Evaluation and ranking of factors affecting the quality of students' online learning during the Corona disease days

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Abstract
The aim of this study was to explain and rank the factors affecting the quality of students' online learning during corona disease. The research method is descriptive-correlative and the statistical population is all primary and secondary school students in Sarchahan city (600 people) in the academic year of 2020-2021. To select the sample size using Cochran's formula, a sample of 234 people was selected by stratified random sampling. The standard questionnaire of Elmilai et al. (2020) was used to measure the research variables. The reliability of the questionnaire was evaluated by Cronbach's alpha coefficient, and estimated to be 0.87; and its validity was evaluated and confirmed by construct and content validity. Using the structural equation modeling method, the research hypotheses were analyzed and the factors were weighted and ranked using the hierarchical technique. The results showed that executive support has a negative and significant relationship with the quality of e-learning. Course content, course design, social support, technical support, instructor and learner characteristics also have a positive and significant relationship with the quality of e-learning. The results of ranking the factors through the method of hierarchical analysis process showed that the course design variable is in the highest priority, followed by executive support, learner characteristics and course design in the second to fourth priorities. Social support variables and coaching characteristics were in the lowest priority.

Extended Abstract
Introduction
E-learning supports students in making effective use of their time and commitment to courses. E-learning can increase self-confidence, reduce stress, and increase enthusiasm and empathy (López-Catálan et al, 2018). However, there are problems in preparing content for e-learning, because students may not be able to access educational materials or do not have a proper understanding of the content in the electronic platform (Bovil, 2020, Bovill and Woolmer, 2018). Nevertheless, teachers find the e-learning platform to be highly interactive, as lesson plans can be mapped with visual aids and attractive learning (Marutschke et al, 2019). In the current situation, Covid-19 has completely changed the educational phase. Although in this global epidemic; administrators, teachers, and students struggled with how to achieve the overall goals of institutions and individuals, in March 2020, the Centers for Disease Control and Prevention issued guidelines to students on alternative training methods for Communicated classes and assignments. Popular virtual classroom programs include Zoom and Adobe Connect around the world (Stone, 2020), and in Iran Shad for teaching schools, and Adobe Connect and Skyroom for universities, which play an important role in the transition from face-to-face classes to online system and training. Learning with electronic technology such as online classes and portals for access to extracurricular courses is known as e-learning (Ngamporn-chai and Adams, 2016). Given the above, the main issue of the research is: what are the factors on the quality of students' online learning in the days of Corona?

Theoretical framework
This study was conducted with the aim of emphasizing the use of technology in meeting the needs of qualitative education and expectations of school students in Sarchahan city. Also, ranking the influential factors is one of the most important goals of this research. Given that no comprehensive research has been conducted in this field in the country, this research is absolutely necessary and the researcher hopes that the results of this study can help decision makers, government policy makers, teachers and students to plan their activities to improve the quality of education. Because many problems were created due to the corona epidemic and the decision of the educational system to run classes online. The unpreparedness of the educational system in dealing with such an event and the lack of proper management and many infrastructural problems caused the students of schools in Sarchahan city to face many problems to study.

Pur Takeli et al, (2021) in a study examined the design of an electronic content development model based on the factors affecting e-learning satisfaction. The results showed that factors such as content, interaction, technology, educator, service quality, design, perceived ease of use, personalization, perceived usefulness, learner, perceived value and self-efficacy were the most important factors affecting e-learner satisfaction.

Marlina et al, (2021) in their study examined the factors that affect students' acceptance of e-learning. The results showed that users' satisfaction with e-learning is affected by the quality of education, service quality and information quality.

Methodology
This research is applicable in terms of purpose, and descriptive correlative according to method. The statistical population of the study was all primary and secondary school students in Sarchahan city in the academic year of 2020-2021 (600 people). Cochran's sample volume formula was used to determine the volume. 234 people were selected using stratified sampling method according to the volume. For this purpose, first, three grades;

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elementary, first high school, and second high school; each were considered as one stratum, so that students in different levels could be easily available. The questionnaire of Elimelay et al, (2020) with 27 questions; based on a 5-point Likert scale (strongly agree to strongly disagree) was used to collect data related to research variables

Discussion and Results

In order to test the research hypothesis and analyze the data, softwares of SPSS23, PLS3 and Expert Choice were used, and the results showed that the coefficient of the extrinsic variable path of executive support on the e-learning quality variable was 0.102 with a t-value of 1.522 and a significance level of 0.183. The error level of 0.05 with the confidence of 0.95 is not significant, so there is no positive and significant relationship between executive support and the quality of e-learning. The coefficient of the extrinsic variable path of the course content on the e-learning quality variable is 0.469 with a t-value of 5.805 and a significance level of 0.000. The error level of 0.05 with a confidence level of 0.95 is significant, so there is a positive and significant relationship between course content and e-learning quality. The coefficient of the extrinsic variable path of course design on the e-learning quality variable is 0.153 with a t-value of 2.195 and a significance level of 0.029. The error level of 0.05 with a confidence of 0.95 is significant, so there is a positive and significant relationship between course design and e-learning quality. The coefficient of the extrinsic variable path of social support on the variable of e-learning quality is 0.255 with a t-value of 5.123 and a significance level of 0.000. The error level of 0.05 with a confidence of 0.95 is significant, so there is a positive and significant relationship between social support and e-learning quality. The coefficient of the exogenous variable path of technical support on the e-learning quality variable is 0.190 with a t-value of 2.448 and a significance level of 0.008. The error level of 0.05 with a confidence level of 0.95 is significant, so there is a positive and significant relationship between technical support and e-learning quality. The coefficient of the exogenous variable path of instructor characteristics on the variable of e-learning quality is equal to 0.182 with a t-value of 3.156 and a significance level of 0.000. The error level of 0.05 with a confidence level of 0.95 is significant, so there is a positive and significant relationship between instructor characteristics and e-learning quality. The coefficient of the extrinsic variable path of the learner's characteristics on the e-learning quality variable is 0.217 with a t-value of 3.696 and a significance level of 0.000. The error level of 0.05 with a confidence of 0.95 is significant, so there is a positive and significant relationship between learner's characteristics and e-learning quality.

Conclusion

The aim of this study was to investigate and rank the factors affecting the quality of students' online learning during corona disease. The results of this study are consistent with the findings of Pur Takeli et al, (2021), Elumalai et al, (2021) and salehi et al, (2019); E-learning, which in recent years due to the corona epidemic has received serious attention in scientific and educational circles and has grown and expanded rapidly, serves as a bridge between student and teacher. The application of various components of information and communication technology, especially the Internet, in the organization and management of educational systems is not the only criterion for the quality of e-learning of Madras Sarchahan students. Therefore, paying attention to the needs of Sarchahan Madrasa students and meeting them can also be one of the important measures that principals should pay attention to. In addition, based on the results, the course design variable is in the highest priority, followed by executive support, learner characteristics and course design in

the second to fourth priorities. Social support variables and coaching characteristics are the lowest priority.

According to the present study, it is suggested that, while paying attention to the design of the course, Sarchahan education system try to create an environment for providing quality learning experiences for students and try to design the courses in a way that is most effective. In-service courses and conferences should be held for teachers and students to get acquainted with educational design patterns and the application of each of them. Also, the content should be prepared as a standard and in a suitable framework for the students of Sarchahan schools. In designing an e-learning system, items such as organizing and supporting, faster responding, and providing training classes to work with the system are recommended.

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