

Investigation of the Effectiveness of Online Education on Employees Productivity

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Key words: *e-learning*

Abstract:

This quantitative study is designed to discover and investigate the productivity level of the employees in relationship to the degree they earned, it compares the productivity of those employees who earned their degree by online institutions and the productivity of those who earned their degree by conventional classroom institutions. Employees with master degrees and PhD degrees were selected from different organizations in Jordan, and the collected data was analyzed using ANOVA and the T-test. The result of the study was that there is no statistical significance difference between those who received their degree by online education and those who finished their degree by a conventional classroom education.

1 Introduction

Online education is well-known by an educational effort where the instructor and the student can be separated by large geographical area. The field of online education had been faced numerous development through out the last years. One of the important characteristics of online education is the communication between the students and the instructor, which is done through the e-mail, or blackboard, or any other electronic tools, just like posting the student work on the web, audio or video conferencing. There is no face-to-face communication between them. However the universities and companies in Jordan prefer to hire employees because they graduated from accredited traditional institutions and that means there exist a gap in understanding the effectiveness between the online education and the classroom education, and this leads the companies' recruiters in Jordan to give more chances to the traditional educated over the online educated. One of the key causes for this perception is the limited knowledge of these companies about the effectiveness of the online educated, compared with traditional classrooms educated. The Purpose of this study is to explore and assess the effectiveness performance of employees in Jordan universities and companies who earned their degree from an accredited colleges compared to those who earned their degree from traditional class room colleges, this quantitative study will employ only those who finished their higher educations, masters and PhD's, in both ways online and traditional. This will help both the recruiters and the employee to focus their effort while choosing and perusing their education, the finding of this research will help the recruiters better taking their

decision while hiring , and will also help the student better choose the institution that he want to pursue his education in and the way he want to do that.

2 Research question and the hypotheses

The research is designed to explore the level of productivity the employee have, in relation to the type of education he obtained. , so the question of the research is as follows:

Does the productivity level of an employee rely on the type of education he earned?

In this research we have a null hypothesis (Ho) and alternative hypothesis (Ha), in which both of them were designed to discover the difference between the performance levels of the employees who earned their master degrees or PhD's degree from online institutions or traditional classrooms institutions.

Ho: There is no difference between the performance level of the Jordan organizations employees who have earned their master degree or PhD degree by online institutions or those who have earned their master degree or PhD degree by traditional classroom institutions.

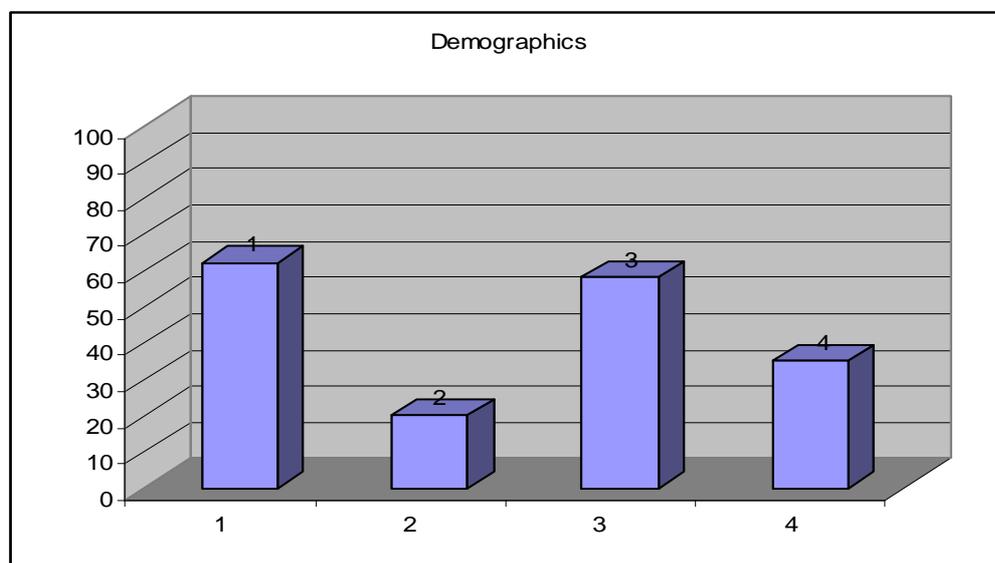
Ha: There is a difference between the performance level of the Jordan organizations employees who have earned their master degree or PhD degree by online institutions or those who have earned their master degree or PhD degree by traditional classroom. To measure the general hypotheses several hypotheses were also checked comparing the average performance of employees before getting their online degree to the average performance after getting the online degree, and before getting their classroom degree and after getting the degree.

3 Population Sample

The population for the research study comes from three different organizations in Jordan. These three groups were chosen as they provided a representation of employees who earned master and PhD degrees from both ways, online and classroom education. Initial way to contact these groups was by E-mail. A simple random sampling will be used, so each employee in the three groups will have the same opportunity of being selected for the sample. A 150 individuals were chosen from those who earned their degree form online institutions, and another 150 were chosen who earned their degree from a classroom intentions to be part of the this study population, the researcher have limited the selection of those employees to be part of the study population to those employees who have finished their degree and been at the job for at least six months. Excel will be used to administer the findings as well as the SPSS software which is a general statistical package for data management and analysis.

A pilot study was done on 10 participants to assure that the researcher is having the right instrument. The researcher delete the introduction and the demographic part , all the ten participants were asked to write in the comment part ,what do they think is the reason of the study and they were informed to delete any question that they think it is inappropriate. The researcher received e-mails back from the ten participants, and the result was that,

they all think that the reason for the study is to explore and evaluate the employee productivity before he obtained his degree and after he obtained his degree ANOVA is used to test the hypotheses and then SPSS reliability analysis were used to measure the reliability of the instrument ,in particular cronbache's alpha were used in which it ranged from -1 to +1 where -1 indicated instability of the instrument and +1 indicate stability of the instrument , the result was that alpha measure 0.9 which validates the instrument. Then an e-mail was sent to the 300 people and an eighty two from the online educated were responded and a ninety three of the classroom were responded.



1. online male 2. Online female 3. Classroom male 4. Classroom female

Figure 3.1 The demographic of the participants

4 Demographic Analysis

The final result of the participants was eighty two finished their degree by online. Sixty two of them were males and twenty were females. Seventy of the online participants were a master degree holder while twelve participants were PhD holders. Twenty of them were a master holder and females while fifty of them were a master holder and male .Twelve of the online PhD holders were male. Thirty seven of the online degree holders were in the age in twenty three to thirty while thirty eight were in the age between thirty one and forty. Only seven people of the online participants were in the age between forty one and fifty. Three of the online degree holders had been in their job for one year to three years and seventy nine were in the job for four to six years before getting the degree of master or a PhD by online education. Forty four of the online degree holders were in their job for

a year to three years after getting the degree and thirty eight of them were in the job for four to six years after getting the job.

The total number of participants who holds a degree through classroom institutions was ninety three, fifty eight of them were male and thirty five were female. Sixty nine of them were master degree holders while a twenty four were a PhD holder. Twenty nine of them were female and a master degree and forty were male and master degree holders, six were a PhD and female while eighteen were male and PhD holders. Forty four of the classroom participants were in the age of twenty three to thirty, and thirty one were in the age of thirty one to forty while eighteen were in the age of forty one to fifty. Twenty three of the classroom participants were in the job for one to three years and forty seven were in the job for four to six years before getting the degree and another twenty three were in the job for seven to ten years before getting the job. Fifty nine of the classroom participants were in the job for one to three years after getting the job, while thirty four were in the job for four to six years after getting the job.

5 Data Descriptive Statistics

It is used to present the quantitative data in a convenient form, and it consists of the following

- Graphics
- Tables
- Summary statistics

The following graphs illustrate the average employee productivity before online participants, after online, before classroom and after classroom respectively.

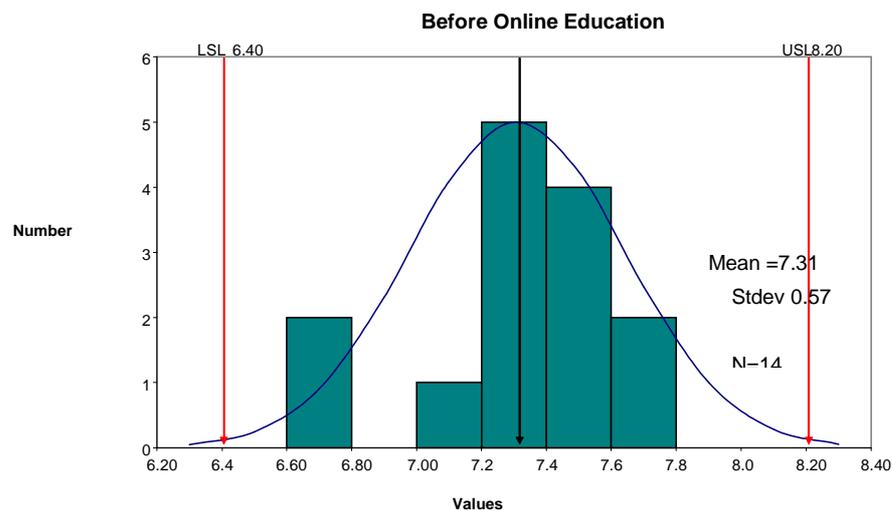


Figure 5.1 The average employee productivity before online

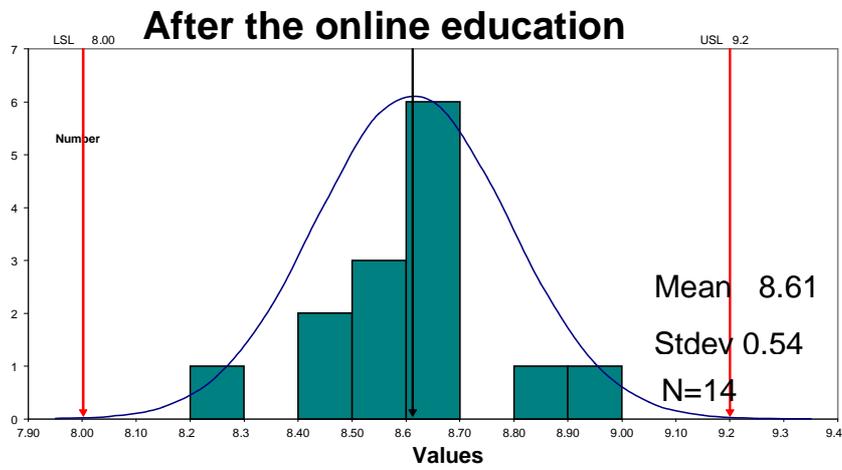


Figure 5.2 The average employee productivity after the online participants

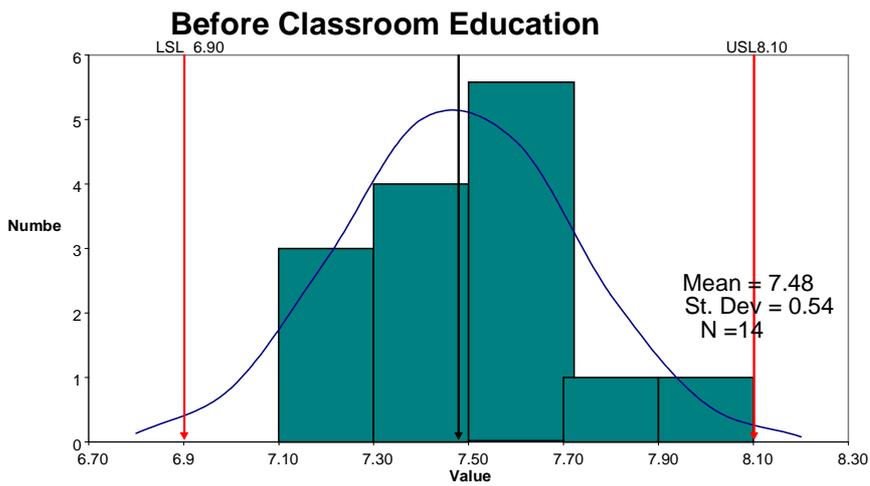


Figure 5.3 The average employee productivity before classroom participants

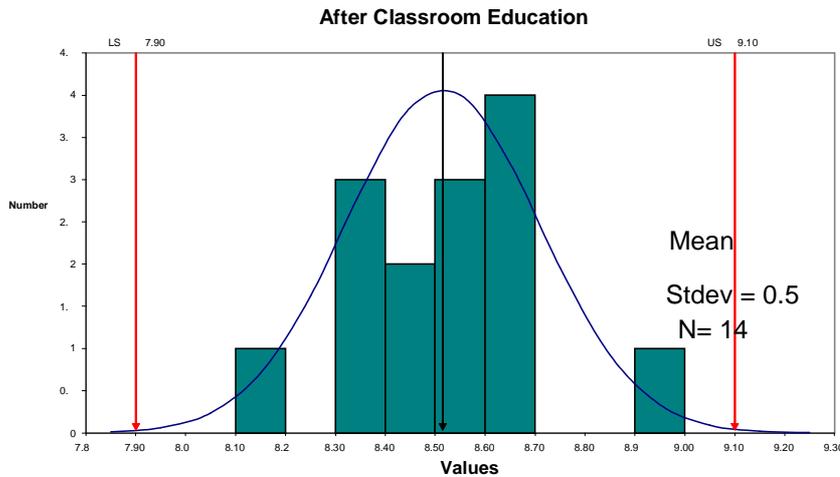


Figure 5.4 The average employee productivity after the classroom participants

As been shown from the previous graphs all of them were normally distributed, the over all average productivity of online participants before they earned their degree was (7.31 / 10) and after they finished their degree was (8.61/ 10) with standard deviation of 0.57 and 0.54. The Overall average productivity for the employees who finished their degree by class education was (7.48/10) and after they finished their education was (8.51 /10) with standards deviation of 0.5 and 0.54.

The variance in the average productivity of the employees before getting their traditional classroom degree is $(7.48 - 7.31) = 0.17$ that means the productivity of employees before getting their traditional classroom participants is higher than the productivity of employees before getting their online education by $(0.17 / 10)$. Similarly the variance in the average productivity of the employees after getting their online education is $(8.61 - 8.51) = 0.10$ which means the productivity of online participants is higher than the productivity of traditional classroom participants by $(0.10/10)$.

Therefore the conclusion of this descriptive statistics is that the average productivity of online educators is a little higher than the average productivity of traditional classroom educators when they received their degree , and the average productivity of online participants is less than the average productivity of classroom participants before receiving their degree.

6 Data Statistical Analysis

In this part the ANOVA analysis of variance will be used to analyze the data collected from the participants, and then compare the result of those who finished their degree online and those who finished their degree by classroom education , different hypotheses will be checked to compare the mean between group variance ,and within group variance by using the F-test. Then the t-test is also used to verify the result. The following null hypotheses and the alternative hypotheses were checked

H0: $\mu_1 = \mu_2 = \mu_3 = \mu_4$ where

μ_1 : The average productivity of the participants before they earned their online education.

μ_2 : The average productivity of the participants after they earned their online education.

μ_3 : The average productivity of the participants before they earned their classroom education.

μ_4 : The average productivity of the participants after they earned their classroom education.

Ha: $\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4$ which indicated to that one of the means is different than the others

Applying ANOVA leads to reject the null hypotheses and accept the alternative hypotheses and the conclusion was that, there is at least one mean is not the same.

The following hypotheses were also checked

Then several hypotheses were checked and by applying ANOVA and the t-test , the researched found that there was no statistical significance difference between the average performance before getting the degree online and before getting the degree by classroom and also there is no statistical difference between participants after getting the degree online and after getting the degree by classroom , while there was significance difference between the participants before online and classroom degree and after online and classroom degree .

7 Conclusion

Based on the findings of this study, the researcher found that there is no significant statistical difference between the productivity of the employees who earned their degree by online education and the employees who earned their degree by conventional classroom education, these findings were validated by using the ANOVA test and the T-test and they all give the same result. The conclusion of this study should enhance the employments of online degree holders by different organizations in Jordan. These organizations should improve the way they use when hiring a new employee by giving the online degree holder the same chance as they give the traditional classroom degree holder. The conclusion of this study should also influence the administrations in these organizations, by encouraging their employees to take online courses especially with the increase of accredited online institutions and that should affect the productivity of the organization as a whole. The conclusion of this study should also influence the institutions that provide the online education, by training the instructors and keeping up with the latest techniques that can keep the online education as good as the conventional classroom education, the finding of the study should also encourage the school who only focusing on the traditional classroom education, by planning to provide the online education in particular those school with a good reputations, and that will make it easy to those who like to join the school but they are far a way from it.

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