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# The effect of electronic education on interest of learning Students of Payame Noor University

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**ABSTRACT**

*This research aimed to investigate the impact of electronic education of Payame Noor University Students interest to learning. For this purpose, were used the experimental method and pretest and post-test. For this purpose, 40 students in two classes of 20 students from mathematics PNU center of Kerman were selected by convenience sampling. Student's on experimental group under E-learning teaching and control group students was trained in the traditional way. A researcher made questionnaire was used to measure the variables in the pretest and posttest and data were analyzed using analysis of covariance. The results showed that students' interest in e-learning method is effective. Also, another part of the findings suggest that e-learning has increased the enthusiasm, willingness and interest of learning of students in experimental group. Therefore, according to these findings, university officials can only motivate students to improve the mechanism to provide this kind of education at the University.*

**Keywords:** e-learning, interest in learning, students

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## INTRODUCTION

According to current clear-sighted individuals, Third thousand has been called Information technology and communication management era because of hastily development of Science, knowledge and techniques. Moving industrials societies toward information society has been started for many years and has been accelerated since nineties somehow speed of this movement is felt in less developed countries. Because of transformational and accelerated of this technology, intelligentsia was forced to put it on system creating technology (Jalali, 2011). Intelligentsia believes on human society entering to new era called information era that this perspective causes that quick and nimble movement necessity of such countries like Iran is felt well . In accelerated changes and developments era of e-technologies , role of e-learning in development of training and educational management specially in universities is not hidden for someone (Crutsinger et al.2012) . In 21 centuries, information technology introduced itself as successful method for learning sciences in universities (Bowles, 2009) . E-learning is the most function of information technology in universities that are provided that in form of different educational methods such as computer-based learning , At first, e-learning expression was presented by Cross that internet technologies and internet for learning are used in these training. Cooper (2004) know e-educational as set of educational activities that is performed by means of electronic tools including audio, video, computer and network .

The benefits of new technologies to compensate the shortcomings and bottlenecks of universities in the field of education, not be considered negligible and ignoring it will lead to more poverty and backwardness of universities . Using modern information and communication technologies in education department can be one of the considered options for filling the gaps "unavailability of presence education" at universities . In all countries, there is a kind of

educational system that is supposed to respond to the needs of skilled manpower. Changes in this system and its components and tools, needs to sustainable and cohesive planning and any use of technology in this traditional system must be along with needs and indigenous facilities -based approach . Technology applications in the field of learning can be a useful example of the proper using of this phenomenon . The prerequisite for e-learning using is availability of necessary grounds and infrastructures and clear view about national development plan . Modern technology attractiveness may fascinate some students somehow they take practical action would recognition and adequate assessment that hurt education as well as new technology functions is considered useless and ineffective. Hence, studying effectiveness fields of this type of educational programs in universities , is part of the technology using process in training and learning (Alavi et al., 2014).

Interest in learning, rooted in several factors that many studies have been conducted in this field, today . Mogadem (2004) knows interest in learning as affected from satisfying the real needs of students and their satisfaction about how to provide education in training-learning process. Conley (2012) believes that motivational factors such as satisfaction from how to train, curriculum and fair and proper evaluation process is one of the most important tendencies of students to learn presented subjects by professor. Kelly (2007) knows that interest in learning is derived from satisfaction of spiritual, material, social motives in educational environments. In general, it should be said that interest in learning be influenced by individual, economical and social factors, satisfaction with how to present training, the appropriateness of educational content with capabilities and talents of students. Learning leads to change the behavior and performance of students in educational environments. Making any changes in condition that performances became formal and routine, creates some degrees of psychological stress in individuals existed in position (Carter, 2009). Changing teaching methods and using new techniques that requires more activity of students is considered a state of these changes that has been less studied. Accordingly, studying amount of student interest in learning and their satisfaction from teaching, is undeniable necessities. . One of the stressor factor in stable and dynamic learning and interest in learning is teaching methods . Training based on E-learning is an educational innovation that can be presented by compact disk (CD), local web or internet. E-learning includes computer-based learning and we-based learning. In the simple words, it can be said that e-training includes all training that are performed by means of electronic tools including audio, video, computer , web and etc . This training includes broad complex of functional software and educational methods such as computer-based training, web-based training, virtual classrooms and etc. (Emadi, 2008) .

The results of studies indicate that in educational systems, providing training to learners with regular and conventional methods, not only leads to human, economical and social capital waste but also mentally will challenge graduates . In other words, non-compliance with learning principles and rules through traditional and straight training, learners anxiety will increases and their self-esteem will decrease. But results of some studies showed if these training are performed virtually and by using new technologies , not only it will decrease stress and increase reliability and self-esteem but also will bring increased interest and willingness to learn and the satisfaction of educational methods (Jalali, 2011) .

Therefore, this study aims to assess effectiveness of e-learning approach in terms of interest content to learning in mathematical students at Payame -noor University in city center of Kerman and answer to this question that whether E-learning method for education effect on mathematics students' interest (at Pyam Noor University) in learning or not.

## MATERIALS AND METHODS

### Research Methodology

The present research has been used pretest and posttest method. For this purpose, 40 students in two classes of 20 students from mathematics PNU center of Kerman were selected by convenience sampling. Students on experimental group trained by E-learning method and students in control group was trained in the traditional way. In this research, was used researcher made questionnaire that has 17 articles of willingness to learning component and desire to learning, and expressed interest in learning and its reliability was 0/82. The collected data has been analyzed using SPSS 20 software by analysis of covariance.

### Findings

Hypothesis: electronic education is effective of increasing willingness to learning, desire to learning and expressed interest in learning of mathematics students of PNU center of Payame Noor University of Kerman.

**Table 1. Descriptive statistics of pre-test and post-test score of willingness to learning component, desire to learning and expressed interest in learning in experimental and control groups**

| Components | Groups | Test phase | No. | Mean | Standard deviation | Levene's test | .Significant level |
|---|---|---|---|---|---|---|---|
| Willingness to learning | Experiment | pre-test | 20 | 12/30 | 2/27 | 0/199 | 0/658 |
| | | Post-test | 20 | 14/55 | 3/37 | | |
| | Control | pre-test | 20 | 13/20 | 2/16 | 2/84 | 0/061 |
| | | Post-test | 20 | 12/60 | 2/34 | | |
| Desire to learning | Experiment | pre-test | 20 | 18/20 | 3/22 | 0/921 | 0/343 |
| | | Post-test | 20 | 21/55 | 3/41 | | |
| | Control | pre-test | 20 | 18/40 | 4/08 | 0/039 | 0/844 |
| | | Post-test | 20 | 19/15 | 3/78 | | |
| Expressed interest in learning | Experiment | pre-test | 20 | 13/20 | 2/87 | 0/199 | 0/658 |
| | | Post-test | 20 | 15/40 | 2/99 | | |
| | Control | pre-test | 20 | 11/65 | 3/23 | 0/530 | 0/471 |
| | | Post-test | 20 | 12 | 3/12 | | |

According to the table, willingness to learning, Desire to learning and express interest in learning in the experimental group on Pre-test by an average of 12/30, 18/20, 13/20 with SD 2/27, 3/22, 2/87 and the on post-test an average of 14/55, 21/55, 15/40 with SD 3/37, 3/41, 2/99. Levine test results in the above table shows that the group's variance is homogeneous.

**Table 2: The results of the regression line slopes assumption in the variables of Willingness to learning, Desire to learning and express interest in learning**

| Source changes | Sum of squares | Degrees of freedom | Mean Square | F | P value |
|---|---|---|---|---|---|
| pretest groups* willingness for learning | 8/04 | 2 | 4/02 | 0/461 | 0/632 |
| pretest groups *desire to learning | 98/01 | 2 | 49/009 | 4/009 | 0/061 |
| pretest groups *expressed interest in learning | 140/66 | 2 | 50/23 | 4/08 | 0/071 |

Table 2 information shows that, the variable F test between value of covariate (Pre-test willingness to learning, Desire to learning and express interest in learning) and independent groups are not significant. The homogeneity default of regression slopes were observed.

**Table 3: The results of covariance analysis of the effectiveness of electronic education of Willingness to learning, Desire to learning and express interest in learning**

| Components | Change Sources | Sum of squares | Degrees of Freedom | Mean Square | F | P Value | Chi Eta |
|---|---|---|---|---|---|---|---|
| Willingness to learning | pretest group (interaction) * | 67/29 | 1 | 67/29 | 9/78 | 0/003 | 0/209 |
| | Group (independent variable) | 21/26 | 1 | 21/26 | 3/09 | 0/047 | 0/177 |
| | Error (intragroup) | 254/454 | 37 | 6/87 | - | - | - |
| Desire to learning | pretest group (interaction) * | 67/74 | 1 | 67/74 | 5/88 | 0/020 | 0/137 |
| | Group (independent variable) | 61/09 | 1 | 61/09 | 5/30 | 0/027 | 0/125 |
| | Error (intragroup) | 425/75 | 37 | 11/50 | - | - | - |
| Expressed interest in learning | pretest group (interaction) * | 60/24 | 1 | 60/24 | 7/51 | 0/009 | 0/169 |
| | Group (independent variable) | 71/46 | 1 | 71/41 | 8/91 | 0/005 | 0/194 |
| | Error (intragroup) | 296/55 | 37 | 8/01 | - | - | - |

According to the findings that presented in Table 3, after adjusted pre-test scores, has been investigated the effectiveness of the provided training on the willingness to learning, desire to learning and express interest in learning and was confirmed the significant and positive effect between group subjects (e-learning) .The adjusted mean scores in post-test of willingness to learning, desire to learning and express interest in learning shows the experimental group (electronic training) compared to the control group (without training), has a more willingness to learning, desire to learning and had expressed interest in learning. 17 percent of the variance willingness to learning, 12 percent of the variance of desire to learning and 19 percent of expressed interest in learning in post-test is explained by the provided training.

## CONCLUSION

E-learning and E-training are a new paradigm and information technology products that have been presented and implemented by some organizations and universities in the form of several educational projects for several years . In general, information technology has created new opportunities for different communities that identify opportunities faster and be able to compensate their backwardness by structural mutation . E-learning can dissolve many problems of societies , including people growing needs of education, lack of equal access to educational centers, lack of economical facilities, lack of qualified instructors and high cost spent on education. E-learning is effective in enhancing cognitive strategies such as learning, academic achievement, motivate yourself, create a positive self-esteem , self regulation and self-sufficiency (Shani Yeylagh, et al., 2011). In other simple side, E-training is computer-based training. E-training is a sample of training using educational technology where related media can be used with a deployment of computers .

In education , it is known a way to participate in a course or educational plan in which the learner does not need physically or face-to-face present in class. E-training can be along with using Internet and can use various forms such as audio, video and animation to provide training (Shahni Yeylagh et al., 2011). In general, E-learning as a new way of training, grows and develops rapidly all around the world and attention to this and investment in educational processes with this method is the component of necessities . E-learning is a learner-centered model to help learners to find information in desirable time with personal speed. E-learning is not merely the use of electronic devices and new technologies and in designing and developing these courses, we should have special attention to educational theories, educational objectives and learner characteristics and demands . If E-learning wants to be useful educational method and stay in the competition scene, it should be able to surpass from traditional methods in improving academic performance and learners interest .

The results of research hypothesis indicate that E-learning is effective in increasing willingness to learning and these results are consistent with findings of Rezaei and Ghadam Pour research . (2010) Theses researchers found in their study that using educational methods such as e-learning can increase students' interest and enthusiasm for learning. According to other results of this research, e-learning is effective in increasing willingness and interest expression to learning. These results is consistent with findings of Rocca and Ganiyeh (2013) and Souribo et al (2009) researches . These researchers' findings indicate that the basic psychological needs and intrinsic motivation are useful in predicting desire and interest expression to continuous using of e-learning. Self-determination theory using in workplace can be effective to predict desire and express willingness to continuous using of E-learning .
People are more likely to continuous when they feel autonomy and competence because these base needs effect on intrinsic motivation. On the other hand, among the theories and approaches to dimensions of motivation including interest, desire and expression, the most important current approaches to motivation, including behavioral, humanitarian , cognitive and social - cultural approaches were studied. According to the behaviorist approach, creating interest and desire methods to learning in students include various reinforcements and incentives based on conditions, are avoidance of punishment and threats and reducing the unpleasant results of learner activities.

Also according to the humanistic approaches, creating interest and desire methods in students to learning include helping student to meet their needs of shortcomings and also help them to create interest for responding their existential needs (growth and excellence needs) ؛ According to cognitive approach, these methods include explicit expression of behavioral and educational objectives and providing clear expectations for learners, establishing clear and precise feedback from assignments and tests, expressing reasons for studied subjects, creating challenging situations and unusual events, emphasis on intrinsic motivation, training documents and determining appropriate document model؛ and based on socio-cultural approach, the most important methods to create interest and desire in the learners include their active participation in learning communities and protect identity through active participation in group activities.

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