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Reviewing the challenges and opportunities of digital technology integration in virtual education: Insights from MBA programmes in Iran

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ABSTRACT

The current study provides a comprehensive review of the integration of digital technologies in virtual education in Iran with a specific focus on MBA programmes. Drawing on research published from 2003 to 2022, the investigation seeks to identify major challenges, evaluate current practices, and offer recommendations for improving online MBA education within the Iranian context. An extensive search was conducted across databases such as Semantic Scholar, Google Scholar, Scopus, and Noormags, using keywords to select relevant studies focused on digital technology integration. The findings revealed that although digital technologies present opportunities for increased flexibility and educational innovation, their implementation in Iranian MBA programmes is hindered by inadequate technological infrastructure, limited lecturer training, and challenges in maintaining interactive and experiential learning environments. This review contributes to the existing literature by highlighting the unique institutional and geographic barriers faced by Iranian universities, providing a detailed analysis of these challenges, and proposing targeted strategies for overcoming them. Future research should prioritize the development of innovative solutions and the evaluation of their effects on the overall effectiveness of virtual MBA education in Iran.

INTRODUCTION

As a multidimensional process the growth of a society both requires and hastens improvements in economic conditions, technological advancements, and fundamental changes across political, social, economic, and cultural domains. Education serves as a foundation of societal development, functioning as a powerful means of dissemination of knowledge, the development of skilled professionals, and the enhancement of collective well-being (Mousavi, 2013; Siakas et al., 2019; Spiel et al., 2018). Higher education institutions, including universities in Iran, play a crucial role in driving economic change and fostering new ideas, social movements, and cultural shifts (Jameie, 2018).

The emergence of computers and the Internet has significantly changed education, leading to the widespread acceptance and utilisation of virtual or online education systems. These technological advancements address challenges encountered by traditional educational models,

such as increasing educational demands, limited access to educational centres, insufficient economic resources, and high costs (Rahmani et al., 2019). The rapid advancement of information and communication technologies has expanded learning opportunities and access to educational resources, which consequently made education more inclusive and global (Tarjomān & Seyyedi, 2019).

Virtual education, also referred to as online education, includes a range of web-based applications, computer-based learning tools, virtual classrooms, and electronic collaboration platforms. Not only does it offer cost-effective solutions but also increases accessibility, overcoming traditional constraints. Through the Internet, regardless of location, virtual education facilitates continuous interaction among teachers, learners, and peers, (Dascalu et al., 2017; Kia, 2018). In Iranian universities, platforms like Adobe Connect are commonly utilized for virtual instruction, supplemented by tools such as Skype, Telegram, and WhatsApp to support the learning process (Ghanbari et al., 2015).

In the Iranian context, integrating technology into education implies a considerable shift. It is essential to make us independent and flexible in education in the modern era, which is empowered by information and communication technologies (Giddens, 2010). Not only does this transformation in tertiary education complement traditional face-to-face instruction, but it also opens up opportunities to update content and create teaching and learning methodologies for college and university students. I think this perspective is particularly relevant to digital technologies integration in MBA education in Iran, where flexibility and continuous learning are significant.

In Iran, virtual or online education was already in use before the COVID-19 pandemic; however, the pandemic accelerated its expansion. During this period, a surge in demand for online MBA programmes, which led to an increase in courses at various Iranian universities, was observed. The focus on virtual education during the pandemic heightened; however, prestigious universities in Iran, including the University of Tehran, have long offered online MBA programmes. The steady rapid expansion during the post-COVID period put additional and considerable strain on existing Internet and virtual education infrastructures, which require significant changes and improvements (Jazini, 2018).

The increasing demand for virtual education and the growing trend of MBA programmes in Iran highlights the need for a thorough examination of these issues. In Iranian literature, comprehensive studies on the challenges and opportunities of integrating digital technologies into MBA programmes are scarce. Despite aiming to evaluate the challenges to effective digital integration and proposing strategies to enhance the quality and accessibility of virtual MBA programmes, this study also seeks to provide recommendations for improving digital education in Iranian universities.

To address the objectives of this study, three research questions were formulated. First, it aims to identify the primary challenges faced by MBA programmes in Iran when integrating digital technologies. Second, it investigates the opportunities that digital technologies present for improving MBA education in Iranian universities. Finally, it intends to study and review how the integration of digital technologies can be optimized to improve educational outcomes.

This study is a significant attempt and can benefit educators, teachers, and researchers as it addresses the critical need for the effective integration of digital technologies in MBA programmes in Iran. By exploring the challenges and opportunities of virtual education, this research offers valuable insights for university administrators, educators, and policymakers. The findings can contribute to improving the effectiveness of digital learning environments and advancing MBA education in Iran.

METHOD

This study is a literature review that explores the integration of digital technologies into MBA education in the Iranian context. It synthesizes existing research conducted both inside and outside of Iran with a specific focus on MBA programmes to identify key challenges, evaluate current practices, and propose recommendations for improvement. The review includes research

published between 2003 and 2022, emphasizing global insights into digital technologies in online MBA programs while offering a detailed analysis of their implementation in Iran.

In the beginning, an extensive search for relevant literature was conducted using several academic databases, including Google Scholar, Noormags, Scopus, and Semantic Scholar. The search technique involved searching for certain keywords, such as "digital technologies in MBA education," "virtual education," "online learning in higher education," and "technology integration in education." This approach was designed to ensure comprehensive coverage of studies pertinent to the integration of digital technologies within MBA programs.

Since in conducting a comprehensive literature review, it is crucial to carefully select the types of scholarly publications that can provide a thorough analysis of the existing research on a given topic (Randolph, 2019), the selection process for the included studies was based on their relevance to the research focus. Thus, given the scarcity of relevant research, articles published or presented at peer-reviewed journal articles, conference papers, dissertations, and academic reports published within the specified timeframe were considered. The entire process is illustrated in Figure 1. Relevant articles were then reviewed and organized according to their context, purpose, and methodological design. Each study was examined for its geographical and institutional context, as well as its research objectives and questions. The review also focused on synthesizing the recommendations and suggestions offered in the studies, identifying common themes for overcoming challenges and managing opportunities in virtual MBA education in Iran.

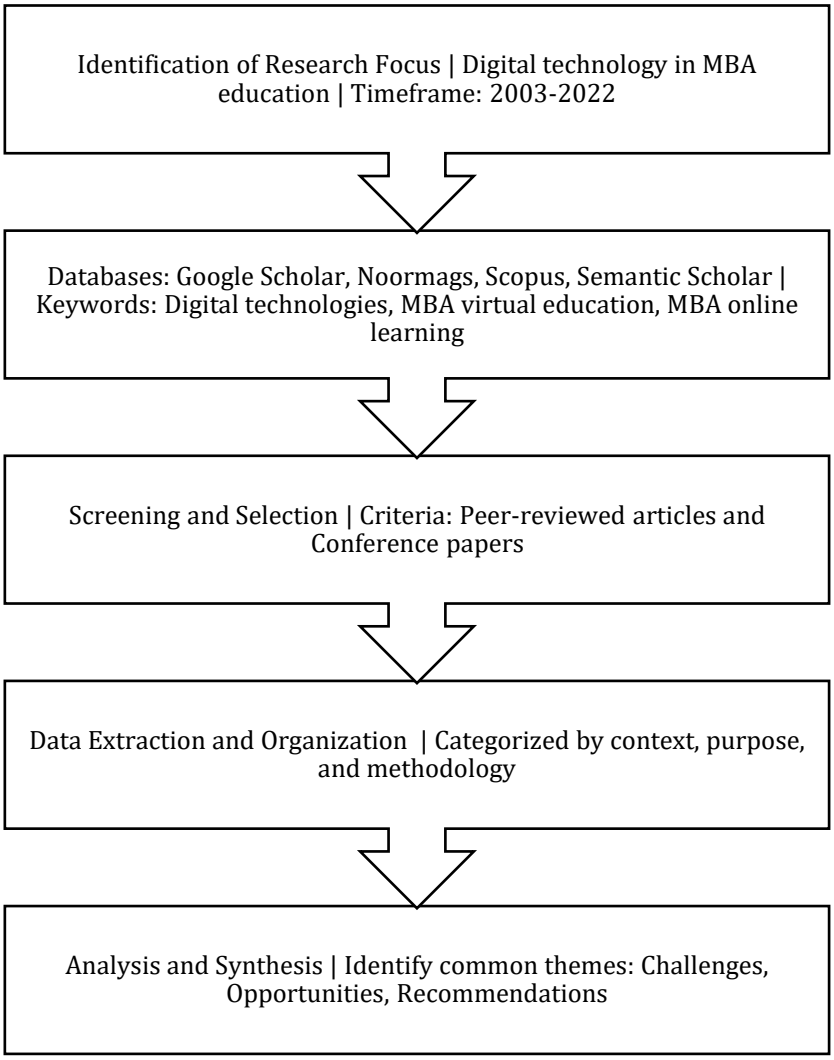

Figure 1. Literature review process for digital technology integration in MBA education

RESULT

This literature review explores the opportunities and challenges of integrating digital technologies into MBA education, focusing on Iran while incorporating global perspectives. To conduct this literature review, of the relevant articles published between 2003 and 2022, thirty ones that abode by the criteria earlier mentioned in this volume were carefully selected and analysed. The review was organized thematically, addressing areas such as academic identity and readiness for virtual education, technological and infrastructural challenges, and the specific context of virtual education in Iran. Key findings were summarized, with comparisons drawn where relevant, providing a comprehensive overview of how digital advancements have impacted and transformed MBA education. The challenges identified in the literature are illustrated in the Figure 2.

Challenges of virtual education

Based on the review of the literature, challenges associated with virtual education in MBA in Iran fell into several key areas, each presenting distinct issues and opportunities for improvement. The following sections delineated these challenges.

Problems related to technical issues

Internet interruptions and speed issues

According to the literature from Hasanzadeh et al. (2010), technical difficulties with Internet connectivity are a prevalent challenge in virtual education particularly in Iran. Frequent interruptions and slow speeds can disrupt online classes, occurring both on and off the university campus. These disruptions can hinder the learning process and diminish engagement between students and teacher-students. For example, issues such as inconsistent audio and video quality during classes were referred to several times.

Software and courseware limitations

Limitations in software used for virtual education in Iran, such as Adobe Connect, also present challenges (Ebrahimi et al., 2022). Inadequate features and stability issues can detract virtual lessons from full efficacy. For example, difficulties such as frequent disconnections and problems with interactive features can waste time and affect the overall quality of the educational experience. In this regard, enhancing the robustness and functionality of such software is essential for improving virtual education. Some software, particularly those used during exams, may not be well-integrated or familiar to users. Problems such as software disconnections or navigation issues can waste valuable time and disrupt the learning process. Several factors contributing to the improvement of the reliability and user-friendliness of educational and assessment materials, it is essential to enrich online learning and teaching experience.

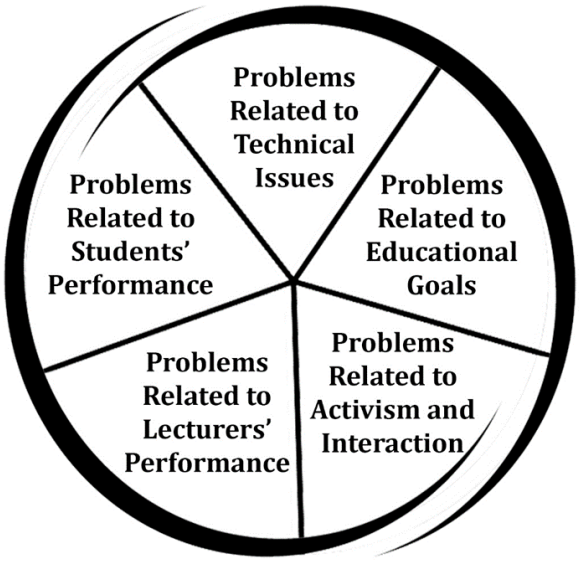

Figure 2. Challenges of MBA virtual education in Iranian educational system

High cost and data usage

The literature confirms that the considerable cost and significant data consumption of online programmes in Iran are dire concerns for teachers and students (Bagheri Majd & Sedghi Bokani, 2017; Ebrahimi et al., 2022). Still, numerous students encounter financial challenges due to the high costs of data packages required for online learning despite the recent efforts from the government to make Internet access more affordable to people in academia.

Responsiveness of technical support

Another significant concern for university students who take part in MBA online programmes is the effectiveness of technical support (Ghanbari et al., 2015). This is particularly challenging over the peak times when providing online support becomes ineffective and untimely. Students might experience problems that have indistinguishable causes; whether they stem from an unstable internet connection or faulty software packages. Improving the availability and responsiveness of technical support on the one side and increasing the number of administrative and assistant staff on the other hand can be helpful.

Limited access to the internet and technology

In Iran, the issues associated with the accessibility of a stable internet connection and the availability of smart devices are much more tangible on a large scale, particularly in smaller cities (Ghorban Khani & Salehi, 2016). These issues are believed to be one of the major factors contributing to the active participation of students in MBA courses. In essence, those who attend online lessons from remote or less-developed cities will likely struggle with insufficient internet access and, in turn, miss classes and experience reduced learning opportunities.

Sudden power outages

At certain periods of the year, particularly during summer, power outages inevitably disrupt online education. In certain regions in Iran, electrical supply problems can interfere with internet access and the functionality of electronic devices. For example, severe weather conditions or local power grid issues can lead to frequent disruptions during online classes or exams, hindering participation and performance.

Problems related to educational goals

Disruption in learning and concept transfer

The absence of direct interaction between instructors and learners in virtual education can hinder the observation of students' understanding and the ability to address their issues in real-time; MBA programmes in Iran are no exception. Technical problems often lead to reduced engagement and the expression of learning difficulties. The lack of immediate instructor feedback can result in students feeling that their comprehension of the material is compromised (Ebrahimi et al., 2022). For example, some lecturers may progress through topics without verifying whether students have understood the content due to limited interaction capabilities.

Reduction in teaching quality

At least in the Iranian context, the quality of content delivery in virtual education is perceived to be lower compared to face-to-face instruction (Ferdowsi & Levy, 2010). The collaborative nature of traditional teaching, including interactive discussions and immediate feedback, is diminished in virtual or online environments, which can lead to a loss of content richness and depth. It is believed among Iranian students that online programmes, including MBA courses, mostly address concerns regarding basic information rather than offering a detailed and accurate account of the subject matter.

Inaccurate evaluation of student performance

In contrast with traditional brick-and-mortar education, in online education, the evaluation process can be more challenging, particularly in MBA programmes. This is also confirmed by the literature; for example, students who fail to submit their assignments in due course or cannot participate fully in online lessons due to technical problems can have a reverse effect on the decisions regarding their progress, leading to unfair evaluations where students may receive lower grades due to circumstances beyond their control (Ghorban Khani & Salehi, 2016). Moreover, inaccurate evaluations can hamper lecturers from effectively addressing students' learning difficulties. This also goes hand in hand with the lack of direct interaction in online education, which can result in a careless judgement of students' performance.

Problems related to lecturers' performance

Disruption in interaction and understanding of students' conditions

Online education may fail to include students' concerns including their problems and lack of knowledge of technical difficulties. This is sometimes overlooked in online programmes contrasted against traditional education. This inadequate knowledge of each individual, along with insufficient direct interaction can lead to unfair assessments (Ebrahimi et al., 2022). For instance, technical issues with microphones or internet connectivity can cloud lecturers' judgements. Insufficient time allocation for exams is also a common issue. This is also worsened by technical problems such as software malfunctions and slow internet speeds. Those teachers unfamiliar with these technical challenges might not account for these disruptions, which can alternatively lead to unfair exam conditions.

Lack of proficiency with virtual teaching tools

According to Hasanzadeh et al. (2010), plenty of lecturers in MBA programmes in Iran prefer in-person education and are willing to apply typical techniques of traditional teaching methods. These techniques are usually ineffective for online education. In online education, it is essential to employ strategies and techniques that can engage students effectively. What's more, a considerable proportion of teachers lack the necessary proficiency to use online teaching software packages. Their struggle can hinder and reversely affect the effectiveness of virtual education and disrupt the learning process.

Problems related to students' performance

Cheating and avoidance of participation

As far as evaluation is concerned, in online MBA programmes run by Iranian universities, since the option of in-person supervision is not present, cheating has become a significant issue. Students can use different communication platforms, including Telegram and WhatsApp, to have group discussions and answer-sharing during exams. On the other hand, to some students, cheating is viewed as a necessary adaptation to perceived deficiencies in virtual education (Kian, 2014). There are also examples of students who avoid participation in online lessons by claiming technical issues or other excuses, thanks to the lack of direct and visual engagement. This online form of education, which does not require students to keep face-to-face communication, can lead to students skipping classes or pretending to have connectivity problems.

Distraction, inattention, and superficial participation

Virtual education in MBAs in Iran often lacks mechanisms to monitor students' activities, leading to distractions and multitasking during class (Salimi & Fardin, 2020). With no physical presence to enforce engagement, students may engage in unrelated activities such as cooking or sleeping while supposedly attending classes. To encourage class participation, according to Ebrahimi et al. (2022), some lecturers awarded grades based on student engagement which negatively in several cases led to superficial participation – a situation in which students might attend classes only to fulfil participation requirements without genuine involvement or questions.

Problems related to activism and interaction

Reduced interaction with professors and peers

The shift from dynamic, face-to-face interactions to a more passive virtual format often leads to students feeling isolated and less involved in the learning process, raising issues pertaining to the lack of engagement and interaction between students and professors, as well as among students themselves. The virtual education environment, particularly in MBA programmes in Iran with platforms like Adobe Connect, can limit student interaction by restricting their ability to participate unless granted specific access by the lecturer (Mousavi, 2014). This often results in declining opportunities for students to engage actively with both the instructor and their peers. Furthermore, Technical challenges and software issues can hamper student activism and participation. Difficulties such as managing microphone settings and typing in non-Latin scripts contribute to reduced engagement.

Challenges in collaborative group work

The lack of face-to-face interaction complicates the division and management of group projects. With students often working remotely from their own locations, coordinating group tasks and receiving timely feedback from professors becomes problematic. However, by fostering

a structured and supportive online environment, students can successfully address the complexities of group work and achieve their academic goals.

Opportunities of virtual education

A commonly cited positive of virtual classes is that they tend to limit off-topic conversations that often occur in face-to-face settings. This streamlined focus helps maintain the educational objectives. Moreover, Virtual education removes the need for commuting, thus saving both time and money. This is particularly beneficial for students who previously faced significant travel expenses. In this case, virtual or online MBA classes offer more freedom, compared to rigid face-to-face structures. This flexibility allows students to manage their time and environment more effectively. For students living in dormitories, virtual education eliminates issues such as overcrowded living conditions and limited study space. As advantageous for students who experience anxiety in face-to-face settings, presenting virtually can alleviate the stress associated with public speaking. Also, the ability to record and revisit class sessions is a notable advantage of virtual education. This feature allows students to review content at their convenience.

DISCUSSION

Reviewing the literature and identifying the problems and opportunities related to virtual education in MBA programmes in Iran, I have discussed the challenges and opportunities highlighted by previous studies under four pillars: academic identity and readiness for virtual education, technological and infrastructure challenges, virtual education in Iran, and, finally, comparisons with studies from other countries and regions of the world in the following paragraphs.

Although MBA programmes have been in practice for years in Iran, I believe that particularly after the COVID pandemic, educational settings need to be redefined, and additional factors should be considered to make virtual or online education more effective for students. I can also refer to some previously published papers. Jazini (2018) discussed the difficulties Iranian universities face in nurturing academic identity among students due to inadequate communication and interaction within academic settings. This lack of meaningful engagement impedes the practical application of course content and affects student education. This challenge was also echoed in Kerr and Ninerson's (2006) study, which designed a test to measure online learning success, identifying key readiness dimensions such as computer skills and independent learning abilities. Examining virtual education from multiple perspectives, Shahbeigi and Nazari (2011) highlighted both the shift to student-centred learning and the limitations due to reduced emotional support and communication. Ferdowsi and Levy (2010) developed a model to explore personal factors influencing willingness towards virtual education, identifying resistance to change and perceived value as significant factors. There are positive correlations between educators' attitudes and training effectiveness (Hashimi Bakhshi et al., 2016).

The infrastructure of online education in Iran needs significant change and improvement to support effective virtual learning. The literature suggests that a lot of attention has already been given to the technological and infrastructural challenges that halt progress in online education. These challenges include reduced emotional support as a key limitation (Shahbeigi& Nazari, 2010) and managerial and technological barriers (Bagheri Majd & Sedghi Bokani, 2017). Students possess a variety of attitudes towards online education. For example, Ebrahimi et al. (2022) found that undergraduate students at the University of Shahid Beheshti perceived more challenges than opportunities, while Kian (2014) maintained how limited communication in online environments limits student engagement and creativity. However, it is generally believed that as far as online education is concerned, systemic and technological obstacles exist in Iranian universities (Ghorban Khani & Salehi, 2016).

Since one of the objectives of this literature review is to also address these issues, Jahaniyan and Etebar (2012) suggest that the redefinition of virtual education in Iran has to focus on overcoming resistance to fully embracing online teaching and learning methods. It is also imperative to improve infrastructure which could considerably enhance remote training and online education (Ebrahimi et al., 2016; Tarjomān & Seyyedi, 2019). Apart from that, the success of online programmes depends on human resources and cultural readiness (Seyedi &

Hosseinzadeh, 2016). The literature illustrates the specific areas in online education in Iran where change is necessary to improve the effectiveness of these programmes.

As part of the current literature review, comparative studies on online education underscore significant differences between the e-readiness and challenges of universities inside and outside Iran. As an instance of studies focusing on a non-Iranian context, in Malaysia Abas et al. (2004) found that course organisers including managers were more prepared than students. On the other hand, in another less developed context, Uganda, there is a focus on awareness and technology in e-learning readiness and instructors for online education (Omoda-Onyait & Lubega, 2011). In contrast, in Iran, there are non-MBA programmes where the setting for online education is well-prepared (Parchebafieh et al., 2017). For MBA programmes, integrating digital technologies remains more challenging than advantageous. These challenges stem from traditional academic settings that struggle to employ practical, technology-driven methods to education. By comparing studies that focus on the challenges and opportunities of online education inside and outside of Iran, it becomes evident that while some academic institutions outside Iran have made significant progress in embracing virtual education, Iran still faces considerable obstacles. Addressing these challenges is essential for improving the effectiveness of MBA programmes in Iran, making sure that these courses can meet the evolving needs of students, academia, industry, and society.

CONCLUSION

A thorough review of the literature on the implementation, challenges, and opportunities of online education in Iran with a specific focus on MBA programmes indicates that the shift from traditional learning to digital and online formats is mainly marked by significant challenges. Digital technological advancements offer ample opportunities for flexibility, innovation, and ubiquitous accessibility; however, these positives are mainly overshadowed by several obstacles, particularly in the Iranian context. Insufficient technological infrastructure, lack of adequate training for both lecturers and students, and the difficulty in reproducing the interactive and experiential learning outcomes which are crucial to MBA programmes are major barriers that halt the effective implementation of online education. Moreover, the move from traditional to online education incurs risks to the cultivation of academic and professional identities. As far as these challenges are concerned, the potential for digital transformation exists, however, the current context in Iran is not yet fully equipped and prepared to harness these opportunities.

For the future development of online education in Iran and to address these challenges, some recommendations can be made. Firstly, it is essential to invest in technological infrastructure which supports the unified delivery of online education. Not only does this include improving internet connectivity and access to digital tools but also providing constant training and support for lectures to effectively integrate technology into their teaching methods. In addition, actions should be taken to enhance student engagement in online learning environments. This is likely achievable through the development of more interactive and experiential learning opportunities that can replicate the face-to-face MBA experience. Innovative approaches to maintain and enhance academic and professional identity formation in virtual settings should be further studied. Furthermore, the long-term effects of online education on student outcomes and the broader implications for the future of MBA programmes in Iran should also be thoroughly studied.

Author contributions

The author made significant contributions to the study's conception and design. The author was in charge of data analysis, interpretation, and discussion of results. The final manuscript was read and approved by the author.

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AI Application

This paper is an original work authored by Laleh Karimi. I have utilised ChatGPT 3.5 and 4 exclusively for proofreading purposes to enhance clarity and correctness. The content, research, and conclusions presented in this paper are entirely my own.

Conflict of interest

The author declare that there is no potential conflict of interest.

Data availability statement

All data are available from the author.

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