Utilization of Blended Approach Mode in Teaching and Learning for Undergraduate Nurses in Kenya

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Abstract

Background: Blended learning approach refers to a combination of online and face-to-face methods in response to learner need and for the achievement of instructional objectives. Technological advancement in the world is influencing the nature of how disciplines conduct training. In order to match with this expectation, nursing has been influenced by both theoretical and clinical practice. Blending represents a fundamental change in the way teachers and students approach the teaching-learning experience. The practice of using technology to deliver coursework in Universities worldwide has seen a veritable explosion in adoption. Purpose: The study aimed at determining utilization scale of engagement in use of blended approach mode in teaching and learning in Kenyan universities.

Methodology: This study applied mixed design method in order to obtained detailed information from the study participants of interest to the researcher. The study involved conducting teaching and managing one fourth-year course “NRSG 400: Education Concept and Teaching Strategies in Nursing” in the selected study sites for one trimester, by use of blended mode and conventional teaching and learning strategies. Four out of nineteen (4/19) universities in Kenya that offered Bachelor of Science in Nursing were sampled by use of convenience non-probability sampling. The sample population included two public and two private university. One public and one private university were used as experimental group and control group respectively. The study participants comprised of only general nursing lecturers and fourth year nursing students. Consent forms were filled from the study sites and study participants, anonymity and confidentiality during the study period was maintained. Data was collected by use of observation, self-reported questionnaire, followed by structured focused group discussion at the four study sites. Descriptive and inferential data was processed and analyzed in order to generate simplified information.

Results: A total population of (n= 486) comprised of 175 (36.0%) male and 311 (64%) female participants who consented for the study. The students had a mean age of 22 years. 302(62.1%) students were motivated to adopt and use blended mode of learning while, 386 (79.4%) students did not have confidence in eLearning mode. 302 (62.1%) students disagreed with the appropriate time and place for use of blended learning. (60.7%) disagreed that information uploaded on Moodle platform was credible. Furthermore, 376 (75.1%) students stated that they had experience problems with use of learning platform.109 (22.4%) student’s greed that Moodle interface was easy to use. 402 (82.7%) students indicated that they had experienced internet discussions while.

Recommendations: More emphasis during sensitization needs to be done in order to increase high level of engagement and utilization of the same in order to address anxiety among students therefore lecturers need to offer continuous support to students as a good gesture role model. Conclusion: There is utilization of blended teaching and learning mode among universities offering Bachelor of Science in Nursing in Kenya but not fully utilized as shown in the above and similar studies in the world.

Keywords: utilization, blended teaching and learning mode, nurse, Moodle


1. Introduction

Blended learning approach refers to the systematic integration of online (eLearning) and face-to-face engagement to support and enhance meaningful interaction between the teacher and students as suggested by Garrison and Kanuka, [1]. It is an education program (formal or informal) that combines online digital media with traditional classroom instructional methods. More so, it creates a learning experience whereby the learner interacts with other students, with the instructor, and with e-contents through thoughtful integration of online commonly known as eLearning environments at their own pace [2].

Nursing, historically has been a form of occupation influenced from a variety of health-related disciplines.
2. Methodology

This study to find Utilization of Blended Approach Mode in Teaching and Learning for Undergraduate Nurses in Kenya used mixed methods design with specific application of concurrent triangulation strategies. One public and one private university were deemed to be the experimental group and control group respectively. These includes; Masinde Muliro University of science and technology, Maseno University which are public universities, while, Great Lake of Kisumu University, and University of Eastern Africa Baraton are private universities. The four universities are located in the western part of Kenya.

Study participants were lecturers and students from school of nursing. Purposive sampling was used in identifying fourth year nursing students. Students were selected randomly by aid of a random table enabling minimization of biasness in selection of study participants as noted by Rose, [11]. A sample of 486 participants were obtained by use of Yamane formula [12],

$$n = \frac{N}{1 + N(e)^2}$$

from a target population of 865. Simple random and purposive sampling methods were used to achieve the desired study sample of 486. All fourth-year registered nursing students at the time of study were eligible for the study and their respective general nursing lecturers. All nursing students in their first, second, third year, absent from School and not registered at the time of the study were not eligible. Plus, all other students who were undertaking any other program in the University during the time of data collection were also deemed to be excluded from the study.

Research permit was obtained from, NACOSTI-Kenya, ERC of the selected university study sites. Information sheet, consent form was also provided and filled by the study participants before commencement of data collection. In addition, anonymity and confidentiality were assured. A two-page self-administered questionnaire was completed by participating students and nursing lecturers which consisted of section A, closed ended questions to capture demographic information while Section B adopted a modified five Likert scale items to capture engagement on the use of internet-based learning platform at the University of the subjects on the study. The responses were on a five-point rating of Strong Agree (SA)-5, Agree (A)-4, Neutral (N)-3, Disagree (D)-2 and Strongly Disagree (SD)-1. The questionnaire was reviewed by experts in the department of nursing at University of Nairobi College of Health Science and its contents validated after pilot study. Statistical Packages for Social Sciences (SPSS) computer packages version 23 was used to code, organize and analyze the data. Descriptive statistics of mean, percentages standard deviation, frequency distribution was used to summarize data. Chi square was used to determine the association of the engagement scale of blended learning of the participants to their respective university.

3. Results

Four hundred and eighty-six (486) subjects participated in the study. 175 (36.0%) were male while 311 (64.0%) were female. The respondents were of varied age between 20 years (0.4%) to 37 (0.2%) years of age. Majority were 23 (50.6%) years, followed by 24 (14.4%) years, 25 (12.6%) and 22 (4.7%) years old respectively. But the male gender had a mean of 24.8 while the Female gender had a mean of 24.0. Table 1 show the demographic characteristics of the study subjects.

Among other demographics the respondents were required to answer which category of university they came from. The target subjects were sampled from public and private universities 64.4% of the respondents came from public university while 35.6% came from private universities as illustrated in Table 2.
Table 1. Respondents mean age

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24.8229</td>
<td>175(36%)</td>
<td>3.24968</td>
</tr>
<tr>
<td>Female</td>
<td>24.0289</td>
<td>311(64%)</td>
<td>2.38323</td>
</tr>
<tr>
<td>Total</td>
<td>24.3148</td>
<td>486(100%)</td>
<td>2.75038</td>
</tr>
</tbody>
</table>

Table 2. University category of respondents

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>313</td>
</tr>
<tr>
<td>Private</td>
<td>173</td>
</tr>
<tr>
<td>Total</td>
<td>486</td>
</tr>
</tbody>
</table>

First, the respondents were asked questions in order to check their Utilization of Blended Approach Mode in Teaching and Learning for Undergraduate Nurses in Kenya. Table 3 illustrate utilization of blended approach in teaching and learning for undergraduate nurses in Kenya. The respondents were asked whether they were anxious in learning through internet platform. 3.1% (15) strongly agreed, 83.3% (405) agreed, 5.6% (27) were neutral, 8.0% (39) disagreed. While, none of the respondents strongly disagreed. Secondly, majority of the respondents 297 (61.1%) disagreed that they have a capability to interact with Technology effectively during Learning while 64.8% (315) of the respondents agreed that they were ready to participate in eLearning demonstrating inquisitively on blended approach learning. With regard to readiness to participate in e-learning activities most of the respondents 141(29.0%) strongly agreed, 315(64.8%) agreed, 13(2.7%) were neutral, 1(0.2%) strongly disagreed while 16(3.3%) disagreed. Fourthly, on motivation to learn and use of eLearning platform 22 (4.5%) participants strongly agreed 302 (62.1%) agreed, 121(24.9%) were undecided on whether they were motivated to learn and use eLearning platform while, 39 (8.0%) of them disagreed.

In addition, 386 (79.4%) of respondents who were the majority disagreed that they had high level of self confidence in using eLearning platform, this was followed by 302 (62.1%) who disagreed that they were satisfied with time, place of the eLearning platform. Furthermore, majority of participants 295 (60.7%) disagreed that there was information credibility in eLearning platform only 97 (20.0%) agreed while 67 (13.8%) were not sure if the information was credible. With regards to as to whether the module interface was clear and simple to use 52.5% (255) disagreed while, 109 (22.4%) agreed that the Moodle interface was easy to navigate through. 65.4% (318) respondents disagreed that there was reliable and secure Information and Technology services in their university and 97(20.0%) agreed on the same. However, majority of the respondents 69.5% (338) disagreed that there was adequate investment on Information and Technology services by their respective Universities to undertake utilization of blended teaching and learning approach in the near future. 340 (70.0%) of the respondents disagreed that the screen layout and design of Moodle is appropriate for use for teaching and learning in nursing and 63(13.0%) were note sure. Majority of the respondents 82.7% (402) disagreed that they were rarely disconnected during online learning while, 63 (13.0%) agreed that they were not disconnect from university internet 72.8% (354) showed dissatisfaction with the browsing speed of their university website while 75.1(365) respondents disagreed that they do not experience any problem while navigating through module platform on their respective university platform. Results from the chi square test showed that there was a statistically significant relationship between university type and utilization X² (2, N=486) =39.109, p=0.02.

Table 3. Utilization of blended approach learning mode in undergraduate teaching (N=486)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am anxious in conducting teaching/learning through internet platform</td>
<td>15(3.1%)</td>
<td>405(83.3%)</td>
<td>27(5.6%)</td>
<td>0(0.0%)</td>
<td>39(8.0%)</td>
</tr>
<tr>
<td>I believe in my capability to interact with Technology</td>
<td>26(5.3%)</td>
<td>119(24.5%)</td>
<td>33(6.8%)</td>
<td>11(2.3%)</td>
<td>297(61.1%)</td>
</tr>
<tr>
<td>Ready to participate in e-learning activities</td>
<td>141(29.0%)</td>
<td>315(64.8%)</td>
<td>13(2.7%)</td>
<td>1(0.2%)</td>
<td>16(3.3%)</td>
</tr>
<tr>
<td>I have the motivation to learn and use eLearning platform</td>
<td>22(4.5%)</td>
<td>302(62.1%)</td>
<td>121(24.9%)</td>
<td>2(0.4%)</td>
<td>39(8.0%)</td>
</tr>
<tr>
<td>I have high level of self confidence in using eLearning platform</td>
<td>3(0.6%)</td>
<td>31(6.4%)</td>
<td>44(9.1%)</td>
<td>22(4.5%)</td>
<td>386(79.4%)</td>
</tr>
<tr>
<td>I am satisfied with time, place of the eLearning platform</td>
<td>10(2.1%)</td>
<td>41(8.4%)</td>
<td>98(20.2%)</td>
<td>35(7.2%)</td>
<td>302(62.1%)</td>
</tr>
<tr>
<td>there is information credibility in eLearning platform</td>
<td>1(0.2%)</td>
<td>97(20.0%)</td>
<td>67(13.8%)</td>
<td>26(5.3%)</td>
<td>295(60.7%)</td>
</tr>
<tr>
<td>Moodle interface is clear and simple to use</td>
<td>0(0.0%)</td>
<td>109(22.4%)</td>
<td>53(10.9%)</td>
<td>69(14.2%)</td>
<td>255(52.5%)</td>
</tr>
<tr>
<td>Information and Technology services in my university is reliable and secure</td>
<td>7(1.4%)</td>
<td>64(13.2%)</td>
<td>35(7.2%)</td>
<td>62(12.8%)</td>
<td>318(65.4%)</td>
</tr>
<tr>
<td>There is adequate investment on Information and Technology services in my University</td>
<td>0(0.0%)</td>
<td>54(11.1%)</td>
<td>21(4.3%)</td>
<td>73(15.0%)</td>
<td>338(69.5%)</td>
</tr>
<tr>
<td>The screen layout and design of Moodle is appropriate for use</td>
<td>0(0.0%)</td>
<td>28(5.8%)</td>
<td>63(13.0%)</td>
<td>55(11.3%)</td>
<td>340(70.0%)</td>
</tr>
<tr>
<td>I am rarely disconnected during online learning</td>
<td>2(0.4%)</td>
<td>57(11.7%)</td>
<td>21(4.3%)</td>
<td>40(8.0%)</td>
<td>402(82.7%)</td>
</tr>
<tr>
<td>I am satisfied with the browsing speed of my University website</td>
<td>0(0.0%)</td>
<td>66(13.6%)</td>
<td>58(11.9%)</td>
<td>8(1.6%)</td>
<td>354(72.8%)</td>
</tr>
<tr>
<td>I do not experience any problem while navigating module platform on my University website</td>
<td>2(0.4%)</td>
<td>34(7.0%)</td>
<td>75(15.4%)</td>
<td>10(2.1%)</td>
<td>365(75.1%)</td>
</tr>
</tbody>
</table>
4. Discussion

This study was conducted on Nursing undergraduate students currently registered in the selected universities of study to assess the utilization of blended approach learning mode in undergraduate learning. The total number of participants for the study was 486 of varied age from 20 years (0.4%) to 37 (0.2%) years, majority were 23 (50.6%) years, followed by 24 (14.4%) years and 25 and 22 years old at 12.6% and 4.7% respectively. The respondents were 36.0% male and 64.0% female. 35.6% who were drawn from private universities and 64.4% from public universities respectively. 18.6% of the respondents were first years, 33.3% second years while 21.0% and 27.0% were third and fourth years nursing students respectively. The study found out from previous studies that, subjects’ characteristics such as age and level of education significantly influenced utilization of blended approach of teaching and learning, different age and level of study influenced the need of applying different approaches that had been suggested as applicable when addressing the differing learning styles and needs of students as noted by Bloomfield et al., [5].

According to Kashorda and Waema [13] in their e-Readiness Survey of Kenyan Universities (2013) Report, the networked PCs available per 100 student’s ratios was 3.8 in Kenyan universities, which was considered quite low. This explains the response of respondents when asked whether they were anxious in learning through internet platform. 3.1% (15) strongly agreed that they anxious, majority were 83.3% (405) who agreed, while 3.8 in Kenyan universities, which was considered quite low. This explains the response of respondents when asked whether they were anxious in learning through internet platform. 3.1% (15) strongly agreed that they anxious, majority were 83.3% (405) who agreed, while 3.1% (15) strongly agreed that they anxious, majority were 83.3% (405) who agreed, while 5.6% (27) were neutral, with 8.0% (39) disagreed that they were anxious to perform learning through internet platform and none of the respondents strongly disagreed.

Tarus et al., [14], Isabiry & Waema [15], Oroma & Mduma, [16] and Tashabala et al., [17] noted uptake of ICT-based course delivery including technical, financial, human and institutional aspects by students explaining 61.1% of the respondents disagreeing in their capability to interact with the, majority 64.8% of the respondents showed readiness to participate in e-learning activities this is because of the many students today in the world and in Kenya who are still attempting to adjust their family social life, job and university life towards having more flexibility in their learning programs Tarus et al., [14] in addition, the Universities student’s enrolment worldwide in nursing program has increased due to high market driven demand

62.1% of participants had the motivation to learn and use eLearning platform this had been highlighted by a study done by Gilbert et al. [19], in the developing countries many of students have expressed an interest to implement e-learning but face obstacle in infrastructure resources and information access. 79.4% Disagreed that they have high level of self confidence in using eLearning platform studies have shown that due to increased Universities student’s enrolment worldwide in nursing program due to high market driven demand [18] The infrastructure has overstretched both classrooms and in the clinical placement that it cannot adequately accommodate students thus many young optimistic persons are left untrained thus reduced self confidence in even utilization of eLearning platforms [16]. 62.1% of participants were not satisfied with time, place of the eLearning platform, this is further shown by the e-readiness survey of 2013 report which pointed out that although all universities are inter-connected to the national fiber backbone network, the problems still was that universities were not investing sufficiently in their internal campus backbone and wireless network infrastructure that which make it easier for students to use their own laptops and smartphones on campus to access learning materials and other student services. Equally, apart from the low PC ratio, the students considered the campus networks slow and unstable leading to dissatisfaction on their internet platforms [13].

Many students had expressed an interest to adopting e-Learning but faced obstacle with regard to infrastructure resources and information access of their respective universities such as bandwidth technology and connectivity instructor’s design and technology confidence [20] this explains why the majority 60.7% of the respondents disagreed that there was information credibility in eLearning platform. Majority of the respondents 52.5% disagreed that the Module interface was clear and simple to use due to the combination of self-paced learning without a facilitator support which keeps the learners feeling isolated, Folorunso et al., [21], 65.4% disagreed that Information and Technology services in their university was reliable and secure this is despite the improvement in the recent years of the availability of electronic communications equipment and the accessibility of the internet in the world and Kenya, in particular [8]. 70.0% disagreed that the screen layout and design of Module is appropriate for use this may be influenced by Technical, Financial, human and institutional aspects as noted in a review of literatures studies by Tarus et al., [14], Isabiry & Waema [15], Oroma & Mduma, [16] and Tashabala et al., [17].

In 2013 in Tanzania a survey study conducted by Joel S. Mtebe and Christina Raphael revealed that invasiveness on personal time meant that some participants felt that blended learning was an overwhelming and tiring experience while some participants commented that the internet connectivity was an issue. This was particularly the case in geographical areas where there was a slow dial-up network connection, this explains the majority of respondents 82.7% agreed that they wereDisconnected during online learning further explaining why 72.8% showed their dissatisfaction with the browsing speed of their internet and 75.1% experience problems when navigating module platform.

5. Recommendation

The study showed that, participants in the selected study sites utilized blended teaching and learning approach mode minimally as evidenced by high levels of disagreement in the multivariable that were tested to include. More emphasis during sensitization needs to be done in order to increase high level of engagement and utilization of the same. In order to address anxiety among students the lecturers need to offer continuous support to students as a good gesture role model. In turn this will motivate the students to participate in teaching and
learning through blended mode. Benchmarking and adequate training should be organized for students and the lecturers to increase e exposure on use of eLearning. Multiorganization support is required in order to facilitate installation of infrastructure in the university. Difficulty in use of ICT which is also related to lack of accessibility of the ICT hardware during their training period can be addressed through university collaboration with ICT companies to ensure students have required facilities for eLearning. Internal quality survey to be reviewed and adopted with regard to identifying the existing gaps that ought to be addressed immediately

6. Limitations

The outcome of this study is limited in its generalizability and needs to be validated in other settings. This study does not consider university rankings and economic statuses in its realization of application of blended approach learning in Nursing.

7. Conclusion

There is utilization of blended teaching and learning mode among universities offering Bachelor of Science in Nursing in Kenya but not fully utilized as shown in the above and similar studies in the world.

References