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# E-Training & Employees' Performance a Practical Study on the Ministry of Education in the Kingdom of Bahrain

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**Abstract**
The research examines the impact of e-training on employees' performance in the ministry of Education in the Kingdom of Bahrain. Efficient operation of business, relies heavily on high-quality employee performance, which in turn, requires competent training. To remain competitive and comply with the emerging labor market infrastructure, organizations are taking advantage of the evolved online technologies to train employees faster, and in a more effective way. Therefore, one of the researchers as being working in the ministry of education throughout a number of years, has indicated that there is a problem in terms of the readiness of the ministry of education to act upon e-training.The research adopts the analytical descriptive approach, utilizing a questionnaire to identify the impact of e-training on employees' performance. The selected sample consists of 194 employees working at the Ministry of Education. The research concludes that there is a positive and significant relationship between e-training and employees' performance as the value of the correlation coefficient was 0.358 while the simple regression coefficient reveals that the efficiency of the e-training influences the job performance by 25.3%. The results also indicates that there are statistical differences in terms of demographic variables such as (qualification, and job experience).
**Keywords:** E-training, technological infrastructure, efficiencies, e-training methods, employees' performance.

## 1. Introduction

The advancement of information technology has caused an evolutionary and paradigm shift in e-training in recent years. The demand for corporate training has grown exponentially allowing employees to be provided with an emulated e-learning without attending the traditional brick and mortar training. (Ramayah, 2012).

Over a decade, businesses are regularly using technology to deliver training programs for their employees due to a bundle of benefits such as cost saving in travel expenditures and training time, flexibility and delivery of training, diverse content availability, standardized and constant course delivery, permanent use of resources within the company, enhancing worker productivity, rise in the number of trained employees, staying competitive, etc. (Chen 2009; Womble 2008; Newton and Doonga 2007; Schweizer 2004; Burgess and Russell 2003; Bonk 2002; Nisar 2002; Setaro 2002; Sthrother 2002; Fry, 2001; Minton 2000; Tarr 1998).

Organizations have sought the most appropriate ways to deliver training effectively to their employees in their workplaces. Superior outcomes were gained from e-training, especially if additional learning resources were provided and in case the training course include some hybrid elements. (Hardman & Robertson, 2012).

Due to globalization, many businesses started to rely upon e-training because of its potentiality to reach mass groups of people in different districts or countries, decreasing costs, and disseminating efficient information. For many individuals, E-training is perceived as the preferred learning channel due to its global accessibility and reach. Through a mouse click over the internet, E-Training can occur anywhere. (Ellis & Kuznia, 2014).

According to (Bardach, 1997); (Taylor, 2002) E-training is similar to e-learning in numerous ways, especially in terms of the means of delivery and technology used. However, e-training refers explicitly to a shorter time than e- learning that is specifically designed to achieve a certain learning outcome or skill. Among the most common types of e-training are video conferencing and web-based training. This definition is in agreement with (Mohsin & Sulaiman, 2013) who stipulated that E-training is the use of technology by a trainer to deliver specific knowledge to an employee through a medium as internet or intranet.

In the training literature, academics revealed that the key intent of e-training is to enhance job performance and the extent of satisfaction felt by the trainee, and to create a productive workforce. Business leaders usually embark on E-training for various reasons, such as the attempt to create a unique advantage and the need for globalization. (Ellis & Kuznia, 2014).

## 2. Literature Review

The demand for alternative methods for learning is increasing exponentially. The use of corporate electronic learning (E-learning) is on the rise as many corporations have adopted E-learning for employee training and

learning to create a collaborative learning environment. E-learning is a technique designed to provide learning solutions using technology. (Chen, 2008) defined E-learning as combining technology with learning, delivered using telecommunication and information technologies, and a type of training delivered on a computer supporting learning and organizational goals. E-learning can include instructors divided into several categories: purely online, blended, or hybrid. Other forms of E-learning; led group, self-study, self-study with subject matter expert, web-based, computer-based (CDROM), and video/audio tapes. E-learning can be delivered using print (e-text, eBooks, e-zines), video (streaming video, video tape, satellite transmission, cable), audio (streaming audio, audio tape), reviews and exams (electronic, interactive, paper), and communication (asynchronous, threaded discussions, weblogs, forums) or synchronous-chat (videoconferencing, and teleconferencing).

(Chen, 2008) defined E-learning as combining technology with learning, delivered using telecommunication and information technologies, and a type of training delivered on a computer supporting both learning and organizational objectives. The advancement of information technologies has contributed to the substantial growth in corporate e-learning (or e-training) in recent years. This revolution enables employees to obtain an intimate learning experience without attending a brick-and-mortar facility. As organizations strive to enhance their competitiveness by constantly promoting continuous learning culture, online training continues to grow in popularity as organizations strive to better meet their immediate and strategic needs for a flexible, well-trained workforce (Kosarzycki et al., 2002).

One reason why there is so much discussion around online learning is that there are many purported benefits and uses of online learning. Some of the most important ones are: its effectiveness in educating students, its use as professional development, its cost-effectiveness to combat the rising cost of postsecondary education, credit equivalency at the postsecondary level, and the possibility of providing a world class education to anyone with a broadband connection (Bartley & Golek, 2004; De la Varre, Keane, & Irvin, 2011; Gratton-Lavoie & Stanley, 2009; Lorenzetti, 2013). What has gained most of the attention for online learning is the postsecondary education arena. The rising cost of postsecondary education and the importance of a postsecondary degree are well documented in the literature.

E-learning use by employees had varying correlations with job productivity, job performance, job satisfaction and organizational commitment. It was determined that the use of technology alone will not yield the desired results; corporations need to specify a balance between E-learning strategies and managerial support (Ellis, Kevin D., 2014). Hence, careful assessment and evaluation of real organizational learning benefits derived from e-training are required to justify the investment. Some of the important questions to raise are; “Are the employees satisfied with the e-training system provided by the organizations?”, and more importantly, “Are they willing to continue pursuing e-training in the future, and are the benefits articulated realized?” Understanding the critical factors that lead to user satisfaction and effective training outcomes is fundamental for organizations to reap the benefits of e-training. The present study therefore is an endeavor to determine the critical factors that influence e-training effectiveness in organizations.

(Christian & other, 2007) have examine the readiness of infrastructure has given very high influence on the job performance especially once they adept the handheld devices to be used as main references for the materials during training and after.

The intent of corporate E-learning is to improve job performance and satisfaction, and to create a productive and competitive workforce. Some corporate leaders typically embark on E-learning for different reasons, such as attempting to create a competitive advantage and the need for globalization. Other company leaders use E-learning to meet the demand for learning and reduce budget constraints. By gaining a competitive advantage, an organization’s executives can align their employee needs with strategic organizational goals. With globalization, corporate leaders need highly developed communication tools such as the Internet and other E-learning tools to reach stakeholders anywhere in the world.

Using the studies found on www.nosignificantdifference.org as an indicator of the effectiveness of distance and online learning. It would be observed that about 92% of all distance and online education studies found that distance and online education is at least as effective, if not better, than traditional education (Nguyen, 2015).

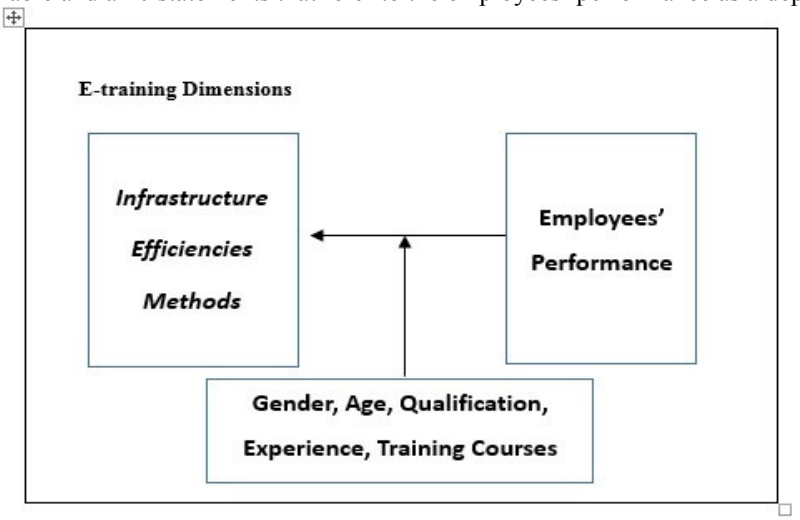
## 3. Methodology

To examine the impact of E-training on employees’ performance, a practical study was conducted on the employees working at the ministry of education in the Kingdom of Bahrain. This research employed the qualitative research approach through the use of a structured questionnaire to induce information from the targeted respondents.

To develop this questionnaire, the researchers reviewed all available researches to identify common attributes related to E-training and employee performance. Based on the literature review, the construct of the model consists of E-training dimensions (infrastructure, efficiencies, and methods). Measurements of items were adapted from the model developed by Baldwin & Ford (1988) and for the part of employee performance items

were adapted from the model developed by Thomson (2008).

These questions were then compiled into a 25 statements that measure the dimensions of E-training as an independent variable and a 20 statements that refer to the employees' performance as a dependent variable.




***Sample size***

The study sample targets the whole study population that was 194 employees working at the ministry of education in the Kingdom of Bahrain. A total of 157 questionnaires were received back, indicating a response rate of 80.92 percent.

Apart from demographic variables, all the others variables were measured using a five-point Likert type scale, where "strongly agree" was given five and "strongly disagree" at one.

***Data analysis Technique***

Data was analyzed via the Statistical Package for Social Science (SPSS) computer program version 18,Cronbach Alpha, Pearson Correlation, simple regression, mean, and standard deviation.

***Reliability***

The reliability of the survey was tested by Cronbach's alpha value for all the scales used in this research. The values of Cronbach's Alpha Coefficient was calculated for every dimension of the questionnaire. As illustrated in the table (1) the overall value of the Coefficient is high (0.791), thus confirming that the measurements used in this study had high internal reliability.

Table 1. Cronbach's Alpha Coefficient for the E-training and Employees' Performance

| **Variables** | **E-training Dimensions** | | | | **Employees' Performance** |
|---|---|---|---|---|---|
| *Dimensions* | ***Infrastructure*** | ***Efficiencies*** | ***Methods*** | ***Overall Value of E-Training*** | |
| *Cronbach's Alpha Coefficient* | 0.71 | 0.74 | 0.72 | 0.81 | 0.78 |
| *Significance* | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |

This table shows the Alpha Coefficient values for the dependent variable (E-training).It is noted that theses values are high and have a statistical significance at 0.01.

***Validity***

The validity of the questionnaire was examined through the use of the correlation coefficient, where it calculates the value of every statement as well as the overall value of the questionnaire as illustrated in table (2).

Table 2. Alpha Coefficient and Correlation Coefficient for each statement and the overall value for the E-training dimensions.

| Serial | Statements | Alpha Coefficient for every statement | Correlation Coefficient of every statement to the dimension |
|---|---|---|---|
| **First Dimension : E-Training Infrastructure** | | | |
| 1 | Necessary communication services with high quality, such as Internet, are available at the Ministry of education. | **.711** | **.755** |
| 2 | IT support and other maintenance infrastructure for communication services are available at the Ministry of education. | **.743** | **.832** |
| 3 | There are virtual training halls at the Ministry of education to simulate live or recorded lectures to the audience on E-Training Portal. | **.827** | **.876** |
| 4 | The content of the training courses are prepared for trainees through the identification of the respective training needs. | **.825** | **.812** |
| 5 | Training course activities are designed by a team dedicated to develop the electronic content of the course to assure achieving the required interactivity. | **.705** | **.865** |
| 6 | The ministry of education has a website accessible to all employees that provide electronic interactive courses, | **.624** | **.903** |
| 7 | Organization and delivery of the training courses content offered by the ministry of education adhere to international standards. | **.711** | **.910** |
| 8 | High standards of support and assistance to develop training content are available. | **.733** | **.810** |
| **Second Dimension : Efficiencies** | | | |
| 1 | Trainers have competent knowledge in regards to the education concepts, information communication technology (ICT). | .926 | .843 |
| 2 | Trainers have adequate knowledge of the e-training content. | .977 | .890 |
| 3 | As a trainee, I feel that trainers have competent knowledge in managing the e-learning and managing the e-content | .980 | .853 |
| 4 | The skill of managing trainees' database by trainers is satisfactory. | .911 | .672 |
| 5 | Trainers are competent in planning and managing E-Training | .932 | .811 |
| 6 | There is a high standard of organizing the training content and its delivery. | .845 | .835 |
| 7 | There is a high standard of communication through e-mails, forums and e-chats. | .777 | .865 |
| 8 | Trainers possess high standards of managing e-assessments and e-exams. | .781 | .830 |
| **Third Dimension: E-Training Methods** | | | |
| 1 | Trainers use interactive platform with trainees in the ministry of education | .941 | .906 |
| 2 | Trainers use visual electronic applications. | .942 | .856 |
| 3 | Trainers use simulated electronic applications. | .982 | .900 |
| 4 | Trainers use electronic games. | .982 | .906 |
| 5 | Trainers use virtual applications. | .981 | .952 |
| 6 | Trainers use electronic chats. | .980 | .853 |
| 7 | Trainers use electronic brainstorming | .911 | .672 |
| 8 | Trainers use electronic coordinated approach. | .942 | .889 |
| 9 | Trainers use electronic compact approach. | .921 | .804 |

Table 3. Alpha Coefficient and Correlation Coefficient for every statement and the overall value for job performance dimension.

| Serial | Statements | Alpha Coefficient for every statement | Correlation Coefficient of every statement to the dimension |
|---|---|---|---|
| **Job Performance Dimension** | | | |
| 1 | Rarely, I have to postpone my tasks to another time slot. | .911 | .672 |
| 2 | I am keen to maximize the benefit of my working time. | .909 | .845 |
| 3 | I feel that I perform my tasks in a way that exceeds my superiors' expectations. | .980 | .712 |
| 4 | I am aspiring to get assigned for new tasks in addition to my key duties. | .942 | .889 |
| 5 | I believe that my mistakes ratio in performing my duties is low. | .983 | .833 |
| 6 | I perform my duties accurately without requiring extra time. | .887 | .712 |
| 7 | I am punctual. | .931 | .814 |
| 8 | I suggest new ideas to develop performance. | .911 | .879 |
| 9 | I suggest innovative procedures to perform the job smoothly. | .827 | .876 |
| 10 | I am tightly restricted to perform the assigned tasks in compliance to the job specifications. | .910 | .672 |
| 11 | I do not face any difficulty in adapting to the emerging changes in my duties from time to time. | .777 | .865 |
| 12 | I possess the ability to solve exceptional issues even though it is beyond my tasks. | .932 | .812 |

## 5. Results & Discussions

*Testing Hypotheses*

The hypothesized relations in the proposed casual model (Figure 1) was tested with the help of Pearson Correlation Coefficient as follow:

**H1**: There is a significant relationship between e-traing and job performance of employees at the ministry of education in the Kingdom of Bahrain.

**H2**: There is a significant relationship between e-traing infrastucture and job performance of employees at the ministry of education in the Kingdom of Bahrain.

**H3**: There is a significant relationship between e-traing methods and job performance of employees at the ministry of education in the Kingdom of Bahrain.

**H4**: There are statistical differences in the levels of job performance due to the demographic variables (gender, age, qualifications, experience, and training courses).

To test the first hypothesis, researchers have calculated correlation coefficient among the independent variable dimensions; e-training and the dependent variable, job performance as shown in table (4).

Table 4.Pearson Correlation Coefficient between e-training and job performance dimensions

| **Variables** | | **E-Training Dimension** | | | |
|---|---|---|---|---|---|
| | | **Infrastructure** | **Efficiencies** | **Methods** | **Overall Degree** |
| **Job Performance** | **Correlation Coefficient** | 0.365** | 0.513** | 0.503** | 0.586** |
| | **Statistical Significance** | 0.01 | 0.01 | 0.01 | 0.01 |
| *** Correlation is significant at the 0.05 level ** Correlation is significant at the 0.01 level** | | | | | |

It is clear from the correlations matrix that all e-training dimensions are strongly correlated with the job performance as all correlations were significant at the level (0.01).

Moreover, the research has illustrate the highest correlation received 0.586 were between infrastructure and job performance, this confirm with the findings reported by (Christin & other, 2007) which indicates that infrastructure is perceived higher than the other dimensions.

Methods dimension has received the second highest correlation with 0.503 to job performance, this

findings confirm with the research by (Prince F., Kevin D., 2014) which indicates that a balance between e-learning strategies and managerial support give good result on job productivity, and job performance.

Finally, the efficiencies dimension received the last in the correlation result by getting 0.513 to job performance due to some of the factors in the demographic date which give certain point of views by the tested sample as will be discussed in the second hypothesis test.

It is noted that the highest correlation between the overall e-training dimensions to job performance received 0.586 which evidences that implementing e-training raises employees' job performance at the ministry of education in the Kingdom of Bahrain.

To confirm the degree of impact, the researchers have used simple regression analysis as shown in Table (5)

Table 5. Simple Regression results identifying the overall value of e-training on job performance

| Source of Variation | Sum of Squares | Degree of Freedom (DF) | Mean Squares (MS) | Correlation Coefficient | Coefficient of Determination | F Ratio | Level of Significance at ( F) |
|---|---|---|---|---|---|---|---|
| Regression | 3011.85 | 3 | 1003.95 | 0.630 | 0.397 | 41.751 | 0.00 |
| Residual Value | 4568.72 | 190 | 24.04 | | | | |
| Total | 7580.58 | 193 | | | | | |

From the simple regression results, it was clear that there is an impact with statistical significance for the three e-training dimensions on the job performance. This can be demonstrated by the high value of calculated (F) where the significance was less than 0.00 which is lower than (0.01-0.05) and this is supported by the correlation coefficient that was (0.630) which indicates that e-training influence the level of job performance by 39.7% and this is based on the coefficient of determination (R2 = 0.397).

Based on the findings, the hypothesis "There is a significant relationship between e-training and job performance of employees at the ministry of education in the Kingdom of Bahrain" was accepted.

In order to test the second hypothesis, researchers have analyzed and interpreted the demographic data and have portrayed the respondents profile through the use of the mean, standard deviation, T-test and ANOVA to confirm the variance between the dependent dimensions and its impact on job performance as follow:

1- Gender:

The revealed results showed that there are significant differences at level (0.01) for the employees working at the ministry of education in terms of gender, except the efficiencies dimension at level (0.05). Differences in gender were high in females for all dimensions of e-training (infrastructure, efficiencies and methods). This indicates that females have positive perception regarding e-training more than males. However, there are significant differences between males and females in the job performance. Based on this finding, the hypothesis is accepted.

2- Age:

In terms of age, the revealed results through the use of ONE WAY ANOVA showed that there are no significant differences at level (0.05) for the employees within the age range of (25-40 years). This finding rejects the hypothesis and accepts the alternate one.

3- Qualifications:

The revealed results showed that there are statistical significant differences at level (0.01) associated with qualifications for all e-training' dimensions. The differences among all employees for e-training' dimensions were for those who are holders of post studies and this can refer to their perception that the more qualifications the employee possesses, the greater the opportunity he/she has pertaining to e-training. Whilst, differences among employees regarding job performance were statistically significant at level (0.01) for those employees who have a bachelor degree, as their opinions were the highest in regard to this variable. Therefore, the hypothesis is accepted.

4- Experience:

In terms of experience, the revealed results showed that there are significant differences for all e-training' dimensions, except the infrastructure dimension. Statistical significant differences were found at level (0.05) for the deficiencies dimension, as the result showed significant relation at level (0.41). The method dimension was significant at level (0.17), and the infrastructure dimension was non-significant at level (0.285). Whereas, differences among employees regarding e-training and job performance were statistically significant at level (0.05). Thus, this finding accepts the hypothesis.

5- Training Courses:

In terms of training courses, the revealed results showed that there are no significant differences for all e-training' dimensions. Statistically, there were non-significant differences found at level (0.05); for the infrastructure dimension, it showed non-significant relation at level (0. 675); for the efficiencies' dimension, it was non-significant at level (0.952); and for the methods' dimension, it was non-significant at level (0.510). Whereas, differences among employees regarding e-training and job performance were non-statistically

significant at level (0.05). Thus, these findings reject the hypothesis and accept the alternate one.

## 6. Management Implications and Conclusion

As a result of the knowledge acquired from this study, the following practical implications are identified:

- The study highlights the importance of e-training and its impact on job performance, therefore top management at the ministry of Education should pursue an e-training strategy. This will allow an extent of flexibility through entitling employees to further authorities that will reinforce employees' confidence and raise their desire to bear extended responsibilities.
- The Ministry of Education should assure that the e-training system is integrated in an attractive, and interactive interface to achieve the intended outcomes.
- The study draws attention to the vital role of support that the Ministry of Education would exert to assure the success of e-training and the extent of trainee' satisfaction.
- The authors concluded that an organization's long-term success is essentially determined by spreading a culture of e-training among employees towards high job performance results.
- Suggestions to involve all employee in the e-training practices and programs made by the ministry of Education as a result of the research highlight the positive impact on the job performance within the ministry.
- For future implications, more data is required to validate and enhance the framework that may include comprehensive dimensions, work environment and implementation plan.

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