A Phenomenological Study of the Challenges of Transferring to Virtual Learning in Iranian Universities with Regard to the Corona Pandemic

Shady Echresh[1], Ali Beiramipur[2] and Abdolah Parsa[3]

Abstract

The Covid-19 crisis, surprisingly and in a short period of time, transformed the way of teaching in higher education and imposed virtual and technology-based education on universities. This sudden change, in addition to opportunities and benefits, has brought short-term and long-term challenges to the higher education system that require profound study. The present research was applied in terms of purpose and phenomenological in terms of method. The scope of research included the directors of digital education of public universities affiliated with Ministry of Science and Technology. Using purposive sampling method, 15 of them were selected for in-depth interviews. Creswell data analysis cycle was used to analyze the data. Data analysis showed that technical-economic and education challenges were the most important challenges of transitioning to virtual education. Technical-economic challenges were extracted in a general category under the title of "infrastructure". Educational challenges were categorized into eight categories respectively: The educational challenges were categorized into eight categories, respectively: "teachers' lack of preparation and unfamiliarity with virtual learning", "content production", "assessment and examination", "conducting practical lessons", "lack of interaction", "faculty and student dissatisfaction with central control", "time" and "student teaching". Finally, it must be said that although this virus left the most negative consequences in the face-to-face, educational, scientific and research activities of the university for at least one year; however, its fundamental opportunities and benefits will cause a revolution in education, especially virtual learning.

1. MA of Curriculum Development, Faculty of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran.
2. Assistant Professor, Faculty of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran. *Corresponding author: a.beiramy@scu.ac.ir*
3. Associate Professor, Faculty of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz, Ahvaz, Iran.

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Introduction

The Covid-19 crisis brought about a significant and rapid change, leading universities to adopt virtual and technology-based education. Researchers in various fields have been exploring the impact of this event on their respective areas of activity. Currently, universities face the challenge of adjusting to the transformation of face-to-face education and embracing virtual education more extensively. In Iran, some universities and educational institutions had previous experiences with offering virtual courses. However, the outbreak of Covid-19 compelled all universities in the country to swiftly shift to virtual education, a process that might have taken decades under normal circumstances. This research aims to explain and address the challenges virtual education has posed for higher education institutions in Iran. It also seeks to identify successful strategies utilized by academic faculty members in facing this phenomenon and overcoming the challenges associated with virtual education.

Methodology

The practical purpose of the present research is to conduct a qualitative study using a phenomenological approach. The research focuses on virtual education managers from public universities under the Ministry of Science, Research, and Technology in Iran, which comprises 99 universities. Targeted sampling was used to select participants who are currently working as virtual education managers in these universities. Initially, 15 individuals were chosen for conducting interviews, and theoretical saturation was achieved after interviewing these 15 participants.

The research employed a semi-structured interview process for data collection. Data analysis followed the Creswell information analysis cycle, which involves data organization, reading and noting, description, classification and coding, interpretation of data validity and reliability, and finally displaying and visualizing the data (Creswell, 2013: 182).

To ensure the validity and acceptability of the study, the research considered various aspects recommended by Moustakas (1994), Creswell (2013), and Lincoln & Guba (1985). These aspects include prolonged engagement, continuous observation, triangulation, questioning colleagues, and member checks. These measures were implemented to enhance the accuracy and precision of the research findings.

Findings

The interview participants identified economic, technical, and educational challenges as the most important obstacles in transitioning to virtual learning. These challenges were categorized under the general theme of "infrastructure." The specific aspects included within this category were "hardware," "software," "manpower," "high number of audiences," "internet," "student facilities," and "insufficient experience of educational centers." The theme of "Internet" itself was further classified into sub-themes such as "cost," "speed," and "geography."

The educational challenges of transferring to virtual learning, respectively, "lack of preparation of professors and unfamiliarity with virtual learning", "content production", "evaluation and holding of tests", "conducting practical lessons", "lack of interaction", "dissatisfaction with the teacher" and student were extracted from central control", "time" and "student education". The category "professors' lack of preparation and unfamiliarity with virtual learning" was classified into three categories: "excessive use of lecture method", "lack of scenario and lesson plan" and "lack of course management". The category "Evaluation and conduct of the test" was classified into five themes: "No control over the student", "Lack of sufficient infrastructure for high concurrency", "No re-participation in the test", "No proper authentication system for examinees" and "Not participating again in the exam ". The category of "conducting practical lessons" was classified into three themes: "conducting workshop units", "conducting internship units" and "conducting laboratory units". The category "lack of interaction" was classified into three themes: "lack of image sharing", "lack of attractiveness" and "having a negative view of virtual learning". The category "time" was also classified into three topics: "starting time of virtual classes", "duration of virtual classes" and "compression of virtual classes for professors and students".

Successful solutions and strategies for transitioning to virtual education from the point of view of virtual education managers were examined. In response to this question, economic-technical, educational, interaction, and practical lesson strategies were considered.

Economic and technical strategies for the transition to virtual learning were divided into eight categories, namely: 1) Technical training for professors and students 2) Utilizing the experiences of educational centers 3) Collaboration with supporting companies and different departments 4) Formation of technical and support teams in the university 5) Credit allocation 6) Setting up a studio for content production 7) Student support 8) Course and audience distribution

Under the "student support" category, three themes were identified: 1) Formation of student support groups 2) Gratuitous loans 3) Charities

Educational strategies for transitioning to virtual learning were classified into five categories: 1. Teacher training 2. Educational support training 3. Using the theoretical foundations of related fields 4. Personalization of electronic learning systems 5. Giving Theses of master's and doctoral students in the field of virtual learning in higher education.

Strategies for dealing with professors' resistance were identified under two categories: 1) Supporting and empowering professors 2) Providing pre-made content

The strategies for creating interaction in virtual classes were derived from four categories: 1) Teaching method 2) Activating the image, microphone, and chat box, and recording the class 3) Giving feedback 4) Pre-test

The category of "teaching method" was further divided into five topics: 1) Reverse method 2) Participatory method 3) Project-oriented method 4) Problem-oriented method 5) Microlearning

It was found that holding practical lessons posed a significant challenge, and many experts participating in the study believed that these lessons could not be effectively handled in the current era of virtual education.

Discussion and Conclusion

In the present study, 15 participants willingly agreed to participate in the interview process. Following the completion of the semi-structured interviews, the researcher implemented data coding. The analysis of the data revealed that the challenges associated with transitioning to virtual learning could be categorized into two groups: economic-technical challenges and educational challenges, which will be described and explained below.

Despite the fact that the virus had a profoundly negative impact on face-to-face university activities, educational endeavors, scientific research, lasting for at least a year, its fundamental contributions are anticipated to bring about a revolution in education, particularly in the realm of virtual learning. Throughout history, significant progress and human excellence have often arisen from unforeseen events like this. These moments have also been instrumental in shaping or reshaping concepts in humanities, and critical periods such as the Covid-19 pandemic have brought basic and applied research as well as technological innovations to the forefront.

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