A STUDY OF THE EFFECT OF E-LEARNING ON STUDENTS’ STUDYING CULTURE

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ABSTRACT

With regard to the expansion of modern technologies and communication route via internet in recent years, and of course by invention of e-learning concept, a very suitable situation for all the people is prepared to gain from this facility. Ease of usage and fewer expenses are two factors which lead the people to gain the advantages of e-learning that cause increasing daily study and individual knowledge of the person and finally will affect on level of knowledge and culture of the society. So this article tries to answer to the effect of the e-learning role in study culture. The present study investigated the impact of e-learning of Amir Kabir University students on their study culture. The population of Amir Kabir University students is all using Cochran Formula. Conceptual model is composed of the following four aspects: the usefulness, ease of use, ability to learn, cost-effective learning. A questionnaire was developed based on the dimensions and parameters of the model and its validity and reliability were confirmed. Data analysis by SPSS & LISREL software’s and structural equation showed that there is positive and significant relationship between e-learning and study culture varies and also between the components of usefulness, ease of use, ability to learn and cost-effective learning with the study culture.

KEYWORDS: E-learning, Culture, Study, Technology

INTRODUCTION

The emergence of new information and communications technologies, led to emergence of new concepts and terms such as electronic publishing, e-banking, e-business, E-City and so on. E-learning is among concepts that with the development of information and communication technologies in education was introduced and attracted much attention. E-learning is an overarching framework that aims to extend holding online educational courses which contains all type of web based technology that are supporter of strategies teaching and learning sources. (Sridharan et al., 2010). University applicants growth, and caused educational institutions to focus on e-learning as a logical choice (Masoumi, 2010). Many educational programs now offer
a wide variety of online. They expand the scope of their training without the restrictions of time and place and complete their training classes with online and under web training. Many profit and nonprofit institutions increasingly have changed their traditional learning methods with online methods. They believe that online training can reduce training costs and effectiveness will improve by best service quality (Lee et al., 2009).

Large-scale e-learning success depends on establishing an educational model that focuses on student needs and educational goals. Design appropriate educational services is a complex task that requires a multi type approaches (Sanchez-Franco et al. 2009).

Although the nature of traditional and e-learning are almost the same but There are significant differences in the methods and practices used leads to differences between students and each method has its own advantages and disadvantages. Learned with the traditional approach has lacks of creative work, information management and producing knowledge. Such a person has a classical education that can be assigned tasks in order to do their job, business or industry and is ideal for a community-driven industry. But e-learning students in Information oriented Society, creative thinking, information management, and knowledge that are fundamental. Principles. Although e-learning in developed countries increasingly accessing traditional and nontraditional students, has been accepted, but in developing countries, it is not known and not used as a teaching approach. However, the e-learning can have a tremendous potential to solve many of the problems of teaching methods such as methods of distance learning (Such as limited financial resources, limited space, the lack of creativity and innovative potential learners; Minimal use of network technology and the Internet and information technology; Lack of learning oriented in education, lack of planning, coherent and systematic imbalance in education and research). E-learning, let person with personal or professional reasons, those who prefer to study at home, continue college education. The initiative, aimed at developing students' reading culture and linguistic space C and response to them. So the basic question that arises in this study is: what is the effect of e-learning on the study culture of Amir Kabir University students?

THEORY AND HISTORY OF LITERATURE REVIEW

Since the third millennium coming with technological advances in all aspects of scientific and technological so it has been named information age. On one hand Variety of technological tools and infrastructure development and on the one hand, human knowledge led to the development of techniques and knowledge of the course become faster than before. Concurrent with these changes and their impact on life styles and techniques, as well as the educational process that is one of the fundamental pillars of the community is changing. Today, it has completely changed the traditional educational methods and terms such as virtual learning, virtual universities, large digital libraries are used. E-learning is one of the tools of information technology that is used in many university programs. In fact in recent years due to advances in information technology and its role in reducing costs and increasing quality universities also tend to use this opportunity to find a more modern and more efficient and effective options for educating their students (Selim, 2007). E-learning is the use of information technology in the educational process that led to the development of e-learning and culture of study. E-learning is a kind of training which is based on using information productivity software and contains a wide range of computer-based trainings and virtual works (Eke, 2010). The term e-learning is widely used in the mid-90s, but there is no clear definition on which agreement is reached. According to some researched view
Electronic learning, is providing basic educational materials, via an electronic medium, such as the Internet, intranets, extranets … (Engelbrecht, 2005). According to other researchers’ point of view, e-learning is a web-based learning which is benefit from a web-based communication, collaboration, knowledge transfer and training to add value to individuals and organizations (Kelley & Bauer, 2004). Most researchers agree that this e-training is available with other electronic media other than the web. But web technology due to its widespread acceptance by educational institutions and organizations is used. E-learning is an integral and essential part of the competitive market of educational services (Hiltz & Turoff, 2005).

1. Learning objectives:

In general, e-learning aims to provide equal access to free, search in courses and create a uniform learning environment for any one in everywhere and improving all material presented in order to improving more serious and deeper learning. In such a learning environment unlike the traditional teaching, people due to their ability will benefit from subjects.

The following represents the main goals of e-learning:

- Overcoming the Limitations of the geographical, cultural, economic, personal and popular educational system.
- Deliver dynamic content, integrated and tailored to each person. Because individuals and organizations need to rapidly change and coordinate progressing in different science.
- Facilitate the development of learning communities, the Community of learners and practitioners bind with experts and professors.
- The achievement of educational goals, how these goals can be based on environmental factors, technology factors measured by teacher or learner. (Devedzic, 2006 : 1).

2. E-learning Benefits:

E-learning benefits for students, teachers, participants and designers to develop training material and managers of educations some of them are:

- No place restrictions for attending in training courses and no need for physical presence of teachers in the classroom.
- Cost saving
- Quick access to course materials and classroom learning and productivity of time due to independency of class time to specific time.
- Raising the scientific level of knowledge in the community by creating a favorable environment for knowledge cycling in society.
- Help provide skilled manpower to enrich the community and enhance human capital and productivity.
- Provide cultural growth areas for the preservation of cultural features and create a suitable area for expanding the development of cultural creativity.

- Participation in training at equal level (Priest,2011:2)

3. Background of research

In this study, we investigated the impact of e-learning on students reading culture. It was noteworthy that there wasn't much domestic and foreign researches on relationship between e-learning and reading culture, and we will study on this relation in this research. We see in Table 1 and 2 the recent research done by domestic and foreign in the context of e-learning and Culture of study.

TABLE 1: INTERNAL INVESTIGATION CARRIED OUT FOR THE VARIABLE OF E-LEARNING

<table>
<thead>
<tr>
<th>Research title</th>
<th>Year</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison of two training methods of presentation-based and e-learning model or Merrill and Reigeluth pattern on learning and motivation of those for continuing medical training</td>
<td>2012</td>
<td>Omrani et al</td>
</tr>
<tr>
<td>Quality of e-learning in university education: a qualitative study</td>
<td>2011</td>
<td>Mahdiun et al</td>
</tr>
<tr>
<td>Considering practical ways to activate and develop the culture of school libraries in Zahedan</td>
<td>2011</td>
<td>Hakimi and Tabasi</td>
</tr>
<tr>
<td>Check the status of network skills among undergraduate students of Payam Noor University, Dezful, e-learning as a factor in semi-presence and remote training</td>
<td>2010</td>
<td>Ghalam baz and ghalam baz</td>
</tr>
<tr>
<td>Feasibility of using e-learning in higher education, using factor analysis (case study: Students of Agricultural Extension and Education Agriculture University)</td>
<td>2010</td>
<td>Miladi and Malek mohammadi</td>
</tr>
</tbody>
</table>

TABLE 2: EXTERNAL RESEARCH CARRIED OUT FOR VARIABLES E-LEARNING

<table>
<thead>
<tr>
<th>Research title</th>
<th>Year</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality in e-learning in the real</td>
<td>2010</td>
<td>Masoumi</td>
</tr>
<tr>
<td>The impact of media interest in adopting e-learning</td>
<td>2009</td>
<td>Lio et al</td>
</tr>
<tr>
<td>Factors affecting on successful e-learning environment</td>
<td>2008</td>
<td>Johanson et al</td>
</tr>
<tr>
<td>Why people benefit from e-learning?</td>
<td>2008</td>
<td>Wan and et al</td>
</tr>
<tr>
<td>Seven key decision criteria for selection of e-learning</td>
<td>2008</td>
<td>Hoddlestone and Pike</td>
</tr>
<tr>
<td>Acceptance of e-learning courses based on technology acceptance model TAM in the Department of Technology, University of Science Malaysia</td>
<td>2007</td>
<td>Masrom</td>
</tr>
</tbody>
</table>
4. Conceptual Model of Research

The conceptual model of this study is the result of theoretical investigation and the background of field research after which the model dimensions and indexes of the study on the effect of e-learning on students’ study culture was come out. After considering, reviewing, and improving existing indexes, remarkable attention for the author has been realized, then the model parameters were selected and some new indexes were also designed. Dimensions and indexes were selected by experts and dimensions and indexes which were important by the experts’ point of view were selected as dimensions and model parameters. These dimensions and indexes of students’ study culture are Influencing Factors.

![Conceptual Model of Research](image)

**FIGURE 1: CONCEPTUAL MODEL OF RESEARCH**

**Method of Research**

This classification based on aim is applied research and as a research method is considered descriptive – scaling. The population of this research is all students at Amir Kabir University. Random sampling is sampling method in this study. Using Cochran formula, 153 persons were selected as sample.

The main data collection methods in this study are as follows:

1- Library studying: In this section the theoretical basis for data collection and research literature library resources, articles, books, and require global information network (Internet) has been used.
2- Field Research: Field research methods for data collection is bound to go outside with people, organizations and institutions to communicate. He must carry out their own assessment tools or containers of information and complete it with discussion, taking video interview and observation. The instrument used to collect data in this study is two questionnaires which were made by researcher. To ensure content validity of the questionnaire, the experts considered questionnaires and after the desired changes, the content validity of the questionnaire was approved. After validation, the questionnaires distributed and collected among the students. Cronbach's alpha reliability of the questionnaire was calculated using the formula. The average alpha obtained from the questionnaire study of e-learning and culture were 795% and 810%, as it is more than 7/0, the reliability of the questionnaires were confirmed. Statistical relation analysis in this study was both descriptive analysis and inferential analysis and for data analysis software LISREL, SPSS was used.

1. Hypotheses
   1.1. Main research hypothesis
   E-learning has a significant effect on the culture.

   2. Secondary research hypotheses
   There is a significant relation between the usefulness and study culture.
   There is a significant relation between ease of use and study culture.
   There is a significant relation between the ability of learning and study culture.
   There is a significant relationship between cost-effective learning and study culture.

ANALYSIS OF THE RESULTS AND FINDINGS:

1. Initial model
   The model which come out from the structural equation model of Lisrel, will be stated, and it was found that the relationships between the main variables investigated and parameters was significant.
FIGURE 2: THE FINAL MODEL OF RESEARCH

Other values of the original model in Table 3, it can be seen:

TABLE 3: VALUES OF THE FINAL MODEL

<table>
<thead>
<tr>
<th>Relations of concepts and parameters in the model</th>
<th>Estimated value</th>
<th>Standarded value</th>
<th>Standard error</th>
<th>T value</th>
<th>Variance (R²)</th>
<th>Significant level</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-learning has significant effect on the Study culture</td>
<td>0.21</td>
<td>0.21</td>
<td>0.085</td>
<td>2.51</td>
<td>0.19</td>
<td>P&lt;0.01</td>
<td>Hypothesis confirmation</td>
</tr>
</tbody>
</table>

Estimated load factor, which is calculated by the method of maximum likelihood, is shown in Figure 2. The so called \( \lambda \) values in order to estimate the latent variables scores are used in SEM (Structural Equation Modeling) analysis. Standard load factor values show standard relation for the parameters of the model, the measured values are comparable. The estimated standard error values indicate that the error in estimating crude functional loads that the smaller values (close to zero) indicates smaller confidence interval and more accurate estimates. T values obtained by dividing the estimated load factors on which showed significant of estimated load factor (significant difference of load factor to zero). T values between 1.96 and -1.96 showed no significant relationship between indexes and related latent variables. T values between 1.96 and 3 showed a significant relation with 95% confidence between indexes and related latent variables. T values equal to or greater than 3 indicates a significant relationship with over 99% confidence between indexes and related latent variables. As can be seen from the above table, in column T, the relation between all variables is approved by more than 99% confidence. Meanwhile, the columns of significant and result has been explained. Column represents the amount of variance.
explained by the latent variable's variance explained by each index. Higher values up to one indicating up more appropriate of index for measuring of the latent variable. It should be noted that this value has a direct relationship with the other values.

The main research hypothesis is tested using structural equation modeling. According to Table 4, the results of Structural Equation Modeling analysis of each index are as follows:

Main hypothesis: e-learning has a significant effect on study culture.

According to standard estimates of the variables of e-learning on study culture 0.21 and the values of $T=2.51$ $R^2=0.19$ it can be concluded that at significant level of $P < 0.01$ there is a significant relationship between e-learning and study culture.

2. Fit model

Fit model means that the variance matrix - covariance that is observed and variance matrix - covariance values predicted by the model should be so close together, so called fitting of the model. Whatever values are close to the matrix model, it has a better fit, in model estimates of the structural equations, when it can be confident that the model fit is adequate.

**TABLE 4: FIT INDEXES OF FINAL MODEL**

<table>
<thead>
<tr>
<th>Result</th>
<th>Value</th>
<th>Acceptance range</th>
<th>Index title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmation of the model</td>
<td>1.27</td>
<td>$\leq 3$ $X^2/df$</td>
<td>$X^2/df$</td>
</tr>
<tr>
<td>Confirmation of the model</td>
<td>0.008</td>
<td>$RMSEA&lt;0.09$</td>
<td>RMSEA</td>
</tr>
<tr>
<td>Confirmation of the model</td>
<td>0.97</td>
<td>$GFI&gt;0.9$</td>
<td>GFI</td>
</tr>
<tr>
<td>Confirmation of the model</td>
<td>0.93</td>
<td>$AGFI&gt;0.85$</td>
<td>AGFI</td>
</tr>
<tr>
<td>Confirmation of the model</td>
<td>0.94</td>
<td>$CFI&gt;0.90$</td>
<td>CFI</td>
</tr>
<tr>
<td>Confirmation of the model</td>
<td>0.95</td>
<td>$IFI&gt;0.90$</td>
<td>IFI</td>
</tr>
<tr>
<td>Confirmation of the model</td>
<td>0.90</td>
<td>$NNFI&gt;0.90$</td>
<td>NNFI</td>
</tr>
</tbody>
</table>

All fit indexes indicate that the model has good fit. Therefore, we conclude that the research model has a great ability to measure key variable of investigation.

3. Test of secondary hypotheses of the research

For checking the secondary hypotheses of the research and regarding to normality of variables Pearson's correlation test was used. In Continuation, the results separately for each of the sub-hypotheses have been expressed.

The first sub-hypothesis research: there is a significant relationship between the component of usefulness and study culture.
TABLE 5: THE FIRST SUB-HYPOTHESIS CORRELATION TEST

<table>
<thead>
<tr>
<th>P-value</th>
<th>Number of sample</th>
<th>Study culture</th>
<th>Usefulness</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>152</td>
<td>0.369</td>
<td>usefulness</td>
</tr>
</tbody>
</table>

For the component of to be useful, as the P-value is lower than 0.05 so it can be stated that there is a significant relationship between two variables. Thus, there is a significant positive relation between components of usefulness and study culture. So it can be concluded that by increasing the amount of the component of usefulness, the quality of the study culture will increase.

The second sub-hypothesis research: There is a significant relation between the component of ease of use and study culture.

TABLE 6: THE SECOND SUB-HYPOTHESIS CORRELATION TEST

<table>
<thead>
<tr>
<th>P-value</th>
<th>Number of sample</th>
<th>Study culture</th>
<th>Ease of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>152</td>
<td>0.365</td>
<td>Ease of use</td>
</tr>
</tbody>
</table>

For the component of ease of use, as the P-value is lower than 0.05 so it can be stated that there is a significant relationship between two variables. Thus, there is a significant positive relation between components of ease of use and study culture. So it can be concluded that by increasing the amount of the component of ease of use the quality of the study culture will increase.

The third sub-hypothesis research: there is a significant relationship between the component of ability of learning and study culture.

TABLE 7: THE THIRD SUB-HYPOTHESIS CORRELATION TEST

<table>
<thead>
<tr>
<th>P-value</th>
<th>Number of sample</th>
<th>Study culture</th>
<th>Ability of learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.024</td>
<td>152</td>
<td>0.248</td>
<td>Ability of learning</td>
</tr>
</tbody>
</table>

For the component of ability of learning, as the P-value is lower than 0.05 so it can be stated that there is a significant relationship between two variables. Thus, there is a significant positive relation between components of ability of learning and study culture. So it can be concluded that by increasing the amount of the component of ability of learning, the quality of the study culture will increase.

The fourth research sub-hypothesis: there is a significant relationship between the component of cost-effective learning and study culture.
TABLE 8: THE FORTH SUB-HYPOTHESIS CORRELATION TEST

<table>
<thead>
<tr>
<th>P-value</th>
<th>Number of sample</th>
<th>Study culture</th>
<th>cost-effective learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>152</td>
<td>0.322</td>
<td></td>
</tr>
</tbody>
</table>

For the component of cost-effective learning as the P-value is lower than 0.05 so it can be stated that there is a significant relationship between two variables. Thus, there is a significant positive relation between components of savings of and study culture. So it can be concluded that by increasing the amount of the component of cost-effective learning, the quality of the study culture will increase.

4. Offers the results of the research hypotheses

Main hypothesis: e-learning has a significant effect on study culture.

Considering the results of the measurement equation modeling: Results of analyzes performed in the previous chapter, the first research hypothesis that e-learning has a positive impact on Study culture, was approved. Thus, by improving the components of "usefulness", "ease of use", "ability of learning" and "cost-effective learning" the level of study culture will also increase. The findings of the hypothesis were aligned to researches of Albalvshy and Alkhalifa (2003), Elliott (2010) and Meyer (2002).

Considering of sub-hypothesis of the research:

The first sub-hypothesis research: there is a significant relationship between the component of usefulness and study culture.

The results of the Pearson correlation test: The first sub-hypothesis of the research examined the relationship between two variables, it has studied the relation between usefulness and study culture. The results of the data analysis indicated the relationship between usefulness and study culture. A correlation of 0.369 indicates with probability of 0.95, there is a significant direct relationship between these two variables. On this basis it can be suggested that focuses on the indexes of 'appropriate use of e-learning systems"," understandable the use of e-learning," "increase the effectiveness of the study," "intention of the benefits of e-learning systems", "Predictable use of it", "efficiency" and "usefulness" so the component of usefulness will be improved, and it finally will improve the study culture. The findings of the hypothesis were aligned to researches of Albalvshy and Alkhalifa (2003), Elliott (2010) and Meyer (2002).

The second sub-hypothesis research: There is a significant relation between the component of ease of use and study culture. The results of the Pearson correlation test: The second sub-hypothesis of the research examined the relationship between two variables, it has studied the relation between ease of use and study culture. The results of the data analysis indicated the relationship between ease of use and study culture. A correlation of 0.365 indicates with probability of 0.95, there is a significant direct relationship between these two variables. On this basis it can be suggested that with improving the relations of the ease of use, the level of study...
culture will increase. Accordingly, we conclude that improving the indexes of "ease of use of e-learning systems" and "Ease of doing what one need to do in this field", can improve the component of ease of use, then the study culture will improve. The findings of the hypothesis were aligned to researches of Albalvshy and Alkhalifa (2003), Elliott (2010) and Meyer (2002).

The third sub-hypothesis research: there is a significant relationship between the component of ability of learning and study culture. The results of the Pearson correlation test: The third sub-hypothesis of the research examined the relationship between two variables, it has studied the relationship between ability of learning and study culture. The results of the data analysis indicated the relationship between ability of learning and study culture. A correlation of 0.248 indicates with probability of 0.95, there is a significant direct relationship between these two variables. On this basis it can be suggested that with improving the relations of the ability of learning, the level of study culture will increase. Accordingly, we conclude that improving the indexes of "The Guide", "There are other people in order to help the individual" and "the existence of an auxiliary facilities for much help", can improve the component of ability of learning, then the study culture will improve. The findings of the hypothesis were aligned to researches of Albalvshy and Alkhalifa (2003), Elliott (2010) and Meyer (2002).

The fourth research sub-hypothesis: there is a significant relationship between the component of cost-effective learning and study culture. The results of the Pearson correlation test: The forth sub-hypothesis of the research examined the relationship between two variables, it has studied the relation between cost-effective learning and study culture. The results of the data analysis indicated the relationship between cost-effective learning and study culture. A correlation of 0.322 indicates with probability of 0.95, there is a significant direct relationship between these two variables. On this basis it can be suggested that with improving the relations of the cost-effective learning, the level of study culture will increase. Accordingly, we conclude that improving the indexes of "E-learning system is easy to learn" and "not having to spend so much energy to learn" can improve the component of cost-effective learning, then the study culture will improve. The findings of the hypothesis were aligned to researches of Albalvshy and Alkhalifa (2003), Elliott (2010) and Meyer (2002).

CONCLUSION

This research has been done with the aim of investigating the effect of eLearning on the study culture of the students. Interested learners to continue learning, is one of the requirements for continuing education and even vital and important for overall system management. This issue provided competitive reaction on attracting more students in e-learning environment. Therefore a planning with true based framework is required to develop an interest in learning to use the system for continuing education in the future. The findings of this study indicate that, there is a significant relationship between e-learning and study culture, as well as between the components of usefulness, ease of use, ability to learn and cost-effective learning and study culture. Although in virtual environment, training is given to people who are separated by time and place, and there is no physical presence in the environment. But creating an environment to show the psychological needs of students can be effective in educational enrichment. Giving the right of choose in choosing goals and controlling of learning process will be cause that students feel of independence and do Learning activities based on their sense reasons and self-motivated.
In fact, e-learning courses, as a social context should be planned in such a way that supports learner autonomy in its choice. Not a controller that have to use electronic system for hours to pass a series of courses. Because these factors has resulted analysis inner motivation to act temporarily. This environment also have to face people with challenging situations and provide opportunity to deal effectively with the instructors and other students and benefit from the feeling of being efficient and also from the positive feedbacks. Because environmental approaches for a limited time can cause people to do something. If, these tools used correctly the external control gradually replaced by internal control.

It can be hoped, students who have experience in e-learning courses, choose again the same method of learning for their future education in higher levels. Besides organizing and optimizing e-learning courses require high-quality training materials and applicable content provided for students. This would be the basis for judging the students’ satisfaction or dissatisfaction of e-learning. The learning experience that should be fun, meaningful and memorable is not just good but it is a basic condition for success. Once students feel that the course is a waste of time, they easily escape of it. This is particularly true for younger learners who may lose interest. While they have the satisfaction of learning process, they take advantage of the information, they have a lot of questions to ask, they follow objective samples and scientific discussion and at this point of time they avoid to attend in non-effective activities, and take control of their learning. Due to limited research has been done on the relationship between e-learning and study culture, It is suggested in another study, the dimensions and parameters of this model can be developed by taking advantage of other experts. And examine the relationship between e-learning and study culture in other organizations.

Among the limitations of this study can include: Restrictions on access to experts for validation questionnaire, not enough cooperation of students for filling out questionnaires at the time of exams.
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