

**Original Article****Covid-19 and the challenges of distance learning from a student perspective (Case study: Islamic Azad University)**  
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**Received:** 2022/06/22**Accepted:** 2022/10/22**Abstract**

Virtual education will be an effective educational system in the effective learning of students during the outbreak of Covid-19 and after its eradication. This study aims to identify the challenges of distance education from the view point of Islamic Azad University students under Covid-19 pandemic So the research method is qualitative (grounded theory). In total, 40 MSc students of Electronic Management in the second semester of 2019-2020 were selected by purposive sampling in order to participate in structured interviews. Thematic analysis of the data obtained from the interviews was performed, and the approaches of member check and peer debriefing were used to approve the results' credibility. Notably, the results were modified in several steps. In addition, the reliability coefficient between the encoders (75%) was applied to evaluate reliability. Data analysis was performed in Maxqda 12. According to the results, challenges of distance education for students included two individual and organizational dimensions, seven educational (11 items), communication (9 items), managerial (11 items), structural (6 items), technological (9 items), cultural (8 items), and personality component (6 items), and 60 indexes for distance learning during COVID-19 pandemic.

**Keywords**

Covid-19, Challenges of Distance Education, E-learning.

**Introduction**

The development of virtual education has recently had significant impacts on the growth and excellence of educational levels and the scope of educational fairness in different parts of the world. However, the use of this novel technology requires the formation of the necessary foundation, education, and development of an acceptable environment for the presentation and use of countless possibilities and capabilities. Moreover, various factors are involved in this area, such as support for faculty members, the existence of a support system, organizational commitment, management system, instructor competency, and how to provide services and infrastructure for the success of virtual learning [1, 2]. Before the COVID-19 crisis, only a few numbers of courses were held online in some universities. The emergence of the COVID-19 disease led to the prevention of people's gathering in educational environments due to the high transmission rate of the disease[3] through respiratory aerosols and close contact[4] in order to control the situation. This caused many challenges for the regular and in-person global educational system and resulted in the expansion and development of online learning (e-learning)[5]. The World Health Organization also introduced distance learning (DL) such as the use of radio, television, and the Internet as one of the best ways to continue education during the COVID-19 crisis[6]. However, since most instructors had no experience in teaching courses in

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the form of e-learning, they primarily faced challenges such as lack of familiarity with the system, structural problems in existing systems, and problems related to the Internet[7]. Evaluation of different studies revealed that the probability of performing a collective behavior increases in the case of the presence of three components. In a crisis, people will have more cooperation if they are informed about a common strategy based on the collective benefit, there is strong group identity, and reasonable punishments are imposed on non-aligned people. These principles can be used in various aspects of an epidemic. In this regard, some of the important factors include promoting the practice of good hygiene habits, home quarantine, and higher education planning in holding virtual classes[8]. On the other hand, it seems useful to improve various components of literacy, such as; emotional literacy, which means building strong emotional relationships with friends and families; communication literacy, which means the ability to communicate effectively with others and know the social etiquette, media literacy, which is known as an informed, critical understanding of the prevalent mass media, and health literacy, which is the capacity that an individual has to access and effectively use health-related information[3]. Today, e-learning and virtual education are recognized as a new paradigm in teaching-learning mechanisms, and their development has been among the main policies of higher education. In this type of education, educational activities occur via electronic devices, and education can be applied anywhere and anytime[9]. These policies have been formulated by the Islamic Azad University with approaches of developing educational justice, eliminating geographical limitations, and offering lifelong learning. This has increased the necessity of managers' attention to the operationalization of e-learning development programs. Given the need for access to related facilities and a comprehensive view of various fields in order to implement projects such as e-learning programs, it seems crucial to collect data and increase knowledge of the field. Some of the essential requirements for DL include providing sufficient funds and creating appropriate facilities for the purchase of computers and hardware and software equipment for students to enter this field, holding various computer and Internet courses for students, and holding conferences, seminars, and courses on the benefits, applications, and familiarity with e-learning [10]. In the current era, this type of education has provided a suitable environment for people who are unable to attend university courses in person due to job or personal commitments. However, DL requires many communication technologies and infrastructures, the provision of which can be challenging in case of inadequate facilities. Dreyfus believes that DL cannot guarantee the emergence of creative ideas, quality of information, users' aristocracy over all realities, and the possibility of living a meaningful life. According to this scholar, students prefer to attend classes in person and communicate with teachers and do not want to lose this feeling[11]. In fact, given that education is a dynamic process, in order for an e-learning environment to be beneficial, it should be able to easily provide learners and teachers with its tools, including computers and access to high-bandwidth Internet so that learners can easily learn in an interactive environment. In general, e-learning is the use of information and communications technology (ICT) to deliver information for instruction where educators and students are separated by factors such as distance, time, or both. In this regard, the primary goal is to increase the learning experience and performance of learners[12]. In addition, defines e-learning as a series of instructions given via all electronic means, such as the Internet, intranets, and extranets. Based on this definition, individuals can take responsibility for their own lifelong learning by eliminating temporal and spatial barriers [13]. E-learning is becoming increasingly prominent in tertiary education owing to the growth of the Internet and increased access to it[14]. Technology can support creative thinking by applying problem-solving strategies in learning situations. Moreover, it can provide a tool for better learning by expressing issues, bottlenecks, and problems that originate from genuine and credible activities[15]. In fact, the goal of online learning is to provide specialized training with modern methods that cannot be presented by traditional methods. Today, DL is considered a

tool for continuous learning, and this training can include teachers and students of any age, geographical location, social and political status, and with any educational method. To increase the use of online learning systems in the area of higher education, IT experts have suggested the need for capable instructors to increase success and progression in this system. The prevalent use of digital technologies has provided countless e-learning opportunities for anyone at any time or place in the world [16]. DL is defined as a set of educational activities occurred by using electronic tools such as audio, video, computer, network, and virtual equipment. In other words, online learning refers to instruction that is delivered electronically through computer networks, especially Internet platforms. In this type of education, major educational activities such as registration, credit selection, receiving course materials, and negotiating with the teacher are performed through a computer network. In some cases, doubts removal sessions and some laboratory classes are held in-person but with proper scheduling[17]. According to [18] learning, development, support, evaluation, and organization are the indicators of the e-learning maturity model. [19] believes that e-learning environments require learners to accept new roles in the learning process. In such situations, the role of educators also changes from the transferer of knowledge and information to the facilitator of the learning process. Therefore, e-learning requires programs, policies, strategies, goals, methods, and new patterns in the current context of globalization. In the current study, researchers faced challenges regarding virtual education during COVID-19, such as a lack of familiarity with online teaching and the inability to accurately assess the students. Accordingly, attempts were made to eliminate barriers to e-learning and develop its use by recognizing the challenges of the field in each university. Given the lack of certain knowledge of real experiences of teachers at Azad Universities and considering the specificity of virtual education problems in various educational institutions around the world and in educational groups at graduate and undergraduate levels, the present study aimed to determine the challenges of DL from the perspective of MSc students of Islamic Azad University during COVID-19 pandemic.

### **Theoretical foundations and background review**

Several studies have been conducted to evaluate the effect of COVID-19 on higher education.

Fast et al(2022) in Examining the Practices and Challenges of Distance Education of PhD Candidates in the Context of COVID-19 stated that: retraining of a large proportion of the teaching staff, implementation of a system approach to the development of the online environment of educational institutions, development of skills and abilities to use educational content[20]. Similarly, in their review, Akkara & Mallampalli (2020) stated that e-learning cannot happen in a vacuum as it needs two most important pillars-internet connectivity and existence of the relevant infrastructure[21]. Shehab & Khalifa (2021) carried out a study in Kurdistan to determine the challenges student nurses were facing while studying online. In interviews with 25 students and educators, the researchers found out that Kurdistan faces immense problems which requires that the region invests heavily to boost its infrastructure to allow for the successful implementation of e-learning systems as the public universities in the region relies on funding from the KRG[22]. Hawzhin Hama Ameen(2021) The study found out 7 themes through thematic analysis which represented the major issues public universities are facing; poor internet connection, illiteracy of teachers on technological matters, resistance from students, lack of devices, poor electricity connection, lack of platforms, and lack of conducive environments[23]. Abbasi Darehbidi and Jafari (2021) examined the challenges of virtual education from the perspective of students during the Corona. The results of their study showed that the most important challenges for students in virtual education include challenges and issues related to educational tools and networks, especially Shad networks, challenges related to teachers (lack of media literacy, lack of student control by the teacher), challenges facing students (Peer avoidance and inactivity), challenges related to schools and the Ministry of

Education (inability to establish a consistent and efficient procedure, inconsistency of face-to-face education resources with virtual education), family-related challenges (inability to preparation of educational fields and tools)[24]. Karimi (2020) studied internship training at Farhangian University during the Corona era. The results of the study showed that inadequate infrastructure of Iranian platforms such as Skyroom system and Shad from the point of view of the target community, lack of use of new teaching methods by teachers and lack of effective participation between students and professors are among the most important factors of weak virtual education in obtained experience during the internship[25]. Matin(2020) In a study, demonstrated that 58% of international students were interested in studying online and believed that universities should provide a 24-hour helpline for students. However, 42% of the subjects had no interest in online learning[26]. In another research, Yaghobi & Mohamadi(2018) classified the damages of virtual social networks into six areas of ethnic and religious insults and increased verbal immortality, decreased public trust and the spread of fake identities, loss of time and academic failure, the spread of false information and increase of unhealthy relationships, reduced face-to-face communication, and dissemination of immoral content[27]. In a study by Naderifar et al(2016) some of the e-learning challenges were instructors' lack of use of e-learning due to unfamiliarity with the area, the diminished role of teachers, lack of expertise to use the technology, fear of the application of e-learning, certain cultural beliefs, and insufficient resources[28]. In this regard, Ionescu et al(2020)expressed the need for considering educational policy, management, standards, content, rules, financial and human resources, culture, security, hardware, network, and support readiness[29]. Gamdi et al(2016) classified e-learning barriers into two sections of internal barriers (lack of English language proficiency, lack of incentives to use e-learning, lack of a clear pattern and design, concerns about the quality of e-learning, and fear of technology) and external barriers (poor access to the Internet and network, lack of proper training in e-learning, lack of technical support, insufficient access to hardware and software, lack of organizational policies for e-learning, lack of support for e-learning training design, concern about workload, lack of time to expand e-learning, and concerns about lack of access to learners and teachers)[30]. Tarus et al(2015) introduced the challenges of e-learning use in public universities of Kenya to be insufficient IT and e-learning infrastructure, financial constraints, lack of cost-effective internet bandwidth, lack of e-learning policies and procedures, lack of technical skills of training staff in the development of e-learning and e-content, lack of interest and commitment of training staff to use e-learning, and the amount of time to develop e-learning content[31]. According to Arkorful and Abaidoo (2015) lack of in-depth online conversations, lack of creative ideas, lack of understanding and being understood by others, lack of acquaintance with others, and lack of learning and modeling for behavior and learning were e-learning disadvantages. In this respect, teachers compensate for the lack of face-to-face communication with strategies such as immediate feedback, differentiating between managerial and personal interactions, and face-to-face communication with students based on a regular schedule[32]. According to Wieser and Seeler(2018) problems such as lack of creativity and new ideas, inadequate knowledge of the technology, lack of motivational factors, and poor organizational culture were among the barriers to DL[33]. Al-Hujran et al(2018) mentioned the challenges of success in e-learning to be students' unawareness about the usefulness of e-learning application, lack of clear understanding of its nature, resistance of teachers to e-learning, learners' resistance to changing traditional teaching methods, lack of ongoing access e-learning websites, lack of government and educational support for e-learning, and lack of guideline(s)[34]. In a study, Contreras (2021) evaluated teachers' challenges and experiences of using e-learning at the University of Mexico during the COVID-19 pandemic, concluding that a university should have all the necessary facilities and components for online education and there should be a formal regulation for DL[9]. In another study, Keshavarzi et al(2019) evaluated the challenges of e-learning in medical education from

the perspective of faculty members. In the end, they extracted two main categories of organizational and ethical-legal barriers determined by subcategories of inadequate organizational culture, inadequate infrastructure, and neglect of rights (intellectual property and disregard for ethics)[35]. In addition, Sadati et al(2021) studied teachers' experiences of virtual learning challenges and opportunities during the COVID-19 pandemic. The results obtained from conventional content analysis led to the extraction of two main categories, including individual barriers to the effectiveness of e-learning with sub-categories of personality traits and family factors, and organizational management with subcategories of providing infrastructure, management and leadership, training and supervision, ethics and law, and evaluation[36]. In a study, Ghorbankhani and Salehi(2017) represented virtual education challenges in the Iranian higher education system, and their data analysis process led to the identification of five main categories, including challenges related to “university”, “teachers”, “students”, “system” and “classroom”. According to their results, virtual education in the higher education system faces various challenges, is far from the optimal condition, and improvement of its quality requires the serious attention of custodians and avoiding considering it a secondary type of education [37].

## Methods

This qualitative study aims to investigate the challenges of distance learning from the view point of students of Azad University. This was a qualitative study conducted using the grounded theory approach. Since the project did not aim to present and define a theory, the primary and secondary coding of the data was carried out and themes were analyzed and divided into conceptual categories. According to Strauss and Corbin, the grounded theory approach can have three main outputs, including description, conceptual classification, and theorization. In the current research, the collected data were categorized based on common themes to form the main concepts [40]. Data were collected using semi-structured interviews, which is one of the main data collection methods in qualitative research and the only method for some studies. In addition, data analysis was performed in Maxqda 12. It is notable that, contrary to quantitative software, qualitative data analysis software is unable to automatically analyze the data. In fact, data storage, simplification of the analysis process, data categorization, and easy access to code help the researcher. To validate the results, they were modified and corrected in several stages by using the member review and homogeneous analysis strategies. Regarding member review, the results were provided to the participants continuously and their feedback was applied to modify the results. In terms of homogenous analysis, a qualitative research expert was asked to evaluate the data analysis process and provide feedback, which was applied to the ultimate report of results. We used a coding to analyze. Our extracted model includes 2 dimensions, 7 components and 60 concepts.

**Participants:** The subjects were students who were familiar with the subject (challenges of DL) and were able to offer valuable information to the authors. Therefore, subjects were selected using purposive, theoretical sampling, where interviews are made with those who have rich information about the research objectives. The researcher aimed to determine the features of the developing categories or theory and not select subjects by simple random sampling or representative sampling. In this method, the researcher attempted to choose those people, events, or information that could clearly define the limits and relations of categories [38] Confirming the need for a purposeful and theoretical sample framework in data-driven theory, Ferasatkah added that the theoretically of the sample means that it can ensure achieving a level of theoretical abstraction. In other words, the sample size is considered synonymous with data completion or data saturation in qualitative research [39]. In this regard, a total of 40 students(15 females and 25 men), who had sufficient knowledge of the research subject, were included in the qualitative section of the research. This was mainly due to the fact that data

saturation was achieved after interviewing 40 individuals.

### (3) Results

#### Open coding stage

In order to encrypt the data, the scripts of interviews were studied several times. Then, the encryption process began by identifying and highlighting words, sentences, and paragraphs. At the end of interview, data were inserted into the symbol □. Finally, the number of 60 data were extracted and led to open coding.

**Table 1.** Open Coding

Identified components	Interviewer Code
Matching of content to the course objectives; skills training for users; application of multi-media facilities; standardization of online content; organising educational resources logically; multi-sensory interactive literacy training; provision of services, guidance by the support unit; the responsibility of professors and staff; proportionally of content of the exam.	1-5-12-17-22-35-28
Video conference communication with students; creation of a platform for student competition; increase in students' self-confidence for conference presentations; flexibility in modifying and changing content with interactive learning; facilitating teacher-student interaction; providing quick, accurate and useful feedback in the classroom.	2-3-16-21-34-39
Training Needs Assessment; the existence of clear policies in the context of e-learning; making the organizational motivation and support; developing training capacity in major new and multidisciplinary disciplines; improving the economic efficiency of educational resources, instructor competence and proficiency; e-learning process management.	4-7-9-11-18-20-27
Drafting standards in the design and implementation of the program; determination of sufficient time for professors; designing the necessary policies for implementation of educational programs; conserving of resources and manpower; Equipping classrooms for students to use the teacher's performance.	13-14-8-6-24-40
Existence of sufficient supplies in urban and rural areas; access to resource of information; capability for system updates; degree of system personalization; system security; ability for documentation.	10-23-25-26-30
Reducing teachers resistance; planning the morality security on the Internet; motivating the teachers; offering a blend of education with work and family life; change in attitudes; spreading an independent learning culture; expansion of cross-cultural connections.	29-31-32-36-38
Growth of students' personal characteristics; teaching responsibility to students; improvement of interpersonal relationships; development of citizenship skills; strengthening of moral education; consideration of individual talents during distance learning.	33-19-15-37

Source: (Authors' Findings)

#### Axial Coding stage

In this state, 2 main categories and 7 sub-categories were extracted from the concepts revealed in the open coding stage. In terms of abstraction, these main categories are higher than the concepts identified in the previous step. Table 2 shows the extracted main categories.

**Table 2.** Classification of identified concepts in the form of categories

Main Category	minor categories	concepts	Interviewer Code
Individual Factors	Educational Infrastructure	Matching of content to the course objectives; skills training for users; application of multi-media facilities; standardization of online content; organising educational resources logically; multi-sensory interactive literacy training; provision of services, guidance by the support unit; the responsibility of professors and staff; proportionally of content of the exam.	1-5-12-17-22-28-35
Individual Factors	Communication Infrastructure	Video conference communication with students; creation of a platform for student competition; increase in students' self-confidence for conference presentations; flexibility in modifying and changing content with interactive learning; facilitating teacher-student interaction; providing quick, accurate and useful feedback in the classroom.	2-3-16-21-34-39
Individual Factors	Personality Infrastructure	Growth of students' personal characteristics; teaching responsibility to students; improvement of interpersonal relationships; development of citizenship skills; strengthening of moral education; consideration of individual talents during distance learning.	33-19-15-37
Organizational Factors	Management Infrastructure	Training Needs Assessment; the existence of clear policies in the context of e-learning; making the organizational motivation and support; developing training	4-7-9-11-18-20-27

		capacity in major new and multidisciplinary disciplines; improving the economic efficiency of educational resources, instructor competence and proficiency; e-learning process management.	
Organizational Factors	Instrumental Infrastructure	Drafting standards in the design and implementation of the program; determination of sufficient time for professors; designing the necessary policies for implementation of educational programs; conserving of resources and manpower; Equipping classrooms for students to use the teacher's performance.	6-8-13-14-40-24
Organizational Factors	Technological Infrastructure	Existence of sufficient supplies in urban and rural areas; access to resource of information; capability for system updates; degree of system personalization; system security; ability for documentation.	10-32-25-26-30
Organizational Factors	Cultural Infrastructure	Reducing teachers resistance; planning the morality security on the Internet; motivating the teachers; offering a blend of education with work and family life; change in attitudes; spreading an independent learning culture; expansion of cross-cultural connections	29-31-32-36-38

Source: (Authors' Findings)

### Research model assessment

Following conducting interviews with experts, the results were modified and corrected in the second stage after several stages of member check and homogeneous analysis. Regarding member check, the results were constantly provided to the participants and their opinions were used to modify and correct the results. In terms of homogenous analysis, a qualitative research expert was required to evaluate the data assessment process and provide the necessary feedback that could lead to the identification of



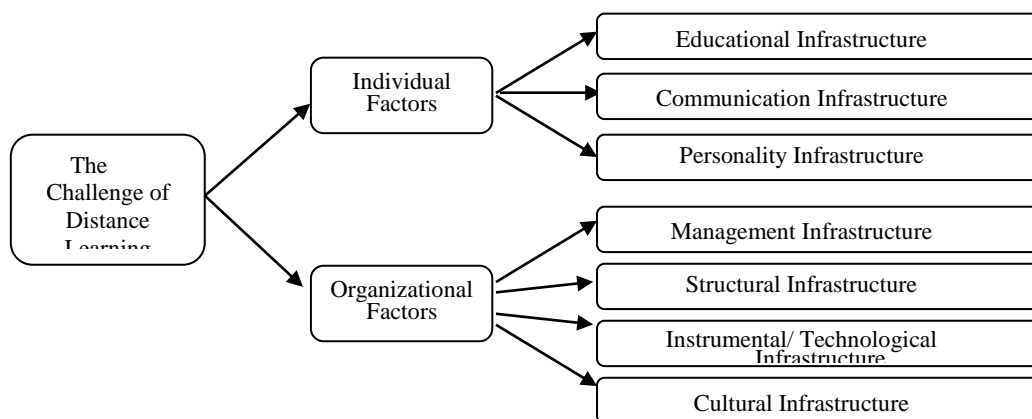
components related to the challenges of DL. Given the qualitative nature of studies that present a model based on the background and questions about the challenges of DL, similar concepts were extracted from the results using coding method and by considering the following stages: 1) data review, 2) coding, 3) data organization, 4) data classification, 5) open coding, 6) compilation of the final report, 7) qualitative data analysis, and 8) identification. Overall, two main categories and seven sub-categories of challenges of DL were identified. In this respect, the results are presented in Table 3.

**Table 3. Identified dimensions and components**

Main Components	Secondary Components
Individual factors	Educational infrastructure
	Communication infrastructure
	Personality infrastructure
Organizational factors	Managerial infrastructure
	Structural infrastructure
	Technological infrastructure
	Cultural infrastructure

Source: (authors' findings)

The effective components of the challenges posed by e-learning during the COVID-19 outbreak are described in Figure 1.



**Figure1.** The Conceptual Model of research

**(4) Discussion**

According to the results, individual factors were the first category related to the challenges of DL at Islamic Azad University. These factors were related to faculty members and included three sub-categories of educational, communication, and personality infrastructures. Regarding the importance of the educational infrastructure, one of the interviewees expressed that the educational content presented by the professors, from a conceptual point of view, should be completely appropriate. Even though the increase in network connections, portable computers, and smartphones has made educational content portable, which is one of the advantages of e-learning, the reality is that they have not yet been able to surpass printed and reference books.

The educational content of courses is useful when targeted, and will ultimately meet users' needs. Another interview revealed that teachers could use relevant images and PowerPoints to facilitate the comprehension of electronic content. In fact, visuals give a better understanding of the content. In virtual universities, creativity, and, as a result, the development of scientific productions, decrease due to a lack of attention to challenging academic issues. Online students experience academic weaknesses regarding writing and creativity, which results in the questioning of their literacy and knowledge quality regarding being innovative. In communication infrastructure, interviewees referred to poor teacher-student communication in online classes, expressing that self-education has been one of the current challenges of DL. In fact, students are responsible for their own education due to a lower classroom attendance rate. In addition to problems related to book reading and learning academic content, students deal with a type of methodological problem for learning. They have not learned how to learn, do not have confidence in showing such behavior, and have no self-teaching experience. On the other hand, the lack of interaction between teachers and students led to a decrease in communication and was considered an obstacle to students' personal growth. Regarding the personality infrastructure, which was identified as the third sub-category, interviewees stated that although online education was successful in creating a vast information space, it was not capable of cultivating high human qualities such as responsibility towards society and others, improving interpersonal relationships, developing citizenship skills, and personal development. Cyberspace undermines the moral education platform of users, including academic users. Moreover, cyberspace lacks the presence of physical identity of teacher and student in front of each other, which disrupts virtual communication and strong human connections between students and the teacher. On the other hand, other challenges of the personality infrastructure included a decreased competition among students, negative effects of this type of education on the rate of academic achievement and growth of students' personalities, and students' lack of use and behavior of professors in e-learning. Organizational factors were identified as the second category of challenges of DL during COVID-19 in Islamic Azad University, which encompassed four sub-categories of managerial, structural, instrumental and technological, and cultural infrastructure. Regarding the managerial infrastructure, the interviewees reported that teachers had inadequate time to compile and evaluate e-learning materials due to the high workload. On the other hand, they believed that there was a lack of communication and interaction with IT staff. Research has shown that educational innovation and change in the educational and research system are not possible without the support and admission of teachers. Appropriate planning should be done by the university to lay the groundwork and create enough time for teachers to address this important issue. In general, increasing the relationship of teachers with educational technology experts and experts in specialized fields such as educational designers, editors, graphic designers, and librarians helps to effectively guide them in this field and solves the problems of this type of education in the field of management. Regarding the structural infrastructure challenge, a number of DL specialists believed that the establishment of a test and internal assessment method by the relevant organization resulted in determining the level of goal achievement. At this stage, necessary changes in the program or its various stages are examined in a way that helps the organization achieve its predetermined goals. The important factor is to anticipate the behavioral changes resulting from the implementation of the program among students and its educational and economic achievements. Examination of the samples can also be effective in determining the implementation policies of e-learning. In adopting an appropriate strategy for the implementation of e-learning, the goals must be clearly defined first and then the educational content must be properly and completely prepared. Finally, there must be a method to test and measure the work done. Regarding the sub-category of instrumental and technology infrastructure, the following has been stated in the interview texts: the use of advanced equipment and facilities increases the possibility of

providing information and knowledge with better and higher quality. Moreover, a telecommunication network must be established for the digital transmission of information. The educational content, presented using audio, video, and text transmission, makes effective use of two-way communication between the teacher and the learners and ensures the quality of the training course to its highest level. According to some experts in the field of cultural infrastructure sub-category, some of the factors identified were poor informing, weakness in regulations and laws related to e-learning, and students' lack of trust in this educational method, which requires awareness and more attention from university officials. Virtual education requires more time and culture. Some teachers worry that their role (especially their governance role) will diminish as e-learning expands. On the other hand, some described the challenges of cultural infrastructure as the lack of change in traditional attitudes, the lack of trust in information technology, and the lack of a "culture of electronic student evaluation". Educational infrastructure barriers were one of the biggest barriers to e-learning at this university. In the virtual university, creativity and the development of scientific productions are reduced due to the lack of attention to challenging academic issues. The virtual student has poor writing and creativity skills due to educational weaknesses, as a result of which the student's literacy and knowledge quality are questioned in terms of novelty. In this respect, our findings are in line with the results obtained by [11, 30, 31, 41, 42]. Regarding the educational infrastructure barrier, [42] concluded that learning through cyberspace was stopped in the early stages of cognition, such that the student does not reach higher levels of learning such as proficiency, expertise, and practical mastery due to a lack of direct communication with the teacher and the weakness of the learning environment in cultivating creativity. In another study, [43] emphasized the educational and cultural barriers of the electronic system in medical universities. Issues such as the content of the electronic test were also suggested as a challenge from the students' point of view, which is consistent with the results obtained by [30] and [9]. They cited students' responses to these types of tests as flawed, but the results were inconsistent with the results obtained by [37]. In his research, it was realized that most students considered answering computer questions an interesting experience. According to the results, the personality barrier was another obstacle to the development of DL. In this regard, although virtual education has been successful in creating a vast information space, it is not capable of cultivating high human qualities such as responsibility towards society and others, promotion of interpersonal relations, promotion of citizenship skills, and personal growth and development in general. Cyberspace undermines the moral education platform of users, including academic users. In addition, cyberspace lacks the presence of the physical identity of the teacher and the student in front of each other, and this lack causes communication to be fragile, resulting in damage to strong human ties and weakness in students' moral modeling of the professor. In this regard, our findings are congruent with the results obtained by [11] and [9], who concluded that the teacher-student interaction is necessary for students' learning and personality, and cultural character. The cultural infrastructure was another challenge, which requires informing and more attention from the government and education authorities due to poor informing, weaknesses in regulations and laws related to e-learning and students' lack of trust in this educational method, and weaknesses in education and tools. In fact, virtual education requires more work and time. In this regard, our findings are in line with the results obtained by [11, 30, 34]. These scholars concluded that students had no positive attitude toward e-learning. Therefore, it is suggested that the most appropriate e-learning method be selected and implemented by applying the existing processes in the world and using the experiences of leading countries in this field. On the other hand, culture building is essential for faculty members and university administrators by holding related training workshops at DL centers of universities. Establishing academic incentives and requirements to provide some learning content and educational interactions through cyberspace and e-learning systems can greatly reduce resistance to e-learning and

increase inclination. In addition, it is necessary to create conditions such as creating and developing strong technological infrastructures, formulating the necessary educational standards for evaluating students, creating a proper culture and changing the traditional attitude of society in education, increasing government and private sector's investment and participation in order to use any new technology system in educational affairs. The results obtained by [9, 11, 26] demonstrated that developed countries have planned and implemented activities in this field and have more or less the same goals for the development of information and communication technology in their education system. These goals include the development of knowledge and communication skills, skills in working with technology, information and its use in the educational process, as well as creating a positive attitude toward technology. This shows that hardware development in this field is not enough but necessary. In addition, it is crucial to plan to create knowledge of such technologies and even to change attitudes towards them in the academic community. Based on the results, another challenge mentioned by the interviewees was instrumental and technological challenges, which is consistent with the results obtained by [11, 36, 43].

This shows that DL is not complete in terms of technology, hardware and software, and equipment used and is not available to all students and there is a need for more technology in this regard. Moreover, [36] emphasized the instrumental and technological, as well as personality and educational barriers. [11, 26] mentioned that the lack of appropriate technological infrastructure for the use of e-learning caused only 3.32% of students to be well prepared to use the e-learning system. According to the staff of Islamic Azad University, DL causes no problems in terms of communication, managerial and organizational infrastructures. This finding may be due in part to their biased views on information about their organization.

#### **(4) Conclusion**

Considering the fact that present study aimed at explaining the educational challenges of the Islamic Azad University, each different view and criticism will help recognizing other aspects of the problem and a deeper understanding of the subject. This will necessarily result in a greater recognition of the challenge and obstacles in deploying e-learning in Iran's educational system and will eventually develop e-learning in the said system. It is hoped that other scholars with new ideas regarding "E-learning Challenges" could move towards new horizons in this interdisciplinary field and explore the untapped areas that may enhance the educational system of Iran.

#### **Research Limitation:**

One of the limitations of our research was non-cooperation and the biased, negative attitudes of some employees towards both gathering the information and the amount of time required to conduct the interviews. On the other hand, considering that the research was conducted at the Islamic Azad University, caution should be exercised in generalizing the results.

#### **Suggestions:**

Given what has been said and the challenges identified in each dimension and related categories, the following suggestions are made:

#### **Individual factors:**

- Utilize modern learning-teaching approaches in the e-learning process.
- Hold re-training courses and improve teachers' knowledge and skills in applying the technologies required for distance education.
- Design and implement specific mechanisms which utilize the results of researches and educational evaluations.

**Organisational factors:**

- Establish and implement appropriate implementation mechanisms to ensure maximum utilization of the university's potential according to the distance education mission.
- Build a culture in regards to the promotion of distance education's role and position at the university.

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Footnotes:

**Ethical Declarations**

At the beginning of the data collection stage, the participants were given a thorough explanation of the study and its objectives. With respect to ethical consideration, an attempt was made to preserve the confidentiality of the collected data and privacy of the participants. All procedures performed in studies involving humans.

**Consent for publication**

Not applicable

**Availability of data and materials**

The data that support the findings of this study are available from the corresponding author on request.

**Conflict of interests**

The authors declare that they have no conflict of interests.

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**Authors' contributions**

M.A. devised the study concept, designed the study, supervised the intervention, data collection and analysis, participated in the coordination of the study, and critically revised the manuscript. S.F.N and M.M. collected data, ran the study intervention, participated in the study concept, performed the analyses and revised the manuscript.

**Conclusion**

E-learning is an effective tool to transfer knowledge and it has the potential for overtaking the conventional teaching method. E-learning training help learners and instructors in educational environment. Students' needs are becoming priority for instructors and; thus, universities and colleges are implementing e-learning system in their own training programs. Through the study findings, it has been identified that e-learning has been advantageous to its users in many ways. One of the most dominant characteristics of e-learning is that it ensures ease of communication between teachers and students, and contributes in developing students' skills. It further contributes in providing scientific material to students in an interesting manner. In contrast to this, e-learner has developed negative influence on students as it promotes social isolation due to increase in screen time. Considering the fact that present study aimed at explaining the educational challenges of the Islamic Azad University, each different view and criticism will help recognizing other aspects of the problem and a deeper understanding of the subject. This will necessarily result in a greater recognition of the challenge and obstacles in deploying e-

learning in Iran's educational system and will eventually develop e-learning in the said system. It is hoped that other scholars with new ideas regarding "E-learning Challenges" could move towards new horizons in this interdisciplinary field and explore the untapped areas that may enhance the educational system of Iran.

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