning gaps.

The broader literature suggests that developing comprehensive digital competencies among educators is essential to effective Arabic language instruction in online settings. This includes mastery of pedagogy, classroom management, and content delivery on virtual platforms. Institutional investment in educational technology, adoption of student-centered approaches, and regular professional development are all crucial components for enhancing instructors' self-efficacy. While much of the data is self-reported and thus subject to limitations, it nonetheless offers valuable insight into the pressing need for capacity building in this area.

The challenges faced by instructors were not isolated. Students learning Arabic during the pandemic also encountered significant obstacles. Alfayez (2022), examining the Hail region of Saudi Arabia, identified poor connectivity, high costs of digital devices, low student attendance, and difficulties developing interaction-based skills as prominent concerns. In a wider Arab context, Baroudi and Shaya (2022) found that while instructors generally reported high self-efficacy in online environments, those with prior online teaching experience scored higher. Professional support and training were significant predictors of self-efficacy, while student engagement had the weakest correlation. Interestingly, parental involvement emerged as a factor that could enhance teacher efficacy.

On the student side, Kerras and Essayahi (2022) reported that nearly 60% of students learning Arabic in Spain struggled with the transition to online learning. Common issues included difficulties with focus, participation, oral comprehension, and social interaction. Prolonged screen time and home confinement negatively affected their mental health and ability to concentrate. Despite these challenges, Omar et al. (2023) found a strong correlation between

self-efficacy and self-regulated learning. Students who were able to manage their time, engage with peers and instructors, and organize their learning environments were more successful in adapting to online Arabic language instruction.

Discussion

Based on the study's findings, it can be said that lecturers' difficulties with technology self-efficacy in teaching Arabic during COVID-19 included limited knowledge and insufficient training in online instruction, reduced motivation influenced by various external and internal pressures, increased stress from balancing professional teaching responsibilities with household obligations, and concerns regarding students' acceptance and engagement with online learning. Bandura's four primary sources of efficacy beliefs; mastery teaching experience, vicarious experience, social persuasion, and physiological and emotional behaviours are used to illustrate the findings.

Mastery experiences represent the most powerful source of self-efficacy, as they are derived from direct successes in performing tasks. In the context of technology self-efficacy, Arabic language lecturers who have successfully integrated digital tools into their teaching demonstrate higher confidence in sustaining and expanding such practices. For example, instructors who designed interactive online lessons, recorded lectures, and engaged students through ICT applications during the pandemic strengthened their belief in their capacity to use technology effectively. Similarly, research has shown that prior online teaching experience is a strong predictor of higher levels of technology self-efficacy (Baroudi & Shaya, 2022). On the student side, mastery was reflected in those who successfully managed their learning through self-regulation strategies, such as effective time management and peer interaction, which facilitated their adaptation to online Arabic instruction (Omar et al., 2023). These direct experiences highlight how successful performance builds confidence in navigating digital pedagogy.

Vicarious experiences, or learning through observation, play an important role in shaping beliefs about one's own abilities. Instructors who observed colleagues successfully integrating technology into Arabic language instruction were more likely to believe that they too could achieve similar outcomes. During the pandemic, lecturers who lacked prior online teaching experience often looked to their peers for models of effective digital pedagogy, thus enhancing their own willingness to experiment with new tools. Empirical findings support this, as instructors with previous exposure to online teaching demonstrated significantly higher technology self-efficacy compared to those without such experience (Baroudi & Shaya, 2022). Likewise, students observing peers who adapted well to virtual learning environments through active participation and strong self-regulation were also encouraged to adopt similar practices. Vicarious learning therefore serves as an important mechanism in cultivating both teacher and student efficacy in technology-enhanced Arabic education.

Social persuasion, which refers to verbal encouragement, institutional support, and constructive feedback, provides another pathway for enhancing technology self-efficacy. In the case of Arabic language teaching, professional development opportunities, structured training programs, and peer encouragement were found to be critical in building lecturers' confidence to employ digital tools. Aysun and Seda (2010) emphasized the strong relationship between general teaching self-efficacy and technology-specific self-efficacy, underscoring the

role of supportive environments. Institutional measures, such as policy development, technical support services, and provision of reliable platforms, also serve as persuasive mechanisms that motivate educators to persist in digital instruction. In some contexts, parental involvement and student feedback functioned as external reinforcements that encouraged instructors to sustain their online teaching practices (Baroudi & Shaya, 2022). Such forms of persuasion highlight the importance of a supportive ecosystem in strengthening self-efficacy for technology integration.

Finally, physiological and emotional behaviours contribute significantly to self-efficacy beliefs in technology-enhanced teaching and learning. Lecturers with low levels of technology self-efficacy often reported feelings of anxiety, frustration, and self-doubt when required to use digital platforms for Arabic instruction (Zimmerman & Cleary, 2006). The rapid transition to online learning during the COVID-19 pandemic further amplified these emotions, particularly in the presence of unstable internet connectivity, lack of standardized teaching guidelines, and insufficient digital skills (Mustapha, Saad, & Ghani, 2021). Similarly, students learning Arabic online faced challenges related to prolonged screen time, reduced concentration, and declining mental well-being, which negatively affected their engagement (Kerras & Essayahi, 2022). Moreover, the intrinsic complexities of Arabic such as its orthographic structure, phonetics, and grammar heightened stress when poorly supported by technological tools. These affective and physiological responses demonstrate how emotional states can either undermine or reinforce technology self-efficacy in teaching and learning contexts.

It can be concluded that the four sources of efficacy beliefs identified by Bandura; mastery experiences, vicarious experiences, social persuasion, and physiological and emotional behaviours collectively shape the development of technology self-efficacy in Arabic language teaching. Mastery and vicarious experiences build confidence through practice and observation, while social persuasion reinforces belief in ability through institutional support and peer encouragement. At the same time, physiological and emotional states highlight the importance of addressing anxiety, stress, and motivation in digital learning contexts. For professional development, this highlights the need for structured training that not only equips lecturers with technical and pedagogical skills but also provides collaborative opportunities, mentorship, and ongoing emotional support. By integrating these four dimensions, institutions can foster sustainable technology self-efficacy, thereby enhancing the quality and resilience of Arabic language instruction in evolving educational landscapes.

Conclusion

From the discussion above, it can be concluded that teachers' technology self-efficacy can be developed by four main sources. Bandura (1998) agreed that the most effective way to have a high self-efficacy level is through mastery experiences rather than three efficacy sources. The self-efficacy challenge that the teachers' have in online teaching during COVID-19 pandemic can be faced by mastering a variety of techniques and methods in conducting online lessons to get more experiences on it. But, it cannot be declared that the three sources are not important to increase teachers' efficacy as they have to make online lessons more interesting and acceptable among students.

Theoretical and Conceptual Contributions

This study contributes theoretically by extending Bandura's four sources of self-efficacy which are mastery experiences, vicarious experiences, social persuasion, and physiological/emotional states into the context of technology use in higher education Arabic language instruction, offering insights into how these sources shape educators' confidence and competence in online teaching. Conceptually, it proposes a framework that identifies key factors influencing technology self-efficacy and integration, bridging psychological theory with practical teaching challenges. Together, these contributions advance understanding of the mechanisms underlying educators' technology adoption and provide a basis for designing targeted professional development and institutional support to enhance effective technology-mediated Arabic language instruction.

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