

A Case Study on the Use of Digital Applications in Business Mandarin Communication: Challenges and Strategies Among UiTM Kelantan Students

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DOI: <https://doi.org/10.47772/IJRISS.2026.100601090>

Received: 24 June 2026; Accepted: 29 June 2026; Published: 13 July 2026

ABSTRACT

The integration of digital applications into language learning has become increasingly important in higher education, particularly in foreign language courses such as Business Mandarin Communication. Digital technologies provide students with flexible access to learning resources, facilitate communication, and encourage interactive learning experiences. This study aimed to examine the use of digital applications in Business Mandarin Communication learning among undergraduate students at Universiti Teknologi MARA (UiTM) Kelantan. Specifically, the study investigated the level of digital application usage, the challenges encountered by students, and the strategies employed to overcome these challenges. A quantitative survey design was adopted involving 51 undergraduate students enrolled in the Business Mandarin Communication course during the October–February 2026 semester. Data were collected using a structured questionnaire that was reviewed for content validity and demonstrated acceptable internal consistency. The data were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations. The findings revealed that students reported a high level of digital application usage, while the challenges encountered were at a moderate level. The strategies adopted to overcome these challenges were also reported at a high level, indicating that students actively employed self-directed and collaborative learning approaches, such as consulting lecturers, discussing with peers, and using multiple digital applications. Overall, the findings suggest that digital applications play a significant role in enhancing Business Mandarin Communication learning and that appropriate learning strategies enable students to adapt effectively to challenges encountered in technology-enhanced learning environments. The study provides valuable implications for educators and higher education institutions in strengthening digital language learning practices and supporting students' learning experiences.

Keywords: *Digital Applications, Business Mandarin Communication, Mandarin Language Learning, Learning Challenges, Learning Strategies*

RESEARCH BACKGROUND

In recent years, digital transformation has significantly influenced teaching and learning practices in higher education. As Business Mandarin Communication has become an important subject for preparing students in international business environments, understanding how they utilize digital applications has become increasingly relevant.

Previous studies have shown that the use of digital applications can enhance the effectiveness of Mandarin language learning, particularly in terms of communication skills and language proficiency. A study by Chua and Goh (2021) demonstrated that mobile application-based Mandarin learning can improve students' communication competence while creating a more interactive and flexible learning environment.

In addition, Elyana (2023) found that the use of the “Chinese Conversation” application helped students improve their Mandarin speaking skills through engaging and user-friendly interactive features. The application was also found to enhance students' interest and motivation in language learning.

In the field of Business Mandarin Communication, Wang and Wu (2020) explained that the use of WeChat in business communication simulations helps students develop more authentic communication skills and increases their engagement in learning activities.

Several studies have reported that the use of digital applications in language learning still faces challenges such as poor internet connectivity, limited technological skills, and difficulties adapting to digital learning environments. Therefore, research on the challenges and strategies associated with the use of digital applications in Business Mandarin Communication learning should be expanded, particularly among university students in Malaysia.

PROBLEM STATEMENT

The use of digital applications has become increasingly widespread in language learning, particularly in third-language education, including Business Mandarin Communication, which is gaining importance in language teaching. However, there is still a lack of studies specifically investigating the challenges faced by university students when using digital applications in the context of business communication. Furthermore, research on the strategies employed by students to overcome these challenges remains limited. This lack of data hinders the development of more systematic and effective teaching approaches.

Previous studies have shown that the use of digital applications in language learning presents various challenges that may affect students' learning effectiveness. These include internet accessibility issues, insufficient technological skills, distractions during online learning, and inconsistent levels of student motivation. Adnan and Anwar (2020) reported that online learning caused many students to experience internet connectivity problems and difficulties adapting to digital technologies in the learning process. Similarly, Chung, Subramaniam, and Dass (2020) found that although digital learning provides flexibility for university students, challenges related to learning interactions, communication, and technological readiness still persist.

Furthermore, Coman et al. (2020) highlighted that students often face challenges in terms of motivation, self-management, and the use of digital platforms during online learning. Their study emphasized that the effectiveness of technology-enhanced learning depends largely on the strategies employed by both students and lecturers. Chua and Goh (2021) also found that while mobile applications can enhance language communication learning, constraints related to technological readiness, student confidence, and the effectiveness of specific applications in real learning situations remain evident.

Therefore, there is a need to conduct a more focused study on the challenges and strategies associated with the use of digital applications in Business Mandarin Communication learning, particularly among Malaysian university students such as those at UiTM, where this new subject has recently been introduced. Although previous studies have investigated the effectiveness of digital applications in language learning, limited research has specifically examined Business Mandarin Communication among Malaysian university students.

LIMITATIONS AND FUTURE RESEARCH

This study has several limitations. First, the study involved only 51 respondents from a single higher education Institution, which limits the findings to a broader population of university students. Second, this case study may not fully reflect students' actual learning behaviors. Third, the study employed descriptive statistical analyses and therefore did not extensively examine the predictive relationships among the study variables.

Future research should involve larger and more diverse samples from multiple universities to improve the findings. Researchers are also encouraged to employ more advanced inferential statistical techniques, such as multiple regression analysis or structural equation modelling. In addition, qualitative approaches, including interviews or focus group discussions, could provide deeper insights into students learning experiences and perceptions regarding the effective use of digital applications in Business Mandarin Communication learning.

RESEARCH OBJECTIVES

This study aims to:

1. Identify the level of challenges faced by students in using digital applications for Business Mandarin Communication.
2. Identify the strategies used by students to overcome challenges in the use of digital applications.
3. To examine the strategies employed by students to overcome the challenges encountered when using digital applications in Business Mandarin Communication learning.

RESEARCH QUESTIONS

This study seeks to answer the following questions:

1. What challenges do students face in using digital applications for learning Business Mandarin Communication?
2. What strategies do students use to overcome challenges related to the use of digital applications in learning Business Mandarin Communication?
3. How do students overcome the challenges encountered when using digital applications for Business Mandarin Communication learning?

LITERATURE REVIEW

The use of digital applications in language learning has continued to grow alongside advancements in educational technology. Digital applications such as mobile learning platforms, communication platforms, and social media are widely utilized to enhance the effectiveness of foreign language learning, including Mandarin. Digital technology enables students to access learning materials flexibly while increasing interaction throughout the learning process.

Chua and Goh (2021) found that mobile learning applications in Mandarin language education increase student engagement and help learners develop communication skills more effectively. Their study also revealed that mobile applications create a more interactive and flexible learning environment, which directly enhances students' confidence in using Mandarin.

Similarly, Wang and Wu (2020) explained that the use of WeChat in Business Mandarin Communication learning improves student interaction and provides opportunities for more effective business communication simulations. However, digital learning continues to face several challenges and limitations. Coman et al. (2020) found that university students encounter issues related to motivation, communication difficulties, and challenges in using digital platforms during online learning. These issues may negatively affect the effectiveness of the learning process if not addressed appropriately. Likewise, Chung, Subramaniam, and Dass (2020) reported that university students' readiness for online learning remains at a moderate level.

Therefore, studies on the challenges and strategies associated with the use of digital applications in Business Mandarin Communication learning are necessary to enhance teaching and learning effectiveness in higher education institutions.

METHODOLOGY

This study adopts a quantitative survey research approach to identify the challenges and strategies associated with the use of digital applications in Business Mandarin Communication learning. This approach was selected because it allows for systematic data collection from respondents.

The research design employed descriptive statistical analysis using frequencies, percentages, means, and standard deviations, using a questionnaire as the primary data collection instrument. Descriptive analysis is

employed to identify the levels of challenges and strategies among students, while inferential analysis is used to examine the relationships between the study variables.

The study population comprises undergraduate students at UiTM Kelantan who enrolled in the Business Mandarin Communication course during the October–February 2026 semester. A total of 51 students were selected as respondents through purposive sampling.

Data were collected using a structured questionnaire consisting of four sections. Section A gathered respondents' demographic information, while Section B measured the use of digital applications. Section C examined the challenges encountered in using digital applications, and Section D explored the strategies adopted by students to overcome these challenges. All questionnaire items were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Data were collected online using Google Forms. Respondents were given a specified period to complete the questionnaire distributed by the researchers. The data were analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistical analyses such as means, percentages, and standard deviations were employed to determine the levels of challenges and strategies among students.

RESULTS AND DISCUSSION

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	10	19.6
	Female	41	80.4
Age	18–20 years old	3	5.9
	21–23 years old	47	92.2
	24 years old and above	1	2.0
Mandarin Language Proficiency	Low	4	7.8
	Moderate	33	64.7
	High	14	27.5
Level of Digital Application Usage	Moderate	23	45.1

The demographic analysis showed that the majority of the 51 respondents were female students (80.4%), while male students accounted for 19.6% of the sample. Most respondents were between 21 and 23 years old (92.2%), followed by aged 18 to 20 years old (5.9%) and those aged 24 years and above (2.0%).

The respondents generally possessed a moderate level of Mandarin language proficiency (64.7%). Only 27.5% of the students showed a high level of Mandarin proficiency, while 7.8% were at a low proficiency level.

Most respondents used digital applications at a moderate level (45.1%). These findings indicate that the respondents had sufficient basic experience in using digital applications and learning Mandarin, enabling them to provide relevant feedback in relation to the objectives of the study.

Table 2. Digital Application Usage

Item	Mean
Word Meaning Search	4.45
Pronunciation & Sentences	4.45

Item	Mean
Communication Skills	4.31
Assignment Completion	4.31
Learning Materials	4.27
Business Terminology	4.24

The findings of the study indicate that the use of digital applications was at a high level. The items that recorded the highest mean scores 4.45 were the use of digital applications to search for word meanings and to learn Mandarin pronunciations. These findings demonstrate that digital applications function as useful tools in helping students improve language comprehension and facilitate independent learning.

This finding is consistent with the study of Dhawan (2020) which showed that digital learning provides flexible access to learning resources and enhances opportunities for self-directed learning through the use of various technological platforms. The use of digital applications enables students to obtain information quickly and improves their understanding of language learning content.

Table 3. Challenges in Using Digital Applications

Challenge	Mean
Inaccurate Translation	3.67
Pronunciation / Tone	3.31
Internet Connectivity Issues	3.33
Selecting Suitable Applications	3.12
Lack of Confidence	3
Understanding Terminology	2.82

The main challenge identified was the accuracy of translations provided by digital applications ($M = 3.67$), followed by internet connectivity issues ($M = 3.33$) and difficulties in mastering Mandarin pronunciation or tones ($M = 3.31$).

This finding supports the study by Rahman and Singh (2021) which found that university students in Malaysia facing the challenges during online learning, including technical issues, limitations in interaction, and difficulties in understanding learning content effectively. In the context of learning Mandarin for business communication, the issue of translation accuracy becomes even more critical.

Table 4. Strategies for Overcoming Challenges

Strategy	Mean
Using More Than One Application	4.37
Consulting Lecturers	4.25
Discussing with Peers	4.43
Learning Videos	4.29
Vocabulary Notes	4.14
Dialogue Practice	4.02

The most frequently adopted strategies were discussing learning-related issues with peers ($M = 4.43$), using more than one digital application ($M = 4.37$), and watching educational videos ($M = 4.29$).

This finding is consistent with the study by Charles B. Hodges et al. (2020), which emphasized that the effectiveness of digital learning depends not only on technology itself but also on the learning strategies and social support utilized by students. The use of multiple learning resources enables students to verify the information they obtain and reduce the limitations associated with a particular application.

Table 5. Summary of Descriptive Analysis

Construct	Mean	Standard Deviation	Level
Digital Application Usage	4.34	0.75	High
Challenges in Using Digital Applications	3.21	1.17	Moderate
Strategies for Overcoming Challenges	4.25	0.78	High

Overall, the use of digital applications in learning Mandarin Business Communication was found to be at a high level ($M = 4.34$), while the challenges associated with digital application usage were at a moderate level ($M = 3.21$). At the same time, strategies for overcoming these challenges were also reported at a high level ($M = 4.25$).

This finding also supports the study by Coman et al. (2020), which found that higher education students had a positive perception of the use of digital platforms when such technology helped enhance learning flexibility and access to learning materials. In this study, the use of digital applications was found to assist students in improving communication skills, completing assignments, and understanding Mandarin business terminology more effectively.

Furthermore, students' tendency to use more than one digital application and to seek assistance from peers and lecturers indicates the presence of positive collaborative and self-directed learning practices. This situation is consistent with the findings of Kohnke, Moorhouse and Zou (2023), which stated that the use of digital technology in language learning can enhance learner autonomy, provide immediate feedback, and support continuous language skill development. Therefore, although students face several technical and linguistic challenges, they are still able to adapt through the use of effective learning strategies.

Although students experienced several technical and linguistic challenges, they remained highly motivated to utilize digital resources and adopted various learning strategies to enhance their language proficiency. This reflects students' readiness to embrace technology-supported learning and highlights the complementary role of digital applications in language education.

CONCLUSION

This study examined the use of digital applications in Business Mandarin Communication learning among UiTM Kelantan students, focusing on the challenges encountered and the strategies adopted to overcome them. The findings revealed that the use of digital applications was at a high level, indicating that students actively utilize digital tools to support their learning. Although students experienced a moderate level of challenges, particularly related to technical and language-learning issues, they demonstrated a high level of strategy use in addressing these difficulties.

The results suggest that digital applications play an important role in enhancing students' learning experiences, communication skills, and understanding of Business Mandarin terminology. Furthermore, students' willingness to seek assistance from peers and lecturers, as well as their use of multiple digital applications, reflects positive self-directed and collaborative learning behaviors. Overall, the findings indicate that while challenges remain, students are generally able to adapt effectively through appropriate learning strategies. Therefore, higher education institutions and educators should continue to promote the effective integration of digital applications and provide adequate support to maximize the benefits of technology-enhanced language learning.

Lecturers are encouraged to integrate multiple digital applications into Business Mandarin Communication courses while providing guidance on selecting reliable digital resources. Universities should also improve digital learning infrastructure and organize workshops that enhance students' digital literacy and language learning skills.

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