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Designing an E-Learning Model in Payame Noor University of Lorestan

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Abstract

Purpose: The purpose of this study was to design an E-learning model in Payame Noor University of Lorestan.

Methodology: The present research method was integrated (qualitative-quantitative) and practical in terms of implementation. The qualitative research community included university experts from Khorramabad city in the academic year of 2019-2019, and 40 people were selected based on the rule of theoretical saturation and by purposive sampling method. The statistical population of the quantitative part included 552 university professors in Shahram Khorramabad in the academic year 2020-21. The tools of the qualitative part of the interview and the quantitative part of the questionnaire were made by the researcher. The validity of the qualitative part of the tool was done with face validity, and the reliability was 0.82 with the agreement coefficient between the coders. Also, in the quantitative part of the research, formal validity and reliability were obtained with Cronbach's alpha of 0.85. The analysis of the qualitative part was done with the coding method in MAXQDA3 software and the quantitative part was done with the partial least squares method in Pls smart3 software.

Findings: In the qualitative section, 5 components (content, evaluation, technical infrastructure, planning and learning environment) and 41 indicators were identified for the e-learning model. Based on the results of the quantitative part, the factor load, which is the correlation coefficient between the implicit variable (e-learning) and the obvious variables in a model, is related to planning (0.74), content compilation (0.63), evaluation (0.58), respectively, technical infrastructure (0.51) and learning environment (0.5). Also, according to the results of structural equation modeling, the planning component with a coefficient of 0.42, content compilation with a coefficient of 0.21, evaluation with a coefficient of 0.18, technical infrastructure and learning environment with a coefficient of 0.14 respectively had the greatest effect on e-learning.

Conclusion: Covid-19 showed that e-learning is the necessity of the educational system in the future. Therefore, the first step is to seek opinions from professors and experts to identify and solve the challenges of e-learning and plan for the implementation of this system in the higher education system according to the components of content, evaluation, technical infrastructure, planning and learning environment.



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Detailed abstract

Purpose: The Covid-19 disease (coronavirus 2019) emerged in Wuhan, China in December 2019 and spread rapidly around the world. This disease is considered a serious issue for public health and the health of individuals and communities. Considering that a specific control and method to prevent and treat this disease has not yet been discovered, the need for self-care and self-control of people in order to prevent and spread this disease is very important. One of the ways to control the spread of this disease is to stay at home and stay away from daily interactions and home quarantine. Based on this, this crisis has affected different parts of the world, including educational systems, and has led to the closure of face-to-face courses in schools and universities. Instead of canceling their educational program, many universities have asked professors to provide educational materials and evaluate learning through education. Distance learning and online training are required. Although the change to the state of virtual education and electronic learning happened unexpectedly and quickly, but with the entry into the age of information technology, major changes were made in the field of education. One of the most important achievements of this course is electronic learning, which has caused a great transformation in educational systems. One of the essentials of e-learning in modern society is providing customized information depending on the needs of each learner and with similar content. Also, in order to provide timely and reliable content, the content should be updated and EL should be available to learners anywhere and at any time of the day. This new phenomenon is an approach to design, develop, deliver and evaluate education and training that uses facilities. Electronics and capabilities show learning at its best. E-learning is the use of technologies such as the Internet, web applications and computing to facilitate teaching and learning. E-learning is the use of Internet technologies to provide a wide range of solutions that enhance knowledge and performance. Some of the important benefits of e-learning include improved access to quality educational materials; The possibility of learning through simulation; Multimedia presentation as well as electronic communication and collaboration and learning is flexible so that learners can have control over the content and speed of learning. The purpose of e-learning is not just to transfer knowledge, but to transform learners into creative people and producers of science and technology. To achieve this important, e-learning courses should be designed according to specific local standards and criteria. One of these criteria is the use of educational design models. With the emergence of Covid-19 and the need to limit social interactions, including in the field of education, new challenges were faced by the world's educational systems and made the importance of electronic education more obvious. Based on this, considering the gap in the e-learning system in Iran, the aim of this research was to design a model of e-learning in Payam Noor University of Lorestan.

Methodology: The method of the present research was practical and in terms of implementation, it was an integrated (qualitative-quantitative) research. The statistical population in this research in the qualitative part included educational science experts in Khorram Abad city in the academic year 2020-21, and based on the purposeful sampling method, 40 people were selected to participate in the Delphi panel based on the theoretical saturation rule. The selection criteria of these people were writings related to virtual and electronic education, membership in the academic faculty of one of the country's universities, and the desire to participate in research. In the quantitative part, the statistical population included 552 professors of Khorramabad University in the academic year of 2019-2020, and 225 of them were selected as the sample size based on the random sampling method. The research tool in the qualitative part is the interview, whose validity was obtained with face validity and its reliability with the agreement coefficient of 0.82 of the coders. The quantitative part tool is also a researcher-made questionnaire based on qualitative findings, which has 47 indicators based on a five-point Likert scale (very high 5, high 4, somewhat 3, low 2 and very low 1). For the validity of quantitative data, face validity and reliability were also checked with Cronbach's alpha method, which was 0.83. The questions of the qualitative stage that were asked to the research experts include 27 questions and the quantitative research questionnaire includes 52 choice questions based on the Likert scale. To analyze the data in the qualitative part, the coding method and MAXQDA3 software were used, and in the quantitative part, the inferential statistical methods of exploratory factor analysis and structural equation modeling with Smart Pls3 software were used.

Findings: In the qualitative section, 5 components (content, evaluation, technical infrastructure, planning and learning environment) and 41 indicators were identified for the e-learning model. Based on the results of the quantitative part, the factor load, which is the correlation coefficient between the implicit variable (e-learning) and the obvious variables in a model, is related to planning (0.74), content compilation (0.63), evaluation (0.58), respectively, technical infrastructure (0.51) and learning environment (0.5). Also, according to the results of structural equation modeling, the planning component with a coefficient of 0.42, content compilation with a coefficient of 0.21, evaluation with a coefficient of 0.18, technical infrastructure and learning environment with a coefficient of 0.14 respectively had the greatest effect on e-learning.

Conclusion: Covid-19 showed that e-learning is the necessity of the education system in the future. Therefore, the first step is to seek opinions from professors and experts to identify and solve the challenges of e-learning and plan for the implementation of this system in the higher education system according to the components of content, evaluation, technical infrastructure, planning and learning environment. Every research has limitations. Here too, due to the fact that the instrument for measuring the variables was a questionnaire, the respondents may not have chosen the desired and actual limit and avoided the reality. Also, in the design of the research model, it is not possible to control all the effective factors; In other words, there may be many other influencing variables to be included in the model, which are not seen by the author of the research. Another limitation was the corona virus epidemic, which did not allow more face-to-face interviews, so they were conducted over the phone. It is suggested that in the future, researchers design the e-learning model with special attention to the components of content, evaluation, technical infrastructure, planning and learning environment in the country's universities. In order to improve the suitable infrastructure for the establishment of e-learning in universities, it should be invested in a favorable way so that it can benefit from its benefits. The higher education system should identify the obstacles and challenges of e-learning by asking the opinions of professors and experts and use the optimal strategies to solve them.