

E-Training Acceptance Factors in Business Organizations

[doi:10.3991/ijet.v6i2.1443](https://doi.org/10.3991/ijet.v6i2.1443)

O. Harfoushi and R. Obiedat
Jordan University, Amman, Jordan

Abstract—E-training is considered nowadays as a very important issue for business organization because of the benefits it can bring. Unfortunately, e-training is not fit well in most of Jordanian organization. In order to implement e-training successfully in an organization, you need the right people at the right place using the right resources. Furthermore, it is essential to measure the organization's acceptance for the new e-training system before implementing it in order to gain its full potential. This research proposes a model to measure an organization's acceptance for a new e-training system. This model has been developed from various previous studies and then it has been tested using quantitative methods (Questionnaire). The studied factors which are believed to affect the e-training acceptance are: System Functionality, Finance Resources and Human capabilities.

Index Terms—e-Training, Jordan, Acceptance

I. INTRODUCTION

It is important to measure the organization acceptance for the new e-Training system before the implementation process, this is in order to benefit from the system and gain the maximum potential from it. Business organizations mainly use e-training system as a major way to increase the knowledge of their employees so that it will reflect in a positive way on their way of doing their work. On other words, they use these systems to train their employees without having to leave their job location for a long time.

Different studies were suggested to measure the acceptance factors of organization for e-learning systems in general and e-training systems in particular. Chapnick (2000) suggests a framework to assess the acceptance for a new e-Learning system. The framework attempts to answer three different questions; (1) Can we do this? (2) If we can do this, how are we going to do it? and (3) What are the outcomes and how do we measure them?.

There are many factors that affect the acceptance of e-systems in organizations. One of the most important factors is to study the employees' feelings and emotional state about the e-Training system that will affect their acceptance and adoption of the system. Another critical factor is the readiness of the Environment. This factor studies the availability technical infrastructures. Human resource is considered as another important element. It means the availability of a skilful Technical staff dedicated to support, planning and implementing e-training initiatives. Furthermore, it is important to make sure that the organization has the needed sponsorship to afford the cost of implementing and maintaining the system, in addition to allocate a part of their budget for e-Training activities and

has enough financial resources to invest in infrastructure and training.

II. E-TRAINING ACCEPTANCE FACTORS

The researchers choose three acceptance factors for e-Training. The three main factors were chosen based on the literature review and fit into the Jordanian culture as a developing country. The studied factors are system functionalities, human capabilities and financial resources. Figure 1 shows the model developed from the literature review and is tested using quantitative methods.

A. System Functionality

It is important to have a certain characteristics in the system in order to gain the employees acceptance and high usage. A successful e-training system should be flexible with higher respond time and allow the interactivity between the users of the system and the same time should keep the simplicity.

The e-training system which contains interaction tools such as forums, video conferences, chatting rooms, blogs, tapped lectures and others can improve the training process and motivate employees to use the system. Some studies showed that the system content with strong interaction between users and instructors, user and learning material or even between users themselves are more likely to succeed than the less interactive one (Gareis, 2005).

Moreover, flexibility of the e-training system means that the system can be customized according to employees' interest, needs, preferences and skills. Also the organization will be able to update the system regarding the employee' feedbacks and changing requirements. This help in gaining the employees' acceptance and guarantee high participation rates. Simplicity, on the other hand, means that the system has simple procedures and will be easy to use by all organizations' members especially those who are not experienced with IT. Moreover, some of the main system functionalities that should be available in e-Training system are the ability to retrieve the data quickly, the ability to access to the information anytime anywhere



Figure 1. Acceptance Factors Model Affecting the Acceptance of e-Training

and to support different languages especially to those who are weak in English such as older employees.

B. Human Capabilities

One of the main reasons behind people resistance to the new system is their fear from new technology because they do not know how to use it, do not have the needed skills and experience to use it or lack of confidence they can use software, especially the older one who did not grow with technology and afraid from learning new one (Rosenberg, 2006; Gareis, 2005; Cocea and Weibelzahl, 2006). Therefore, people educational backgrounds, technological competences, self-efficacy, previous experience and skills in using computer and internet play a key role in people acceptance and adoption success (Cross and Dublin, 2002; Gareis, 2005). Moreover, employees' self-efficacy, which means that employee believes in his capability to perform a specific task on specific level, is considered as another critical factor for success (Cocea and Weibelzahl, 2006).

Consequently, organizations need to assess their employees' technological skills to make the appropriate training courses for them and distribute the needed manuals between learners before launching the system to help them using the new system more easily. This will lead the employees to be more familiar with the system and eliminate their fear from the new technology, and therefore, to increase their acceptance for the new system (Sullivan, 2002; Minton, 2000; Stoltenkamp and Kasuto, 2009).

C. Human Capabilities

The organizations should start by defining the needed sponsorship to be able to afford the cost of implementing and maintaining the e-Training system (Chapnick, 2000; Anderson, 2002). They need to prepare enough financial resources to support initiatives, invest in ICT infrastructure, and training and afford the cost of highly effective e-Training system, since one of the main reasons behind the failure of e-system adoption is lack of funds and weak sponsorship. As Rosenberg (2006) stated, "the most disarming roadblock is a lack of sponsorship, especially when you think you have it but find out too late you really don't. Picking the right sponsor is essential for any new initiative. E-learning, whether it is more traditional or part of a broader learning and performance architecture falls into this category ...").

Consequently, it is important to dedicate a part of organizations budget to sponsor e-Training activities and give it high priority besides owning an adequate fund to offer rich learning material and qualified tutors as having the right sponsorship goes hand-on-hand with the adoption likelihood of succeed (Rosenberg, 2006).

III. RESEARCH METHODOLOGY

After building the Acceptance model of e-Training (Figure 1), the model was tested by surveying the Jordanian organizations' employees. The questionnaire was used as a data generation method to authenticate the factors affecting the acceptance of e-Training systems. The questionnaire was distributed randomly among the Jordanian organizations' employees in different hierarchical levels in each organization which already uses the system, and then the results analyzed quantitatively using SPSS as the main statistical tool.

The studied model consists of three independent factors and one dependent. The independent factors are System Functionality, Human Capabilities and Financial Resources. The dependent variable is the Acceptance of e-Training in Jordanian Organizations.

In order to test the model, the main Objective of this research is to "Assess the Factors which Affects the Acceptance of e-training". In order to achieve this objective, three hypotheses were tested. Each hypothesis is related to independent variable. The hypotheses are:

H1: *The factor "System Functionalities" influences positively the successfully acceptance of e-Training.*

H2: *The factor "Human Capabilities" influences positively the successfully acceptance of e-Training.*

H3: *The factor "Financial Resources" influences positively the successfully acceptance of e-Training.*

Moreover, in order to test the test the first hypothesis (System Functionality), this research suggests six variables to be investigated to examine the relation between the system functionality and the acceptance of e-Training. For the second hypothesis, the researcher suggests four variables while for the purpose of the third hypothesis, four variables are tested. Table I summarizes the constructs and the variables codes which are used in this research.

IV. RESEARCH ANALYSIS AND FINDINGS

This study starts by some major preliminary data analysis including mean and standard deviation analysis first. Then a Normality test was conducted using skewness and

TABLE I.
CONSTRUCTS AND ITEM CODES

Construct	Variables	Code
System Functionality	E-Learning has interactive material	R1
	E-learning support multiple languages	R2
	The system is Flexible and can be customized	R3
	e-learning provides knowledge quickly	R4
	Information in the system is well organized and can be accessed easily and quickly anytime from anywhere	R5
	e-learning is simple to learn and use and have simple procedures.	R6
Human Capabilities	Employees have the needed computer skills required to use the system	R7
	The company Offers the required training courses for employees	R8
	Employees' have the needed experience in using computer and internet	R9
	Employees have high self-efficacy.	R10
Financial Resources	The company has the needed sponsorship for implementation	R11
	There is a part of organization budget dedicated to sponsor e-learning activities	R12
	The organization has an adequate fund to offer rich learning material and teachers	R13
	The organization has enough financial resources to invest in ICT and training	R14

Kutosis values and makes sure that all independent and dependent variables were distributed normally. After that Homoscedasticity was tested for constructs using Levene test and all variables were accepted.

Data validity and reliability were checked next. Factor analysis was used to test the data validity of the dependent and independent variables. As a result four items out of fourteen were deleted but the validity of the all constructs still sufficient even after the items' deletion. The deleted items are R2, R5, R9 and R10. Cronbach's alpha was used to test the data reliability and one construct (Finance Resources) was dropped after the conducting the test. Although the Finance Resources factor did not pass the reliability test, it does not mean it is not important to the acceptance process.

Subsequently the multiple regression analysis was used to test the hypotheses in order to study the relationship of the remaining two independent constructs with the dependent construct "The Acceptance of e-Training". Multiple regression test used Beta coefficient values in order to measures how strongly each independent construct (System Functionality, Human Capabilities) affects the dependent variable (e-Training Acceptance). The following sections summarize the findings of the three hypotheses of this research

A. Hypothesis 1: System Functionalities and e-Training Acceptance

The hypothesis of System Functionalities was supported by the data analysis. This means the system functionalities has a positive influence on the adoption process of e-Learning system. Furthermore, the mean for the system functionalities were 3.9709 as shown in Table II which presents a high result, this implies that organizations which used the e-training system were very careful to include the main functionalities such as interactivity, flexibility, simplicity and ease of use in their systems since systems with higher functionalities are more likely to be accepted and used by the organizations' employees.

TABLE II.
SYSTEM FUNCTIONALITIES MEANS

Variable	Mean
Sys. Has Interactive material (R1)	3.7955
Sys. Is Flexible (R3)	4.0625
Sys. Is Up to speed (R4)	4.1875
Sys. Is Simple (R6)	3.8381
System functionalities	3.9709

The regression analysis found that the Standardized Coefficient β for the System Functionalities was 0.105 which means that System Functionalities has 10.5% of the influence on the acceptance of e-Training system. In other words it shows how much it is possible to predict the acceptance success by knowing the System Functionalities available in any organization.

In addition the result shows that organizations insist to choose a system with high speed in which employees can retrieve data quickly without problems since it has the highest mean with (M=4.1875). Another important functionality is the flexibility in which the system can be updated and customized continuously according to the employees' needs, preferences and changing requirements,

since it has the next highest mean (M=4.0625) as shown in Table II.

The lowest mean for the interactive training material which means there is lack of interactive system and it need improvement since interactive contents such as online videos, audio files, online discussion and whiteboards presents a very essential for employee acceptance success (Chapnick, 2000; Gareis, 2005). The functionality of information organization was deleted due to validity test after the factor analysis.

B. Hypothesis 2: Human Capabilities and e-Training Acceptance

The results of the quantitative analysis show that there is a positive relationship between the human capabilities and e-Training acceptance. This means when the employees have the needed skills they will be more willing to use the system. This is coherent with what Minton (2000), Chapnick (2000), Broadbent (2001), (Sullivan, 2002) mentioned about the importance of having individual technological competences, as the fear from technology presents the main reason behind people resistance to the new system (Sullivan, 2002; Minton, 2000).

The regression analysis found that Standardized Coefficient β for the human capabilities were 0.110 which means that the independent variable human capabilities have 11% impact on the success of acceptance process. In other words, it is possible to say that the success of e-Training acceptance depends 11% on human capabilities, so when the level of human capabilities is known it is possible to predict 11% of the adoption.

The analysis shows that offering the training courses has the highest acceptable mean as shown in Table III; this implies that organizations make sure to offer the needed training courses for their employees in order to be able to use the system. This confirms the previous research about the importance of training employee on the system before launching it (Rosenberg, 2006; Cross and Dublin, 2002, Minton, 2000). Having the needed computer skills coming next with mean (M=3.7216) which present a high value and indicate that the people in organization are skillful which decrease their fear from new technology and consequently their resistance to new e-Training system. Having high self-efficacy and ICT experience was deleted after the validity test, this doesn't mean they are not important.

TABLE III.
HUMAN CAPABILITIES MEANS

Variable	Mean
Emp. Have computer skills (R7)	3.7216
Org. Offer training courses (R8)	4.0455
Human capabilities	3.88355

C. Hypothesis 3: Financial Resources and e-Training Acceptance

This hypothesis was not tested at all because it didn't pass the Cronbach alpha of reliability test. However, this does not mean it is not essential for the adoption of e-Training. The inconsistency in employees' response may be due to their poor knowledge about the financial issues. Managers are more concerned with financial side, while

the questionnaires was distributed among the users whom almost from operational employees who have few information about budget and sponsorship.

TABLE IV.
FINANCE RESOURCES MEANS

Item	Mean
Org. Has sponsorship (R11)	3.8011
Org. Have learning budget (R12)	3.8977
Org. has an adequate fund (R13)	3.9375
Org. has enough financial resources (R14)	3.8011
Finance Resources	3.85935

The company needs financial resources in order to afford e-Training initiatives, implement and maintain the system, continuously buy learning material and other expenses. This study confirms the previous research on the importance of finance to e-Training success such as (Broadbent, 2001; Chapnick, 2000; Anderson, 2002; Rosenberg, 2006). Although this hypothesis was not tested but it has to be taken into consideration before deciding to adopt new system, since the organization has to make sure it has the needed fund and proper budget to implement and maintain the system otherwise it will not succeed.

V. RESEARCH CONTRIBUTIONS AND RECOMMENDATIONS

This research can provide an important contribution to the knowledge domain as the first exploratory empirical study in Jordanian organization. Moreover, this research used quantitative methods which provide an important contribution at the practical level and can enhance the reliability and validity of the results. In addition, this research may present the first empirical study about factors which affecting the acceptance of e-Training systems inside Jordanian organizations. All previous researches found by the researcher were descriptive and theoretical.

As for the Recommendations, first of all, the organization must start by assessing the factor which increases the level of acceptance of e-training systems. They have to study the e-Training system and make sure it is customized according to their exact needs and it includes all important functionalities that encourage employees to use the system such as interactivity, flexibility, speed and simplicity. Moreover, they have to make sure they have the appropriate environment with the needed infrastructure, equipments and technical support before starting to implement the e-Training system. Also, organizations should make sure that their employees have the needed skills to be able to use the system and give them the needed training before launching the system. In addition, it is important to find proper sponsorship and allocate sufficient part of the budget and financial resources for e-Training system needs to avoid any financial problems.

REFERENCES

[1] Al-Alawi et al., 2007, "Organizational culture and knowledge sharing: critical success factors", JOURNAL OF KNOWLEDGE MANAGEMENT, VOL. 11 NO. 2 2007 pp. 22-42, Q Emerald Group Publishing Limited. [doi:10.1108/13673270710738898](https://doi.org/10.1108/13673270710738898)

[2] Anderson, T. (2002). "Is e-learning right for your organization?" Learning Circuits: ASTD's , published January 2002, from, http://gc21.inwent.org/ibt/en/site/gc21/ibt/permanent/publicforum/dok/is_elearning_right_for_your_organization.pdf

[3] Aydin, C. H., & Tasci, D., 2005, "Measuring Readiness for e-Learning: Reflections from an Emerging Country". Educational Technology & Society, 8 (4), 244-257

[4] BISCHOFF Michael et al., 2003, "A Model for Systemic Change Management in Education", International Conference on Education and Information Systems: Technologies and Applications (EISTA '03), Orlando, Florida

[5] Broadbent, B., 2001, "Tips to help decide if your organization is ready for e-learning", available on <http://www.serprofessor.universitario.pro.br/ler.php?modulo=11&texto=700>

[6] Chapnick Samantha, 2000, "Are You Ready for E-Learning?", published November 2000. http://gc21.inwent.org/ibt/en/site/gc21/ibt/permanent/publicforum/dok/are_you_ready_for_elearning.pdf

[7] Cocea Mihaela and Weibelzahl Stephan, 2006, "MOTIVATION – INCLUDED OR EXCLUDED FROM E-LEARNING"

[8] Cross Jay and Dublin Lance, 2002, "Implementing E-Learning". ASTD

[9] Gareis Karsten, 2005, "eLearning for Work: The Role of Access, Motivation and Competence in Explaining Uptake", Paper for ITA 2005, Preston

[10] Minton, M. C. ,2000, "Is your organization ready for e-learning? Seven key questions you need to answer". Communication Project, Inc., 3 (1), from, <http://www.comproj.com/Minton.htm>

[11] Mungania Penina, 2003, "The Seven E-Learning Barriers Facing Employees", The MASIE Center & e-Learning Consortium

[12] Myers, M and Avison, D., 2002, "Qualitative Research in Information Systems: A Reader. Introducing Qualitative Methods Series", London, Sage Publications.

[13] Newman Adam, 2003, "measuring success in web-based distance learning" , EDUCAUSE center for applied research, Volume 2003, Issue 4

[14] Nininger R. James, 2001, "E-LEARNING FOR THE WORKPLACE". The Conference Board of Canada

[15] Oates, B, 2006, "Researching information systems and computing", London, Sage publications

[16] Orlikowski, W. and Baroudi, J., 1991, "Studying Information Technology in Organizations: Research Approaches and Assumptions", Information Systems Research 2(1), pp.1-28. [doi:10.1287/isre.2.1.1](https://doi.org/10.1287/isre.2.1.1)

[17] Rosenberg J. Marc, 2006, "Beyond E-Learning", John Wiley & Sons, Inc.

[18] 1.1 Senge, P. , 2004,. Interview: The future of workplace learning and performance. T&D Magazine, p. SS45.

[19] Stoltenkamp J. and Kasuto O.A.J, 2009, " E-Learning change management and communication strategies within a HEI in a developing country: Institutional organizational cultural change" available on <http://www.formatex.org/micte2009/book/720-727.pdf>

[20] Sullivan Christine, 2002, "Getting Organization to Adapt E-Learning From Challenge to Actoin.". New York Times.

[21] Van Dam Nick, 2007, 25 Best Practices in Learning & Talent Development, e-Learning for Kids Foundation © 2007

AUTHORS

O. Harfoushi (o.harfoushi@ju.edu.jo) is a Lecturer at Department of Business Information System at Jordan University. He used to work in different academic institutions in Jordan. His main research interests are in the field of applying Technologies in the business such as e-Business. Another main interest is the mobile business applications.

R. Obiedat (rubaobiedat81@yahoo.com) is an Assistant Professor at Department of Business Information System at Jordan University. Her main research interests are in the field of e-learning especially for business organizations.

Received September 8th, 2010. Published as resubmitted by the authors May 16th, 2011.