

Preparing Faculty for Utilization of Innovative Approaches in Digitalized Teaching and Learning Environments

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ABSTRACT

The emergence of new information and communication technologies that can be used to enhance teaching and learning environments provide both an opportunity to transform delivery of education and a challenge in its adoption. With the proliferation of portable and adaptable technologies, it is currently possible to access educational content anywhere with internet connectivity. This has heightened the interest for online learning and most academic institutions now provide options for both face -to- face and electronic leaning. Hence the need arises to prepare faculty to adopt the emerging approaches in teaching as they integrate technology in the delivery of instruction. The learners also need orientation in order to adapt to the virtual and online learning environments. An important factor in the success of managing online instruction is the training of faculty before launching online courses and provision of support throughout the study. The emphasis placed on training of faculty for online instruction, will determine its success or failure. It is important to determine and address the needs related to online instruction appropriately. With the dynamic technological advances, it is critical that faculty are updated on new learning devices in order to provide learners with interactive, rich and engaging online content. There is need to rethink teaching and learning as we embrace innovative approaches such as utilization of e-learning platforms, social media, you-tube, open educational resources, initiating collaborations and partnerships with industry and educational institutions. Integration of information and communication technologies into teaching and learning offers significant potentials for higher education institutions resulting in transformations in delivery approaches and presentation of content. This paper is based on the experience of training and supporting faculty and students at institutions of higher learning. It explores innovative approaches that enhance instruction and highlights the challenges faced by faculty when transforming roles from face-to-face teaching to managing digitized learning environments.

Keywords: E-Learning Technologies; Online Instruction; Digitized Teaching; Course Design

INTRODUCTION

The world today is driven to a large extent by Information and Communication Technologies (ICT). The proliferation of these technologies in the work place, learning environment, sport and entertainment arenas is a clear indication of their significance. Different sectors have integrated

technologies in their service delivery and task performance to varying degrees. However, the bottom line is that the operational environment has gone digital and the devices metamorphose at amazing speeds. This therefore implies that continuous exposure to the emerging information and technology devices, development of digital skills and literacy are imperative for effectiveness and efficiency in all our day to day undertakings, otherwise there is risk of digital exclusion.

Training and support of faculty is an important factor in the success of running online instruction. As faculty venture into the online learning realm, they require support to make the transition from traditional classrooms to online instruction (Johnson, 2003; Pelz, 2004). The emphasis placed on training of faculty for online instruction will determine its success or failure. It is important for those responsible for online support services to assess faculty deficiencies in terms of technical and pedagogical skills in order to determine the needs related to online instruction. There is need to rethink teaching and learning for the online environment in order to cater for the online learners' unique environment in which they are working, which includes both the virtual classroom and their off-campus world.

Integration of information communication technologies into teaching and learning offers significant potentials for higher education institutions and new challenges for faculty as they venture into the digital realm. There is therefore a need for faculty to acquire new skills and enhance their capacity to facilitate the new kind of instructional approaches in the digital environments.

Objectives

This paper was based on the experience of training and supporting faculty at institutions of higher learning. The objectives were to:

determine the attitude of both the instructors and learners towards online learning

establish the challenges faced by faculty when changing roles from face-to-face teaching to managing online classrooms.

To identify the skills gaps to be addressed for effective implementation of online teaching and learning.

METHODOLOGY

The data was collected during the training sessions. Questionnaires (Pre and Post training) were administered at the beginning and end of each training session. In addition, the behavior of the participants was observed throughout the training period, checking on questions asked, requests for support during practical sessions and reactions to information provided. At the end of the training, the data was analyzed and compared.

We sought through the questionnaires to determine the attitude, literacy levels with regard to the technological applications such as navigation within the eLearning platform, identifying useful instructional links on the Internet and integrating the information for instruction, appropriate instructional strategies and the skills gap with regard to the devices and tools for application. A

sample of the questions asked included:

Pre-training Questionnaire

Have you heard of online/eLearning?

Have you used an eLearning platform to teach or study?

Please indicate your level of ICT literacy (Basic, proficient etc.)

How do you use Internet?

What are your expectations of this training?

Post-training Questionnaire

How did you find the services provided for this training?

How would you evaluate the relevance of the issues discussed in the presentations?

Please rate the following statements after this training: I have a better understanding of - (a) online/eLearning, (b) distance education, (c) Self-Learning Instructional Materials (SLIMs) (d) Learner/Content Management Systems (LMC/CMS), Support services, Discussion / chart forums.

Are you now ready to offer your courses online? If no please elaborate.

Would you require more training? If yes, suggest areas for further training.

RESULTS.

The results were categorized into three broad areas namely attitude related, technological and pedagogical challenges. In most cases, those being introduced to online learning for the first time were skeptical that real learning with intended outcomes could be achieved through such approaches which were not conventional. The attitude was even more negative for those who had challenges in utilizing the technological devices which formed the media for delivery of instruction. Finally, the innovative approaches possible under the virtual learning environments meant that the instructors had to learn new approaches of delivery simultaneously with learning new skills on how to utilize the emerging digital devices and applications.

Attitude faculty

A majority of the lecturers who have attended the training sessions carried out in a number of higher education institutions in East Africa indicated that they have neither taught nor undertaken online courses for credit. However, as these institutions begin to embrace online teaching, the level of anxiety and uncertainty have remained high, sometimes leading to resistance to change or total rejection. Faculty were divided about whether courses delivered online can achieve the same learning outcomes as those delivered face-to-face. Some still view online teaching to be less effective than traditional classes when it comes to interaction with students during class. Other faculty members also expressed the view that online courses may be especially ineffective when it comes to teaching of hands-on or practical courses that require skill transfer.

Some of the faculty members further expressed a general feeling that creating and uploading learning content online would provide avenues for accessibility by anyone and can be downloaded to be used elsewhere. They felt that they would be expected to put too much effort in the design and development of the instructional content, for others to access freely disadvantaging them. Some doubted the employability of the graduates of online learning systems, questioning their

competence.

It emerged however, that after exposure through training, faculty developed a strong sense that online instruction is a way to enhance one's teaching skills and increase student engagement with the learning materials. They further expressed that it helped them organize their work for efficient and effective delivery of instruction. This approach accorded the flexibility especially with regard to delivery time and were no longer tied to a specific location. It was notable that faculty eventually admitted that online classes were more effective compared to traditional classes when grading, communicating and monitoring individual students at a personal level.

From our observations of the participants, we found that at the end of the training sessions, and with further continuous exposure and support, the attitudes of the faculty slowly changed and they became positive towards electronic/ online teaching. Some would even go ahead to offer to be champions in their schools to lead and convince others to embrace online teaching and learning. We therefore encouraged peer support urged them to form teams in their journey as they designed, developed and delivered instruction online. The transformation became a motivating factor in itself and we began getting positive responses and requests for training from those who had initially declined to participate.

Training faculty

Training forms the most critical foundation in the development of competence for online delivery of instruction. There is therefore a need to provide both formal and informal training opportunities to faculty in order to advance and also accelerate the integration of technology in their delivery of instruction. Informal training sessions can be organized through competent liaison staff who are attached to different schools to provide support during the semester. This provides for continued contact between faculty and training teams for sharpening of skills and providing support when students interact with online materials.

A training almanac can be provided at the beginning of the semester and shared with schools who schedule themselves to attend training as per the dates provided. Essentially, the training is tailored to provide the lecturers with basic skills to enable them become proficient in navigating through the learner/content management system. The training is inclusive of a number of topics, such as, how to design online instruction, how to effectively engage students, how to manage discussion forums and learning how to handle new digital devices and applications. At the beginning, it is imperative to do sensitization for the first-time participants. This provides an opportunity to transform minds and eliminate negative attitudes from pre-misconceived perceptions about e-learning.

Practical sessions provide the participants with a tangible experience on what to expect whenever they access the learner/ content management system. Apart from support on how to upload content, faculty are taken through the learner profiles to have an experience of what a student is encounters while interacting with instructional content. All limitations attributed to an online learner are highlighted for faculty to consider when designing online instruction and avoid activities that could

pose a challenge to the learner's experience while using the learning management system. A step by step procedure for including activities and resources putting into consideration pedagogical skills is undertaken to create quality interactive online course. A manual should also be provided both in print and on the eLearning platform.

As a result of the exposure through training sessions, a majority of faculty become eLearning champions in their various sections. This is because faculty tend to listen to other faculty rather than the instructors, providing a forum to share what worked for them at different times when faced with challenges.

With the growing range of roles and responsibilities, faculty need to engage with ongoing skills upgrade at every opportune moment. However, during the sessions it was evident that faculty have competing priorities. Finding time for multiple work responsibilities was an issue of concern for all faculty. Faculty members were also concerned about how to achieve balance as they handle personal as well as professional commitments. This resulted in participants dropping out from the training sessions or walking in and out of training rooms hence missing out on critical aspects of the training.

It was established that some faculty who were very vocal about their course not being able to be adapted for online teaching, had a challenge with using the attendant technological devices. The reason was attributed to an individual never having had a chance to use technology while undertaking their education and what was being introduced was unfamiliar territory.

Issues of copyright and how much is acceptable material to be used from other sources was an issue. Faculty had a feeling that their developed content would be accessible to everyone and others would publish their materials without their knowledge. Another major issue of concern that downplayed on the morale of faculty was on compensation. There was concern about the time an individual would take to develop self-learning materials and the compensation.

Faculty support

The technical support team remains to be a great asset to the success of the online class once a course has been launched. The team responds quickly to the technological hitches and unexpected issues that may arise. This support provides a positive student experience and ensures that faculty feel that they have a recourse where their challenges can be addressed. Their confidence level motivates them to continue teaching online. Faculty who are supported fully by the technical support team and management become effective champions for online teaching and learning and can provide peer support to their colleagues. According to Vai and Sosulski (2011: 4), "a great deal of work and research has been done to determine what works in an online learning and teaching environment. As a result, standards and best practices have been developed to guide course designers and teachers"

Once the course has been launched, students are given basic orientation on the Learner management system and enrolled in the course. Faculty at times would be enthusiastic about

online learning and would want to roll out an online course without prior preparation. This sometimes leads to a number of challenges since there would be no resources in form of instructional content or activities that would engage the students asynchronously. Challenges also emerge if there are no provision for students to participate in discussion forums, online chats or submit their assignments.

In managing Students, enrolment into courses proved a challenge especially for large classrooms. This was either due to students missing out during the orientation sessions or not keenly following instructions as guided. A Lecturer would have an afterthought of having the students in groups for easy management and assessment for the large classes. This needed manual allocation of groups on the system that would result in a student having registered in more than one group or would want to change groups after allocation had been done.

Innovative approaches to delivery of education

There is need to have a strong understanding of how to navigate through the learning management system. Knowledge of other web technologies and how they function would provide leverage for instructors in presenting their content well. Faculty need to take advantage of opportunities for training and workshops, collaborate with colleagues who are currently teaching online, and request consultations with specialists. Some of the innovative delivery approaches include: e-Learning Teams; Open Educational Resources; Collaborative partnerships; Social Media Platforms; Flipped learning; Blended Learning; Student-led discussions; Cooperative Learning; Problem-based Learning; and Project-Based learning. A number of the innovative approaches are addressed below.

Use of open educational resources

Open Educational Resources (OERs) are any type of instructional materials or content that are in the public domain or introduced with an open license. The nature of these open materials is that anyone can legally and freely copy, use, adapt and re-share them. OERs range from textbooks to curricula, syllabi, lecture notes, assignments, tests, projects, audio, video and animation. These materials can be used by an individual to enhance their knowledge and training, as well as by students and educators around the world. Open Educational resources encourage more independent and flexible learning opportunities for students. The courses allow students to explore materials before enrolling, making them better prepared before they arrive in the classroom.

Leading universities around the world provide free online courses that are open to the public. This provides for easy access to more quality choices of courses for students in low-resource environments enabling the enjoyment of recorded lectures and video tutorials. Just to name a few reputable institutions such as; Yale University –<https://oyc.yale.edu>, Massachusetts Institute of Technology –<https://ocw.mit.edu/index.htm>, Harvard University –www.extension.harvard.edu/open-learning-initiative, are among the many colleges and universities offering open online courses to the public. Educators share their work with more individuals and enjoy wider influence since their materials are available to larger audiences.

Through provision of a free license, educators can improve and adapt the learning materials to give students what they need to learn to achieve their goal. New programmes that have been introduced at some universities especially in the developing economies, lack adequate learning resources that would provide insightful learning to students. In one of the training sessions students were more eager to supplement their classroom learning with OERs which were available freely online. One of the participants highlighted that the recommended text books for their course were highly priced and hence not affordable. The participants were therefore glad to discover the vast resources available for use free of charge.

Building e-learning teams

E-learning teams are collaborative groups of lecturers with the intention to improve their teaching methods and increase students learning. These teams provide a forum where challenges encountered and success stories are shared thus diffusing the negative attitude towards online instruction. The main benefit of e-learning teams is the opportunity for collaboration, peer mentoring, and support in the process of designing, developing and delivering online courses.

It is easier to interact constructively and support each other more effectively for an e-learning team when in smaller groups of about ten (10) members. The members in the team get to know each other well enough to understand their strengths and weakness and agree on a common framework of operation. This minimizes conflict and enables the team members to derive value from the collaboration. To run the team efficiently, roles should be assigned to members to provide coordination among themselves and any other eLearning support services that they can access. The team should create opportunities for regular interaction to enhance moral support and tackle any challenge that may arise in the course of rolling out the online course.

Collaborations and partnering with other institutions

It is important to partner with institutions that have had success in implementing online teaching. Faculty have the opportunity to share ideas and learn from different experiences. From observations gathered at a number of universities in the region, it was evident that the challenges experienced were similar to a greater extent in terms of workload, attitude, infrastructural, pedagogical and technological challenges. There was reluctance from lecturers to take up online teaching citing reasons such as too much workload and not having received adequate training for them to be proficient. Issues with compensation and facilitation from management on availing resources for developing online materials were highlighted as barriers to embracing online teaching. Another issue of contention was on the ownership of copyright for the Self-Learning Materials (SLIMs) designed and developed.

E-learning platforms

The type of eLearning platform an institution selects will depend on the programme content they want to be delivered online. That, in turn, depends on a number of factors such as the curriculum,

what students should know and be able to do as they navigate and interact with the platform, technical devices and applications and the skills of online instructors. Unique requirements for delivery of content for online courses, is a major challenge when selecting the right eLearning learning platform. An institution will need to focus on the learner and the outcomes they must obtain from progressing through the online courses. There should also be consideration on the features that will be required to deliver the instruction. All learning management systems contain an array of features. One may consider some 'must have' features such as analysis of learner outcomes, a chat space for learners, or the ability to carry multiple content formats from text to videos, and those elements necessary to dispense the content seamlessly, and intuitively, to learners.

There is need to understand the technical skills of those who will be using the system keeping in mind how and when they will access the system. Today, the digital instruction is mostly asynchronous, meaning it takes place on-demand rather than during scheduled times and in defined locations. Therefore, it is important to ensure that the learning management system selected has a mobile capability, for learners to have constructive and productive experiences whether on a desktop, tablet, smartphone or any other digital device. For any new system and applications installed, training must be provided for the users to familiarize themselves for greater proficiency leading to maximin utilization.

Commercial Learner Management systems sell through a subscription and come ready to use. The provider handles any technical problems and maintenance and performing scheduled visits to carry out software updates. An open source system may be a better solution for institutions that have in-house software developers and are able to customize the Learner Management System to accommodate their unique requirements. An open source LMS is sold with partial coding that the purchaser must complete before use. This therefore means that the institution must invest in system developers to support and maintain the system. For a cloud based LMS, the software resides on a remote server maintained by the vendor. This type of LMS deploys via a browser, and customers are charged a subscription fee. An on-location LMS is installed on the purchasing company's server. Buyers typically pay an annual license fee and are charged for other installation and support services if required. Factors to consider include the size of your organization, the cost, how customized the learning environment must be, and the data security.

The possibility of institutional growth, with more courses of different types and varying cases of use will have an effect on the LMS capability of expansion. Online learning is growing fast and becoming not only more accepted but more expected, hence the Learning Management System must be flexible enough to seamlessly adapt to the anticipated learning opportunities that continue to emerge.

Use of social media platforms

Social media is a group of internet-based applications that build on the idea and technology foundations of web 2.0 which allows creation and exchange of user-generated content. Social media has gained credibility over the years as a trusted source of information and platform where

organizations can interact with audiences. The use of social media in education provides students with the ability to get more useful information, to connect with learning groups and other educational systems that make education convenient. The social network tools afford students and institutions with multiple opportunities to improve learning methods. Through these networks, one can incorporate social media plugins that enable sharing and interaction. Students can benefit from online tutorials and resources that are shared through social networks and content management systems.

Social platforms such as Facebook, YouTube and Instagram are being used to communicate campus news, make announcements and provide students with useful information. This has built engagement between the institutions and students which help in addressing many student issues through the group interactions. Video is a prominent tool on social media that is effective and can be used to share useful videos that inspire students and help them in enhancing the understanding of their course content. Twitter as a social platform through the use of the hashtags has been used to engage students in online discussions that are helpful.

Social media offers audience and subject monitoring tools that are useful and it is one of the best platforms to extract data. Students can find out how the majority of people feel about a particular topic or how experts perceive and advice on specific issues. This can help students compile and produce useful content for research. Whether students are working on an assignment, working on a project or trying to gain more insight on a subject, some of the best information and results can be extracted from social media.

Connecting with experts on topics through social media is made possible at amazing speeds. These provide a great opportunity to interact and engage instantly with experts on various subjects and receive immediate responses to questions and guidance on topics that one may require support. Social media has the ability to broaden student's perspectives on various subjects and avails new informative materials.

CONCLUSION

Institutions of higher learning should embrace the emerging digital technologies by integrating them into their teaching and learning systems and ensuring that both the instructors and learners are trained on a continuous basis to keep them competent and updated. This will lead to positive attitudes, greater levels of technology integration and higher motivation levels. In addition, they need to capture the benefits offered by emerging digital technologies that support online instruction and embed best practices in their teaching and learning culture to enhance quality and greater participation of the learners. Thus, there is need to keep abreast with the technology as it evolves

hence the need for frequent reskilling and training of both faculty and students. It is also critical to pay attention to the ideal choice of the e-Learning platform and professional design and development of instructional content. The bottom line is not the utilization of technology or not which makes the difference. It is how efficiently and effectively the technology is used to support teaching and learning that results in the achievement of the desired results.

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