

Needs Analysis: Developing A Digital Literacy Integrated Speaking Syllabus for Arabic Pre-Service Teachers in China

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Abstract

Integrating digital literacy into language teacher preparation programs has gained increasing attention in recent years. With the expanding economic trade with Arab countries, Arabic language education is becoming more important in China. This study aims to identify the needs for developing a digital literacy-integrated speaking syllabus for Arabic pre-service teachers in China. The study presents phase 1: needs analysis of the design and developmental research (DDR) approach. Interviews were conducted to collect data. The finding shows that while digital literacy elements are integrated into the existing speaking syllabus through resources and multimedia presentation teaching approach, it is mainly concentrated on the skill domain rather than the knowledge and attitude domains. The study further found that the challenges for Arabic lecturers to integrate digital literacy are the lack of digital teaching resources, the lack of digital literacy training for lecturers, the heavy teaching tasks but limited class instructional time, and the restrictions of higher education institutional policies. Moreover, Arabic pre-service teachers have basic digital literacy skills for daily use but lack technical knowledge in Arabic and awareness of digital literacy. The results of the study provide valuable insights for curriculum designers and educators for language teacher education programs in China.

Keywords: *Digital literacy, Syllabus design, Arabic speaking, Pre-service teachers.*

Introduction

With the development of technologies in the 21st century, integrating digital literacy in the disciplines has gained significant attention (Hays & Kammer, 2023). Technologies are essential for second language education since education benefits a lot from the rapid development of digital technology because it provides a wider range of knowledge that can instantly access and obtain information from anywhere in the world (Burton et al., 2015; Akhmedov, 2022). However, the ability of learning with technologies such as the latest Artificial Intelligence (AI) depends on the digital literacy of both teachers and students (Chiu et al., 2023). Digital literacy is not only based on technical skills, but also the competence to use technologies to find, access, evaluate, create, and communicate digital information in various contexts (American Library Association, 2013), thus, it is important for to prepare today's pre-service teachers with digital literacy.

In recent years, the development of the economy with Arab countries promotes Arabic language education in China such as in Gansu provinces (Male, 2023). Thus, teaching and learning foreign languages as Arabic language in China has received more attention in foreign language planning (An & Zheng, 2022). Arabic is a foreign language in China, and digital tools and resources are becoming a bridge between Arabic language learning and teaching, providing pre-service teachers with opportunities to engage with authentic language materials, collaborate with native speakers, and use digital tools to enhance their speaking skills. Technology-enhanced language learning has a significant positive impact on learners' speaking performances (Chen, 2022; Chen et al., 2011; Idayani & Sailun, 2017). However, YaNa's findings (2018) indicate that a lack of suitable textbooks and a lack of professional training are some of the challenges in training professional Arabic language teachers in China. Besides that, Chinese pre-service teachers have a lower level of digital competencies compared with in-service teachers (Yang et al., 2022). Thus, this study aims to identify the needs for developing a digital literacy-integrated speaking syllabus for Arabic pre-service teachers in China.

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Statement of Problem

There is increasing demand for Arabic pre-teachers who are not only proficient in the Arabic language but also in the use of digital tools that facilitate teaching. Arabic pre-service teachers are preparing to enter the workforce, digital literacy is essential for both personal and professional development. For Arabic pre-service teachers in China, the ability to effectively use digital tools in language instruction is particularly important, as it enhances language acquisition and communication skills while preparing them to meet the demands of a globalized, digitally driven educational environment.

Previous studies revealed that Chinese learners encountered difficulties in the Arabic language learning in China especially in speaking (Kouhi, 2019; YaNa, 2018), and they felt anxiety (Lian, 2021). The integration of digital technology in speaking instruction has shown positive effects in improving learners' speaking performances (Hampel & Stickler, 2005; Khairunnisa, 2022). Besides that, social media can be used as a posting forum for Arabic project-based assignments, a tool for acquiring information for digital literacy, and a way to optimize social media as a medium for literacy for Arabic learners (Ilmiani & Miolo, 2021).

In addition, traditional teaching methods continue to dominate in Arabic language instruction, and digital instruction is often overlooked (Pradana et al., 2021; Sarip et al, 2024). Arabic language curriculum in China lacks a structured framework for integrating digital literacy. The Arabic language programs of universities in China mainly study the basic theories and knowledge of the Arabic language, grammar knowledge, speaking skills, and the culture and history of Arabic-speaking countries. Lack of professional training is one of the challenges in training professional Arabic language teachers in China (YaNa, 2018). Having a well-designed teacher preparation program is crucial for training pre-service teachers (Wilson et al., 2002). The Ministry of Education of China reported the document "Digital Literacy of Teachers" in 2022, which emphasized the importance of improving teachers' digital literacy in five aspects: digital knowledge and skills, digital application, digital social responsibility, digital awareness, and professional development.

However, without a clear understanding of the specific digital literacy needs of Arabic pre-service teachers, higher educational institutions in China may struggle to equip future teachers with the necessary skills to teach Arabic in the 21st century. Thus, the study aims to address the gap between the current curriculum and the needs of Arabic pre-service teachers by investigating the extent of digital literacy integration in existing Arabic-speaking syllabus and identifying the challenges faced by lecturers in implementing digital tools in the classroom in China.

Significance of the Study

This study is significant for Arabic lecturers, pre-service teachers, and curriculum developers in enhancing the quality of Arabic language teacher preparation programs in China. For Arabic lecturers, the findings of the study offer insights into the needs for how digital literacy elements can be effectively integrated into Arabic language teaching. Also, for pre-service teachers, the digital literacy-integrated speaking syllabus will serve as a framework to enhance their Arabic speaking skills, while improving digital literacy. Furthermore, the findings of this study may inform curriculum developers' decisions about the integration of digital literacy in language education programs in China, helping to address the gap between traditional language teaching methods and the needs of the digital classroom in the 21st century. Besides the contribution to the enhancement of Arabic teacher education in China, the findings of the study also provide a model for other language teacher education programs to understand the needs for integrating digital literacy more effectively.

Research Questions

The study aims to answer the following research questions:

(1) To what extent is digital literacy integrated into the existing syllabuses of speaking courses for the Arabic Language Study Program at teacher education universities in China?

(2) What are the challenges faced by lecturers in integrating digital literacy into the existing syllabuses of Arabic speaking courses at teacher education universities in China?

(3) Is there a need to develop a digital literacy-integrated speaking syllabus for Arabic pre-service teachers?

Literature Review

The integration of digital tools and resources in Arabic language instruction has the potential to create an interactive learning environment that supports learners' language acquisition (Moghazy, 2021). This section will review the relevant literature on digital literacy, syllabus design, and Second Language Acquisition (SLA) theory, providing the theoretical framework for the needs analysis of developing a digital literacy-integrated speaking syllabus for Arabic pre-service teachers in China.

Digital Literacy

The term “Digital Literacy” was first coined by historian and educator Gilster in 1997. Gilster (1997) argued that digital literacy encompasses more than just using technology, it also involves the competence to comprehend and make information in a variety of formats from several digital sources. Digital literacy is about mastering concepts, which distinguishes the conception of digital literacy from the limited view of technical skills. Thus, digital literacy in the study is defined as a set of required knowledge, skills, and attitudes that help to efficient, ethical, and effective access to digital information (Julien, 2019). According to Ng's (2012) digital literacy model (Figure 1), there are technological, cognitive, and social dimensions. The technological dimension refers to the practical skills to use digital tools and platforms. The cognitive dimension involves critical thinking and problem-solving skills necessary for processing digital information. The social dimension focuses on the interpersonal skills required for communication and collaboration in digital spaces. These three dimensions provide a framework for integrating digital literacy into Arabic language instruction.

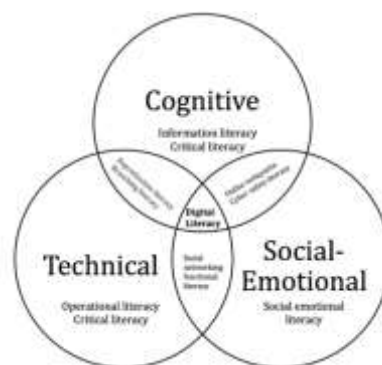


Fig. 1 Digital literacy model (Ng, 2012)

Syllabus Design and Needs Analysis

Stevenson (2010) defined a syllabus as a written document that outlines duties and expectations and provides information about an academic course. A syllabus is a framework within which activities might take place, which can be seen as a teaching tool to support learning. Based on previous studies' recommendations for syllabus components (Liu & Wang, 2016; Wolf et al., 2013; Zuwanda et al., 2021), the components of the syllabus in this study are 10 common components: Basic Information, Course Description, Learning outcomes, Materials, Resources, Learning Media, Teaching Approach, Course Schedule, Course Content, Assessment, and Evaluation.

Needs analysis is defined as collecting information about learners' needs, which is the first stage of syllabus design (Richards, 2001). Needs analysis, which emerged in the 1960s as part of a systematic approach to curriculum development, is a distinct and necessary stage in educational program planning (Stufflebeam et al., 2012). Needs analysis in language teaching may be used for different purposes such as to determine whether an existing language course adequately meets learners' needs, to identify a gap between what learners can do and what they need to do, or to find out what language skills learners need. What is identified as a need is a personal judgment. According to Brindley (1984), the term needs could refer to wants, desires, expectations, demands, requirements, motivations, lacks, and constraints. Thus, when designing the syllabus, curriculum developers have to consider societal factors, institutional factors, teacher factors, and learner factors (Kaharuddin et al., 2014). Applied linguists began to adopt needs analysis procedures in language teaching as the demand for professional language programs continued to grow.

The study used McGehee and Thayer's Three Level Analysis Model (1961) as a framework to guide the needs analysis of the development of a digital literacy-integrated speaking syllabus (Figure 2).

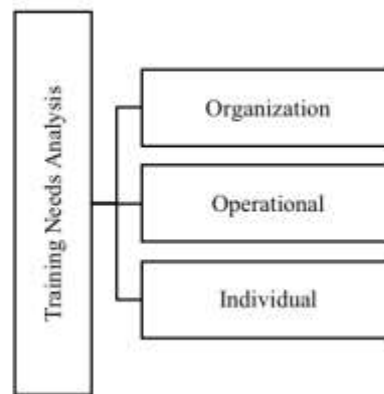


Fig. 2 Three-level analysis model (McGehee & Thayer, 1961)

Organizational Analysis: This level involves examining the organization's goals, objectives, and resources related to the development of the digital literacy-integrated speaking syllabus. It focuses on understanding the overall information such as resources and teaching objectives within the Arabic speaking courses at teacher education universities in China. **Task Analysis:** This level involves analyzing the learning tasks and activities, and the challenges. It helps identify the needs of digital literacy that should be addressed in the speaking syllabus. **Individual Analysis:** This level involves analyzing the characteristics and needs of the Arabic pre-service teachers. It aims to understand their existing knowledge, skills, and attitudes related to digital literacy.

Second Language Acquisition (SLA)

This study used the SLA Theory based on Krashen's (1982) input hypothesis, focusing on the process of second language acquisition by individuals. This theory stresses the importance of comprehensible input, emphasizing the role of exposure to meaningful language in developing language ability. Krashen (2003) further argues that this approach is superior to direct grammar instruction for improving grammatical accuracy. Also, studies show that technology-enhanced language learning can improve learners speaking performances (Chen, 2022; Idayani & Sailun, 2017). Integrating digital literacy into language learning can enhance students' engagement, autonomy, and communicative competence (Dzekoe, 2020), improving students' academic enthusiasm compared with the conventional teaching approach (Fannakhosrow et al., 2022). Thus, integrating digital literacy elements into the components of Arabic speaking syllabus helps provide authentic language input through digital tools like videos, online discussions, and virtual collaborations. This enhances Chinese Arabic learners' exposure to authentic Arabic while building their communicative competence. The SLA theory, thus, guides the choice of digital content, resources, and activities to engage Arabic language learning in China.

Methodology

Research Design

This study used the design and development research (DDR) approach (Richey & Klien, 2007). The DDR approach includes phase 1: needs analysis, phase 2: design and development, and phase 3: evaluation. In this paper, the focus is on the first phase: needs analysis.

Participants

The participants were 6 Arabic lecturers from teacher education universities in Yunnan, Ningxia, and Gansu provinces in China. These provinces were selected due to their significant populations of Chinese Muslims, as noted by Min (2013). The teacher training universities in these provinces offer four-year undergraduate programs in Arabic. The participants all have teaching experience in Arabic courses, and they had Arabic language-speaking teaching assignments before. Therefore, their expertise in both the language and educational contexts helps provide valuable opinions on the needs for a digital literacy-integrated speaking syllabus for Arabic pre-service teachers in China.

Data Collection

Data were collected through online semi-structured interviews conducted via the Tencent Meeting platform. Semi-structured interviews allow participants the flexibility to express their feelings, experiences, views, and prejudices (Wellington, 2015), providing rich qualitative data. The interview aims to explore participants' perspectives on the current digital literacy integration in Arabic-speaking syllabus, the challenges they face, and the needs concerning Arabic syllabus development.

Data Analysis

The qualitative data collected from the interviews were analyzed using Braun and Clarke's (2006) thematic analysis. Braun and Clarke's (2006) six-step guide for thematic analysis is: Familiarizing yourself with your data, Generating initial codes, Searching themes, Reviewing themes, Defining and naming themes, and Producing the report. This method was employed to identify recurring themes and patterns within the data, offering an approach to code and interpret the participants' responses. Based on the research questions and objectives of the study, thematic analysis is a suitable method. It allows the researchers to capture the participants' responses, identify recurring themes, and help to understand the needs for the development of a digital literacy-integrated speaking syllabus for Arabic language pre-service teachers in China. After the initial thematic analysis, the study used member checking to enhance the validity and reliability. The researchers sent the initial themes and interpretations back to the participants and asked them if they were reasonable. According to Maxwell (2005), member checking could help change the possibility of participants misinterpreting what they said and did, as well as ruling out researchers' own biases and misunderstanding of what they observed.

Findings and Discussion

The part discusses findings of the current integration of digital literacy in existing speaking syllabuses, the challenges in integrating digital literacy into Arabic language education in China, and the need for a digital literacy-integrated speaking syllabus.

The Current Digital Literacy Integration

The findings show that digital literacy elements are explicitly integrated into the components of the existing Arabic speaking syllabus, including materials, learning media, teaching approach, and resources. In contrast, digital literacy elements are implicitly integrated into components: assessment and evaluation, course content, course description, and learning outcomes. These findings are similar to the research conducted by Hamid and Sulistyningrum in 2019 in Indonesia. An Arabic lecturer reported, "We have Arabic audio

recordings, sometimes, we will play Arabic videos in the speaking classroom”. Besides, lecturers in China usually adopt a multimedia presentation teaching approach and use digital materials for second language teaching. This can be traced in the interviews, five of six lecturers mentioned presentation teaching through PowerPoint. Li (2014) also found that PowerPoint is the most frequently used technology to support foreign language teaching and learning activities in the classroom in China. A lecturer explained, “The main purpose of using multimedia teaching in speaking classes is to improve teaching efficiency. As for digital literacy, it is not specifically written in the syllabus”. These findings suggest that digital literacy elements are primarily integrated into the materials, resources, learning media, and teaching and in the existing Arabic speaking syllabus in China.

Additionally, the study reveals the current integration of digital literacy elements concentrated on the skill domain, with less emphasis on the knowledge and attitude domains. These findings are in accord with Hamid and Sulistyningrum’ (2019) study, which found that the most commonly applied level of ICT competencies in the existing syllabuses is knowledge deepening level rather than technology literacy or knowledge creation. A possible explanation for this trend is the limited range of technologies available to learners, and their learning attitudes influenced by lecturers’ teaching approaches (Margaryan et al., 2011). Hammoud et al. (2008) also highlighted that lecturers’ attitudes will affect learners’ use of online learning tools. Furthermore, the interaction between learners and lecturers has been shown to have an indirect impact on e-learning via motivation (Essam & Al-Ammary, 2013). Thus, while digital literacy is integrated into components of the existing Arabic speaking syllabus in China, its integration is mainly skill-based, with gaps in the knowledge and attitude domain. These findings leave room for integrating digital literacy elements into the speaking syllabus.

Challenges of Integrating Digital Literacy

The findings show one of the challenges is the lack of digital teaching resources for Arabic language education in China. Also, Arabic lecturers lack digital literacy training. This finding is consistent with YaNa’s (2018) research, which highlights that the lack of suitable textbooks and professional training are significant challenges in training proficient Arabic language teachers in China. As a lecturer reported, “Arabic is not commonly used in China, so, there are a few relevant teaching materials available both in print and digital formats. And some Arabic videos are not suitable for their levels”. Chinese network restrictions further increase these challenges, as access to foreign websites such as Google and YouTube are limited (Lee et al., 2012). These restrictions also apply to many Arabic teaching websites, making it difficult for lecturers to access and download Arabic videos or other digital resources necessary for effective teaching. Thus, the limited availability of Arabic resources further requires a high level of digital literacy of Arabic lecturers in China.

However, a lecturer reported in the interview, “In provinces like Yunnan where a lot of Chinese Muslims live, schools like this don’t provide teachers with this modern teaching training. Our teaching model is more like a master teaching an apprentice. Then, I just teach in the way my master taught me”. Pradana et al.’s (2021) study has similar findings that one of the inhibiting factors for digital literacy integration into Arabic language instruction is lecturers do not master technology. According to Wilson et al. (2002), lecturers are not only expected to provide syllabi, instructional resources, and communication tools but also to solve instructional, interpersonal, and technical problems in a digital learning environment. Without any training or support and adequate resources, individual lecturers are likely to face challenges in a digital teaching environment (Guri-Rosenblit, 2018).

Another challenge is the heavy teaching task and limited class instructional time. A lecturer complained, “I have to read, explain, and teach these units from the textbook, however, most of them are beginners, they don’t have any basic Arabic vocabulary or grammar knowledge before they go to the college, the teaching task is difficult.” For second language learners, lecturers usually need to explain new words and grammar of the new unit content in the learners’ native language first, which reduces the time available for learners to practice and discuss. In addition, a typical class in universities in China lasts 90 minutes, divided into two 45-minute classes with a 10-minute break (Lan et al., 2009). “There is not enough class time for too many digital activities, also, I don’t have so much time to prepare for that, like online teaching materials, but we

do have student presentations once a semester”, as a lecturer complained in the interview. This time constraint, coupled with work overload and burnout, particularly in the context of online teaching, requires lecturers to devote additional preparation time (Guri-Rosenblit, 2018).

Furthermore, the findings show that higher education institutional policies, such as restrictions on the use of personal phones or laptops during class, are additional challenges for Arabic lecturers to integrate digital literacy into the syllabus. Tindell and Bohlander (2011) investigated Chinese college students from a university in China and found that 92% of them use their phones for text messages during class, causing classroom management issues for lecturers. Thus, these policies of universities in China, intended to improve classroom management and ensure students’ focus, can limit opportunities for them to engage with digital tools during class at the same time. A lecturer added, “Our classroom rules are strict, we will take their phones, but we can use the multimedia classroom which has online computers”. Although some universities in China are equipped with multimedia classrooms or language labs, the number of such facilities is limited, so these restrictions further cause the use of digital tools in the classroom.

The Need for a Digital Literacy-integrated Speaking Syllabus

The findings from interviews show that Arabic pre-service teachers have basic digital literacy skills for daily use, but they often lack the technical knowledge in Arabic and awareness of digital literacy. An Arabic pre-service teacher stated in the interview, “Usually, my students will help me prepare the projector in the classroom before I come, and they have no problem with mobile phone applications. However, they still lack certain knowledge to complete digital tasks in Arabic, for example, even the text layout order of Chinese and Arabic in one document on Words bothers some pre-service teachers.” Arifah et al. (2022) similarly found that Arabic pre-service teachers can use digital media, but they need to improve their readiness to use the learning management system in teaching Arabic. Another lecturer added, “Sometimes, I notice that they don’t use apps or websites to learn by themselves, when they don’t know the new words, they just ask friends. “While multimedia or digital tools are commonly used in second language instruction (Ilmiani & Miolo, 2021; Khairunnisa et al., 2022), learners often passively consume content rather than actively engaging with digital tools to create and evaluate information, which limits the development of critical digital literacy. One lecturer noted, “Our pre-service teachers need to have the awareness to use digital tools, not just for Arabic language acquisition but also for teaching Arabic in their future classrooms.” All six participants in the study agreed that there is a need to develop a digital literacy-integrated speaking syllabus that equips Arabic pre-service teachers with the digital literacy knowledge, skills, and awareness required to succeed in the 21st-century digital learning environment.

As Bărbuceanu (2020) notes, lecturers have to recognize that their students are digital natives who already mastered essential skills to access digital and informational resources. West (2013) points out that if lecturers teach today’s students as yesterday’s, they are robbing them of tomorrow. The process of instructional design must focus on identifying both current and future needs (Morrison et al., 2019). By integrating digital literacy elements into all components of the speaking syllabus, Arabic pre-service teachers will be better prepared with digital skills, knowledge, and awareness of the demands of teachers in the 21st century.

Implications

The results of the study contribute to the theories on digital literacy, Second Language Acquisition, and syllabus design. It strengthens the concept that digital literacy is a multi-domain conception, including not only technical and cognitive domains, but also attitudes and social-emotional domains (Ng, 2012). Also, the findings highlight the need for a more comprehensive syllabus for digital literacy integration, particularly in fostering knowledge and attitudes toward the use of digital tools in Arabic language learning. In SLA, learner autonomy and motivation are crucial factors that influence second language acquisition (Holec, 1979; Dörnyei, 2014). Furthermore, the challenges identified, such as limited Arabic teaching resources and higher education institutional restrictions, suggest that designing the syllabus should consider societal factors, institutional factors teacher factors, and learner factors (Kaharuddin et al., 2014). This supports Richard’s (2001) syllabus design theory, which emphasizes the importance of needs analysis. Needs analysis allows

the identification of gaps between Arabic pre-service teachers' current needs and the demands of modern Arabic language teaching in China, especially in digital environments in the 21st century.

In terms of practice, curriculum developers should adopt a needs-based approach when designing second language teacher preparation programs, following models like Richards' (2001) syllabus design model. This study conducted needs analyses, helping identify the specific digital literacy gaps of Arabic pre-service teachers and ensure that the syllabus is aligned with both institutional goals and learners' needs. This will allow for more targeted and relevant digital literacy integration into the curriculum in China.

Moreover, to successfully integrate digital literacy into second language teaching, lecturers themselves must be proficient in digital tools and pedagogy. As Williams and Jacobs (2004) state educators should not only be familiar with using digital tools but in employing them as part of the learning process. Teacher training institutions should provide continuous professional development focused on enhancing lecturers' digital literacy skills and their ability to apply these tools in a pedagogically sound manner. This should include training in the use of online platforms, AI tools, and collaborative digital environments to enhance language learning outcomes. Learners may have a limited understanding of how technology could support their learning, and their attitudes may be influenced by their lecturers' teaching approaches (Margaryan et al., 2011).

Limitations and Recommendations for Future Studies

First, the study focuses on the perspectives of Arabic lecturers rather than Arabic pre-service teachers. While Arabic lecturers provide valuable opinions for the needs of designing and developing a digital literacy-integrated syllabus, pre-service teachers' experiences and perspectives would enrich the findings. Because what is identified as a need depends on personal judgment (Richards, 2001). These judgments reflect personal interests and values. Thus, Arabic lecturers and Arabic pre-serve teachers may have different views about what needs are. Future studies could investigate both Arabic lecturers and Arabic pre-service teachers' perspectives, providing a more comprehensive understanding of digital literacy integration in Arabic language education in China. Besides, the study collected self-reported data from interviews with Arabic lecturers, which could introduce bias. Future research could adopt a triangulated approach, adding classroom observations and teaching materials analysis. Data triangulation is a principal strategy to ensure validity and reliability (Merriam & Tisdell, 2015), as it helps provide a more objective perspective of how digital literacy is integrated into actual Arabic teaching practices in China.

Conclusion

This study investigated the needs for developing a digital literacy-integrated speaking syllabus for Arabic pre-service teachers in China, focusing on the extent of digital literacy integration, challenges faced by Arabic lecturers, and the need for a new syllabus. Six Arabic lecturers participated in the interviews. The results show that that while digital literacy elements have integrated into some components of the existing Arabic speaking syllabus such as materials, resources, learning media, and teaching approaches, they are mainly skill-based rather than knowledge and attitude domains. These findings leave room for integrating digital literacy elements into the speaking syllabus. Also, challenges such as limited Arabic digital teaching resources, lack of digital literacy training, network restrictions, and high education institutional policies hinder the effective integration of digital tools in Arabic language teaching in China. These findings highlight the importance of equipping Arabic pre-service teachers with the necessary digital literacy to study and work in the 21st-century digital learning environment. Structural changes in the curriculum such as speaking syllabus and greater professional development for Arabic lecturers are necessary to overcome the challenges of digital integration. Thus, it is obvious that there is a need to develop a digital literacy-integrated speaking syllabus that addresses the knowledge, skills, and attitudes in Arabic language education in China. Furthermore, it is recommended that future studies explore the appropriate digital literacy learning outcomes, digital literacy elements, digital tools, and platforms, and teaching approaches that are most effective for enhancing both Arabic speaking skills and digital literacy in a technology-driven learning environment. These future studies will contribute to a deeper understanding of how digital literacy can be

effectively integrated into Arabic language education and improve pre-service teachers' readiness for the demands of digital teaching environments.

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