SKILLS REQUIRED BY STUDENTS FOR VIRTUAL LEARNING IN TERTIARY INSTITUTIONS OF NIGER STATE

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Abstract
The study focused on student’s personal skills required for virtual learning in Niger State Tertiary Institution, personal skills are essential to enable students succeeds in virtual learning. Three research questions guided the study and a total number of 54 copies of structured questionnaire with five point likert scale were distributed and used to elicit information from the respondents and all the copies were retrieved given a return rate of 100%. Mean and standard deviation were employed to answer the research questions. A descriptive survey research design was adopted for the study; it was found that computer literacy skills, effective communication skills and independent learning skills were needed for virtual learning. It was also recommended that the college should organize information communication technology training programme for the Students with emphasis on communication skills. This will increase their level of communication and will make them reach out to the world beyond the classroom and communicate ideas in powerful ways, use technology effectively to access, evaluate, process and synthesize information from various variety of sources.

Keywords: Personal skills, Virtual learning and Tertiary institution

Introduction
In the present days Nigeria, there is a general demand for functional education, the important role of technology to the present and future human existence cannot be over emphasized. The socio-economic and technological development of any community or nation hinge on the level of qualitative educational attainment of the citizens, therefore, Niger State as a developing state can only achieve this by exposing her students at the tertiary institutions to Virtual learning which depend on the students’ personal skills. These skills are so essential for every 21st century child as a knowledge explorer.

Okorie (2001) defined skills as ease, rapidity and precision usually of muscular action. Skill refers to the ability to perform an act expertly or that expertness, practiced ability or proficiency displayed in the performance of a task. It is also a well-established habit of doing something, Osinem & Nwoji (2005). Garrison (1997) also sees skills as the ability to do something well arising from talents, training or practice. Skills are of different types, they include academic skills, occupational/technical skills and employability skills. An efficient skill developed raises hope for better utilization of resources for the nation’s industrial growth and development.

Personal skills are those skills that an individual should posses to enable him/her succeed in a Virtual learning environment; these skills are the computer literacy skills, self-motivational skills, effective personal communication skills, independent learning skills and personal commitment
skills (Crowley, 2002). To progress towards career goals tertiary education students must be successful not only in occupationally related skills, but also in personal, social and civic skills which are necessary to rewarding participation in the larger society. The acquisition of requisite personal skill is a means of increasing the productive power of a person or nation; those who are trained for jobs become wage earners. They turn out to be useful contributors rather than consumers of goods. Personal skill required for virtual learning is important for the development of intrinsic potentials in an individual, to enable people enhance their intellectual physical, social, emotional, moral, spiritual, biological, political and economic capacities, there is need to make provision for them to learn and acquire appropriate skills and express same. With this, individual's student can become aware of the challenges that are associated with a worthwhile life that will boost their career, stability and fulfillment in a world of competitive industry (Okorie, 2000).

Twenty years ago, cell phones, laptops, pagers, fax machines and internet were in the realms of scientists and science fiction; today those technologies and the Internet have gained widespread public acceptance and use. It is clear that in today's digital age, students must be technologically literate to live, learn and work successfully, Hoffman & Blake (2003). Most schools acknowledge the importance of technology to their students' futures, but to date few have successfully incorporated technology into the mainstream of academic learning, Hoffman & Blake (2003). Technological literacy is an essential component of job readiness, citizenry and life skills, students must not only become competent in the use of technology and associated applications, they must also be able to apply their skills to practical situation. Most experts agree that students should develop and improve their virtual learning skills in the context of learning and solving problems related to academic content.

Virtual learning has a key role to play as an enabler to help better manage complex information flow and to integrate them towards the maximization of human capacity and potentials. Virtual learning is the delivery of educational lessons through electronic medium anytime, anywhere. It can also be defined as employing information and communication technology to deliver instruction (Brooke, 2002). Virtual learning is a term frequently used interchangeably with Distance learning, Online learning, e-learning or web-based learning (Holstron, 2002). Virtual learning is seen as one of the modern instructional techniques that adopt the principle of artificial intelligence, that combine the power of massive data processing and computational power associated with modern computers (Webstar & Hackley, 1997).

In educational delivery system, Virtual learning can be achieved through the Internet, CD ROMs and computer base programme instruction either in the form of asynchronous instructor led instruction, synchronous instruction and blended instruction to compliment in-person teacher's instruction (Frick, 1991). Virtual learning is being developed to address individual learning styles and need, to provide opportunities for students at risk for dropping out of school because of pregnancy, high mobility and disciplinary problems to offer wider course offerings, particularly advanced courses and to accommodate the needs of accelerated learners who drop out of tertiary institutions. One of the main goal of tertiary education as stipulated by the national policy of education (FRN 2004) is to acquire social and intellectual skills which will enable an individual to be self-reliant and useful member of the society. These includes Virtual learning skills, and these skills holds great potential in supporting and augmenting existing educational as well as National development efforts and therefore, the need for the study in students' personal skills for virtual learning in Niger State Tertiary Institutions.
Statement of the Problem
Many exciting applications of information communication technology in schools validate that new technology based models of teaching and learning have the power to dramatically improve educational outcomes, yet the cost of technology, the rapid evolutions and the special knowledge, skills and aptitude required of its users pose substantial barriers to effective utilization (Hoffman & Blake 2003).

Information in Niger State College of Education are received in lecture format over the internet or virtual learning environment, this may hinder the students ability to adequately explore for knowledge over the internet using the computers. This may be due to inadequate training programmes and infrastructures put in place by government in the educational sector for students to acquire personal skills before the introduction of virtual learning facilities in Niger State College of Education.

Virtual learning holds great potential in supporting and augmenting existing educational as well as National development efforts. Virtual learning instructional technique is still face with several problems Hoffman & Blake (2003), if these problems are not addressed, the effectiveness of any Virtual learning programme will be reduced considerably and will not be adequately replicated both at the state and national levels and it is against this backdrop that this study is undertaken to fill this identified gap.

Research Questions
This study was guided by the following research questions
(i) What are the basic computer literacy skills required by students in Niger State College of Education for Virtual learning?
(ii) What are the personal effective personal communication skills required by students in Niger State College of Education for Virtual learning?
(iii) What are the independent learning skills required by students in Niger State College of Education for Virtual learning?

Methodology
The study was a descriptive survey research design, the design was considered most suitable for the study since information from the population posses the characteristics of the whole population under investigation. Niger State College of Education, Minna was the area of the study which is one the state own tertiary institutions. This area suits this study because it is believed that the acquisition of social and intellectual skills which will enable an individual to be self reliant and useful member of the society is best achieved at the tertiary institutions. The population for the study was 687 which comprise all the students of School of Technical Education, Niger State College of Education. A total number of 54 students were randomly selected as sample for the study from all the levels of the students of School of Technical Education.

Face validation was carried out on the structured questionnaire used for data collection by two experts from the Department of Computer Science, Niger State College of Education, Minna. The structured questionnaire was made up of two parts “I” and “II”. Part “I” is personal data, which indicated the category each respondent belongs. Part “II” is the questionnaire items which are made up of three sections A, B and C with specific observation skills used to elicit the
opinion of respondents. All the instruments administered were retrieved given a total of 100% return leaving a mortality rate of 0.0%. It was made up of 21 items from five likert-type scale to identify to which extent a skill is required for virtual learning.

The data collected from the questionnaire were analyzed using mean and standard deviation to answer each of the three research questions. In taking decision for the research questions, any item with a mean of 3.50 and above was considered as required, while any item with the mean less than 3.50 was considered as not required. Before the administration, the instrument was administered on 10 students of 300 level in the school of science, Niger State College of Education, Minna. Their responses were used in the computation of the reliability coefficient of the instrument using Pearson product moment.

**Result**

**Research Question 1:** What is the basic computer literacy skill required by student in Niger State College of Education for virtual learning?

**Table 1: Mean responses of students on computer literacy skills required for virtual learning in Niger State College of Education**

<table>
<thead>
<tr>
<th>S/No</th>
<th>Basic computer literacy skills required</th>
<th>X</th>
<th>SD</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ability to start, reboot and shut down a computer</td>
<td>3.76</td>
<td>1.22</td>
<td>Required</td>
</tr>
<tr>
<td>2</td>
<td>Ability to Log on to the Internet</td>
<td>3.60</td>
<td>1.23</td>
<td>Required</td>
</tr>
<tr>
<td>3</td>
<td>Ability to print a word processing document</td>
<td>3.58</td>
<td>1.39</td>
<td>Required</td>
</tr>
<tr>
<td>4</td>
<td>Ability to add a table to a document and edits rows and columns</td>
<td>3.55</td>
<td>1.33</td>
<td>Required</td>
</tr>
<tr>
<td>5</td>
<td>Ability to add a table to a document and edits rows and columns</td>
<td>3.67</td>
<td>1.23</td>
<td>Required</td>
</tr>
<tr>
<td>6</td>
<td>Ability to understand animation of movement</td>
<td>3.64</td>
<td>1.26</td>
<td>Required</td>
</tr>
<tr>
<td>7</td>
<td>Ability to vary font, size and style</td>
<td>3.53</td>
<td>1.33</td>
<td>Required</td>
</tr>
</tbody>
</table>

**Key**

N = no of respondents (54)
X = mean
SD = standard deviation

Table 1 above shows the mean responses of students on computer literacy skills required by students in Niger State College of Education for virtual learning, from the above table, the students perceived that all the items are the most essential basic computer literacy skills required for virtual learning with a mean (X) and standard deviation (SD) ranging between 3.53 to 3.76 and 1.22 to 1.39 respectively.

**Research Question 2:** What is the personal effective communication skill required by student in Niger State College of Education for virtual learning?

**Table 2: Mean responses of student’s effective communication skills required for virtual learning in Niger State College of Education**

<table>
<thead>
<tr>
<th>S/No</th>
<th>Effective communication skills</th>
<th>X</th>
<th>SD</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Ability to type, spell and grammar check on the computer</td>
<td>3.50</td>
<td>1.36</td>
<td>Required</td>
</tr>
<tr>
<td>9</td>
<td>Ability to create, send, forward reply and save e-</td>
<td>3.55</td>
<td>1.23</td>
<td>Required</td>
</tr>
</tbody>
</table>
Table 2 above shows the mean responses of students on the personal effective communication skills required by students in Niger State College of Education for virtual learning. The result from the table shows that students perceived that all the items with the exception of item number 10 are the personal effective communication skills required for virtual learning with a mean (X) and standard deviation (SD) rating ranging from 3.50 to 3.79 and 0.83 to 1.34. However, item number 10 is been perceived as a skill which is fairly required for virtual learning with a mean (X) and standard deviation (SD) of 3.41 and 1.36 respectively.

Research Question 3: What is the independent learning skill required by student in Niger State College of Education for virtual learning?

Table 3: Mean responses of students independent learning skills required for virtual learning in Niger State College of Education

<table>
<thead>
<tr>
<th>S/No</th>
<th>Independent learners skills required</th>
<th>X</th>
<th>SD</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Ability to always work within schedule time when learning</td>
<td>3.52</td>
<td>1.33</td>
<td>Required</td>
</tr>
<tr>
<td>16</td>
<td>Ability to set and realize goals and objectives when learning</td>
<td>3.61</td>
<td>1.32</td>
<td>Required</td>
</tr>
<tr>
<td>17</td>
<td>Ability to work in collaboration with other students virtually through e-mail correspondence</td>
<td>3.57</td>
<td>1.34</td>
<td>Required</td>
</tr>
<tr>
<td>18</td>
<td>Ability to look forward to growing and developing one's full potentials when learning</td>
<td>3.78</td>
<td>1.25</td>
<td>Required</td>
</tr>
<tr>
<td>19</td>
<td>Ability to transfer knowledge from virtual learning situation to real life situations</td>
<td>3.72</td>
<td>1.27</td>
<td>Required</td>
</tr>
<tr>
<td>20</td>
<td>Ability to access the information needed for problem solving virtually</td>
<td>3.68</td>
<td>1.24</td>
<td>Required</td>
</tr>
<tr>
<td>21</td>
<td>Ability to use self management strategies such as self discipline to allocate time and resources</td>
<td>3.57</td>
<td>1.09</td>
<td>Required</td>
</tr>
</tbody>
</table>

Key
N = no of respondents (54)
X = mean
SD = standard deviation
Table 3 above shows the mean responses of students on the independent learning skills required by students in Niger state College of Education for virtual learning. The result from the table shows that the students agreed that all the items are the independent learning skills mostly required for virtual learning with a mean (X) and standard deviation (SD) rating ranging from 3.52 to 3.78 and 1.09 to 1.33 respectively.

**Discussion**

The findings on the basic computer literacy skills as shown in Table 1 revealed that the ability to start, reboot and shut down a computer, ability to Log on to the Internet, ability to print a word processing document, ability to add a table to a document and edits rows and columns, ability to understand animation of movement and the ability to vary font, size and style are all in agreement with Owen (2003), Hoffman & Bankole (2003), Osinem & Nwoji (2005) that technological literacy is knowledge about what technology is, how it works, what purpose it can serve and how it can be used efficiently and effectively to achieve specific goals, that technologically literate students demonstrate a sound conceptual understanding of the nature of information communication technology garget and view themselves as proficient users of these systems and use a variety of technology tools in effective ways to increase creative productivity.

The findings on the personal effective communication skills as shown in Table 2 revealed that the ability to type, spell and grammar check on the computer, ability to create, send, forward reply and save e-mail messages, ability to use talk or chat features for real-time communication, ability to read and understand text messages clearly, ability to use electronic mailing lists for communication, ability to use and understand the purpose of a browser and the ability to use keyboard for simple search all in agreement with Okorie (2000), Crowley (2002) and Roskoff (1999) that in today's wired networked society, students should be able to use communication tools to reach out to the world beyond the classroom and communicate ideas in powerful ways, use technology effectively to access, evaluate, process and synthesize information from various variety of sources and that students should learn to communicate effectively using a range of media, technology and environment. This includes both synchronous and asynchronous communications, such as person to person to e-mail correspondence, phone or audio communication and interactions through simulations and models.

The findings on independent learning skills as shown in Table 3 revealed that the ability to always work within schedule time when learning, ability to set and realize goals and objectives when learning, ability to work in collaboration with other students virtually through e-mail correspondence, ability to look forward to growing and developing one’s full potentials when learning, ability to transfer knowledge from virtual learning situation to real life situations, ability to access the information needed for problem solving virtually and the ability to use self management strategies such as self discipline to allocate time and resources are all in agreement with Abdullah (2001) and Hon Kock and Betts (2002) that an independent learners are responsible owners and managers of their own learning process, such individuals have the skills to access and process the information they need for a specific purpose. Independent learning integrates self management (management of the context including social setting, resources and actions) with self monitoring (the process whereby learners monitor, evaluates and regulate their cognitive learning strategies).
Conclusion

Based on the analysis and findings of this study, the following conclusions were drawn: students in Niger State College of Education require basic computer literacy skills, personal effective personal communication skills and independent learning skills in order to become proficient user of the computer for virtual learning at their disposals to enable them cope with this modern instructional techniques. Finally, all the skills are required in order to tackle extremely challenging problems and make a head way in virtual learning.

Recommendations

The following are recommended:

(i) Establishment of training centers for students in tertiary institutions to acquire basic computer skills. This will make the students to perfect their computer skills and become proficient users of information communication technology gargets.

(ii) The college should organize information communication technology training programme for the Students with emphasis on communication skills. This will increase their level of communication and will make them reach out to the world beyond the classroom and communicate ideas in powerful ways, use technology effectively to access, evaluate, process and synthesize information from various variety of sources.

(iii) The federal and state ministries of education should make more funds available for the provision of virtual learning equipment at various colleges for the students to learn on their own. This will make them responsible owners and managers of their own learning process, such students will have the skills to access and process the information they need for a specific purpose.

References


