Comparative Study of E-Learning Frameworks: Recommendation for Nepal

Niroj Paudel, Bishnu Maya Kharel, Ramesh Prasad Sah, Rajesh Shrestha

Abstract: E-learning is essentially the network-enabled transfer of skills and knowledge. E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. Content is delivered via the internet, intranet/extranet, audio or video tape, satellite TV and CD-ROM. This study is a reflection to the current scenario of how ICT is being used in education sector in Nepal that depicts how E-learning Framework aid to different districts of rural areas of Nepal. Since this research is based on fundamental research it is absolutely focused to enhance the knowledge of the researcher. Furthermore the study is vital by ICT education and services for instances E-learning would be the higher priority to deliver education in rural education areas due to its remoteness and unavailability of new technology and other resources, moreover, it may enable the researchers to carry out further detailed study on the subject matter and for students to carryout similar task related to this study.

The overall objective of this Study is to explore the practicability of E-learning application in context of Nepal, with special reference to aid provided by framework Nepal along with to acknowledge the practical consequences observed by framework Nepal after providing the E-learning services to various part of Nepal for access the practice of E-learning Frameworks. Also, recommend a suitable E-learning Framework for Nepal. This study is a reflection to the current scenario of how ICT is being used in education sector in Nepal that depicts how E-learning Framework aid to different districts of rural areas of Nepal. Since this research is based on fundamental research it is absolutely focused to enhance the knowledge of the researcher.

Key Words: E-learning, Nepal, Framework, fundamental research, ICT

I. INTRODUCTION

The overall objective of this Study is to explore the practicability of E-learning application in context of Nepal, with special reference to aid provided by framework Nepal along with to acknowledge the practical consequences observed by framework Nepal after providing the E-learning services to various part of Nepal for access the practice of E-learning Frameworks. Also, recommend a suitable E-learning Framework for Nepal. This study is a reflection to the current scenario of how ICT is being used in education sector in Nepal that depicts how E-learning Framework aid to different districts of rural areas of Nepal. Since this research is based on fundamental research it is absolutely focused to enhance the knowledge of the researcher.

Limited literatures were available concerning E-learning Framework in Nepal [14]. Since this thesis research is based on fundamental Research, it is absolutely focused to enhance the knowledge of the researcher. Furthermore the study provide contribution and application tool to the E-learning Framework Nepal. Alternatively, this thesis does not emphasize that E-learning is better rather it implies that though its use a better ICT education service can be delivered to most communities and population who are still not likely to familiar by ICT education and services[1].

For the literature review of this thesis, Study of E-learning frameworks implemented in different countries with respect to their success stories. (What framework, how it is implemented, why success, policy level) [At least 5 countries] has been given bellow with its report. E-learning is defined as Education via the internet, network or standalone computer. E-learning is essentially the network-enabled transfer of skills and knowledge [12]. E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration. Content is delivered via the internet, intranet/extranet, audio or video tape, satellite TV, and CD-ROM.

E-learning was first called “Internet-Based Training” then “Web-Based Training” Today we will still find these terms being used, along with variations of e-learning such as e-learning, E-learning, and e-learning.

II. METHODS

The data collected from questionnaire was analyzed quantitatively by categorizing and coding. After coding, SPSS statistical analysis software was used to analyze the data. Qualitative data from interviews was organized into relevant themes and concepts, then descriptions and discussions given. After analysis of both quantitative and qualitative data, it
was interpreted by use of descriptive narrations. The data analysis process also included the comparison between the responses and relevant documents to augment the quality of information across the whole E-learning data set. This conceptual research paper uses the latest cultural scores from the GLOBE study to predict the influence of culture on e-learning practices in India [7]. Most cultural studies on human resource management and training use national cultural dimensions of Hofstede which have been applauded and criticized for several methodological issues. Hofstede, the principal research investigator, analyzed data from a single multinational company (IBM) and its 53 regional subsidiaries from 1967-1970 to provide his pioneer work on national cultures to the research world. The respondents for his research were predominantly non-managerial employees and the survey was primarily used as a management diagnostic tool to understand the nuances in IBM’s overseas branches. In contrast the GLOBE research, conducted from 1994-1997, is a collaborative effort of about 170 researchers from 61 countries researching about 951 non-multinational organizations. The GLOBE respondents were managerial employees and this massive research was theory-driven, based on extensive academic literature. Apart from these methodological issues, the GLOBE research introduced cultural dimensions both at the organizational and societal level—therefore collecting two units of analysis (cultural practices or “as is” and cultural values “should be”). This is a distinguishing feature of this cross-cultural study. This study also introduced a new cultural dimension, performance orientation, not addressed in that of Hofstede’s. Scholars suggest that Hofstede’s studies did not measure feminine scores directly—lack of masculinity was considered feminine, but in contrast, the GLOBE project measured feminine scores parse. The results section provides the scores and hypotheses for power distance, uncertainty-avoidance, in-group collectivism, & future-orientation.

Finally, this study focuses on an economy that is moving forward in leaps and bounds. Multinationals are establishing to India at an increasing pace with about 15,000 joint-ventures in India today. Emphasizes that India and China are going to be the most successful emerging economies with India becoming the world’s “back-office” and China becoming the “factory of the world.” Multinationals should increase their awareness of cultural practices in these upcoming economies so that their international transitions are easier

### III. RESULT AND DISCUSSION

Data finding and analysis is an important stage of the research process. The main purpose of this chapter is to change it from unprocessed from to understandable presentation. This research is based on empirical research and researcher has used qualitative data analysis method to collect the data; that comprises words, research, observation and comparative to numbers. In a way it can be said that analysis is the example of human meaningful communication as because we start data analysis and evaluation of our research while we are in the field visit. On the other hand, it can be said that data analysis focuses on the presentation and analysis of data obtained from research interview or a description of the respondents who took part in the study.

Before going to the field visit at each school, due appointment with the school principal through the phone conversation has been taken. By the field survey the researcher got, all the information regarding each school.

Table-1: Summarization table about Total number of teachers, E-Learning trained teachers, total XO laptops provided by E-Learning Nepal in each school

<table>
<thead>
<tr>
<th>Schools</th>
<th>Teachers</th>
<th>Teachers trained by E-learning in Nepal</th>
<th>laptop provided by E-learning Nepal</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>92</td>
<td>45</td>
<td>476</td>
</tr>
</tbody>
</table>

From the above table it is analyzed that there are 92 numbers of teachers in total working in the surveyed schools out of which 45 teachers have been trained by the E Nepal providing 476 XO laptops to the schools.

Fig-1: Percentage of students who are using XO laptop at school

According to the researcher, the primary reason behind the discontinuity of XO laptop service in the student’s house is because of the frequent load shedding due to which the laptops could not be properly charged. Lack of proper knowledge and supervision could also be observed a major reason.
The above table shows that the students of each school have been using XO laptop to study Math, Science, Nepali and English subjects.

The researcher analyzed that the students are keen to study the social studies subject with XO laptop so they express their desire if E-learning Nepal could upgrade the software in XO laptop. As per the data has been collected by the researcher, the above table shows that the students from the respective schools take the help of the books to complete the homework at their home after they have not been allowed to take XO laptop at their home. Due to the technical problems such as load shedding it has hindered the XO laptops to work properly. Analyzing the responses of the students the researcher has concluded that the overall progress of the students have been enhanced as they are found very keen and familiar enough to use XO laptops and about how to extract extra activities to increase their English vocabulary, to learn the right pronunciation and to solve mathematical problems with the step by step technical process. Most of the students have not been showing interest towards teacher’s lecture but after the service of XO laptop they are very positive and fully concentrate on teacher’s lecture.

The researcher have found that most of the students of the surveyed schools have become confident, have become less hesitant to ask question in the class which eventually has grown their academic progress. Analyzing the responses of the students the researcher has concluded that the students express their

Table-2: Schools using E-Pustakalaya and Internet to study

<table>
<thead>
<tr>
<th>Number of Schools</th>
<th>Digital Library</th>
<th>Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

From the above table the researcher analyzed that four schools such as SCDPS, SSLSS, SSSS and SNLSS have been using digital library based on school server as well as internet for their studies whereas two schools such as SVGSS and SBSS have using only digital library for their studies.

Table-3: Number of respondents according to age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>No. of respondents</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-30</td>
<td>32</td>
<td>35</td>
</tr>
<tr>
<td>31-35</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>36-40</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

Fig- 2; Percentage of students who have accessed computers before their enrollment in school

In regard to the above illustration, the respondents stated that their children have not been familiar with the computers in their life prior to the service provided by the E-learning Nepal. They are extremely privileged to have the facilities given by such organization which they hardly know of and which has truly helped their children’s development and most importantly the children have become independent regardless of having to do the menial work.

Fig- 3; Percentage of parents satisfied with the service provided by E-learning Nepal
In response to the above question, the respondents of respective schools have expressed their gratitude towards SaajhaShikshya E-Paathi for their service in schools and said that they are extremely satisfied with the service of XO laptops that the children have been getting in the school by the help of E-learning Nepal.

![Fig-4](image)

**Fig- 4: Percentage of children who were attentive to his/her study before ICT education**

In regard to the above illustration, the respondents stated that they have not been much familiar with the facility of XO laptop. On this note, the 50 percent parents stated that their children had not been keen to their studies as they have been at the present time because of the study with entertainment service given by XO laptops.

![Fig-5](image)

**Fig-5 Percentage of respondents who opines that their children’s study education has been progressed with ICT**

In regard to the above question, the respondents have shown very positive attitude towards it. According to the respective respondents ICT education surely helped their children to increase their study level. Because of the help of XO laptop they can easily learn their mistakes, solve any problem, extract any kind of information, data related to any subjects on their own.

![Fig-6](image)

**Fig-6: Percentage of respondents who opines that ICT education is helpful to develop their children’s career**

From the above chart, the researcher analyzed that the respondents have strongly believed that ICT education is very fruitful to their children’s career which would also help their children in their higher studies to shape their career better.

![Fig-7](image)

**Fig-7; Schools and organization that have deployed E-Pustakalaya**
From the above illustration the researcher analyzed that 70% schools as well as organization have been using digital library inbuilt in XO laptop provided by E-Learning Nepal which is based on school server (intranet) as well as through internet for their studies whereas 30% have not been using digital library for their studies. According to the survey, the researcher concluded that with no doubt, the service is very knowledgeable and interesting, their system is dependent on manual library system therefore, and it is difficult for them to manage the system of digital library [16]. Furthermore, they do not have sufficient budget to provide free access to internet as well as effective infrastructure for the entire service.

From the above illustration the researcher concluded that 86% school organization running on offline server has been satisfied with the service of digital library on the other hand, according to Kathmandu Valley Public Library, they have not been satisfied with the maintenance system of E-learning Nepal and look forward for installation of offline, rest of other respondent school have not been shown their comment regarding to this question.

It was observed that student’s attitudes towards XO laptops are quite interesting. According to student’s perspective the use of XO laptops at school have been upgrading their experiences, knowledge which they have accounted for. Parents were also involved of every school. However, the researcher tried to know their level of satisfaction of ICT education/E-learning through XO laptop provided by E-learning Nepal. Parent’s response had been very supportive towards the researcher. During the field visit to schools, the researcher analyzed that all the teachers have shown their positive attitude towards the service of XO laptop, according to their view the researcher analyzed that not only has XO laptop enhanced the personal skills of the students but has made their teaching better, it makes their lecture more interesting to explain in the class. Before they had used marker, board and books to teach whereas these days they have been enjoying with XO laptop in the class demonstration. Most of the teacher stated that the students highly gave their participation in each and every lecture.

The respondents conveyed their views regarding the service of XO Laptop saying that it plays an influential E-learning in student’s learning process. The respondents suggested that it could be better if different kinds of books from the different categories like PSC, IT, Historical books etc. have been added to this online library to make more accessible to the general people.

The main implementation body, Schools of rural Nepal (that have been using the service of XO laptops), coordinates with multiple body: District Education Office, Community based organization, service center of e-learning Nepal and hardware and software maintenance department. In coordination with DEO it use the curriculum of Nepal Government, with community based organization it discuss about how to implement the software, with service center of e-learning Nepal it provide training to the related teachers to use the software, and with software and hardware maintenance department it gives its feedback out its computer systems

**IV. CONCLUSION**

The government of Nepal, a signatory to the convention of Convention on the Rights of the Child is under the obligation to provide every child their fundamental rights of education as defined in the treaty [8].

The students who have been using XO laptops (“MERO SANOO SATHI”) provided by E-learning Nepal opine that they really enjoy their study through XO laptops [14]. It has made their curriculum easier and enthusiastic then prior. So if the schools of the remaining districts would get to learn through E-learning then one cannot disregard the effective academic outcomes which would obviously contribute to the national development [11].

Development of ICT infrastructure [7] cannot be expanding without the development and expansion of information technologies. It is therefore necessary to develop, expand and mobilize this sector for socio-technological development of the country despite the country’s difficult and remote terrains, weak economic status and infrastructural systems. It is also necessary to develop and expand ICT infrastructures to improve quality education. It is a main foundation of E-learning applications. It will only be viable and reachable if these infrastructures, including transportation and electricity infrastructures, are strong and developed. Strategic plans, reforms, visions, and effective monitoring and evaluation systems are required from the government part in order to implement ICT infrastructures and at the same time private sectors should be allowed to actively participate in its development.

Thus, for XO laptop, the software should be developed and upgraded so as to make it an easy access to the children living in the remote villages.

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