

Use of Adoption Technology Model to Predicting E-Learning Intention Perform among Faculty Members

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استخدام نموذج تقبل التكنولوجيا في التطلع المستقبلي للإستفادة من التعليم الإلكتروني بين أعضاء الهيئة العلمية

المقدمه: إن التعليم الإلكتروني يرفع مستوى فعالية أماليب التدريس و كیفیه مستوى التعليم . الهدف من هذه الدراسة هو تعیین العوامل المرتبطة بالتعليم الإلكتروني على أساس نموذج تقبل التكنولوجيا (ATH) **أهداف العمل:** إن هذه الدراسة هي دراسة توصيفية مقطعية. تم إجراءها على 150 شخص من أعضاء الهيئة العلمية في جامعة كرمانشاه للعلوم الطبية و الخدمات الصحية. تم إختيار المشتركين بناء على رغبتهم و تم بجميع المعلومات عبر إستمارات ملئت بواسطةهم. و استخدام برنامج SPSS النسخة 21 و الإختبارات الإحصائية T.Test. أنوفا. ترابط بيرسن. و رگریشن لاینر (Regression – liner). **النتائج:** مكونات نموذج تقبل التكنولوجيا. خص 46% اجراء التعليم الإلكتروني. إضافة الى ذلك كان قصد التعليم الإلكتروني ذو روتية $r=0.464$. سهولة الإلتصاف $r=0.353$ و المتغيرات الخارجيه $r=0.308$ كان لديها ترابط ذو معنى.

الإستنتاج: اثار نتائج هذه الدراسة الى ضرورة تخطيط لمداخلات تهدف الى ترغيب اعضاء الهيئة العلمية الى اجراء التعليم الإلكتروني و التركيز على الرؤيا و سهولة في تقبل المطلب والمتغيرات الخارجيه . **الكلمات الرئيسية:** نموذج تقبل التكنولوجيا- الهدف من التعليم الإلكتروني- اعضاء الهيئة العلمية

Background: E-Learning could increase efficiency teaching process and higher quality of education. The aim of this study was to determine the factors related to eLearning intention based on the Adoption Technology Model (ATM).

Methods: This cross-sectional study, conducted among 150 faculty members of Kermanshah University of medical science. Participants were randomly selected to participate voluntarily in the study and filled out a self-administered questionnaire. Data were analyzed by SPSS-21 using appropriate statistical tests including t-test, ANOVA, Pearson correlation and linear regression at 95% significant level.

Results: The ATM predictor variables, accounted for 46% of the variation in the outcome measure of the eLearning intention. Furthermore, eLearning intention have a correlation with attitude ($r=0.464$), perceived ease of use ($r=0.353$) and external variables ($r=0.308$).

Conclusions: Based on our findings, it seems that in designing intervention for encouraging faculty members to E- Learning teaching should be more attention to attitude, perceived ease of use, and external variables.

Keywords: Adoption Technology Model, E- Learning Intention, Faculty Member

بهره گیری از مدل پذیرش فن آوری در پیش بینی قصد استفاده از آموزش الکترونیکی در میان اعضای هیئت علمی

مقدمه: آموزش الکترونیکی می تواند باعث افزایش کارآمدی فرآیند تدریس و کیفیت بالاتر آموزش شود. هدف از این مطالعه تعیین عوامل مرتبط با قصدانجام آموزش الکترونیکی بر اساس مدل پذیرش فناوری (ATM) بود.

روش کار: مطالعه حاضر یک مطالعه توصیفی مقطعی بود که در میان 150 نفر از اعضای هیئت علمی دانشگاه علوم پزشکی و خدمات بهداشتی درمانی کرمانشاه صورت گرفت. شرکت کنندگان بصورت تصادفی و با تمایل برای شرکت در مطالعه، انتخاب شدند و پرسشنامه خودگزارشی را تکمیل کردند. داده ها با استفاده از نرم افزار SPSS ویرایش 21 و با بهره گیری از آزمون های آماری تی تست، آنوا، همبستگی پیرسون و رگرسیون خطی مورد تجزیه و تحلیل قرار گرفتند.

نتایج: سازه های مدل پذیرش فن آوری، 46 درصد از واریانس قصد انجام آموزش الکترونیکی را پیش بینی کردند. علاوه بر این، قصدآموزش الکترونیکی با نگرش ($r=0.464$)، سهولت استفاده درک شده ($r=0.353$) و متغیرهای بیرونی ($r=0.308$) همبستگی معنا داری داشت.

نتیجه گیری: بر اساس یافته های ما، بنظر می رسد در طراحی مداخلات بمنظور تشویق اعضای هیئت علمی به اجرای آموزش الکترونیکی باید توجه بیشتری به نگرش، سهولت استفاده درک شده و متغیرهای بیرونی شود.

واژه های کلیدی: مدل پذیرش فن آوری؛ قصد آموزش الکترونیکی؛ اعضای هیئت علمی

اکیدمیک کونسل کے ارکان کی جانب سے ٹکنالوجی اپنانے کا نظریہ

بیک گراؤنڈ: الیکٹرانیک میڈیم کے ذریعے اکیدمیک کونسل کے ممبران کی ٹریننگ سے تدریس کا عمل مزید موثر ہوجاتا ہے۔ اس تحقیق کا مقصد اے ٹی ایم ماڈل کی اساس پر الیکٹرانیک ٹریننگ کے عمل کو اپنانے کے اسباب کا جائزہ لینا ہے۔

روش: یہ ایک عبوری تحقیق ہے جس میں کرمانشاه میں میڈیکل تعلیمی مراکز کی اکیدمیک کونسلوں کے دیڑھ سو ارکان نے شرکت کی، کچھ شرکت کرنے والے رینڈم طریقے سے شامل کئے گئے تھے اور کچھ نے اپنی مرضی سے اس تحقیق میں حصہ لیا۔ انہیں ایک سوالنامہ دیا گیا جسے انہوں نے پُر کیا تھا۔ جوابات کا تجزیہ ایس پی ایس اور ٹی ٹسٹ اور پیئرسن ٹسٹ سے کیا گیا۔

نتیجے: ٹکنالوجی اپنانے کے ماڈل سے پتہ چلا ہے کہ اکیدمیک کونسل کے ارکان اس ماڈل کی طرف راغب ہیں اور اس سے استفادہ کرنا چاہتے ہیں۔

سفارشات: ان نتائج سے پتہ چلتا ہے کہ اکیدمیک کونسل کے ارکان کو الیکٹرانیک لرننگ کی طرف راغب کرنے کے لئے مزید سہولتیں فراہم کی جانی چاہیں۔

کلیدی الفاظ: الیکٹرانیک، ٹکنالوجی، اکیدمیک کونسل۔

INTRODUCTION

Along with fast development of technology in the world and appearance of new capabilities of information technology, there have been many changes in teaching process. There is a spreading view of teaching and learning; in this regard, E-learning is one of the prominent settings of learning in information period. In addition, research indicated E-learning could be an efficient system in teaching contexts and evaluation services (1). E-learning is a teaching learning method, but it is not the alternative to in person training; however, it is developing and is known as an effective tool in learning (2). E learning was introduced in Iran since 1996, most universities are using this technology by now, and some even turn to distance learning (3). This type of training increases efficiency of teaching process and results in higher learning qualities, easier access to large volume of information, lower educational expenses, higher quality, accurateness and validity of learning materials and higher scientific levels for students and teachers (4). Many of higher education centers try to organize and optimize E-learning to follow its procedure effectively and structurally; among them, universities tend to gain the technology for E-learning improvement (5). However, it would not be helpful unless effective factors and reasons of its adoption and application are considered. In other words, recognition of effective factors on acceptance and application of E-learning among university faculties is necessary to offer proper and practical solutions to its application among students, which may results in better learning settings (6). Different dimensions of understandings and attitudes of users should be considered in E-learning evaluation to form a useful and efficient pathology tool (7). If there were positive attitudes toward E-learning with teaching staff, there would be more motivation to use it (8). Users' attitude and viewpoint is considered as a significantly important factor to accept and apply computer technologies (6). Liaw and Haung's point of view, accordingly, could be used to categorize users' attitude structure toward electronic technology to three major evaluative parts: emotions, recognition and behavioral (9). Emotional part was defined as loving or hating something special (10). In research's about application of new technology, it would be useful to know how cognitive related factors, such as attitude, barrier, usefulness, and easy to use of technology; in this regard, adoption technology model (ATM) is one of the common models that application to predict the use of technology; ATM proposed by Davis et al (11-14). The main reason to accept technology was to introduce a basement for pursuing external factors on inner believes attitudes and intentions to use technology; it is a predictive-descriptive model; therefore, managers would be able to recognize why a given system would not be accepted and offer proper reforming steps based on resulted understanding. Structure of adoption technology model includes perceived usefulness, perceived ease of use, external variables, attitude, and behavior intention (11). Perceived usefulness is defined as persons' believe to use certain system that may improve their occupational function. Perceived ease of use refers to person's expectation toward

easiness of a given system. External variables are defined as organizational, social, systematic features of computer such as software and hard ware, teaching method and help from others to use computer system, which negatively affect person's mental perceptions to use IT (14-16). Furthermore, most medical science universities have been paying attention to E-learning (15). In this regard, Clark suggested that it was inevitable to use technology and communication media in education (16).

The main aim of this study was determined factors related with E-learning intention among faculty members in Kermanshah University of medical science based on adoption technology model.

METHODS

Participants

This descriptive-cross sectional study was conducted on 150 faculty members of Kermanshah University of Medical Science, during 2013. The sample size was calculated at 95% significant level according to the results of a pilot study and a sample of 150 was estimated. Of the population of 96, 316 (64.5%) signed the consent form and voluntarily agreed to participate in the study, which has been approved by deputy of research of Kermanshah University of Medical Sciences. Data collection based on the self-questionnaire.

Measures

Questionnaire included two sections that comprised of 36 questions: 11 demographic questions, and 25 items for ATM variable.

Demographics

Background item was designed to gather information related to age (year), gender (male, female), faculty (paramedics, health, nursing and midwifery, pharmacology, medicine and dental), education level (MSc., PhD student, PhD, MD), marital status (single, married), scientific rank (lecturer, assistant professor, associate professor and professor), electronic education background (yes, no), EDC membership (yes, no) and EDO membership (yes, no).

Adoption Technology Model Variable

The items that assessed components of the ATM used standard questionnaires (12-14), panel experts checked validity of the questionnaire and its reliability was defined with Cronbach alpha test, which is explained in the following.

Perceived usefulness included 5 items, e.g. 'electronic education could facilitate availability of experienced professors', answered by choosing one of the five options of 'strongly agree' (5 scores) to 'strongly disagree' (1 score). Maximum and minimum scores were 25 and 5, respectively. The higher the score, the more the perceived usefulness of electronic education was (Cronbach alpha 0.79).

Perceived ease of use included 3 items, e.g. 'it is easy to use electronic education software', answered through choosing one of the five options of 'strongly agree' (5 scores) to 'strongly disagree' (1 score). Maximum and minimum scores were 15 and 3, respectively. The higher the score, the more the perceived ease of use for electronic education was (Cronbach alpha 0.67).

External variables included 4 items, e.g. 'it needs fast

connection to the internet', answered through choosing one of the five options of 'strongly agree' (5 scores) to 'strongly disagree' (1 score). Maximum and minimum scores were 20 and 5, respectively. The higher the score, the more need for external variables in electronic education (Cronbach alpha 0.80).

Attitude included 12 items, e.g. 'electronic education pattern could increase motivation to students learning', answered through choosing one of the five options of 'strongly agree' (5 scores) to 'strongly disagree' (1 score). Maximum and minimum scores were 60 and 12, respectively. The higher the score, the more positive the attitude to electronic education was (Cronbach alpha 0.73).

Intention included 1 item, 'I intend E-learning education within'. It was answered through choosing one of the five options of 'this term' (5 scores), 'next term' (4 scores), 'next year' (3 scores), 'several next years' (2 score) and 'never' (1 score), where the higher the score, the stronger the intention to E-learning education.

In addition, total Cronbach alpha of our scale was 0.80, suggesting that the internal consistency was adequate.

Statistical Analysis

Data were analyzed by SPSS version 21 using appropriate statistical tests including t-test, ANOVA, Pearson correlation and linear regression at 95% significant level.

RESULTS

The mean age of respondents was 42.29 years [SD: 7.71], ranged from 28 to 61 years. In addition, the mean age of job history was 11.09 years, ranged from 1 to 27 years. Furthermore, 83.3 % (80/96) participants were male and 16.7 % (16/96) were female. About 96.9 % (93/96) were married and 3.1 % (3/96) were single. Regarding the educational status, 14.6 % (14/96) had MSc or Ph.D. student, 51 % (49/96) had Ph.D., and 34.4 % (33/96) were MD. Almost 5.2 % (5/96) were lecturer, 80.2 % (77/96) were assistant professor, and 14.5 % (13/96) were associate professor. 33.3 % (32/96) of respondents reported that they had attended in electronic education course. Moreover, 84.4 % (81/96) of participants reported their interest to attend electronic education courses. In addition, 28.1 % (27/96), and 32.3 % (31/96) of participant were EDC and EDO members, respectively.

Table 1 showed the relationship between demographic variables and adoption technology model constructs. In addition, table 2, indicated the mean and standard deviation in answering the items of adoption technology model about E-learning.

Table 3 shows bivariate correlations between the ATM constructs, which were statistically significant at either 0.05 or 0.01 level. The results showed that intention E-learning was correlated with the positive attitude ($r=0.464$), perceived ease of use ($r=0.353$), and external variable ($r=-0.308$).

Finally, a hierarchical multiple regression analysis was performed to explain the variation in intention to E-learning, using the TAM variables. As can be seen in Table 4, ATM variables were statistically significant for predicting E-learning which, they were accounted for 46% of the variation in intention to E-learning ($F: 17.385$, and $P<0.001$).

DISCUSSION

The aim of this study was to determine factors related to E-learning intention among faculty members based on ATM. The results of the present study indicated that perceived ease of use, external variables, and attitudes were the most influential predictors of E-learning intention among faculty members.

Maximum score gained by faculty member for attitude was 47.23% of total score, which suggested that there was no proper attitude to E-learning among participants. Zolfaghari et al (17) reported that faculty members had positive attitude to learning through E-learning systems. In addition, Naghavi indicated students and educators had positive attitudes toward E-learning (18). In addition, Mirzaei et al. reported positive attitudes toward E-learning among students of Shahid Sadoughi medical science university, Yazd, Iran (19). Khandaghi et al. (20) and Mohammadi et al. (21), also, reported similar results. Latifnejad et al. (1) showed that students had positive attitude to E-learning though they reported low levels of knowledge. Zolfaghari et al. (4) studied the efficiency of mixed E-learning system in Tehran medical science university and suggested that most students and educators had positive attitudes to modern education technology including mixed electronic education. Rashidtorabi et al in their study suggested that training over benefits of E-learning courses and supplying proper equipments to more availability to the internet could develop positive attitudes to E-learning (22). Bahadori and Yamani (23), also, reported that majority of faculty members had positive attitude to using computers and the internet in medical training.

Our findings indicated attitude toward E-learning among participants was low. In this regard, Meyers (24) suggested that the reason for improper attitudes of faculty members to E-learning was the need to attend many new training courses and change their methodology to adopt with new teaching condition. It is suggested to hold workshops to teach adoption and application of E-learning systems and introduce its advantages to advance education goals and its economic implementation by investigation centers of medical science universities. Based on the results, only faculty members who had experience of E-learning reported meaningful proper attitude to electronic education. It could be concluded that workshops would help to improve attitudes of faculty members to implement E-learning.

There was no meaningful relationship reported among participants' attitudes and demographic factors. This result is similar to the results reported by Mirzaei et al. (19). It seem, attitude to E-learning was not related to field of education among medical academic member and it could be considered as strength to enhance attitude to intervention studies among faculty member.

Linear regression analyses showed that perceived ease of use, external variables, and attitudes were the most influential predictors of E-learning intention participants. Several studies have reported ATM variables' predictability to explain E-learning or information technology (IT) adoption (23-28).

Table 1. Relation of field variables with suitability, easiness, external variables, attitude and intention

	Perceived Usefulness			Perceived ease of use			External Variables			Attitude			Intention		
	Mean (SD)	P	Mean (SD)	P	Mean (SD)	P	Mean (SD)	P	Mean (SD)	P	Mean (SD)	P	Mean (SD)	P	
Sex	Men	16.71 (2.61)	0.447	10.18 (1.83)	0.372	17.96 (2.16)	0.786	34.28 (5.01)	0.977	2.84 (1.02)	0.892	2.80 (0.42)			
	Women	17.25 (2.35)		10.62 (1.62)		18.12 (2.24)		34.25 (3.64)							
Education Status	MSc	16.21 (2.32)	0.009	10.35 (1.78)	0.242	16.00 (2.80)	0.001	34.14 (5.62)	0.984	2.42 (0.85)	0.166	2.88 (1.03)			
	PhD	17.57 (3.02)		9.97 (1.91)		18.24 (1.82)		34.24 (5.28)							
	MD	15.90 (1.33)		10.72 (1.36)		18.45 (1.93)		34.39 (3.67)							
	Health	18.00 (3.41)	0.001	9.28 (1.70)	0.036	18.42 (1.13)	0.116	38.42 (6.45)	0.067	2.57 (0.53)	0.586	2.83 (0.40)			
	Paramedical	17.62 (2.92)		9.87 (1.88)		17.62 (2.13)		35.50 (4.72)							
Faculty	Nurse & Midwifery	18.21 (3.26)		9.85 (1.87)		18.64 (1.90)		32.35 (4.60)							
	Pharmacology	19.25 (3.73)		9.25 (1.98)		19.12 (0.83)		23.12 (8.21)							
	Medical	15.61 (0.86)		10.97 (1.19)		17.91 (2.29)		33.87 (3.69)							
	Dentist	17.20 (2.61)		10.3 (2.31)		16.50 (2.59)		36.00 (3.97)							
	Married	16.69 (2.54)	0.027	10.26 (1.78)	0.951	17.98 (2.20)	0.993	34.15 (4.79)	0.138	2.76 (0.89)	0.005	4.33 (1.15)			
Marital Status	Single	20.00 (1.73)		10.33 (1.33)		18.00		38.33 (2.88)							
	Educator	17.60 (3.50)	0.473	9.20 (1.78)	0.521	18.80 (1.09)	0.118	37.20 (7.04)	0.285	2.60 (0.54)	0.802	2.87 (0.88)			
	Assistant professor	16.59 (2.48)		10.37 (1.69)		18.16 (2.09)		33.94 (4.60)							
scientific rank	Associate professor	17.69 (2.75)		10.15 (2.07)		16.92 (2.46)		35.46 (4.87)							
	Yes	18.15 (3.33)	0.001	9.77 (2.04)	0.469	17.59 (1.99)	0.469	36.34 (5.00)	0.003	3.00 (1.23)	0.233	2.76 (1.36)			
Experience of E-learning	No	16.28 (1.83)		10.56 (1.64)	0.074	17.94 (2.29)		33.08 (4.67)							
	Yes	17.12 (2.62)	0.027	10.30 (1.78)	0.160	18.13 (2.09)	0.001	33.91 (4.73)	0.083	2.88 (0.86)	0.003	1.50 (1.00)			
willing to attend E.learning courses	No	15.11 (1.53)		9.00 (2.00)		15.33 (1.00)		36.88 (5.66)							
	Yes	17.88 (2.90)	0.013	10.25 (1.34)	0.982	17.51 (2.27)	0.021	34.81 (5.93)	0.520	2.90 (1.15)	0.846	2.86 (0.58)			
Membership in EDC	No	16.38 (2.38)		10.24 (1.78)		18.57 (1.75)		34.06 (4.47)							
	Yes	18.61 (2.78)	0.001	10.25 (1.45)	0.984	18.35 (1.30)	0.700	34.67 (6.26)	0.601	3.25 (0.81)	0.001	2.56 (0.71)			
Membership in EDO	No	15.87 (1.96)		10.24 (1.75)		18.18 (2.28)		34.09 (4.09)							

Table 2. Mean and SD of Responses to ATM Items						
	Strongly disagree	disagree	Slightly	agree	Strongly agree	Mean (SD)
Attitude						
Saves time of the students.	-	3 (3.1%)	39 (40.6 %)	50 (52.1 %)	4 (4.2 %)	3.57 (0.62)
Can solve many teaching difficulties.	-	-	53 (55.2 %)	41 (42.7 %)	2 (2.1 %)	3.46 (0.54)
Saves teacher's time.	-	10 (10.4 %)	37 (38.5 %)	44 (45.8 %)	5 (5.2 %)	3.45 (0.75)
Reduces expenses.	4 (4.2 %)	7 (7.3 %)	30 (31.3 %)	52 (54.2 %)	3 (3.1 %)	3.44 (0.84)
Increase the motivation to learning among students.	1 (1 %)	18 (18.8 %)	45 (46.9 %)	31 (32.3 %)	1 (1 %)	3.31 (0.76)
Leads to more effective teaching.	-	13 (13.5 %)	47 (49 %)	30 (31.3 %)	6 (6.3 %)	3.30 (0.78)
Is more attractive.	3 (3.1 %)	12 (12.5 %)	58 (60.4 %)	22 (22.9 %)	1 (1 %)	3.06 (0.72)
Reduces the dominance of teacher on teaching context.	15 (15.6 %)	42 (43.8 %)	22 (22.9 %)	14 (14.6 %)	3 (3.1 %)	2.54 (1.02)
Prevents receiving feedback from students.	13 (13.5 %)	37 (38.5 %)	40 (41.7 %)	6 (6.3 %)	-	2.40 (0.80)
Decreases interaction between students.	25 (26 %)	40 (41.7 %)	27 (28.1 %)	4 (4.2 %)	-	2.10 (0.83)
Decreases interaction between students and teachers.	28 (29.2 %)	39 (40.6 %)	23 (24 %)	6 (6.3 %)	-	2.07 (0.88)
Is never the best alternative to in person training.	39 (40.6 %)	39 (40.6 %)	17 (17.7 %)	1 (1 %)	-	1.79 (0.76)
Perceived usefulness						
Increasing my efficacy.	-	4 (4.2 %)	60 (70.8 %)	16 (16.7 %)	8 (8.3 %)	3.29 (0.67)
Increasing my job satisfaction.	-	5 (5.2 %)	75 (78.1 %)	10 (10.4 %)	6 (6.3 %)	3.17 (0.61)
Improve teachers' positive attitude to their occupation.	-	11 (11.5 %)	65 (67.7 %)	15 (15.6 %)	5 (5.2 %)	3.14 (0.68)
Could reduce charges.	1 (1 %)	2 (2.1 %)	61 (63.5 %)	25 (26 %)	7 (7.3 %)	3.36 (0.69)
Could facilitate availability of distance learning to faculty members.	-	1 (1 %)	35 (36.5 %)	40 (41.7 %)	20 (20.8 %)	3.82 (0.76)
Perceived ease of use						
It is easy to use computer software related to electronic education.	-	10 (10.4 %)	29 (30.2 %)	25 (26 %)	17 (17.7 %)	3.60 (0.95)
It is clear (perceived) how to act in electronic education.	-	8 (8.3 %)	56 (58.3 %)	17 (17.7 %)	-	3.11 (0.54)
It is easy to prepare education context for electronic education system.	-	7 (7.3 %)	32 (33.3 %)	32 (33.3 %)	10 (10.4 %)	3.55 (0.82)
External variables						
It needs the culture to apply it.	-	-	3 (3.1 %)	32 (33.3 %)	61 (63.5 %)	4.60 (0.55)
It needs equipment's and substructures to be applied.	-	-	4 (4.2 %)	24 (25 %)	68 (70.8 %)	4.66 (0.55)
It needs access to high speed internet connection.	-	-	14 (14.6 %)	28 (29.2 %)	54 (56.3 %)	4.41 (0.73)
It needs workshops and seminars to be hold in the field.	-	6 (6.3 %)	5 (5.2 %)	39 (40.6 %)	46 (47.9 %)	4.30 (0.83)

Table 3. Predictor Variables Correlation Matrix					
	Mean (MD)	X1	X2	X3	X4
X1. External variable	17.98 (2.16)	1			
X2. Perceived usefulness	16.80 (2.56)	0.177	1		
X3. Perceived ease of use	10.27 (1.75)	0.103	0.179	1	
X4. Attitude	34.28 (4.79)	0.117	0.314**	0.016	1
X5. Intention	2.83 (0.95)	0.308*	0.236	0.353**	0.464**

* P < 0.05, ** P < 0.01

Table 4. Predictors of the E-learning Intention

	UnStandardized Coefficients		Standardized Coefficients	P-value
	B	SE B	Beta	
External variables	0.165	0.042	0.386	< 0.001
Perceived ease of use	0.235	0.050	0.453	< 0.001
Attitudes	0.065	0.017	0.366	< 0.001

Adjusted R2 = 0.46, F: 17.385, P<0.001, Final Model: Step 2

In this regard, Al-Gahtani reported ease of use as an effective factor on IT adoption in non-American cultures (26). In addition, Shoaie and Alavi carried out a research on librarians of Tehran technical school librarians and reported perceived ease of use and perceived usefulness are effect on IT adoption (27).

Another result from present study introduced significant role of external variables in predicting E-learning intention among participants; need to supply equipments and substructures of E-learning, and accessibility of high speed internet had highest means among other external variables. In this regard, other studies showed that system quality could affect costumers' intention and satisfaction (29-31).

Joodi Chalan et al (32) in their study stated that, traditional patterns of medical education may be less to promotion college students learning skills. In other hand, Heidari et al (33) conducted a study on academic members of Mashhad University of medical sciences and showed the participants' did not have an appropriate attitude toward the education development organization (EDO) and the educational development center (EDC). Thus providing new training approach such as E-learning and appropriate introduce by EDC for academic members is recommended in order to improve the quality of education in universities.

Although the present study has several strengths, such as theory driven, and data collection about factors related to E-learning intention among Iranian academic members, the

findings reported in this study have certain limitations. First, data collection was based on self-reporting, which is usually prone to recall bias. Second, the internal consistency the questionnaire was relatively low ($\alpha = 0.67$) for assessing perceived ease of use. Third, low collaboration of faculty members in completing the questionnaire is another important limitation of this study.

Our findings indicated ATM variable were accounted for 46% of the variation in intention to E-learning. Forthmore, attitude, percieved ease of use and external variables were considered more efficient to predict behavior intention to E-learning. These points could guide education designer to design training programs to enhance E-learning application in medical science universities.

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