Knowledge and Learning Management (KALM) for Enhancing Academic Staff Online Training Methodologies for Quality Graduates

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Abstract — University lecturers’ new technologies can make a very big difference in enhancing quality and standard in the output of Nigerian universities and other third world nations. Students’ frequent exposure and application of huge interactivity in new ICT tools and media will definitely promote their online utilization of skills and knowledge perception of their environment. The online training greatly depends on the amount of online training education, knowledge and learning management of university lecturers as well as their online training methodologies. The study examined knowledge and learning management for academic staff online training methodologies for quality graduate. A sample of 300 respondents from 6 Federal Universities in the South-east geological zone of Nigeria was selected, using proportionate stratified sampling technique. A 23 item structured questionnaire built on a 4 – point scale was used for data collection. Three research questions and a null hypothesis guided the study. Mean and grand mean were used to answer the research questions while ANOVA was used to test the hypothesis at 0.05 level of significance. Findings revealed academic staff low extent utilization of online training methodologies identified in the literature. 5 impeding factors were also identified and 9 ways academic staff knowledge and learning management (KALM) could enhance their online training methodologies for quality graduate were revealed. Based on the above findings, recommendations include: quality online training methodology tools should be adequately provided for accessibility and utilization by the academic staff, academic staff adequate sponsorship to national and international conferences/workshop for skill development on areas of online training methodologies and knowledge and learning management should be encouraged etc.

Index terms — Academic Staff, Knowledge, Management, Online training, Quality Graduate.

1. INTRODUCTION

University education is the apex of tertiary education as well as the highest rated instrument for effecting national development. It is expected to do this through production of high quality graduates. Production of quality graduates is a factor of academic staff level of new technologies acquisition and utilization for necessary exposure of students to various online training education. It is also believed that the academic staff knowledge and learning management can greatly enhance their online training methodologies for quality graduates. The issue is who are quality graduates?

Quality Graduate

One cannot describe quality graduate without explaining the term graduate. Graduates are generally known as all the outputs of various education levels. In Nigeria for instance, the pre-primary institutions lay so much emphasis on the graduation ceremonies of their outputs i.e. graduates; outputs of secondary and primary education institutions are also graduates. In strict sense, graduates are first degree holders. In this sense, it is only universities that have the capabilities to produce graduates. Other tertiary institutions such as colleges of education, polytechnics and monotechnics cannot produce first degree holders (bachelor’s degree). Certificates of these products are in one way or the other lower than bachelor’s degree. Graduates in this study also refer to students who passed through universities, received university education and finally come out with bachelor’s degree certificates. Quality graduate are graduates who have passed through university education and allowed the university to pass through them [1]. “Ref. [2] describes quality graduates as graduates that can manifest four major goals of university education”. The implication is that these graduates must have been trained and groomed through the following: Intensifying and diversifying programmes for development of high level manpower, Professional course contents that reflect national requirements, Ensuring that they were part of the general programmes of all round improvement in university education and Receiving of general study courses such as history of ideas, philosophy of knowledge and nationalism. These graduates must possess knowledge measured in terms of entrepreneurship and innovation, research and development, software and product design [3]. Quality graduates must therefore be individuals of great mind who have acquired the capacity to be fascinated by knowledge, learning, ideas, and also possess the new technologies and their tools to handle such ideas effectively. Production of quality graduates is of course, the major role of universities across the globe. Unfortunately majority of these graduates from mostly
third world nations such as Nigeria do not adequately possess this attribute of high grade, or standard or excellence. He affirms this by describing these graduates as half-baked and unemployable [3]. “Ref. [4] blames this to low quality products to inability of tertiary education to equip its beneficiaries with expected skills of science and technology”. The issue of achieving quality graduates in high education depends so much on the quality of academic staffs.

Academic Staff

Academic staff is generally teachers in tertiary institutions who are popularly known and described as lecturers. Lecturers are group of individuals trained and employed in universities and other tertiary institutions in Nigeria to train and groom students through high level relevant manpower training needs [1]. Academic staff is generally categorized into male and female. These are academic and professionals whose duties are to teach, instruct, train, educate and facilitate students’ knowledge, learning and performance. They are also experts, custodians of knowledge, learning, skills and values needed to move nations forward. As experts and professionals, these staff is expected to be versatile, creative, innovative, resourceful and models capable of moving with new trends. Academic staff has not been able to produce or turn out quality graduates as expected of them due to their inability to utilize new technologies for online training. Academic staff is therefore expected to utilize their expertise in online training to ensure achievement of quality in their products. There are factors that negate academic staff ability to produce quality graduates in the afore mentioned nations. Observation has shown that majority of these academic staff do not have laptop of their own due to financial inadequacies and inadequate access to computers [5]&[6]. “Ref. [7] identifies other challenges to include: students’ population explosion, millions of students still waiting for admission in these universities, inadequacy of space and place as well as limited number of lecturers in terms of quality and quantity”. The only way to achieve quality graduates in the light of the above challenges is through adoption and practice of online training. It is therefore no gainsay that academic staff new technologies in this age of computer can really make a difference in the quality and standard in the output of universities in Nigeria and other African nations. Students in these institutions need exposure and utilization of huge interactivity in the new ICT tools and media as a means of boosting their online utilization of skills and knowledge perceptions of their immediate and external environment. These issues call for online training methodologies.

Methodologies in Online Training

Observation and research reports have shown that there is not a single online training definition. Definitions depend on authors and authorities perceptions. “Ref. [8] defines online training as a process by which some associations trust video conferencing to let trainers speak to people in some locations at once”. A good number of institutions have pushed the limits of online training further, with greater and enhanced technologies to gather teacher and students plus other. Online training also refers to e-learning which is a process of utilizing educational websites such as those offering learning scenarios, worksheets and interactive exercises for children or students or adult learners. This cost-effective online training is extensively in use in business sector [5]. Effectiveness of online training in achieving quality products in the presence of inadequate university space for effective face-face training methodologies and inadequate space for absorbing millions of children students’ awaiting admission greatly depend on level and quality of online training methodologies available and are in use. Online training can occur in two major different forms viz: asynchronous and synchronous online training methodologies. Asynchronous online training methodologies refer to situation whereby teachers provide for their students, a sequence of training tests and assignments due at a particular date. Students are given the opportunity to do the tests or assignments in one big push of gradually working towards the deadline. This training method requires some level of discipline among the students. Students in asynchronous online training courses are allowed to proceed at their own pace. It has the advantages of second chance opportunities. Students feel free and have the opportunity of listening to a an already delivered lecture a second time, they can think about the same questions given for a while and they can enjoy these second chance opportunities without fear of holding back the rest of the class [5]&[9]. The asynchronous online training methodologies are in line with education maxim that given equal opportunity that every learner is a potential achiever. It avails students opportunities of earning their diplomas more quickly, or repeat failed courses without being embarrassed of being in a class with younger and sharp students. It enables students have access to an incredible variety of enrichment courses in online learning. “Ref. [6] observes that students can participate in college courses, internships, sports or even work and still graduate with their class”. Academic staff using this method must be conversant with its communication technologies.

Asynchronous communication technologies for online training

As online training methodologies is categorized into asynchronous so also is their communication technologies requirements. Asynchronous activities use technologies such as Blogs, Wikis, Discussion boards E-mail etc. This enables participants engage effectively in the exchange of ideas/information without the dependency of other participants’ involvements at the same time. Asynchronous communication technologies
take care of imaged learners disabilities or differences (health problems, child care responsibilities) and regularly leaving the home to attend to lectures’ difficulties). This new technologies enable students and their lecturers opportunities of completing their work in a low stress environment and within a more flexible time frame [5]&[9].

**Synchronous Online Training methodologies:**

Synchronous online training method enables the teacher provide a sequence of course that is closer to customary class learning. The process entails that the teacher and the students in question gather online at a particular agreed times for the online training. Certain synchronous courses are done via “webinars”, i.e. when students log-in in order to see a presentation on computers as well as listen to their teachers over the phone or even via the internet [5]. At times, the reading course contents are specially placed on the internet for free access. Some of this kind of online training requires that students get textbooks. Synchronous online training can appear in form of e-School, whereby students attend occasional courses in classes to meet their teachers live: others still rely on e-mail or teachers instant messaging to work with other students. This also requires good knowledge of its communication technologies.

**Synchronous communication Technologies:**

Synchronous activities require exchange of ideas/information with one or more participants during the same period of time. A face to face discussion is an example’s of synchronous communications. Examples of synchronous communications technologies in an e-learning environment include Skype conversation or a chat room where everyone is online and work collaboratively at the same time. Synchronous activities occur with all students’ participants joining in at once, as with an online chat session or a virtual classroom or meeting [9]. Other online training methodologies (OTM) available for academic staff and their students are Litemos system, examples are: Computer-Based Training-CBT, Internet-Based Training-IBT and Web-Based Training-WBT [9]. These three methods ensure computer and network-enable transfer of skills and knowledge. They are also used to effect these applications such as Web-based learning; Computer based learning. Virtual education opportunities and Digital collaborations. Contents of these applications are delivered through internet, audio, video-tape, satellite TV, and CD Rom. Media for these online training methodologies are in the form of text, image, animation, streaming video and audio. It is expected that these new technologies if adequately acquired, utilized in the teaching and learning could go a long way to equip undergraduates opportunities of accessing wider and more useful knowledge and as a means of assuring quality learning.

The basic requirements for the practice of online training are: availability of computers and their accessories, accessibility to a computer Connection to the internet and Basic knowledge of computers. For academic staff to meet up adequately with the expected curricular course content for a particular programme in the absence of adequate time, personnel, and space which universities are characterized must be able to: guide students through information and course work, assist students perform better in specific tasks, and Present course materials and content via online. All academic staff should then be equipped to package most of the lecture materials and contents online to save themselves from unnecessary stress and danger of insufficient course time, driving to lecture venues when not convenient due to Nigerian factors, crashing lectures or programme because he is working behind schedule. Academic staff online training offers students the opportunity for quality live interactions and real time feedback through quizzes, tests and surveys. Interactions between these staff and their students should be conducted via online medium through chat or e-mail.

**Two popular Online Training Tools:**

There are many tools for achieving online training but the most popular and highly recommended are Moodle and Black board inc.

*Moodle:* This is an open source management system. It is freely downloaded and it is capable of providing blended learning opportunities as well as platform for distance learning courses. Moodle website has many tutorials for creating a program or becoming a moodle student.

*Blackboard Inc:* this is the most popular and has over 20 million users daily. It offers blackboard learn, blackboard collaborate, blackboard mobile, blackboard connect, blackboard transact, blackboard analysis and blackboard (Bonnet, 1997 & Wolfe, 2007). Blackboard inc. tools are necessary skills for academic staff online training. The tools allow the teachers/instructors/educators to decide whether their program will be blended or fully online i.e. asynchronous or synchronous. Enhancement of online training methodologies requires academic staff quality knowledge and learning management skills.

**Benefits of Online Training methodologies:**

Eight major benefits of utilizing these online training methodologies are outlined[8]. They are

*Enhanced access to quality education:*

Academic staff online training methodologies have the potentials for reaching out to many students within and outside institutions. They offer training without compromising quality.

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**Fundamental requirement for online Training:**

**Improvement of Educational delivery system:**
Good knowledge of new technologies and ICT tools enhances teaching and learning process.

Optimal utilization of the existing ICT resources for enhancement of global competitive education system:

“Ref. [4] envisages that in near future, education system that does not proceed along the part will produce graduates that are not globally competitive”.

Reduction of social vices:

Many of the social vices that are plaguing the Nigerians education system (examination malpractice, cultism etc) are caused by numerous factors. Some of these factors that bring about social vices include: poor academic preparation of students, poor learning environment, inadequate time to cover course content etc. Online training methodologies have the potentials of enhancing students’ performance, learning and increasing time, thus reducing incidence of the vices and overtime their elimination. This is because greater number of resources and instructors are made accessible.

Enhanced performance and learning: It appears that students in online learning perform better than those in face-to-face courses.

Reduced training cost: Unnecessary travel cost, venue hire cost and catering costs which are associated with classroom based training sessions are reduced or removed while student’s performances or learning is enhanced.

Convenience and flexibility: The conveniences of the students as well as the lecturers are foremost. Being self-paced method of training, every student enjoys convenience and flexibility by absorbing information at different rates. It ensures that course content and materials are made available to learners for completion at their time of convenience 24x7 [9].

Knowledge and Learning Management

Knowledge and learning management (KALM) refer to the process of development and utilization of several guiding principles and practices to support the effective development of adequate learning on a systematic, district school classroom, virtual classroom and at individual or group levels in an educational environment. There arises need to re-engineer the KALM available in university system to enable both the lecturers and students to be productive in identifying knowledge, acquisition of knowledge and dissemination of knowledge opportunities against stereotyped model. The emphasis is on changing education systems and making them highly responsive to the needs of a changing society. KALM is not just a technology issue, but entails the entire process of discovery and creation of knowledge, dissemination of knowledge and the utilization of knowledge. KALM exist in our jobs hence various elements of KALM include: Argot, corporate knowledge, corporate knowledge management, corporate knowledge server, epistemology, etymology, morphology ontology, taxonomy etc [1].

Academic Staff Knowledge and Learning Management Skills /Components

Academic staff who can produce quality graduates at this information and communication technology age must possess the needed knowledge and learning management technology competencies and skills – These include: Learning management system (LMS), Learning content management system (LCMS), pedagogical approaches/perspectives, reusability, standards, learning objects, computer aided assessment, electronic performance support system EPSS, Content issues and Pedagogical elements [3].

LMS is software that academic staff could use for delivering, tracking, managing and training in education. It consisted of systems for managing training to software for distributing courses over internet and offering features for online collaboration.

LCMS is software that shows author content, contents of various courses, and programmes that could be used and reused for convenience as well as enhancement opportunities for students’ quality learning. Such software can be solely meant for producing and publishing content.

Pedagogy is a serious issue in quality management. Creating e-learning content calls for adequate and manageable pedagogical approaches.

Pedagogical Approaches: The following are recommended pedagogical approaches for effective online training

Social – constructionist: This requires the use of discussion forums blogs, Wiki and online- collaborative activities. It opens educational content creation to a wider group including students e.g. Laptop per child foundation, Social- constructionist, Laurillard’s conversational model,

Cognitive Perspective: This focuses on cognitive process involved in learning as well as how the brain works.

Emotional approach: This refers to emotional aspects of learning such as motivation, engagement, fun etc.

Emotional perspective: This focuses on the skills and behavior outcomes of the learning process, Role playing and application on job setting.

Contextual perspective: This focuses on the environmental and social aspects which can stimulate learning, interaction with other people, collaborative discovery, peer support etc.

Mode Neutral: Consequence or promotion of transmodal learning where online and classroom learners can coexist within one learning environment thus encourage interconnectivity as well as harnessing of collective intelligence [10].
Reusability/standard/Learning Objects

These are the relevant qualities of instructional aids. Academic staffs are expected to ensure that instructional aids must be of standard, capable of stimulating learning, saving cost and unnecessary wasting by its re-usability for subsequent learning or revisit by the class. Such vital knowledge, must be duly organized, stored for retrieval and dissemination at a time of need in a software such as XML.

Computer – Aided Assessment (CAA)

This system which ranges from automated multiple-choice test to more sophisticated systems is becoming increasingly common. Effective use of CAA will reduce examination malpractice with population advantage. Some system gear towards individual attention by identifying students specific mistakes.

“Ref. [3] recommends online formative assessment for university lecturer’s effectiveness towards quality graduates”. Initial formative assessment by sifting out the incorrect answers is achieved. Academic staff should utilize the following softwares to improve students’ learning.

Electronic performance support (EPSS): This is a computer-based system for enhancing students learning and performance by providing on the job-access to integrated information, advice and learning experience.

Pedagogical Elements

Pedagogical elements are educational materials that promote quality. They include lesson note, an assignment, multiple choice questions, a quiz, a discussion, group or a case study. These should be format in dependent. They also include textbooks, web pages, podcast etc. “Ref. [9] reports that university KALM should be concern with a range of practices used by the institutions to generate, store and disseminate knowledge”. He identifies four KALM practices expected of university education to be: Knowledge creation, knowledge storing, knowledge sharing and knowledge utilization. KALM is a means of enhancing existing knowledge, its networking, reuse of new knowledge and ability to innovate with special reference to moving with trends. “Ref. [7] recommends these KALM creativity components”. Agot, corporate knowledge, corporate knowledge management epistemology, etymology, morphology, ontology, taxonomy, knowledge analysis, knowledge planning, knowledge technology and computer supported work system skills as imperative for quality educational enterprise. Academic staff can only utilize online training methodologies outlined in grooming of their students if only they are at home with knowledge and learning management systems and new technology competencies for asynchronous and synchronous communication technologies necessary to enforce effectively online training and its available methodologies.

Rationale for knowledge and learning Management (KALM)

As already pointed out, the success of an educational system such as university system depends not only on the availability of the knowledge and learning but also on how these twin sisters have been judiciously managed. Academic staff must ensure that knowledge and learning in their various forms and sources are properly maintained as a means of increasing their volumes and life spans hence reducing cost of replacing them. This will also ensure quality learning, control and performance of students.

The Problem

Quality graduates are the pride of nations. Production of quality graduates depends to a large extent on the amount of online training exposure during and after their university education. Academic staff online training methodologies in use and their knowledge/learning management are prerequisites for enhancing online training methodologies and utilization. It is now globally acknowledged that an effective utilization of online training methodologies and other forms of e-education could serve as a spring board for achieving enhanced access to quality education. The problem is that majority of the universities in the third world nations still produce graduates of low quality. This could be because majority of these universities are still using obsolete tools to pursue new trends. It seems that these universities do not adequately utilize online training methodologies for achieving quality graduate. It does appear that these staff does not adequately possess the skills of knowledge and learning management that enhance online training methodologies and utilization for quality graduates.

Purpose of the study

The study examined knowledge and learning management for enhancing academic staff online training methodologies for achieving quality graduates in Nigerian universities.

Research Questions/Hypothesis

Three research questions and one null hypothesis guided the study.

1. To what extent does academic staff in Nigeria universities utilize the available online training methodologies?
2. What are the factors that impede online training methodologies for achieving quality graduates?
3. What are the knowledge and learning management strategies for enhancing academic
staff online training methodologies for quality graduates?

\[ HO_1 \]

There is no statistical significant difference in male and female academic staff means ratings on extent of utilization of online training methodologies and the knowledge and learning management strategies for effective online training methodologies.

II. Methodology

The study adopted descriptive survey design. All the 517 academic staff in the faculties of education in the 6 federal universities within the south east geo political zone of Nigeria consisted of the population (i.e. 206 male and 311 female lecturers). A sample of 300 respondents was selected through a proportionate stratified sampling technique to reflect the gender and staff strength. A well structured researchers’ made questionnaire titled Academic Staff Online Training Methodology Questionnaire (ASOTMQ) was used for data collection. It is a 23 item questionnaire built on a 4-point-Likert-type scale. Two experts in ICT education and educational management validated the instrument for face and content validity. A pilot test was conducted using 30 academic staff from 2 universities in the south west geopolitical zone in Nigeria. Cronbach alpha reliability values of 0.84, 0.80 and 0.82 were obtained. All the 300 copies of a ASOTMQ administered to 300 respondents were returned through the assistance of 6 trained Research Assistants and it was used for the analysis. Means and grand means were used to answer the research questions. Items that scored 2.50 and above were regarded as positive responses while ones scoring less than 2.50 were regarded as negative responses. ANOVA statistical tool was used to test the hypothesis at 0.05 levels of significance.

III. Results

<table>
<thead>
<tr>
<th>S/n</th>
<th>Item (online Training Tool)</th>
<th>X</th>
<th>X</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Moodle</td>
<td>2.05</td>
<td>1.55</td>
<td>Low extent</td>
</tr>
<tr>
<td>2</td>
<td>Black board mc</td>
<td>2.20</td>
<td>2.00</td>
<td>Low extent</td>
</tr>
</tbody>
</table>

Means and grand means scored above 2.50 (weighted mean) indicating that 6 items are the impeding factors to effective utilization of online training methodologies. Item by item analysis identified 5 impeding factors out of the 6 items. Item 6 specifically does not serve as an impediment since it scored below 2.50. Therefore the 5 items (1, 2, 3, 4 & 5) are impediments to utilization of online training.

<table>
<thead>
<tr>
<th>S/n</th>
<th>Item (impediments)</th>
<th>X</th>
<th>X</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Inadequate KALM for online training</td>
<td>350</td>
<td>3.00</td>
<td>Agreed</td>
</tr>
<tr>
<td>12</td>
<td>Inadequate accessibility of online training methodologies</td>
<td>3.42</td>
<td>3.58</td>
<td>Agreed</td>
</tr>
<tr>
<td>13</td>
<td>Inadequate knowledge of online training methodologies</td>
<td>4.00</td>
<td>4.00</td>
<td>Agreed</td>
</tr>
<tr>
<td>14</td>
<td>Inadequate knowledge of online training tools</td>
<td>3.92</td>
<td>4.00</td>
<td>Agreed</td>
</tr>
<tr>
<td>15</td>
<td>Inadequate knowledge of online training applications</td>
<td>3.76</td>
<td>3.88</td>
<td>Agreed</td>
</tr>
<tr>
<td>16</td>
<td>Inadequate interest in online training methodologies</td>
<td>1.85</td>
<td>2.31</td>
<td>Disagreed</td>
</tr>
</tbody>
</table>

Table 1 reveals grand means of 2.17 and 1.64 for male and female academic staff respectively. Both grand means score below the 2.50 indicating academic staff negative responds to the items, revealing that the items enumerated are utilized in their institutions to a low extent.
The finding that academic staff utilizes online training methodologies to a low extent in the federal universities in the south east zone of Nigeria is not surprising it is also not surprising that all the ten items scored below the weighted mean indicating near absence of online training in these institutions. The findings negate the essence of online education which aims at promoting adequate opportunities for every learner’s quality live interaction. This agrees with the findings of “Ref. [6]” that academic staff have not been able to produce quality graduate due to their inability to utilize new technologies for online training. In confirmation of the above, “Ref.[5][9]” report that absence of e-learning/online training narrows learners’ scope of knowledge and intellectual development “Ref. [7][6]” emphasize the importance of online training in achieving enhanced access to quality education throughout the globe. In spite of the lofty gains in online training, there still exist impediments to its effectiveness. Some of the impediments outlined by “Ref. [5][6]” are in line with the findings from table 2 which identified five impediments to academic staffs effective online training methodologies. These impediments include inadequate accessibility of online training methodologies. The findings are in confirmation of “Ref. [9]” who observes that there are factors hindering effective implementation of online and e-learning. Factors he identified agree with that of the findings. KALM is not just a technology issue. “Ref. [7], sees KALM as the entire process of discovery and creation of knowledge, dissemination of knowledge and utilization of knowledge”. The above reports are in agreement with the findings of this study, which identified five different factors impeding effective utilization of online training methodologies. These are knowledge and learning management related factors. These include inadequate academic staff knowledge and learning management, inadequate accessibility of online training methodologies, lack of knowledge and learning in areas of online training ICT tools, applications (software) etc. The null hypothesis tested showed no significant difference depicting no gender difference in the mean responses of male and female lecturers on the variable tested.

Educational Implications

Inadequate utilization of online training methodologies in these institutions implies inadequate exposure to numerous quality learning materials that could help in raising quality hence quality graduate. It implies denying students’ opportunity of second chance that is available in asynonhronous online methodologies. Lecturers’ quality KALM skills will assist in assurance of lecture content, instructional aids etc for quality online training for quality graduates.

Conclusion

The importance of online training and its methodologies in producing quality graduates has led to

IV. Discussion

Table 3 reveals grand means of 3.35 and 3.43 for male and female staff respectively on KALM strategies for enhancing Academic Staff online training methodologies for quality graduates. Since the grand means scored above 2.50 and item by item analysis scored also above 2.50 the 9 items serve as KALM Strategies for enhancing academic staff online training methodologies for achieving quality graduates in Nigeria Universities and other third world nations.

Table 4 shows HO1 upheld. This is because at the 0.05 level of significance the critical F-value is 3.06 which is greater than the calculated F-value of 1.15. There is no significant difference in male and female academic staff mean responses on extent of utilization of online training methodologies and KALM strategies for enhancing online training methodologies for quality graduate in Nigerian Universities.
this study. The study x-rayed various online training methodologies academic staff could adopt and apply in training their students to become of high quality. The finding of the study revealed low-extent utilization of the enumerated methodologies. The existing impediments to online training were identified and ways or strategies of redressing the impediments were also identified. It is expected that adequate application of knowledge and learning management components outlined for online trainings, will greatly enhance quality university products.

Recommendation

Based on the findings the following are recommended.

Quality online training methodology tools should be adequately provided for accessibility and utilization by the academic staff and students.

Adequate sponsorship to national and international conferences/workshop for skill development on areas of online training methodologies and knowledge and learning management should be encouraged.

Close monitoring and supervision are advocated as a means of ensuring its effectiveness. This should be the role of the NUC and vice chancellors.

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