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IMPACT OF ONLINE TEACHING CAPACITY BUILDING PROGRAMMES ON ONLINE TEACHING: A CASE OF UNIVERSITY OF KABIANGA KENYA.

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Sub-theme: Building Resilience

Covid-19 pandemic disrupted educational programmes globally, Kenya being not an exception. Most universities in Kenya closed down before slowly shifting to online teaching shrouded with challenges, partly due to inadequate staff expertise in online teaching. There was therefore a need for capacity building on online teaching to build resilience and support the achievement of Sustainable Development Goal 4 amidst the pandemic. The University of Kabianga initiated programmes to train the teaching staff on online education. The staff were also encouraged to enrol for online teaching Massive Open Online Courses (MOOCs) offered locally and internationally. This study sought to assess the lecturers' perceptions of the impact of these online teaching capacity building programmes in terms of relevance, effectiveness, efficiency, and sustainability. The study is underpinned by the Impact Evaluation Model and Mezirow's transformative learning theory. Descriptive-participatory research design through an online survey was used for data collection and the results revealed that although the programmes were considered relevant, most lecturers averse to the interventions and recommends further structured training.

Key words: *Online Teaching, Face-to-Face teaching, Capacity Building Programmes*

1.0 Introduction

COVID-19 pandemic disrupted education systems worldwide, affecting the teaching-learning process across all levels of education (Cathy & Farah, 2020; Meinck et. al., 2022). This aggravated a pre-existing education crisis and amplified inequalities in access to education against the spirit of Sustainable Development Goal (SDG) number 4 which enshrines to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. In Kenya, to minimize the spread of the virus, the government introduced a raft of measures including lockdowns and closure of all schools, colleges, and universities. This continued for months with the hope that the pandemic was not to last long. This was however not the case and alternative modes of teaching and learning had to be sought. Learning institutions were consequently expected to implement technology-supported learning and teaching (Gathuru & Mweyeri, 2021).

Online teaching therefore provided an alternative to deliver teaching activities in most universities which was hitherto mainly on-campus and in-person. According to Jing et al., (2021), online teaching not only provided a paradigm shift in teaching at the universities, but also opened an important window of opportunity to promote educational reform in the information age. It is however imperative to note that online teaching is not just a simple "Internet + teaching method", but rather represents the internet-based support services and innovative elements, which reshape the traditional content, structure, processes and method of teaching and learning, and transforms the existing modes of educational organization, services and teaching (Youru et al., 2020)

Although the majority of lecturers in Kenyan universities were well versed in face-to-face teaching, many were inexperienced in online teaching which is different in design, context, and delivery. As a fundamental problem, prior to Covid-19 pandemic, only a minority of lecturers had some experience of online teaching. Lecturers had to prepare and deliver their classes from home, with all the practical and technical challenges this entails, and often without appropriate technical support. Gaceri (2021) established effective training as a key determinant for adopting online teaching in educational institutions. As pointed out by Junus et al., (2021), online education requires a radical change by lecturers and students in many aspects ranging from communication style, content delivery and assessments to student support.

In order to prepare for online teaching and learning, the University of Kabianga (UoK) invested in digital technological infrastructure through installation of a Learning Management System (Moodle), boosting the internet bandwidth and partnering with local internet providers to give subsidized data bundles to both lecturers and students working online from home. The University also initiated online teaching capacity building

programmes to train staff on the online content development and teaching, through the use of Learning Management Systems and web-conferencing platforms. The staff were also encouraged to enrol for online teaching Massive Open Online Courses (MOOCs) offered both locally and internationally. To understand the effect of such courses and trainings on preparing lecturers for online teaching, this study sought to assess the lecturers' perceptions of training impact in terms of relevance, effectiveness, efficiency, and sustainability of the online teaching-learning process. Peersman (2015) identifies and describes the standards of impact evaluations for any intervention in line with impact evaluation model as follows:

- *Relevance*: The extent to which the objectives of an intervention are consistent with recipients' requirements and policies.
- *Effectiveness*: The extent to which the intervention's objectives are achieved, or are expected to be achieved, taking into account their relative importance.
- *Efficiency*: A measure of how economically resources/inputs (funds, expertise, time, equipment, etc.) are converted into results.
- *Sustainability*: The continuation of benefits from the intervention.

1.1 Study aims and objectives

The purpose of the study was to assess the University of Kabianga lecturers' perceptions of the impact of online capacity building programmes on their online teaching. More specifically, it aimed to address the following objectives:

- (i) To establish whether the lecturers perceived online education capacity building programmes as relevant for online teaching.
- (ii) To establish whether the lecturers perceived online education capacity building programmes as effective for online teaching.
- (iii) To establish whether the lecturers perceived online education capacity building programmes as efficient for online teaching.
- (iv) To establish whether the lecturers perceived online education capacity building programmes as sustainable to continually promote online teaching.

2.0 Literature Review

Experts in Education have warned against making direct comparison between previous face-to-face teaching and what they call "emergency remote teaching" that occurred in response to COVID-19 (Hodges et al., 2020). According to Moorhouse (2020), facilitating online learning can be challenging and professional training is needed for teachers to have the capabilities to teach effectively online. Subsequently, evaluating the impact of online professional learning programmes is crucial to understand the impact of the training strategies and the way they can be improved for future deliveries.

Traditionally, staff professional development training focused mainly on initiating change in the beliefs, attitudes, and perceptions of teachers. It was generally assumed that these changes would lead to other specific changes in their classroom behaviours and practices, which, in turn, would result in improved students' learning (Guskey, 1985). According to Clarke & Hollingsworth (2002), the optimization of outcomes of a process is facilitated by the understanding of that process. If professional development trainings are to be effective, there is need to understand the process and the conditions that support change and promote that growth. The change in professional development of teachers may take the following perspectives:

- a) Change as training—change is something that is done to teachers; that is, teachers are "changed".
- b) Change as adaptation—teachers "change" in response to something; they adapt their practices to changed conditions
- c) Change as personal development—teachers "seek to change" in an attempt to improve their performance or develop additional skills or strategies.
- d) Change as local reform—teachers "change something" for reasons of personal growth.
- e) Change as systemic restructuring—teachers enact the "change policies" of the system.
- f) Change as growth or learning—teachers "change inevitably through professional activity"; teachers are themselves learners who work in a learning community.

From the foregoing review of literature, online teaching capacity building programmes at the university were necessary to retool the lecturers on the online mode of teaching in the face of the covid-19 pandemic if success was to be realised.

2.1 Theoretical framework

The study is based on Mezirow's (2018) transformative learning theory which holds the idea that in the process of receiving new information, learners also evaluate their past ideas and understanding, and shift their worldview through critical reflection. This kind of learning experience involves a fundamental change of perceptions and examining things from new perspectives in order to make room for new insights and information. In this study, the lecturers had to critically reflect and examine the old in-person teaching and shift to the new online teaching due to Covid-19 pandemic.

3.0 Research Design and Method

This study adopts a descriptive, participatory research design and relies on survey method to collect data from University of Kabianga Lecturers. This research method is appropriate when the aim is to explore the self-reported beliefs or behaviours while enabling researchers to ask many questions and measuring many variables at once. This in turn allows collection of descriptive information (Neuman, 2014) and easy access to data in cases where there is a limited budget (Glasow, 2005).

3.1 Sample Size

An invitation was sent through email and WhatsApp to all 180 teaching staff who attended the university online capacity development programmes. A sample of 41 lecturers from volunteer participants were selected randomly for the study. The sample included 27 male and 14 female participants. Of note that the participants were drawn from all academic disciplines and all grades ranging from tutorial fellows to full professors.

3.2 Research Instrument

An online questionnaire was developed and administered to 41 sampled lecturers to seek their perceptions of the impact of Online Teaching Capacity Building Programmes on online teaching at the university. The instrument consisted of 5 sections for demographic information and statements on relevance, effectiveness, efficiency, and sustainability of the online teaching capacity building questions. Five-point Likert scale was used to capture participants' opinion where "Strongly disagree" represented 0 point for positive statements and "Strongly Agree" marked points. Similarly for negative statements, Strongly Disagree = 4 points and Strongly Agree = 0 point.

3.3 Data Analysis

The responses from the participants were collected, coded and analysed using SPSS. Descriptive statistics were used for the analysis. The results are presented and discussed for each objective in the following sections.

4.0 Results and Discussions

This section provides a summary of participants' socio-demographic information followed by their pre- and post-capacity development experiences and their view of the impact of the training programmes on their online teaching.

4.1 Participants' Socio-demographic Information

The majority of participants for this study are male (66%) followed by 34% female lecturers. As shown in Figure 1, more than half of them (54%) are from 46–55-year-old age group, followed by 36–45 (32%) and over 55 (12%) year-old groups respectively. As can be seen, a very small number of the trained staff (2%) were from the youngest age group, i.e. 26–35.

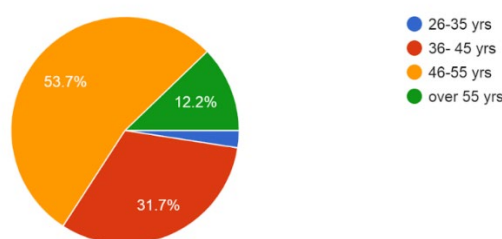


Figure 1: *Participants' categorisation by age groups*

Considering the role of participants, most staff (78%) have a teaching role and a minority are in leadership positions such as Heads of Departments (12%), Directors (5%), Deans (5%), and Senior managers (2%).

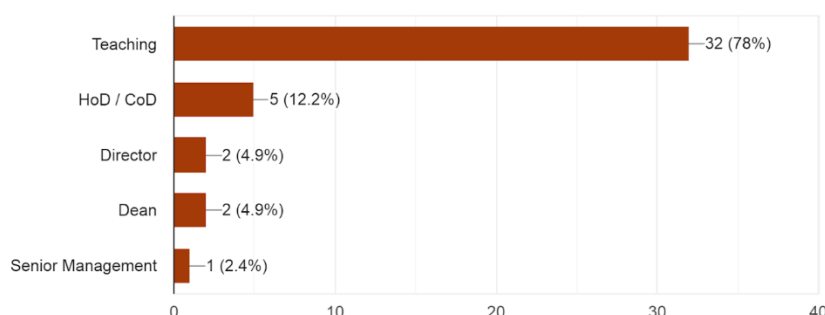


Figure 2: Participants' categorisation by role

4.2. Participants' general view of Online Teaching Capacity Building Programmes and Pre-Online Teaching Training Experiences

As Table 1 displays, teaching staff had a moderately positive view of online teaching capacity building programmes and were interested in further training. They however felt the trainings need to be well structured for them to be effective and adequate in equipping them with online teaching skills and knowledge. Majority of them had no prior online teaching experience.

Table 1. *Participants' General View of the Online Capacity Building Programmes*

General view (n=41)				
Statements	Mean	Std. Deviation	Perception	
The online teaching capacity building programmes organized by my institution were adequate in equipping me with skills and knowledge in online teaching	2.34	1.015	Not Sure	
Prior to the online teaching capacity building programmes at my institution, I had adequate training on online teaching through my self-initiative	1.93	1.081	Negative	
I have had training on online teaching and would be much interested in further training	3.29	1.123	Very Positive	
I have had training on online teaching and I am disinterested in any further training(-ve)	3.41	.894	Very Positive	
The institutional online teaching capacity building programmes need to be well structured for them to be effective	3.41	.774	Very Positive	

Ways of improving online teaching skills and knowledge

Apart from the capacity building programmes at the university, the participants indicated that they had enhanced their online teaching through the means displayed in Figure 3. It seems online teaching videos and virtual workshops unlike in-person workshops are the most popular ways of improving skills and knowledge related to online teaching. Similarly, "being mentored by peers" and "engaging with Massive Open Online Courses (MOOCs)" appear to support the development of expertise in online education for a smaller number of lecturers.

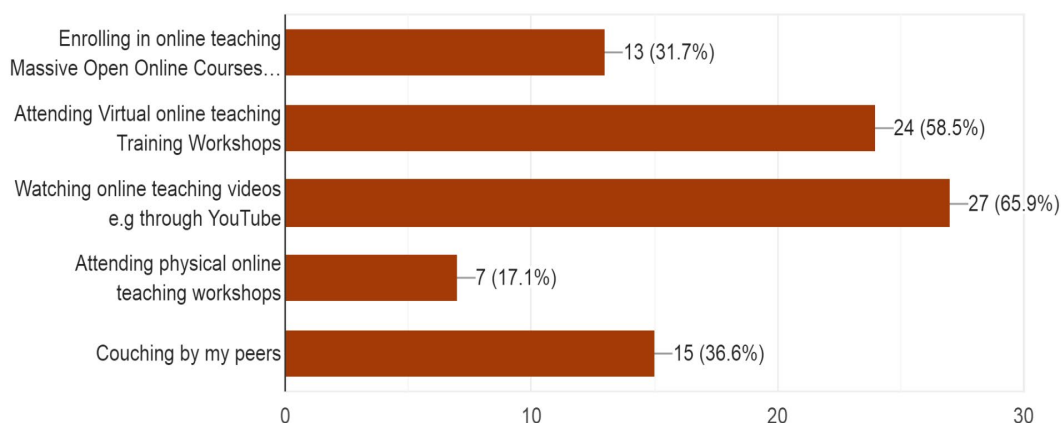


Figure 3: Reported ways of improving online teaching

4. 3. Participants' Perception of the Relevance of the Online Teaching Capacity Building Programmes

Table 2 clearly indicates that lecturers perceived online teaching capacity building programmes as relevant to their online teaching with well organised content and clearly defined objectives.

Table 2. Participants' Perception of the Relevance of the Online Capacity Building Programmes

Relevance of training (n=41)			
Statements	Mean	Std. Deviation	Perception
I found the Online teaching capacity building programmes relevant in my teaching.	3.29	.716	Very Positive
The online teaching capacity building programmes had a well-organized content and was easy to follow	2.73	.895	Fairly Positive
Online teaching capacity building programmes helped me complete teaching my courses on time during the Covid-19 pandemic	2.88	.954	Fairly Positive
Online teaching capacity building programmes had clearly defined objectives	2.80	.749	Fairly Positive
Online teaching capacity building programmes were well structured and logical	2.61	.802	Fairly Positive

In addition, the majority of participants responded that the content was relevant in exposing them to synchronous teaching (76%), use of LMS (71%), and online content design and development (68%). However, from Figure 4, it can be seen that more exposure to online assessments, copyright policies, accessibility, and Open Educational Resources is required.

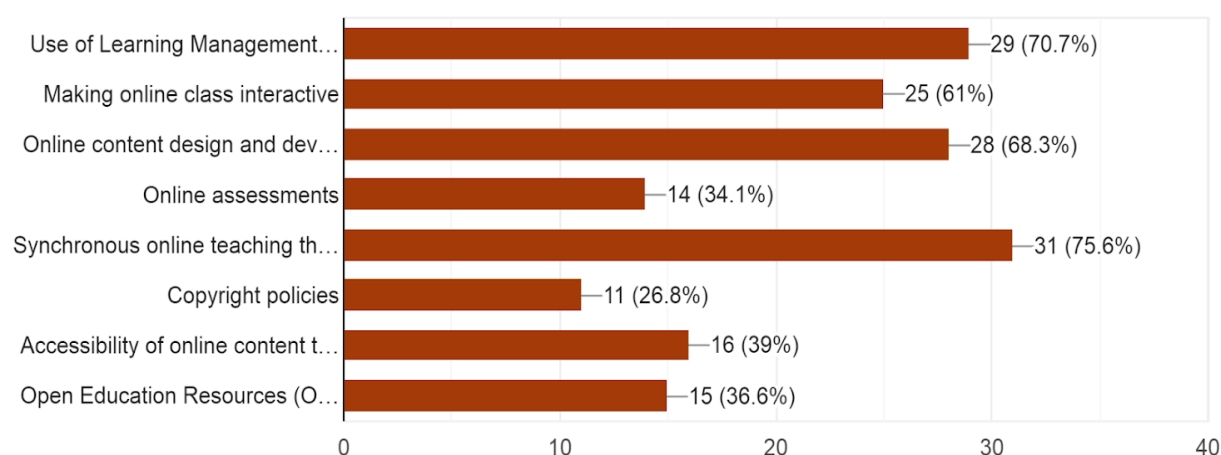


Figure 4: *Relevance of capacity building programmes in exposing lecturers to online teaching*

4. 4. Lecturers' Perception of the Effectiveness of the Online Teaching Capacity Building Programmes

Despite the general positive perception about the effectiveness of the trainings, Table 3 shows lecturers felt they do not possess adequate skills in online assessments, designing of accessible online content and knowledge of online copyright policies.

Table 3. *Participants' Perception of the Effectiveness of the Online Capacity Building Programmes*

Effectiveness of training (n=41)			
Statements	Mean	Std. Deviation	Perception
I feel comfortable using Learning Management System (LMS) such as Moodle and Google Classroom to teach my courses	2.90	.831	Fairly Positive
I feel comfortable using features in LMS such as forums to make my online classes interactive	2.66	.938	Fairly Positive
I feel comfortable using LMS assessment tools to evaluate my students' performance in my courses	2.05	1.117	Not Sure
I feel comfortable designing and uploading content in LMS	2.78	.988	Fairly Positive
I feel comfortable designing accessible content to suit diverse needs of my learners (e.g. use of alternative forms of content such audio, video, transcriptions etc.)	2.24	.969	Not Sure
I feel comfortable organizing for synchronous sessions for my students through video conferencing applications such Google Meet, ZOOM, Microsoft Teams and KENET	2.63	1.067	Fairly Positive
I feel comfortable accessing Open educational Resources(OERs) to supplement my online content	2.51	1.121	Fairly Positive
I feel knowledgeable in online content copyright policies	2.00	1.323	Not Sure
I feel comfortable enrolling students in my online courses	2.85	1.108	Fairly Positive

4. 5. Lecturers' Perceptions of the Efficiency of the Online Teaching Capacity Building Programmes

When the efficiency of trainings is considered, the results show that most lecturers felt online capacity building programmes were not delivered efficiently and the time spent on the training was inadequate (Table 4). Some lecturers did not have access to an appropriate device (e.g. a laptop or tablet) for the trainings. The internet connectivity was also not reliable for the online trainings. Most of participants were however fairly positive that the trainers had adequate expertise in online teaching.

Table 4. *Participants' Perception of the Efficiency of the Online Capacity Building Programmes*

Efficiency of trainings (n=41)			
Statements	Mean	Std. Deviation	Perception
The online training programmes were efficiently conducted	2.12	1.122	Not Sure
The time spent in online teaching training was adequate	1.66	1.063	Negative
The technical equipment (e.g. Smart phones, Laptops, Desktop Computers, Tablets etc.) required for the online teaching training were within my reach	2.29	1.250	Not Sure
The internet connectivity at my institution was adequately strong for online teaching training	1.98	1.172	Negative
The trainers had adequate expertise in online teaching	2.56	.776	Fairly Positive

4.6. Lecturers' Perceptions of the Sustainability of the Online Teaching Capacity Building Programmes

Table 5 indicate lecturers believe that frequent refresher online teaching capacity building programmes and formulation of e-learning policies are required for sustainable impact. Peculiarly, even after undergoing these trainings, most of them responded that they would gladly revert to face-to-face teaching once the covid-19 pandemic is over. This could be an indicator to their hesitations to change even after being equipped with skills and knowledge on online teaching.

Table 5. *Participants' Perception of the Sustainability of the Online Capacity Building Programmes*

Sustainability of training (n=41)			
Statements	Mean	Std. Deviation	Perception
Frequent refresher online teaching trainings need to be conducted for sustainable impact	3.44	1.097	Very Positive
Online teaching trainings have equipped me with knowledge and skills to teach online even post Covid-19 pandemic	3.02	.935	Very Positive
Even after online teaching trainings, I would gladly revert to Face-to-Face teaching post COVID-19 pandemic (-ve)*	1.17	1.138	Negative
e-learning policies need to be formulated or reinforced for sustainable online teaching at the university	3.49	.746	Very Positive

*The mean values are based on a 5 point scale where 0 equals 'Strongly Disagree', 1 equals 'Disagree', 2 equals 'Not Sure', 3 equals 'Agree' and 4 equals 'Strongly Agree' for Positive Statements and the reverse for the Negative Statements respectively i.e. 0 equals Strongly Agree, 1 equals Agree, 2 equals Not Sure, 3 equals Disagree and 4 equals Strongly Disagree.

4.7. Lecturers' Suggestions on ways to Improve Online Teaching at UoK

The following is a summary of some of the suggestions made by lecturers on how to improve and sustain online teaching and learning at the University of Kabianga.

More and structured online teaching trainings

"Structured trainings need to be done and certificates awarded"

“More training for both teachers and students on online teaching and learning respectively”
 “Continuous training, support, funding and infrastructural development”
 “Regular training. Provision of relevant facilities and development of e-learning policy”
 “Through regular capacity building and sensitisation”
 “Refresher training at least twice per semester”
 “Provide online training to both staff and students, subsidized bundles and improve network connectivity”
 “Regular training of academic staff on online teaching, assessment and how admit students”

Provision and Improvement of technological infrastructure

“Just train and provide necessary resources”
 “Ensuring a Reliable Internet”
 “Ensuring stable and strong internet connection in all campuses”
 “Boost internet connection”
 “Improving accessibility for students e.g. through subsidised laptops”
 “Setting aside more resources to boost e-learning”
 “Improvement of network strength”
 “Provide more facilities”
 “By putting suitable infrastructure to support it”

Online teaching Policies

Formulation

“Formulate policies to enhance online teaching and improve infrastructure”
 “More systematic and friendly models be developed”
 “Development of elaborate policies and regulations on online teaching”
 “Establishment of a directorate or coordinating office to lead the transformation”
 “It should be clearly entrenched in the University strategic plan with a clear road map and action points”
 “Motivate and reward staff with good content in the online platform”
 “Design and equip online teaching labs/rooms; create online teaching coordination centre”

5.0 Implications and recommendation for practitioners and designers

The findings of this study could provide the organisers and designers of the online teaching capacity building programmes with a representation of the teaching staffs’ perceptions of such trainings. This could help them provide relevant, effective, efficient, and sustainable programmes.

From the findings of this study, the researchers make the following recommendations:

- (i) The University of Kabianga (UoK) to organise for more and structured online teaching capacity building programmes to the teaching staff.
- (ii) The UoK to seek partnerships and staff exchange programmes with other institutions both locally and globally, that have excelled in online teaching, to offer benchmarking online teaching opportunities.
- (iii) The UoK to establish a Directorate of Open, Distance and e-Learning (ODEL) to oversee and coordinate the online teaching and learning even post covid-19 pandemic
- (iv) The UoK to improve its online teaching technological infrastructure such as internet connectivity to meet the needs of both staffs and students.

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