# Exploring the Acceptability of Online Learning for Continuous Professional Development at Kenya Medical Training Colleges

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**Abstract:** This study explores the acceptance of online learning (OL) for continuous professional development among lecturers at Kenya Medical Training College in 2009. The large and multi-campus College faces logistical and cost challenges in ensuring that its 700 lecturing staff have access to continuous professional development. Online learning potentially provides an effective and efficient solution to this problem. A questionnaire was administered to a sample of the lecturers to assess the perceived usefulness and perceived ease of use of online learning, taking into account lecturers' experiences. Two focus group discussions were also held to assess the lecturers' views on issues relating to OL. We find that there is a high level of acceptability of the idea of undertaking further training using OL as user attitudes towards web-based training were positive. The benefits of OL over face-to-face learning for clinical training and the accreditation of OL courses are issues of ongoing concern to lecturers. Successful and large scale adoption of OL course requires promotion of their benefits in addition to clarification of the accreditation of the available courses.

**Keywords:** online learning; professional development; perceived usefulness of technology; perceived ease of use of technology; online qualifications

## 1. Introduction

Kenya Medical Training College (KMTC) is the largest medical and health training institution in East and Central Africa with 700 lecturing staff and a responsibility for 14,000 students enrolled in more than 50 different medical and health courses across 28 campuses. Lecturers at KTMC are required to keep up-to-date in their field and in addition, are encouraged to enrol in degree and masters programs. A number of factors such as limited conventional classroom learning opportunities, insufficient training funds and restrictions on release of lecturers from their KMTC duties have resulted in management advocating online learning for continuous professional development.

This study explores the attitudes to and the use of online learning (OL) for professional development among lecturers at KMTC through the administration of a questionnaire. The study undertook to find out the appropriateness, barriers and potentials of online learning through the participating and non participating lecturers' experiences.

Previous studies in other parts of the world have commended online learning as an appropriate method of fostering continuous professional development while others have pointed out its limitations especially in remote areas where technology is lagging behind (Beller and Ehud, 1998, Bartolic and Bates, 1999). Most analyses on technology acceptance, however concentrate on high income countries. Kenya as a low income country thus makes an interesting case for analysis as quality and availability of technology is likely to be different to that of the richer countries. This study is able to cast some light on whether technology acceptance is influenced by the availability and quality of the technology. Formative findings in Kenya have suggested negative beliefs and myths have surrounded the use of OL materials, and their delivery and quality (Amutabi and Oketch, 2003).

## 2. Background

### 2.1 Training needs at Kenya Medical Training College

Kenya Medical Training College (KMTC) was established in 1927 and is the largest medical training institution in East and Central Africa. With over 14,000 students attending more than 50 different medical and health courses, KMTC makes the biggest single contribution to the health sector in Kenya with more than 2500


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graduates every year for both the Kenyan public and private health sectors, and the foreign job market. KMTC contributes to more than 80 percent of the health workforce in Kenya and in response to regional needs, also train students from other African countries such as Uganda, Tanzania, Burundi, Rwanda, Sudan, and Nigeria. In total, there are 28 constituent colleges spread throughout the country with 1,500 members of staff of which almost 50% of these are lecturers (Kenya Medical Training College, 2008).

KMTC has a core function of training competent, multidisciplinary health professionals. In order to deliver this, qualified and experienced lecturers are fundamental. To facilitate learning and training of competent health professionals, the lecturers must continually validate their knowledge and skills to reflect the changing nature of health care needs (Mazmanian and Davis, 2002). This calls for a vigorous engagement in Continuous Professional Development (CPD) programs.

In addition to routine CPD, the management of the institution has continued to encourage lecturers to enrol in degree and masters programs. Currently, the majority of KMTC lecturers are holders of higher national diplomas and a minority with bachelors and masters degrees in different fields.

Amutabi and Oketch (2003) note that conventional classroom learning opportunities are limited in local universities. In addition the budget situation means that KTMC has limited funds for training and restrictions on the number of lecturers who can be released for full time and part-time courses. The combination of pressure of work, lack of finances and personal limitations is driving many lecturers to consider the use of online learning for their CPD as a more cost effective means of staff development.

To cope with the demands and challenges of CPD and higher degree acquisition, online learning opportunities are increasingly being introduced in Kenya by both local and foreign universities (Amutabi and Oketch 2003). This study examines the acceptance of the lecturers and the management of KMTC of the use of OL and its perceived impact in improving the quality of training. There exists a view that positive perceptions about the learning method can affect the achievement of the learning objectives, outcomes and their transfer to others (Ames and Archer, 1988, Lockwood and Gooley, 2001).

## 2.2 Research objectives

This study aims to explore general experiences and beliefs of lecturers regarding online learning, and analyze its use and acceptance as a method of enhancing professional development and quality of training in KMTC. In order to explore these general issues, the research has a number of specific objectives. A questionnaire was used to explore the lecturers' knowledge of OL, to determine their experiences of OL, to find out the perceptions of lecturers towards online learning as a method of professional development and to assess the attitudes of online learning over face to face learning. A further stage of the study, elicited managers' and experts' views about online learning (Kyalo, 2009).

In addition, the information obtained from the questionnaire was used to test a number of research hypotheses of the relationship between demographic and socioeconomic characteristics of the lecturers and their acceptance of OL. These hypotheses are:

*1: Lecturers based in urban areas are more likely to accept and use OL than those based in rural areas;*

*2: Lecturers who are computer literate are more likely to participate in OL;*

*3: Experienced lecturers are more likely to use OL;*

*4: Lecturers with higher qualifications are more likely to use OL;*

*5: Lecturers with past or current experience in OL are more likely to have positive attitudes towards OL.*

## 2.3 Theoretical framework

Africa and the rest of the developing world are experiencing a surge in the use of electronic technology for communication and educational purposes. The potential use of this technology however remains largely unexploited due to limited access to ICT facilities (Wilson, 2008). The region depends heavily on high income

 

countries for both ICT materials and technical support leading to high costs of internet services and a technological gap in both education and business sector. While internet coverage appears to be improving in big cities and business centers, connectivity still remains poor and expensive in remote areas (Harasim, 2001). Kenya is in the process of installing fiber optic technology which is expected to boost and reduce the cost of internet communication and other ICT services in the country (Limo, 2009).

Online learning (OL) which is also called e-learning and web-based learning refers to the use of the web-based technologies to delivery material to enhance knowledge and skills. There are 2 possible modes for OL: distance learning or computer-assisted instruction (Ruiz JG et al., 2006). Considerable literature across a number of disciplines attests to the efficiency and effectiveness of OL as means of delivery for teaching and learning (Tallent-Runnels MK et al., 2006). OL is welcomed by students as it provides them with convenience and autonomy as learning is generally self-paced. These characteristics enhance motivation and performance. From the instructors' viewpoint, OL content can be more easily updated.

Whilst not disputing the importance of issues of technological capacity and cost, this paper concentrates on the factors that may impact on the acceptance of OL as a means for obtaining further qualifications or updating skills in KMTC. Lack of acceptance of new technology as evident in rejection, partial engagement or active resistance may be very costly to both the individual and the employer (Hashim, 2008). Thus employers tend to be concerned about financial, pedagogical and attitudinal barriers to use of new technology. All are instrumental in judging the success of the introduction of technology but attitudinal problems are considered to be the most difficult to manage.

Information system researchers have used the technology acceptance model (TAM) to study individuals' acceptance of new technology (Davis F.D., 1989). The model uses two technology acceptance measures of perceived usefulness and perceived ease of use, as the keys to success. Perceived usefulness is defined in the literature as "the degree to which a person believes that using a particular system would enhance his or her job performance". Perceived ease of use is defined as "the degree to which a person believes that using a particular system would be free of effort". (Davis F.D., 1989).

Earlier research by Schultz and Slevin found that the perceived usefulness of technology, especially in terms of the likely effect on job performance and advancement is highly correlated with self-predicted use (Schulz R.L and Slevin D.P., 1975). A system which does not help people in the performance of their job is unlikely to be viewed favourably, and thus adopted.

Both perceived usefulness and perceived ease of use have strong behavioural elements. Thus more recent research is strongly linked to the literature of psychology. Bagozzi, Davis and Warshaw (Bagozzi R.P. et al., 1992) note that the general model underlying the acceptance or rejection of technology follows a sequence of factors that run from systems design characteristics, beliefs and evaluations of consequences of use, attitudes, decision-making and intentions to use and finally to usuage. In the TAM, it is anticipated that positive attitudes towards technology are more likely to lead to an intention to adopt. Bagozzi et al (1992) suggest that the weakest link in the causal chain, and the least researched, is attitudes. Measurement and definition of attitudes may be problematic as attitudes may be linked to both goals and actions.

In conclusion, while studies have shown that OL can achieve the same or even better results than the traditional methods in fostering knowledge and skills, there is need to evaluate the users' attitudes towards this ease and usefulness of OL (Tallent-Runnels MK et al., 2006). Attitudes and beliefs are strong determinants of behavior and will affect the acceptance of any methodology hence affecting its effective use and overall impact in quality improvement.

## 3. Methods

### 3.1 Sample and data collection

Since it was not possible to survey all 700 lecturers in all the 28 locations of the KMTC colleges, 120 study subjects were drawn from 6 of the 28 colleges. The participating colleges, both urban and rural were selected through cluster sampling. After that selection, all full-time lecturers in the 6 participating colleges were used as

study subjects. The research design is a cross-sectional analytical study with data collected from 6 of the 28 colleges of KMTC using a researcher designed questionnaire.

In a second stage of the study, qualitative data were collected via Focus Group Discussions (FGD) with an aim to complement, strengthen and explain quantitative results. The data were derived from two FGDs each consisting of 7 lecturers who had participated in OL and personal interviews with three key informants. The key informants included a human resource officer in KMTC, a principal in one of the KMTC colleges and a lecturer dealing with e-learning in one of the local universities.

The survey instrument is a modified version of a validated questionnaire used in a previous and related study by Chin (2004). In order to allow for clarification of issues for both the researcher and study subjects, one of the authors (William Kyalo) undertook all the data collection procedures including the surveys reported in this paper and the interviews and FGD.

The study instruments were designed in such a way that useful information was collected at the same time as responses to the research questions. The information collected included socio-demographic characteristics, user rate of OL, perceived usefulness of OL, and beliefs, experiences and attitude towards online learning as a tool for continuous professional development.

This section summarises the survey results based on the 120 questionnaires filled by the lecturers in the 6 KMTC constituent colleges. The responses to the interviews are also summarised. The first set of results summaries the demographic and qualifications of the survey respondents (Table 1).

**Table 1:** Demographic details of surveyed lecturers at KMTC (n=120)

| Socio-demographic variables | | |
|---|---|---|
| Gender | Male | 58.3 %( n=70) |
| | Female | 41.7 %( n=50) |
| Age (years) | Mean | 44.9 |
| | Median | 47.0 |
| Work Experience (years) | Mean | 18.5 |
| | Median | 20 |
| Work Location: | Urban | 54.2 %( n=70) |
| | Rural | 45.8 %( n=50) |
| Profession | Nurse | 48.3% (n=58) |
| | Environmental health officer | 11.7% (n=14) |
| | Medical doctor | 1.7% (n=2) |
| | Medical lab technologist | 10.0% (n=12) |
| | Clinical officer | 10.8% (n=13) |
| | Medical engineer | 5.0% (n=6) |
| | Pharmaceutical technologist | 1.7% (n=2) |
| | Medical imaging | 1.7% (n=2) |
| | Dental technologist | 1.7% (n=2) |
| | Occupational therapist | 3.3% (n=4) |
| | Orthopedic technologist | 3.3% (n=4) |
| | Medical records | 0.8% (n=1) |
| Highest Qualification attained | Diploma | 6.7% (n=8) |
| | Higher National Diploma (HND) | 65.8% (n=79) |
| | Undergraduate Degree | 15% (n=18) |
| | Postgraduate Degree | 12.5% (n=15) |

The majority of the lecturers (58.3%) were males while 41.7% were females. The age of the lecturers ranged from 28 to 60 years. The mean age is estimated at 45 years. The lecturers' work experience ranged from 1 to 34 years with an average of 18.5 years.

Work locations were categorized as urban or rural. Colleges located in big cities and provincial headquarters were categorized as urban while those located in district headquarters and counties were categorized as rural. 54.2% of the lecturers worked in urban environment while 45.8% were based in rural areas. It is expected that urban and rural environments enjoy some differences in terms of telecommunications infrastructure.

 

Nearly half (48.3%) of the lecturers involved in this study were nurses. This is consistent with the KMTC statistics which show that the majority of lecturers are in the nursing discipline. The next most common occupancy groups are: environmental health officers (11.7%) and the medical laboratory technologists and clinical officers (10% each). The majority of the lecturers (65.8%) who responded to this study had a higher national diploma as their highest qualification while 15% and 12.5% had undergraduate and postgraduate degrees respectively. The remaining 7% had a basic diploma as their highest qualification. In Kenya, a Higher National Diploma refers to one year of specialized training following the award of a basic diploma. Usually, it is argued that Higher National Diploma is equivalent to a bachelor's degree, though many authorities still believe it is a slightly lower qualification than a bachelor's degree.

The majority of the lecturers (68.3%) have not engaged in online learning (OL). Only 31.7% had engaged in OL in the past and at least 20% of the lecturers were still participating in online learning at the time of this study. Overall, only 33.3% of the lecturers had experience of OL through past or present participation. However, the overwhelming majority (73.3 %) expressed their intention to engage in OL in the near future.

Nearly 90% of the lecturers reported to have basic computer skills though at different levels of proficiency. All these lecturers who had basic computer knowledge were accessing the internet daily, weekly or at least on a monthly basis. Most of the internet access was happening at work place and in internet cyber cafés. Over 80% of the lecturers could easily access a computer and technical assistance if needed and about 70% felt that they had the necessary and adequate computer skills to participate in OL**.** 65% stated that the internet connection is usually reliable and fast enough.

## 4. Results and discussion

### 4.1 Survey results

The survey results assessing the degree of technology acceptance by the KMTC lecturers are provided in Table 2. The results are divided into two sections of perceived usefulness and perceived ease of use. As was explained earlier, perceived usefulness indicates the capacity of the new technology to enhance job performance. Perceived ease of use indicates the effort required to use the technology. The higher the perceived usefulness of a new technology, the more likely people are to adopt it. A system which does not help people in the performance of their job is unlikely to be adopted.

The responses to the survey questions which focus on perceived usefulness of OL reveal a high level of agreement that the use of technology is beneficial (refer to Table 2). Questions on feeling positive (question a), quality of knowledge acquired (question b) and recommending the use of the technology to colleagues (question f) received high approval ratings. Questions on the capacity of the knowledge acquisition to enhance job performance are not regarded so positively. Questions on the acceptability of the online qualifications to the institution (question d) and to the professional body (question e), and whether online learning was successful (question j) receive agreement rankings of 50% or less. While there is not strong disagreement to these 3 questions, there appears to be some hesitancy or uncertainty regarding the acceptability of the online qualifications. This is apparent in the high percentage of respondents who feel neutral towards the questions.

The qualitative responses from the FDG support the survey responses. One of respondents in the FDG commented that: *"The only unfortunate thing is that I don't think OL qualifications are recognized by most of the employers and professional bodies."* While this uncertainty exists, it is unlikely the perceived usefulness will translate into unqualified acceptance of online learning by the lecturers.

Convincing lecturers of the value, acceptability and recognition of online learning requires strong leadership within the institution. The managers at KMTC interviewed as part of this study acknowledged the place of online learning as a cheaper and more practical alternative than face-to-face training for professional development. One manager commented that: o*ur training budgets are insufficient and we can't sponsor every lecturer for a full time course, we hope most of them will enroll in online courses which are cheaper and can be self funded*. Institutional funding of OL would signal wide acceptance of the qualifications. Funding, even partially, would also enable the college to keep track of the professional development activities of the staff. Another manager's comment was that: *It is hard to know the number of staff enrolled in OL courses; most of them only come to us after they have completed their courses.*

Even in the absence of any available funding, it would be beneficial to the institution and its staff to send a clear message that OL training is valued. One manager noted that: *We don't discriminate; we actually consider their online qualifications just like any other qualification when interviewing staff for better job position.*

The second part in Table 2 with respect to perceived ease of use can be divided into two types of responses. The responses to the first 2 questions rate OL highly for its practicality, especially in terms of its flexibility for adults.

The last 3 questions all focus on the perceptions of OL versus face-to-face learning. The link between theory and practice when learning materials are delivered online and thus distant from the clinical area is an issue of concern for health education in all countries, not just low income ones like Kenya (Hewitt-Taylor J, 2003). The significance of this concern needs to be evaluated against the fact that much classroom instruction is also predominantly delivered at a distance from the client care environment (Hewitt-Taylor, 2003).

**Table 2:** Lecturers' views about online learning

| | | *Strongly Agree + Agree* | *Neutral* | *Strongly Disagree +Disagree* |
|---|---|---|---|---|
| PERCEIVED USEFULNESS | | | | |
| | I feel positive about using online learning to further my skills and knowledge. | 80.8% | 16.7% | 2.5 % |
| | Online learning can give me the same quality of knowledge and skills as face to face learning. | 80.8% | 11.7% | 7.5% |
| | I would like to see online learning established in all the universities. | 85.0% | 9.2% | 5.9% |
| | Online qualifications are acceptable and recognized in my institution. | 45.8% | 45.8% | 8.3% |
| | Online qualifications are acceptable and recognized by my professional organization/body. | 50.0% | 40.8% | 9.2% |
| | I would encourage my colleagues to try online learning for their professional development. | 87.5% | 8.3% | 4.2% |
| | Online learning can improve my knowledge and skills level | 89.2% | 5.0% | 5.8% |
| | Online learning can improve my job performance | 83.3% | 12.5% | 4.2% |
| | Overall, staff development through online learning can improve the quality of training in KMTC | 85.8% | 10.0% | 4.2% |
| | My experience in online learning is/was a successful one(for those who participated or are participating) | 27.5% | 66.7% | 5.8% |
| PERCEIVED EASE OF USE | | | | |
| | I prefer looking for reading materials online than in libraries. | 74.2% | 16.7% | 9.2% |
| | Online learning is flexible and suitable for me as an adult learner. | 80.8% | 11.7% | 7.5% |
| | One can successfully complete a course online without face to face sessions | 57.9% | 21.7% | 20.8% |
| | Overall, online courses are cheaper than those offered through face to face contact. | 54.2% | 40.8% | 10.0% |
| | I prefer online learning to face to face learning. | 55.2% | 26.7% | 18.3% |

There was modest agreement (54.2%) to the question on the cost of OL compared with face-to-face. With respect to cost, one of the FGD participants commented that: "*Overall, OL is cheaper but the hidden costs like internet and printing can be very distressing to the students if not anticipated."*

Thus it appears from the answers to questions on lecturers' overall views on OL that they liked the idea of participating in OL - they feel positive and like the flexibility of it – but that a number of dimensions create some doubt such as the cost, acceptability by the institution and their profession and the benefits of OL against face-to-face learning. This indicates that for OL to be successfully promoted as an alternative to face-to-face for continuous professional development, the accreditation issues need to be resolved and marketed to the lecturers to encourage broad uptake.

 

Overall the group of lecturers who have participated in OL did not provide strong endorsement of participation. Only 27.5% of those who had participated agreed that OL is successful for them with 66.7% of lecturers indifferent to the question. Since word of mouth may be important for generating ongoing support for and participation in OL, it would be wise for the institution to explore further the reasons for the neutrality towards the success of the OL experience.

## 4.2 Hypothesis testing

The second part of the data analysis presents tests of association between the lecturers' demographic profiles and their use and acceptance of OL. This enables the 5 hypotheses presented earlier to be tested and discussed. The test statistics for the 5 hypotheses are in Table 3.

**Table 3:** Hypothesis tests of lecturers' views about Online Learning

| Hypotheses | Pearson Chi-Square | Asymp. Sig. (2-sided) |
|---|---|---|
| Lecturers based in urban areas are more likely to accept and use OL than those based in rural areas | 3.290 | 0.070 |
| Lecturers who are computer literate are more likely to participate in OL | 13.147 | 0.004 |
| Experienced lecturers are more likely to use OL | 11.313 | 0.010 |
| Lecturers with higher qualifications are more likely to use OL | 4.706 | 0.195 |
| Lecturers with past or current experience in OL are more likely to have positive attitudes towards OL | 4.865 | 0.027 |

N=120

The first hypothesis is whether lecturers based in urban areas are more likely to participate in OL compared to those based in rural areas. This hypothesis was tested as it is believed that urban and rural environments enjoy some differences in terms of infrastructure. To test this hypothesis, a chi-square test was run between work locations of urban or rural and a value representing past and current participation in online learning. The Chi-square statistic in equal to 3.290 with a p-value of 0.070. Hence we conclude that there is no association between use of online learning and work location (urban or rural).

The second hypothesis is whether lecturers who have better self-assessed computer skills are more likely to participate in OL. In order to test this, a chi square test was run between a computer skills indicator and a value representing current and past OL participation. The chi square statistic is equal to 13.147 with a p-value of 0.004. Hence we conclude that there is an association between the use of online learning among lecturers and their level of self-assessed computer skills.

The third hypothesis addresses the issue of whether lecturers with more years of work experience are more likely to participate in OL than lecturers with less work experience. Based on a Chi-square statistic of 11.313 with a p-value of 0.010, we conclude that there is an association between the lecturers' participation in online learning and their years of work experience. The relationship may reflect the fact that lecturers who have been longer in their job are more likely to have been exposed to OL and its potential benefits.

The fourth hypothesis is whether lecturers with higher qualifications are more likely to participate in online learning compared to those with lower qualifications. The Chi-square statistic is equal to 4.706 with a p-value equal to 0.195, allowing us to conclude that there is no association between lecturers' participation in online learning and their qualifications.

Finally, we considered the hypothesis of whether past or current experience in OL is more likely to be associated with a positive attitude towards OL. The result was a Chi-square statistic equal to 4.865 with a p-value of 0.027. Hence we can reject the null hypothesis and we conclude that there is an association between lecturers' experience in online learning and their positive attitude towards OL. Thus for this sample of lecturers at KMTC, experience or participation in OL is associated with the higher positive attitude towards OL. This result is supported by a review of research on OL by Tallent-Runnels et al (2006).

While this result might seem to contradict the result in Table 2 that only 27.5% of those who had participated in OL agreed that it was successful, the percentage who thought it was successful far outweighed that those

that thought it was not of 5.8%. The most favoured option for the success or otherwise held by those who had already undertaken OL was neutrality. The issue of neutrality is an obvious candidate for further investigation, especially since this group of lecturers will either recommend or condemn OL to their colleagues.

In further tests of association based on results obtained by the questionnaire, we found no significant association between gender and self assessed computer skills, between gender and participation in online learning and between age and computer skills.

### 4.3 Quality issues

An institution pressing forward on the path of recommending OL for its employees' professional development should be both prudent and cautious. OL courses have the potential to enhance the learning experience where face-to-face courses are either unavailable or too expensive, but the quality of the process and of the OL courses should be carefully evaluated. It is imperative that OL courses are well designed and well implemented in accordance with sound educational theories (Tallent-Runnels MK et al., 2006). The ability of students to effectively use any technology associated with course materials must be considered in course design, so that any such applications enhance student learning. For clinical education, well-designed curricula are essential regardless of the method of delivery (Chumley-Jones H et al., 2002).

The quality issues were highlighted in the FGD. One of the lecturers commented: *But the most discouraging thing is that online learning opportunities are not readily available in our country and even if you get one, you are worried about authenticity and quality of the providers.*

## 5. Conclusion

Based on the findings of this study, it can be concluded that there is a high level of acceptability of the idea of undertaking further training using OL. User attitudes towards web-based training were undoubtedly positive. Kenya as a low income country makes an interesting case for analysis as quality and availability of technology is likely to be different to that of the richer countries. However, we find little evidence that the quality and availability of technology is impacting on the decision of whether to undertake an OL course or not. Rather it appears that some of the practicalities of OL training create uncertainties in the minds of the lecturers. There seemed to be some hesitation about the benefits of OL over face-to-face learning in light of the clinical nature of the subjects being studied and also about the accreditation of OL courses. The two questions which address the preferences of OL versus face-to-face registered the highest disagreement of all the answers.

The results are not surprising when considered in the context of OL training world wide. Bassett notes that classroom training is still the norm for most training (Bassett, 2006) . Companies in the United States conduct only 30% of training using OL methods (Hashim, 2008). On the surface, OL seems like a good option for time and financially constrained professionals. But in fact, the challenges of OL are many and include the difficulty of remaining motivated and self-directed. Indeed a comprehensive cost benefit analysis of OL may indicate that whereas the direct cost of OL is less than that of face-to-face teaching, the indirect costs of OL may be higher due to a high drop-out rate. The fact that those who have already participated in OL did not strongly agree about its success provides support to possible high indirect costs of OL.

Given the reservations expressed by respondents to the question on the benefits of OL, hybrid approaches to learning which integrate face-to-face learning with online learning merit some discussion in any decision to introduce more CPD courses at Kenya Medical Training Colleges. Blended learning has the potential flexibility to accommodate the varied requirements of pedagogies, disciplines and levels of course, together with the needs of a wide variety of learners (López-Pérez MV et al., 2011). What makes blended learning particularly effective is its ability to facilitate a community of inquiry for open communication and at the same time allow limitless access to information on the Internet (Garrison DR and Kanuka H, 2004). A study by López-Pérez et al (2011) shows that the implementation of blended learning has a positive effect on reducing dropout rates and in raising exam pass rates in the subject.

In the FDG, it was noted that: *Online learning is more theoretical than practical; it is not good for practical subjects like nursing* and *For practical subjects, I would advocate for a blended methodology whereby OL still comes with some face to face sessions.*

 

In the case of the suitability of OL or other modes of learning for the Kenya Medical Training College, a full assessment of the costs and benefits of OL would require an analysis of data over many years. Obviously this current study due to a limited time frame has not been able to undertake a comprehensive analysis. The results presented here do highlight both some of the advantages of OL and some of the ongoing problems.

There is no doubt that OL particularly where it is supported by a face-to-face component has much to offer an institution like KTMC which is endeavouring to improve the CPD training for its staff. There are a number of features of the KTMC environment which support this conclusion. First, KTMC is a multiple campus college with both urban and rural colleges with considerable distances between them. Second, the complexity and breadth of health and nursing education content coupled with the scarcity of expertise and resources required for effective CPD makes OL delivery a reasonable proposition for both the lecturers themselves and the organisation.

## References


ames, C. & Archer, C. 1988. Achievement Goals in the Classroom: Students' Learning Strategies and Motivation Processes. *Journal of Educational Psychology,* 80**,** 260-267.

Amutabi, M. N. & Oketch, M. O. 2003. Experimenting In Distance Education: The African Virtual University (Avu) And The Paradox Of The World Bank In Kenya. International Journal Of Educational Development, 23, 57-73.

Bagozzi R.P., Davis F.D. & Warshaw, P. R. 1992. Development And Test Of A Theory Of Technological Learning And Usage. Human Relations, 45, 660-686.

Bartolic, Z. S. & Bates, A. W. 1999. Investing In On-Line Learning: Potential Benefits And Limitations Canadian Journal Of Communication, 24.

Bassett, M. 2006. Classroom Setting Still The Rule For Training. Corporate Meetings And Incentives, 25, 20.

Beller, M. & Ehud, O. 1998. The Crossroads Between Lifelong Learning And Information Technology: A Challenge Facing Leading Universities Journal Of Computer-Mediated Communication, 4.

Chin, K. L. 2004. The Perceptions Of Lecturers And On-Campus Students On Online Teaching And Learning In Higher Education Master of Information Systems, Curtin University.

Chumley-Jones H, Dobbie A & Alford C 2002. Web-Based Learning: Sound Educational Method Or Hype? A Review Of The Evaluation Literature. Academic Medicine, 77, S86-S93.

Davis F.D. 1989. Perceived Usefulness, Perceived Ease Of Use, And User Acceptance Of Information Technology. Mis Quarterly, 13, 319-340.

Garrison Dr & Kanuka H 2004. Blended Learning: Uncovering Its Transformative Potential In Higher Education. Internet And Higher Education, 7, 95-105.

Harasim, L. 2001. Shift Happens: Online Education As A New Paradigm In Learning The Internet And Higher Education, 3, 41-61.

Hashim, J. 2008. Factors Influencing The Acceptance Of Web-Based Training In Malaysia: Applying The Technology Acceptance Model. International Journal Of Training And Development, 12, 253-264.

Hewitt-Taylor, J. 2003. Facilitating Distance Learning In Nurse Education. Nurse Education In Practice, 3, 23.

Hewitt-Taylor J 2003. Facilitating Distance Learning In Nursing Education. Nurse Education In Practice, 3, 23-29.

Kenya Medical Training College. 2008. Kenya Medical Training College [Online]. Available: ***Http://Www.Kmtc.Ac.Ke/*** [Accessed May 2, 2009].

Kyalo, I. W. 2009. *Towards Sustainability & Quality In Healthcare Training: Exploring The Use And Acceptability Of Online Learning As A Method Of Enhancing Continuous Professional Development Among Lecturers In Kenya Medical Training Colleges.* Masters Of International Health, Curtin University.

Limo, A. 2009. Fibre Optic Cables Set To Boost Trade In Kenya *Daily Nation*, Friday, February 27, 2009.

Lockwood, F. & Gooley, A. 2001. *Innovation In Open & Distance Learning: Successful Development Of Online And Web-Based Learning,* London, Kogan Page.

López-Pérez Mv, Pérez-López Mc & Rodríguez-Ariza L 2011. Blended Learning In Higher Education: Students' Perceptions And Their Relation To Outcomes. *Computers And Education,* 56**,** 818-826.

Mazmanian, P. E. & Davis, D. A. 2002. Continuing Medical Education And The Physician As A Learner: Guide To The Evidence. *Journal Of The American Medical Association,* 288**,** 1057-1060.

Ruiz Jg, Mintzer Mj & Leipzig Rm 2006. The Impact Of E-Learning In Medical Education. *Academic Medicine,* 81**,** 207-212.

Schulz R.L & Slevin D.P. 1975. "Implementation And Organizational Validity: An Empirical Investigation. *In:* Schulz R.L & Slevin D.P. (Eds.) *Implementing Operations Research/Management Science.* New York: American Elsevier.

Tallent-Runnels Mk, Thomas Ja, Lan Wy, Cooper S, Ahern Tc, Shaw Sm & Xiaoming L 2006. Teaching Course Online: A Review Of The Research. *Review Of Educational Research,* 76**,** 93-135.

Wilson, T. 2008. New Ways Of Mediating Learning: Investigating The Implications Of Adopting Open Educational Resources for tertiary education at an institution in the United Kingdom as compared to one in South Africa *International review of research in open and distance learning,* 9**,** 1.