Moderating Influence Of E-Learning On Employee Training And Development (A Study Of Kwara State University Nigeria)

https://doi.org/10.21272/sec.6(2).83-93.2022

Kowo Solomon Akpoviroro, ORCID ID: https://orcid.org/0000-0002-0504-2248

PhD, Department of Business Administration, Kwara State University Nigeria

Oba Adenuga Olusegun Adeleke, ORCID ID: https://orcid.org/0000-0001-5390-0318

PhD, Department of Educational Foundations, National Open University of Nigeria, Nigeria

Corresponding author: kowosolomon@gmail.com

Abstract

With rapidly changing work environment and digitalization in social life, it is easier and effective to use electronic learning (E-learning) systems to train human resource. This training can cover various dimensions like technologies, product, services, culture and policies. This study examined the influence of E-Learning on employee training and development. Two research questions were posed for the study and two hypotheses formulated in line with the objectives. As such, the objectives of the study were to examine whether the employees with less workload spend more time on E-learning than employees with higher workload, thus handle larger responsibilities and how the trainings imparted through E-learning has influence on performance of the employees and service quality. The study employed survey research, the experimental research and the ex-post facto. For this research, the quantitative research design was used. Questionnaires were administered to a sample size of two hundred and sixty (260) employees out of the seven hundred and twenty six (726) employee population of Non Academic Staffs of Kwara State University Nigeria. The simple random sampling and the test re-test reliability approach was adopted. The research found out that E-learning is a facilitating step for improving the pace of learning and reducing employee down-time thus enabling employees to handle greater responsibilities. Thus it concluded that employees with less workload can be made more responsible by providing training through E-learning. And it was also revealed that E-learning improves performance of employees by enhancing their productivity which influences quality of work thus improves employee performance. Based on the results of findings, the study recommends that Learning interactivities designed to accomplish knowledge transfer with a heavy emphasis on skills development on online learning platform can be used for new hires and market including: Business operations, auxiliary services, guidelines and future markets which will enhance employees performance and service quality. Other e-learning solutions are important as they are self-directed and much easy than any other methods of training.

Keywords: E-learning, training and development, workload, larger responsibilities, performance and Service quality.

JEL Classification: M15, M53.


Received: 24.02.2022 Accepted: 18.04.2022 Published: 30.06.2022

Copyright: © 2022 by the authors. Licensee Sumy State University, Ukraine. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).
Introduction

The use of internet is important as many organizations are now adopting technologies to improvise the efficiency in routine operations (Wang, 2018). Due to international expansion of corporations, the opportunities of working with people from different countries have increased and training people from all those countries together is an issue which E-learning successfully addresses. Costello and Burmeister (2020) posit that in an era of constant learning and growing competition, many organizations ensure that the technology which they are using is so developed that their workforce can learn anything, anywhere, anytime with least manual efforts. To ensure that an employee possess requisite knowledge and skills to perform a specific operation, the importance of corporate training is undisputable for an organization (Morosini, 2020; Xiang et al, 2020). Primarily, corporate training is centered on knowledge transfer e.g. internal as well as external conferences and workshops are an important yet expensive part for every business.

E-learning is a tool which makes it easy, inexpensive and result oriented as sales people can get their training in dealing with new products and formulating sales strategies online from anywhere, anytime and through any device. E-learning can lead to reduced costs to impart training in a short span of time, especially when employees are scattered worldwide. Corporate learning however involves another dimension in training where learners as participants contribute in generating new knowledge and skills that assists in the growth and development of the organization. With the constant changes in all types of work environments brought by the knowledge economy and rapid changes in technology, it is needed to train and retrain people in new technologies, products, and services within the given environment (Broadbent, 2017). E-learning is a way of training which can assist an organization in achieving its goal and the overall competitive advantage of the organization (Akinbola, Alaka & Kowo, 2018). It can raise individual’s employability and corporate effectiveness by increasing knowledge base and skill base of the organization; also it can improve just-in-time training and employee’s control over learning. E-learning means all forms of electronically supported teaching and learning practices (Oh, 2019; Alfrahat et al, 2020).

Across the world, every business large or small, local or global is adopting E-learning as a tool to impart effective learning. E-learning in business refers to a kind of training delivered via computer to individuals or groups that helps in achieving organizational goals. The motive of an organization in adopting E-learning is to enable individuals to improve job performance and satisfaction, understand and learn the skills needed for the job and to create a competitive work force in the organization (Pngil. 2019; Garavan et al, 2019). Undoubtedly, the idea of e-learning over a period of time is spreading rapidly. E-learning in an organization can be defined as a kind of training delivered via computer that meets individual learning as well as organizational goals. The key to success of E-learning is to achieve the organizations strategic goals through reliable learning (Kowo, Akinbola & Sabitu, 2019). In order to do so, companies need to deliver high-quality training programs that potentially can offer good returns to corporations within their current training plans. All learning material is derived from the content within the E-learning system. Organizations generally use E-learning to help the learner improve job skills which lead to better performance and satisfaction and in-turn create a competitive work force for the company. Undoubtedly the success of E-learning is spreading rapidly. Zhang et al, (2019) opined that E-learning means delivery of a learning, training or education program through the medium of electronic tools. E-learning delivers content via computer or electronic device (e.g. a mobile phone) to provide training, educational or learning material.

Literature Review

Rationale for E-Learning

As we look back to the world of training before the inception of mobile devices and learning through internet, there was only ONE of each: One right place, one right time, and one right format. Training was conducted in a classroom by an instructor and learners at a predetermined time with paper guides created for the instructor and handouts for learners (Monolli et al, 2020; Pangil, 2019). Despite the fact that learning has taken various forms and formats over years, the classroom teaching has been de facto standard for corporate learning. And in many cases it still is. But with advancement in technology and availability of easy and affordable resources organizations are now adopting more advanced and technology driven methods of learning, primarily E-learning.
Although most of the organizations have similar reasons to adopt E-learning, but some of them have their own agenda for using it. One of the major reasons that draw their attention towards E-learning (Khandakar & Pangil, 2019) is its ability to align E-learning program with high-level business strategies, and its capacity to train entire workforce simultaneously to support these strategies. Use of technology to impart learning such as CD-ROM, DVD and Internet enables an organization to train its employees and potentially reduce the costs (Winhard & Sitzmann, 2018; Dignen & Burmeister, 2020). There are many reasons which attract organizations to implement E-learning for training such as, cost-effectiveness, free-format, flexibility that allows it to be adopted across multiple channels, learning as per the convenience of the learner and its ability to be tailored according to the organizational needs (Oh, 2019; Mikalef et al, 2018; Kowo, Akinbola & Popoola, 2019).

E-Learning Issues and Challenges

For an organization, E-learning is considered as a new training possibility and as an opportunity to save time and money. However, most of the time, poor quality learning experiences and a high percentage of losses are observed. The common challenges that an organization may face are:

1. Lack of learner's motivation - It is one of the most common E-learning challenges that E-learning experts must work on. Learners often have the preconception that traditional methods are more effective because they believe they can learn better in a familiar environment (Alharthi et al, 2019).

2. Busy schedule of the learners - Many employees resist joining an E-learning program because they believe that it will disturb their peace at work or it will demand more time. Also, trying to keep track of learner's progress could be the most difficult challenge to address (Zhang et al, 2019).

3. It offers no support - It is a myth that E-learning programs offer no support to the learners (Morosini, 2020).

E-Learning and Corporate Training

Corporate training is a method through which businesses can expand the knowledge base of their employees. Through regular and worthy training, employees can be made more productive, more focused on the core competencies of their business which in turn can raise the success level to gain a competitive edge over others in the industry (Pangil, 2019; Broadbent, 2017). Face-to-face training has become impractical due to scheduling and travelling issues, and often due to the costs issues too. In fact, this method requires more manpower and resources which would lead to slower business activities. With the introduction of E-learning system, businesses can expect to deliver successful training programs to their employees and ensure that they get benefited from it. Giant companies in Nigeria are also running their corporate training sessions through online LMS (Akinbola, Alaka & Kowo, 2018).

Training Videos and Computer Based Training (CBT)

Training Videos can be provided to supplement Computer Based Training (CBT). Now a day’s use of satellite mode is encouraged to provide online training to the users at various locations without restriction of geographical boundaries (Mikalef et al, 2018; Garavan et al, 2019). Courses can be outlined to focus on refurbishing operational knowledge and awareness, through intensive and interactive practice on power plant simulator during system malfunction. Such kind of on the job training will inculcate confidence in participants in carrying out their assigned tasks and potentially reducing unscheduled outages and revenue loss, providing better span of life equipment and thus increasing overall profitability in emerging market (Morosini, 2020). The only challenge here is to encourage and keep the spirit of learning high among the employees so that they themselves want to invest the time and efforts (Menollie et al, 2020).

Empirical Review

Naresh B., Dr. Bhanu Sree Reddy (2015), in the paper titled —Challenges and Opportunity of E-Learning in Developed and Developing Countries- This study compares the E-learning environment and its difference between the developing countries. This paper identifies the problems faced by those countries. The developing country faces more challenges like lack of infrastructure, trained instructors, lack of financial support,
Government policies and less student readiness. But E-learning provides more opportunity since it is in developing stage. The things that are to be learned from developed countries are support from the government, proper training regarding technology and awareness of E-learning and user’s readiness to learn new technology. If the developing countries could adopt the success factors of developed countries in terms of E-learning implementation, there is a huge potential for the growth of E-learning in developing countries since it has a large population and huge difference in student and faculty enrollment ratio. In developed countries, government provides financial support for developing E-learning with clear action plans for future proceedings. They have uninterrupted electricity supply and internet facility. Even though developed countries are strong in infrastructure, the challenges faced are found related to student engagement, student motivation, and high student drop out ratio. Opportunity for the developed countries is to implement successful E-learning models, which in turn improves the economic growth of the country. They increase productivity to maximum level with minimum effect by using ICT through which knowledge can be shared across the world. If proper steps are taken, challenges and the differences between the developed and developing countries can be minimized to a greater extent by implementing E-learning in higher education.

Priyanka Chauhan Indora (2014) highlighted in her paper titled — Training, E-Training and Technological Advancements in Cement Industry, the significance of training programme and technological advancement to sustain in corporate world. With growing competition at every level, organizations have to become more adaptable, flexible, responsive, and customer focused to succeed. The managers today are facing a complete new array of changes in technology. E-Training is a part of training programme. E-Training programme is easy to conduct but successful program is a challenge for management too. With the ongoing changes in technology, it’s important that organizations need to be aware of the technological advancements and changes in Information technology and provide training according to that. But E-Training cannot train technical aspects fully as equipment’s and machinery need physical presence for practical knowledge. It has guided a new path in cement industry also. These challenges can be defeated through technical, technological and informational training and E-learning of employees through various innovative ways and self-development practices too. This paper focuses on the technological advancement and how these advancements can be managed by training program. Technology is changing in a rapid way and it has become hard to manage too. It is not an easy task to train employees again and again by E-training. Training and development department have to be more focused over technical updates and make the employees to get updated on regular basis. Knowing in advance what type of situation might arise will help us to be better equipped for technological advancement via E-training or training. Employees, trainers and management all have to be proactive for technical aspects. Priyanka Chauhan Indora (2014) study concludes that E-training is very useful but it has also its limits. As per the survey, technical aspects should be dealt with training and E-training both as per the need.

Pramila Rao, (2011) conducted a study “E-learning in India: the role of national culture and strategic implications”. The main objective of this study is to understand the impact of national cultural dimensions on E-learning practices in India. India is considered as a significant player in the world economy today. US multinationals are constantly increasing their presence in India and understanding cultural preferences are helping global companies transition better. This research indicates that national cultural dimensions of power distance, uncertainty avoidance, group collectivism, and future orientation influence E-learning practices. This study distinguishes between synchronous and asynchronous methods of E-learning and the role of culture on the same. Future research can definitely test the proposed hypotheses empirically. This study provides strategic implications for MNCs with a guide sheet identifying the role of the various cultural dimensions on E-learning. In other countries these suggested strategies can be implemented by multinationals with similar national cultural dimensions also. This study further suggests a theoretical E-learning model identifying the impact of national cultural dimensions on E-learning practices. This research is also helpful to practitioners as it suggests implementation of a strategic model for E-learning initiatives in multinationals.

Nishikant Waikar (1990) in the report —Healthcare: E-learning in Indial, aimed to provide an effective and efficient system to introduce a premium quality based E-education in health sector. Demand for professional and technical education is rising with advent of the society to be prepared for the next century challenges of the
universe. Evolution through adaptation or adoption of technology is the only successful answer for this preparation. Teaching methodology and technology always maintains a closed cycle between them. Sometimes pedagogy involves technology and sometimes invents it. Whatever the relation is, highly personalized and efficient education system needs technology much more than anything else. This study reveals that online learning experiences can be highly engaging and thus highly conducive to learning. In short, global investigation into any area of knowledge is quite possible with the help of a computer with Internet communication. It has made professional and technical education more comfortable and uniform all over the world.

Juha P. Lahti and Tamimee Shinajarkey (2012) in the research paper titled — Corporate eLearning Position in Finnish Energy Business - Power Market Perspective. The paper aimed to assess position of e-learning as used in Finnish energy companies, particularly from power market perspective. Both technical and attitude aspects are approached. As a result, the study focuses on several areas of E-learning and poses the current position of corporate E-learning in Finland. It also reviews the relevant challenges faced by the companies under study and presents future scope of E-learning in the energy sector. Results show that in the companies under study average 7 per cent of the total training and learning is done through E-learning. As a part of research, the study aims to know how well E-learning is accepted in this specified field. The results show that in general the participants estimated their acceptance slightly more positive than average. Majority of the interviewees opines that traditional learning less risky to the core business as compared to E-learning. This is mainly for quality reasons. That's why E-learning is not seen as trustworthy in comparison to traditional approach. Statistically operational and technical personnel see E-learning less risky. Used platforms vary in significant scale and in practice almost every case company used different products or combinations of those in e-learning. In the case e-learning platform that companies commonly used was combination of commercial collaboration platform and intranet solutions. All interviewed groups saw E-learning role rising within coming 5 years. The highest expectations were in technical personnel and management groups, lowest in operational personnel. Again, the results were relativity similar and no exceptionally high variation noticed in groups or companies.

Research Methods

The methods adopted for carrying out this research include the survey research, the experimental research, and the ex-post facto. Quantitative research design was used. The total population of Non Academic Staff of Kwara State University is 736 which would form the basis on which sample size would be drawn. In order to have a more effective sampling, the Yamane formula would be adopted in determining the accurate sample size. A normal approximation with a confidence level of 95% and a margin of error 5% will be employ (Krippendorff, 2018).

The general formula is \( n = \frac{N}{1 + Ne^2} \)

Where: \( n \) = the sample size
\( N \) = population
\( e \) = error margin

Therefore, \( n = \frac{736}{1+736(0.05)^2} \)

\( = \frac{736}{1+736(0.0025)} \)

\( = \frac{736}{2.5} \)

\( = 260 \)

Sample sizes of two hundred and sixty (260) employees out of the seven hundred and twenty six (726) Non Academic Staff of Kwara State University were administered questionnaire to. Questionnaire was used for
collecting responses from the subject selected for the study; the test re-test reliability approach was employed for the convenience of the researcher (McDonald et al, 2019). The data were analyzed using (SPSS). The study made use of statistical tools such as regression analysis in testing hypotheses and ANOVA which helped in the interpretation of results (Krippendorff, 2018).

### Presentation of Data and Analysis

#### Table 1. Distribution of respondents and response rate

<table>
<thead>
<tr>
<th>Respondents Occupation</th>
<th>Questionnaire administered (sampled)</th>
<th>Percentage of total response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisory</td>
<td>160</td>
<td>68.1</td>
</tr>
<tr>
<td>Managerial</td>
<td>75</td>
<td>31.9</td>
</tr>
<tr>
<td>Executive</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>Total</td>
<td>235</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender/Category</th>
<th>Questionnaire administered (sampled)</th>
<th>Percentage of total response (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>151</td>
<td>64.3</td>
</tr>
<tr>
<td>Female</td>
<td>84</td>
<td>35.7</td>
</tr>
<tr>
<td>No of Returned</td>
<td>235</td>
<td>90.4</td>
</tr>
<tr>
<td>No of Not Returned</td>
<td>25</td>
<td>9.6</td>
</tr>
<tr>
<td>Total no of Questionnaires</td>
<td>260</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Survey 2021.

#### Table 2. The Descriptive statistics of E-Learning and Employee Training and Development

<table>
<thead>
<tr>
<th>Responses</th>
<th>Total (N)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workload, E-learning and larger responsibilities.</td>
<td>235</td>
<td>3.96</td>
</tr>
<tr>
<td>E-learning facilitating step improve the pace of learning and reducing employee down-time thus enabling employees to handle greater responsibilities</td>
<td>235</td>
<td>3.79</td>
</tr>
<tr>
<td>Workers are encouraged to work better seeing a large number of people retire at work</td>
<td>235</td>
<td>3.89</td>
</tr>
<tr>
<td>Learning technologies have the greatest impact on the training and development activities.</td>
<td>235</td>
<td>3.88</td>
</tr>
<tr>
<td>The major factor hindering employees training are time and budget.</td>
<td>235</td>
<td>3.98</td>
</tr>
<tr>
<td>ICT tools utilized for E-learning are less complex such as portals, multimedia or text-based content as compared to the complicated tools like content management or virtual classrooms</td>
<td>235</td>
<td></td>
</tr>
<tr>
<td>E-learning, improved performance and Service quality.</td>
<td>Total (N)</td>
<td>Mean</td>
</tr>
<tr>
<td>E-learning training empowered workforce and increased the productivity with tailor made solution for employees.</td>
<td>235</td>
<td>3.97</td>
</tr>
<tr>
<td>E-learning programs improved the efficiency and increase motivational level of a large number of employees across different locations.</td>
<td>235</td>
<td>3.68</td>
</tr>
<tr>
<td>There is a need for the development of uniform measurements to track the connections between learning, employee performance, and profitability.</td>
<td>235</td>
<td>3.87</td>
</tr>
<tr>
<td>In order to improve individual and organizational performance, evaluation and measurement must be vital components of the training process which enhances service quality</td>
<td>235</td>
<td>3.77</td>
</tr>
<tr>
<td>Employers who were engaged with the training system became more aware of and more satisfied with the E-learning services offered by training providers.</td>
<td>235</td>
<td>3.99</td>
</tr>
<tr>
<td>E-learning had varying correlations with employee productivity, job performance, job satisfaction and organizational commitment.</td>
<td>235</td>
<td>3.85</td>
</tr>
</tbody>
</table>

Source: Field Survey 2021.

### Test of Hypotheses and Discussion of Findings

Regression analysis was used to measure the effect of the independent variable to the dependent variable of all the hypothesis and proper interpretation and analysis techniques was used to explain the hypotheses testing.

#### Hypothesis One

**H0**: The employees with less workload do not spend more time on E-learning than employees with higher workload, thus cannot handle larger responsibilities.
H1: The employees with less workload spend more time on E-learning than employees with higher workload, thus making themselves capable to handle larger responsibilities.

Table 3. Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.442a</td>
<td>.195</td>
<td>.191</td>
<td>.41114</td>
</tr>
</tbody>
</table>

Note: a. Predictors: (Constant), Workload.

Source: Field Survey 2021.

Table 4. ANOVAa

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>9.538</td>
<td>1</td>
<td>9.538</td>
<td>56.423</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>39.385</td>
<td>233</td>
<td>.169</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>48.923</td>
<td>234</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: a. Dependent Variable: LARGER RESPONSIBILITIES (LR).
b. Predictors: (Constant), WORKLOAD (WL).

Source: Field Survey 2021.

Interpretation of Results

The results from the model summary table above revealed that the extent to which the variance in Larger Responsibilities can be explained by Workload is 19.5% i.e (R square = 0.195). The ANOVA table shows the Fcal 56.423 at 0.0001 significance level. Workload influences the Larger Responsibilities.

Table 5. Coefficientsa

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.126</td>
<td>.108</td>
<td>10.379</td>
</tr>
<tr>
<td></td>
<td>WORKLOAD</td>
<td>.351</td>
<td>.047</td>
<td>.442</td>
</tr>
</tbody>
</table>

Note: a. Dependent Variable: LARGER RESPONSIBILITIES.

Source: Field Survey 2021.

The coefficient table above shows the simple model that expresses how Workload influences the Larger Responsibilities. The model is shown mathematically as follows; \( Y = a + bx \) where \( y \) is Larger Responsibilities and \( x \) is Workload, \( a \) is a constant factor and \( b \) is the value of coefficient. From this table therefore, Larger Responsibilities (LR) = 1.126 +0.35WL. This means that for every 100% change in Larger Responsibilities, Workload contributed 35.1%

Decision

The significance level below 0.01 implies a statistical confidence of above 99%. This implies that Workload influences Larger Responsibilities. Thus, the decision would be to reject the null hypothesis (\( H_0 \)), and accept the alternative hypothesis (\( H_1 \)).

E-learning enables employees to handle greater responsibilities and time saving

This variable was taken to validate the hypothesis that E-learning makes employees with less workload more responsible to handle greater tasks. A Statistical significant difference was found in the opinions of the employees and it is accepted that a majority of employees agreed about E-learning as a facilitating step for improving the pace of learning and reducing employee down-time thus enabling employees to handle greater responsibilities. A significant difference was found in the opinions of the employees belonging to different organizations about the fact that E-learning enables employees to handle greater responsibilities by improving their learning speed and reducing downtime. This variable also helped in validation of the hypothesis that E-learning has influence on
saving employee time thus enables them to handle greater responsibilities. A Statistical significant difference was found in the opinions of the employees and it is accepted that a majority of employees opined that E-learning had significant influence on time saving and larger responsibility. As per above tables and comparing the opinions of the employees it was found that there was a significant difference in the opinions of employees, hence null hypothesis was rejected and it was accepted that E-learning courses enables employees to handle greater responsibilities by improving their learning speed and reducing downtime. Thus it can be concluded that employees with less workload can be made more responsible by providing training through E-learning.

**Hypothesis Two**

H0: The trainings imparted through E-learning do not results in improved performance of the employees and Service quality.

H1: The trainings imparted through E-learning results in improved performance of the employees and service quality.

**Table 6. Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.159&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.025</td>
<td>.021</td>
<td>.52726</td>
</tr>
</tbody>
</table>

Note: a. Predictors: (Constant), E-LEARNING.


**Table 7. ANOVA<sup>a</sup>**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.675</td>
<td>1</td>
<td>1.675</td>
<td>6.025</td>
<td>.015&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Residual</td>
<td>64.775</td>
<td>233</td>
<td>.278</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>66.449</td>
<td>234</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: a. Dependent Variable: IMPROVED PERFORMANCE AND SERVICE QUALITY (IPSQ).

b. Predictors: (Constant), E-LEARNING (EL).

Source: Field Survey 2021.

**Interpretation of Results**

The results from the model summary table above revealed that the extent to which the variance in improved performance and service quality can be explained by E-learning is 2.5% i.e (R square = 0.025). The ANOVA table shows the Fcal 6.025 at 0.0001 significance level. E-learning improved performance and service quality.

**Table 8. Coefficients<sup>a</sup>**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.605</td>
<td>.148</td>
<td>10.877</td>
</tr>
<tr>
<td></td>
<td>E-LEARNING</td>
<td>.197</td>
<td>.080</td>
<td>.159</td>
</tr>
</tbody>
</table>

Note: a. Dependent Variable: IMPROVED PERFORMANCE AND SERVICE QUALITY.

Source: Field Survey 2021.

The coefficient table above shows the simple model that expresses how E-learning affects the performance and service quality. The model is shown mathematically as follows;

\[ Y = a + bx \]

where \( y \) is Improved Performance and Service quality and \( x \) is E-learning, \( a \) is a constant factor and \( b \) is the value of coefficient. From this table therefore, Improved Performance and Service Quality = 1.605 +0.197EL. This means that for every 100% change in improved Improved Performance and Service Quality, E-learning contributed 19.7%
Decision
The significance level below 0.01 implies a statistical confidence of above 99%. This implies that E-learning affects Improved Performance and Service Quality Thus, the decision would be to reject the null hypothesis \( H_0 \), and accept the alternative hypothesis \( H_1 \).

E-learning improved performance of the employees and Service quality.
This variable helped in validation of the hypothesis that E-learning improves performance of employees by improving service quality. A Statistical significant difference was found in the opinions of the employees and it is accepted that a majority of employees either highly agreed or agreed about emergence of E-learning due to lowering down of service quality. This variable helped in validation of the hypothesis that E-learning improves performance of employees by enhancing their productivity. A Statistical significant difference was found in the opinions of the employees and it is accepted that a majority of employees opined that E-learning had significant influence on employee productivity. This variable helped in validating the hypothesis that E-learning positively influences quality of work thus improves employee performance. A Statistical significant difference was found in the opinions of the employees and it is accepted that a majority of employees opined that E-learning had significant influence on quality of work.

Conclusion
A Statistical significant difference was found in the opinions of the employees and it gets accepted as a majority of employees opined that E-learning was more effective in comparison to other practices. E-learning was found more effective in providing better interaction and understanding and in providing relevant and adequate vocational knowledge as a majority of employees agreed the facts. Most of the employees agree that E-learning was more effective in meeting needs of employees. A majority of employees disagreed that E-learning was more effective in providing knowledge to solve situation specific issues. A majority of employees strongly agreed or agreed about emergence of E-learning due to these reasons namely, inflexibility inherent in traditional methods, lowering down of service quality and delay in resolving urgent issues. However, no significant difference was found in the opinions of the employees belonging to different organizations about the aforesaid facts. A majority of employees neither agreed nor had any idea about E-learning’s emergence due to these reasons namely, Competition, Globalization, innovation of new products or techniques and increased customer complaints. A statistical significant difference was found among the importance given to different objectives of training and development through E-learning. Saving Costs was given the highest importance whereas Ensuring Quick Resolution of Issues got the least importance. A majority of employees opined that E-learning had significant influence on employees’ productivity. A majority of employees revealed that E-learning had significant influence on quality of work. A majority of employees agreed that E-learning had significant influence on time saving.

Recommendations
I. To sustain in competitive market, organizations have to emphasis on the specialist training packages that can be customized to meet each functional level requirement, including operational procedures as well as minimum safety directives applicable to each plant. Companies could start multiple learning and development e-programs, including Operator Certification e- programs. System / Maintenance Operator certification e- programs can be conducted to specific knowledge of job skills and reliability standards. It will also prepare employees to handle the inter-connected generation and transmission controls during normal and emergency processes. Each e-program can have features integrated progress reviews and knowledge assessments with automatic scoring and printable completion certificates.

II. Learning interactivities designed to accomplish knowledge transfer with a heavy emphasis on skills development on online learning platform can be used for new hires and market including: Business operations, auxiliary services, guidelines and future markets.
III. To help employees to meet rapidly changing market scenario, organizations have to strengthen its learning and development initiatives and should introduce e-learning for its employees in a big way. Common strategies or blanket application of strategies is not the only solution particularly for the environment where learning in chunks is appreciated and found as convenient.

IV. To improve employee performance and efficiency as per business needs, LMS and other e-learning solutions are important as they are self-directed and much easy than any other methods of training.

V. Training Videos can be provided to supplement Computer Based Training (CBT). Now a day’s use of satellite mode is encouraged to provide online training to the users at various locations without restriction of geographical boundaries.

Author contribution: conceptualization, Kowo Solomon Akpoviroro; data curation, Kowo Solomon Akpoviroro; formal analysis, Kowo Solomon Akpoviroro; funding acquisition, Oba Adenuga Olusegun Adeleke; investigation, Kowo Solomon Akpoviroro; methodology, Kowo Solomon Akpoviroro; project administration, Kowo Solomon Akpoviroro; resources, Kowo Solomon Akpoviroro; software, Oba Adenuga Olusegun Adeleke; supervision, Oba Adenuga Olusegun Adeleke; validation, Oba Adenuga Olusegun Adeleke; visualization, Oba Adenuga Olusegun Adeleke; writing – original draft, Kowo Solomon Akpoviroro – review & editing, Oba Adenuga Olusegun Adeleke.

Funding: This research received no external funding.

References


