

Original Article**Presenting a Causal Model of the Influential Factors in Applying Continuous Electronic On-the-job Training in the Leasing Employees of Bank Mellat****Mohamadreza Daraie ^{1*}, Noraldin Parsapour ², Saeid Talebi ³, Mohammad Hasan Seif ⁴**

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Received: 2022/06/22**Accepted:** 2022/10/22**Abstract**

The present study aimed to investigate the factors influencing applying continuous electronic on-the-job training in the leasing employees of Bank Mellat, Iran. This correlational study was conducted on a sample population consisting of all the leasing employees of Bank Mellat. Given the limited sample population, census sampling was used, and all the leasing employees of Bank Mellat (n=155) were selected. Various instruments were used to measure the research variables, including the electronic job training questionnaire by Fagan et al. (2004), the quantum management skills questionnaire by Altafi (2011), the facilitating conditions questionnaire by Raleting and Nel (2011), the knowledge sharing questionnaire by van den Hof and van Vinen (2004), the computer self-efficacy questionnaire by Wolters and Daugherty (2007), the organizational intelligence profile by Albrecht (2003), the questionnaire of perceived usefulness by Teo et al. (2007), the survey of technology use experience by Fagan et al. (2004), and the organizational culture questionnaire by Gaffy and Jones (1996). The findings indicated that among the direct effects, the most significant direct effect was exerted by the conditions of technology use on perceived usefulness (0.32), whereas the least significant direct effect was exerted by quantum skills on knowledge sharing (0.15), as well as the effect of knowledge sharing on applying continuous electronic on-the-job training (0.15). Further, the most significant indirect effect was exerted by facilitating conditions on applying continuous electronic on-the-job training (0.09), and the least significant indirect effect was exerted by organizational intelligence on applying continuous electronic on-the-job training (0.03), as well as the effect of experience in using technology on perceived usefulness (0.03). Finally, the least significant total effect was exerted by experience in using technology on perceived usefulness (0.03), and the most significant total effect was exerted by the conditions of using technology on perceived usefulness (0.32).

Keywords

Quantum skills; Knowledge sharing; Applying continuous electronic on-the-job training; Facilitating conditions; Experience in using technology; Perceived usefulness.

Introduction

The On-the-job training is not a new phenomenon; in fact, it has a long history (Saigal, 2012). Today, it is considered to be an important, influential factor in human resource planning and optimization. Therefore, it is strongly believed that on-the-job training and human resource

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optimization are essential, especially the in-service training of organizational employees. Further, on-the-job training not only helps improve employees' work life, but also enhances their personal life. Notably, human resource optimization processes, which are often implemented in the form of continuous training, are classified into two main categories of adult training (pedagogical such as literacy training services) and human resource training (promoting learning and professional growth to improve the work performance of employees) (Zandi and Haghghi, 2012).

On-the-job training can be considered a subcategory of the continuous training programs that employees need so that they could succeed in their duties and responsibilities, professional relations, and social relationships in general (Kazempoor and Ghafari, 2011). Therefore, managers and supervisors believe that on-the-job training programs not only lead to the development of scientific abilities and skills in the workplace, but also create proper attitudes in employees, which makes these programs indispensable to the educational and optimization structures of every country (Abtahi, 1966). Also, using one's capabilities and the ability to use information technology to promote and enhance educational processes (i.e., electronic education and learning) can be highly beneficial.

E-learning is a web-based method of education through which learners can participate in different training programs without needing to attend them physically. In the past, e-learning was referred to as distance learning, virtual learning, web-based learning, and online learning (Nisly, 2014). The term "e-learning" was coined by Kerass about different learning facets that are based on technologies such as the internet or the intranet. E-learning encompasses a wide range of concepts, applications, processes, and expressions such as web-based learning, computer-based learning, networked learning, virtual learning, and electronic collaboration (Dina, 2015). However, e-learning does not yet have a common and widely acknowledged definition, and some consider it to be a new paradigm in modern education that is implemented by using electronic devices (Wang et al., 2011). There are as many as 20 different definitions of the subject as various institutions, organizations, and experts have proposed their definitions depending on their perspectives and applications of e-learning (Dina, 2015).

Over the years, e-learning has represented an important aspect of using new technologies and communications across the world (Neo, 2013). As a result, measuring the efficiency and effectiveness of on-the-job training programs in information technology can greatly help authorities resolve problems based on information technology (Pooratashi and Movahed Mohammadi, 2007). In addition to e-learning, several other similar terms are also observed in the literature on these types of training, including web-based learning, web-based education, web-based career learning, internet-based career learning, distributed learning, advanced distributed learning, online learning, M-learning, distance learning, and out-of-class learning (Khan, 2010).

According to the studies by Fagan et al. (2004) and Delise (2009), experience in using technology is one of the most important factors influencing continuous on-the-job training. On the other hand, researchers such as Siang (2015), Thi Doan (2021), Tselios et al. (2011), Binyamin et al. (2018), Saade and Bahli (2005), Zhang et al. (2006), Al-Dokhny et al. (2021), Sun and Zhang (2008), Sokura et al. (2002), and Reid (2008) claim that useful technology use is another factor influencing applying continuous electronic on-the-job training. Moreover, Nisly (2014) believes e-learning to be an effective educational approach, accomplished by utilizing digital devices throughout the learning process.

E-learning or web-based learning improves the learning process by integrating education and technology. E-learning is an internet-based educational system in which high-quality training or retraining is provided by multimedia, animation, and simulators within a virtual framework. Undeniably, information technology has expanded to the point where information technology

and communication experts and specialists claimed that in 2020, virtual education based on e-learning becomes the normal method of education throughout the world. Also, Ferrell (2001) states that e-learning is often established based on the educational characteristics of different countries. For instance, in Australia and Canada, widespread regions and population density are considered to be the most important reasons behind the extensive use of technology-based learning programs. In countries such as India and China, these reasons include the limited capacity of the available educational institutions, population density, and limited subsidies to education. As for the United Kingdom, the United States, France, Germany, and Japan, adult education and on-the-job training are mainly justified by factors such as acquiring new sciences and skills, which have drawn more attention to IT-based education and learning.

It is noteworthy that despite the importance of on-the-job training programs and the development of information technology, the status of on-the-job training programs is not yet favorable; for one thing, it could be due to the lack of financial credits dedicated to developing electronic on-the-job training programs. In this regard, Montazer (2002) states that designing and producing multimedia training programs are extremely costly. Moreover, the study by Fathi Vajargah and Azadmanesh (2006) implied that the lack of financial credits for developing training programs and providing the required hardware infrastructure are the main barriers to IT-based training programs. Accordingly, Jong and Wang (2009) reported facilitating conditions to be an influential factor in applying continuous electronic on-the-job training. Also, Pooratashi and Movahed Mohammadi (2007) considered the lack of fluency in English and other problems associated with human factors to be among the key barriers to utilizing information technology in learning. With regard to the human factors (especially psychological factors) influencing applying continuous electronic on-the-job training, this is consistent with the studies by Ahmadi Ghotb-odini et al. (2011), Fagan et al. (2004), Al-Dokhny et al. (2021), Menabò et al. (2020), Park (2003), Delise (2009), Yang (2007), Thi Doan (2021), which indicated computer self-efficacy to be an important factor. Meanwhile, it is inconsistent with the findings of Alshibly (2014) and Al-Harbi (2011). According to the study by Montazer (2002) regarding the challenges of using information and communication technology in learning, cultural underdevelopment, organizational factors, and instructors'/learners' traditional approaches toward virtual learning (e.g., relying on lecture-based teaching and the sporadic use of learning technologies) were among the most important causes of the unfavorable status of electronic on-the-job training programs. It seems that some of the organizational challenges associated with electronic on-the-job training can be overcome by knowledge sharing (Menabò et al., 2020; Mohammadi Moghadam et al., 2016) and organizational intelligence (Salajeghey et al., 2013; Alinia and Hafezian, 2017; Alizadeh and Yahyazadeh, 2017), which are two of the most important factors influencing applying continuous electronic on-the-job training. With this background, the present study aimed to propose a causal model of the factors influencing applying continuous electronic on-the-job training in the leasing employees of Bank Mellat.

Methodology

This was an applied study in terms of objective as the findings will be practical to the leasing employees of Bank Mellat. Also, the research focuses on the correlations between different influential factors in applying continuous electronic on-the-job training in the form of a causal model; therefore, it is considered a descriptive (non-experimental) and correlational study in terms of data collection. Given the limited sample population of the current research, we used census sampling, and all the leasing employees of Bank Mellat ($n=155$) were selected. To collect the required data, we used the theoretical and subject literature, library references, scientific journals and articles, English journals, and online references. The collected data were analyzed using various questionnaires, including the electronic job training questionnaire by Fagan et al.

(2004), the quantum management skills questionnaire by Altafi (2011), the facilitating conditions questionnaire by Raleting and Nel (2011), the knowledge sharing questionnaire by van den Hof and van Vinen (2004), the computer self-efficacy questionnaire by Wolters and Daugherty (2007), the organizational intelligence profile by Albrecht (2003), the questionnaire of perceived usefulness by Teo et al. (2007), the survey of technology use experience by Fagan et al. (2004), and the organizational culture questionnaire by Gaffy and Jones (1996). Notably, the reliability of these tools was measured based on Cronbach's alpha, and the coefficients were obtained for the variables, including the real use of communication and information technology (0.73), quantum management skills (0.76), facilitating conditions (0.71), knowledge sharing (0.80), computer self-efficacy (0.76), organizational intelligence (0.70), perceived usefulness (0.83), experience in using computers (0.78), and organizational culture (0.73). In the present study, validity referred to the face validity and content validity of the instruments, which were examined by preparing a version of the questionnaires and providing them to advisors and counselors. The face validity and content validity of all the tools were confirmed as well.

Results

Considering that research such as this is primarily based on the path analysis of the correlations between different variables, the following table contains the correlational matrix of the research variables.

Table 1. Correlational matrix of the research variables

Research variables	1	2	3	4	5	6	7	8	9
Organizational culture	1								
Quantum skills	0.19**	1							
Technology use experience	0.02	0.05	1						
Facilitating conditions	0.17**	0.41**	0.08	1					
Knowledge sharing	0.34**	0.25**	0.13*	0.14**	1				
Organizational intelligence	0.26**	0.29**	0.12*	0.22**	0.31**	1			
Self-efficacy	0.06	0.08	0.18**	0.08	0.11*	0.01	1		
Perceived usefulness	0.05	0.24**	0.11*	0.33**	0.14**	0.16**	0.19**	1	
Applying electronic on-the-job training	0.16**	0.31**	0.32**	0.36**	0.30**	0.31**	0.32**	0.43**	1

*P < 0.05; **P < 0.01

According to the information in Table 1, perceived usefulness (0.43) had the most significant correlation with applying electronic on-the-job training, whereas organizational culture (0.16) had the least significant correlation.

Table 2. Estimated coefficients of direct effect

Estimations Variables	Standardized parameter	t	Significance level
Direct effect of organizational culture on:			
Knowledge sharing	0.26	4.60	0.01
Organizational intelligence	0.22	3.79	0.01
Direct effect of quantum skills on:			
Knowledge sharing	0.15	2.55	0.05
Organizational intelligence	0.25	4.35	0.01
Direct effect of technology use experience on:			
Computer self-efficacy	0.18	3.03	0.01
Applying electronic on-the-job training	0.21	4.28	0.01
Direct effect of the conditions of technology use on:			
Perceived usefulness	0.32	5.62	0.01
Applying electronic on-the-job training	0.19	3.80	0.01
Direct effect of knowledge sharing on:			
Applying electronic on-the-job training	0.15	2.97	0.01
Direct effect of organizational intelligence on:			
Knowledge sharing	0.20	3.36	0.01
Applying electronic on-the-job training	0.16	3.17	0.01
Direct effect of self-efficacy on:			
Perceived usefulness	0.17	2.95	0.01
Applying electronic on-the-job training	0.21	4.30	0.01
Direct effect of perceived usefulness on:			
Applying electronic on-the-job training	0.27	5.33	0.01

According to the information in Table 2, the direct effect of organizational culture on knowledge sharing (0.26; T = 4.60) and organizational intelligence (0.22; T = 3.79) and the direct effect of quantum skills on knowledge sharing (0.15; T = 2.55) and organizational intelligence (0.25; T = 4.35) were observed to be significant at 0.01. Further, the direct effect of

experience in technology use on computer self-efficacy (0.18; $T = 4.35$) and applying continuous electronic on-the-job training (0.21; $T = 4.28$) and the direct effect of facilitating conditions on perceived usefulness (0.32; $T = 5.62$) and its utilization in continuous electronic on-the-job training (0.19; $T = 3.80$) were reported to be significant at 0.01. The evaluation of the findings regarding the direct effects of different variables indicated the direct and significant effects of organizational intelligence on knowledge sharing (0.20; $T = 3.36$) and applying continuous electronic on-the-job training (0.18; $T = 3.17$). Moreover, the effects of knowledge sharing ($\beta = 0.15$; $T = 2.97$) and the usefulness of using technology ($\beta = 0.27$; $T = 5.33$) on applying continuous electronic on-the-job training were considered significant at 0.01. Finally, the direct effect of computer self-efficacy on the usefulness of using technology (0.17; $T = 2.95$) and applying continuous electronic on-the-job training (0.21; $T = 4.30$) was observed to be significant at 0.01. Table 3 shows the explained variances of the research variables.

Table 3. Explained variances of the research variables

Row	Variable	Explained variance (R^2)
1	applying electronic on-the-job training	0.37
2	Self-efficacy	0.03
3	Perceived usefulness	0.13
4	Organizational intelligence	0.13
5	Knowledge sharing	0.09

According to the information in Table 3, applying continuous electronic on-the-job training had the highest variance (0.37), whereas self-efficacy had the lowest variance (3%). It is noteworthy that the research variables explained 37% of the variance of applying continuous electronic on-the-job training. To assess the fitness of the model, we used indexes of fit, as shown in Table 4.

Table 4. The mode's goodness-of-fit characteristics

Characteristic	Estimation
Chi-square (X^2)	21.67
P-value	0.300
Degree of freedom	19
Comparative fit index (CFI)	0.99
Goodness-of-fit index (GFI)	0.98
Adjusted goodness-of-fit index (AGFI)	0.96
Root mean square error of approximation (RMSEA)	0.023

In this study, the ratio of Chi-square to the degree of freedom was 1.14, and the P-value was equal to 0.300. Since the value of the statistic was less than 3 and the P-value was greater than 0.05, it can be concluded that the model fitness was acceptable. Also, the values of fitness indices (i.e., GFI and AGFI) were calculated to be 0.98 and 0.96, respectively. As these values were all greater than 0.9, the fitness of the model is considered acceptable here as well. Finally, given that the RMSEA value was equal to 0.023, the model had proper fitness. The following figure depicts the path diagram of the fitted model, along with the estimated parameters (standard values).

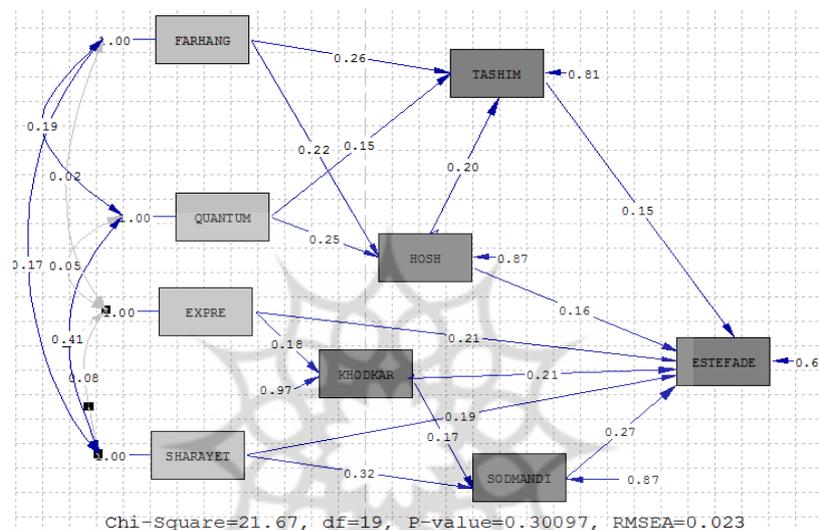


Fig 1. Path diagram and the estimated parameters of the fitted model (direct effects)

Discussion and conclusion

The present study aimed to present a causal model of the influential factors in applying electronic on-the-job training among the leasing employees of Bank Mellat. The obtained results indicated the effect of experience in applying technology to continuous learning (electronic on-the-job training) on self-efficacy in using technology. This finding is consistent with the studies by Fagan et al. (2004), Park (2003), Stone et al. (2003), and Cosaque (2008). In another study, Akhavati (2015) investigated the effective human infrastructures in applying technology to learning, mentioning particular experiences in technology use. According to the researchers, having special skills (e.g., computer skills, using word processors, scientific web exploration instead of idle internet surfing, and software/multimedia skills) and the ensuing new attitudes are essential to the proper use of information technology.

Our findings showed that as the Bank Mellat employees become experienced in using information technology (i.e., acquiring hardware and educational software knowledge), they will be more likely to apply electronic on-the-job training. This is also in line with the findings of Fagan et al. (2004) and Delise (2009), while inconsistent with the results obtained by Park (2003) and Ruth (2000). Further, the present study demonstrated that in addition to experience in applying electronic on-the-job training, facilitating conditions are another factor influencing applying continuous electronic on-the-job training in the leasing employees of Bank Mellat, which is consistent with the study by Jong and Wang (2009). The analysis of the research

hypotheses also confirmed the effect of facilitating conditions on perceived usefulness regarding electronic on-the-job training. This is in line with the results obtained by Mazman et al. (2009), while inconsistent with the research by Raleting and Nel (2011).

Notably, investigations of perceived usefulness regarding virtual learning indicate that this variable is affected not only by facilitating conditions, but also by self-efficacy in using information technology. This is congruent with the findings of Ahmadi Ghotb-odini et al. (2011), Al-Dokhny et al. (2021), Thi Doan (2021), and Menabò et al. (2020), while inconsistent with the results obtained by Alshibly (2014) and Al-Harbi (2011). It can be inferred that if the leasing employees of Bank Mellat believe more in their self-efficacy in technology use, they will better appreciate electronic on-the-job training. Meanwhile, computer self-efficacy affects not only perceived usefulness, but also the continuous use of electronic on-the-job training. This finding is in line with some of the previous studies in this regard, such as those conducted by Ahmadi Ghotb-odini et al. (2011), Fagan et al. (2004), Al-Dokhny et al. (2021), Menabò et al. (2020), Park (2003), Delise (2009), Yang (2007), and Thi Doan (2021). However, there is a discrepancy between this finding and the results obtained by Alshibly (2014) and Al-Harbi (2011). To interpret this finding, it should be stated that the leasing employees of Bank Mellat who are open to risk-taking, and thus, have more self-efficacy in using information technology are more willing to participate in electronic on-the-job training. Researchers such as Kulviwat (2006) and Yang (2007) believe that employees with more information technology self-efficacy are more likely to have a positive perception of technology and use it more frequently as a result. Notably, self-efficacy in using information technology has an indirect, positive, and significant effect on applying electronic on-the-job training through perceived usefulness.

According to the current research, although perceived usefulness is influenced by self-efficacy and facilitating conditions, it can independently influence electronic on-the-job training. This finding is consistent with the studies by Siang (2015), Thi Doan (2021), Tselios et al. (2011), Binyamin et al. (2018), Saade and Bahli (2005), Zhang et al. (2006), Al-Dokhny et al. (2021), Sun and Zhang (2008), Sokura et al. (2002), and Reid (2008). However, it is inconsistent with the research conducted by Tan (2009).

According to the present study, although the variables of organizational culture and quantum skills in the leasing employees of Bank Mellat did not directly affect applying electronic on-the-job training, their effects on applying electronic on-the-job training can be observed through variables such as organizational intelligence and knowledge sharing. In other words, our findings showed that organizational culture influences organizational intelligence (consistent with Shohani et al., 2016; Radmehr and Momeni, 2013) and knowledge sharing (consistent with Mosayebi et al., 2020; Shaad et al., 2018; Hassani Bajd et al., 2018; Hosseini Fatemi and Barani, 2017; Jokar Koochanjani and Rahpeyma, 2016; Nilipoor Tabatabaei and Ghafari Raad, 2016; Khazaei and Yaghini, 2016; Yari and Gholami, 2015), and these variables are correlated with applying electronic on-the-job training by the leasing employees of Bank Mellat. As a result, organizational culture has an indirect effect on applying electronic on-the-job training. As mentioned earlier, the results of the present study demonstrated the effects of quantum skills on organizational intelligence (consistent with Salimi et al., 2016; Isaksen et al., 2011; Galagher, 2014) and knowledge sharing (consistent with Ghafari et al., 2019).

Our findings also showed that knowledge sharing is one of the factors influencing applying electronic on-the-job training, which is in line with the studies by Menabò et al. (2020) and Mohammadi Moghadam et al. (2016). Therefore, the organizations in which employees are inclined towards knowledge sharing, the employees often share the new information or skills they have acquired and usually exchange novel information for that matter. Finally, the results of the present study showed both the direct and the indirect effect of organizational intelligence (as an organizational factor) on applying continuous electronic on-the-job training. This is

congruent with the studies by Salajegheh et al. (2013), Alinia and Hafezian (2017), and Alizadeh and Yahyazadeh (2017). Tisivitanidou (2016) states that eight factors (educational, technological, design, organizational, ethical, managerial, resource maintenance, and evaluation) constitute the e-learning model for designing and implementing e-learning courses; as can be seen, organizational factors have also been taken into account.

It is noteworthy that like any other research, our research also had some limitations. For instance, some of the variables in this study (e.g., organizational intelligence, quantum skills, knowledge sharing, and organizational culture) encompass different components. Given the relatively large number of research model variables, we could not address their components. Further, our study only included the leading employees of Bank Mellat, and the method was quantitative. Considering the obtained results, it is recommended that by endorsing continuous electronic on-the-job training, managers lay the groundwork for accessing the necessary technology in their organizations and facilitate its expansion by establishing a special division for continuous electronic on-the-job training. They may also uphold study courses to enhance the employees' knowledge of the computer hardware and software essential to electronic on-the-job training so that the overall literacy of the employees would increase regarding proper participation in electronic on-the-job training programs.

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Conflict of interest

The authors declare that there are no conflicts of interest regarding the publication of this manuscript.

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