FORMS OF TRAINING SUPPORT IN THE DEVELOPMENT AND USE OF EDUCATIONAL MEDIA DURING MICROTEACHING IN CHRISTIAN RELIGIOUS EDUCATION IN PUBLIC UNIVERSITIES, KENYA

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ABSTRACT

The success of any educational programme depends largely on the consumer's perception. In line with this view, this paper explores the perceptions of Christian Religious Education pre-service teachers and trainers on the forms of support towards the development and use of educational media. The paper is based on an evaluation of microteaching practices in public universities in Kenya. The study adopted a concurrent mixed methods research design embedded in the pragmatic paradigm. It was conducted in four public universities purposively sampled on the criterion that they were public and offered education programmes. Stratified and simple random sampling techniques were used to select the required sample of pre-service teachers. All the CRE lecturers and HODs were considered for the study. Data was collected using structured and unstructured questionnaire, interview and focused group discussion guide. The collected data was then analysed using a combination of descriptive and thematic analysis techniques to cater for the quantitative and qualitative data gathered. From the research findings, it emerged that printed media was widely availed and used while integration emerging educational technologies was still wanting. Teacher trainees and trainers will use the findings to re-examine their perceptions on incorporation of educational technology in CRE instruction.

Keywords: Forms, Training Support, Development, Use, Educational Media, Microteaching, Christian Religious Education, Public Universities, Kenya

INTRODUCTION

Although teacher preparation programmes vary across countries in the manner they emphasize on particular curriculum components and time allocation, the use of educational media to reinforce teacher education remains a common factor in most of the programmes. In an endeavour to apply constructivist pedagogy (Kukla, 2000), a variety of educational media have been integrated into teacher preparation programmes through microteaching. Educational media are defined as materials that facilitate the teaching of educational concepts and encompass prints, audios, audio visuals, charts, internet and computers among others (Dick *et al*., as cited in Wamalwa & Wamalwa, 2014). These media make learning to take place faster and in a better framework. With the help of educational media, for instance, learners are viewed to enhance perception and content retention, and their understanding is reinforced (Ayot, as cited in Ngussa, 2015). The importance attributed to the use of media and application of technology in education in general has seen teacher education shift towards integration of technology during instruction (Lawless & Pellegrino, 2007). In view of this, efforts have been made to study content knowledge in existing technological pedagogy so that knowledge and skills for effective use of educational technology during instruction could be identified (Koehler & Mishra, 2009).

Support offered towards Development and Use of Educational Media during Microteaching

Use of technology in teacher training has continued to gain momentum with a view to aligning pedagogical content with technology. Meta-cognition has been shown to provide pre-service teachers independence and flexibility (Phelps & Graham, 2008). A review of existing literature reveals that critical thinking intertwined with educational media are key competences that pre-service teachers ought to acquire through on-going professional development (European Commission, 2013).

Support given to novice teachers during their work is useful in bridging the gap between them and veteran teachers. Sterrett and Imig (2011) argue that in order to gain experience new teachers require mentoring, collaborative leadership, affiliation with professional organization, and orientation in technology. It is therefore postulated that programmes meant for teacher education require support in diversity in order for novice teachers to acquire requisite skills, knowledge, and dispositions for effective service. Support for pre-service teachers is further underscored in studies that recognize, for instance, classroom management as a function of the classroom community which has unique features (Sterret & Imig, 2011). According to these studies, pre-service teachers require mentoring by veteran teachers on, among other areas, appropriate pacing of learning materials by age, meeting of deadlines, completion of forms and other protocols.

Pyrtula *et al.* (2010) recognize the importance of experience in development of new approaches to teaching. Consequently, they argue that novice teachers require support in planning and peer collaboration in order to develop learning communities. Besides, Melnick and Meister (2008) contend that novice teachers need support to link pre-service to in-service teaching. Similarly, Mitchell *et al.* (2008) aver that new teachers can glide seamlessly into learning relationships if they are supported to collaborate with teachers who have been in the service for long. In so doing, beginning teachers get exposed to creativity in teaching.

Support with the media use during microteaching has been noted to provide trainee teachers with opportunities to experiment with and practice innovative ways of teaching (Grossman & McDonald, 2008). Such innovations are argued to be suitable for this group of teachers to be self-reflective, analyse teaching critically, and to explore with diverse pedagogical experiences (Fernandez, 2010). Koross (2016) argues that pre-service teachers need support with use and development of media in order to handle their pre-conceptions about the teaching practice and also come up with teaching strategies that are more effective.

The studies cited elaborately enumerate the benefits of support for pre-service teachers. There is, however, little or no mention of the form of support pre-service teachers in local universities get in their preparation and use of educational media during microteaching.

Statement of the Problem

Technology has become an integral phenomenon in contemporary society. The endeavour to improve the quality of education must therefore take cognizance of the important role that technology plays in effective delivery of instruction. In recognition of how important technology is to education, teacher development and training that is oriented towards integration of technology in teaching remains central (Lawless & Pellegrino, 2007). Through microteaching, for instance, Kasomo (2012) posits that pre-service teachers learn how to integrate technology, by simulating real classroom situations using small groups of peers. Kasomo contends that, in this way, the pre-service teachers are able to observe given teaching concepts, assess them and implement them in a makeshift lesson.

Despite the expectation that the knowledge gained on integration of media in teaching through microteaching would be sufficient, evidence shows that the degree of utilization of technology

among teachers still varies (Hall, 2010). In CRE evidence shows that teachers tend to exclusively make use of the auditory channel of communication during instruction making lessons to be rather boring (Groenewegen, as cited in Situma, 2016). Although various reasons such as inadequacy of media and lack of integrative knowledge of media pedagogy have occasionally been advanced to explain these differences in technology utilization, pre-service teachers and trainers' beliefs about technology use in instruction have largely been overlooked. The study therefore examined CRE Bachelor of Education pre-service teachers and trainers' perceptions on forms of support towards the development and use of educational media during microteaching session.

MATERIALS AND METHODS

The study was conducted in selected public universities across Kenya. At the time of the study, there were 22 public universities in Kenya established through institutional Acts of Parliament under the Universities Act, 2012. The Act provides for the development of university education, the establishment, accreditation and governance of universities. Four universities were selected on the criterion of the length of time they had been offering the Bachelor of Education degree programme. The choice of these four universities was informed by the fact that, being the oldest, they offered an ideal framework for examining educational media for microteaching since over time they have observed the evolution of both print and electronic media in education. For ethical considerations, these universities were identified as A, B, C and D.

The study adopted a concurrent mixed methods research design. This is an approach to inquiry that combines and associates both qualitative and quantitative forms (Ayiro, 2012). It involves the use of both approaches in tandem so that the overall strength of the study is greater than either qualitative or quantitative research (Creswell, 2012). The study targeted all fourth-year B.Ed students taking CRE as a teaching subject and lecturers in the four selected public universities. The choice of fourth-year students was based on the fact that this group of students had conducted their microteaching sessions. Besides, CRE lecturers were deemed to have incisive views regarding educational media and microteaching management. Therefore, a total of 1130 CRE student teachers and 21 lecturers, 4 of whom were HODs, were identified from the four public universities. The observational unit of analysis was the individual pre-service student and lecturer. The total target population was therefore 1151 individuals. The sample size of the pre-service students for the study was determined using the following formulae adapted from Getu and Tegbar (2006):

$$\text{Sample size} = \frac{n}{\left(1+\frac{n}{N}\right)} \text{ and } n = Z^2\, p\,(1\text{-}p) / w^2$$

Where: n is the sample size, N is the study population (1130 in this case), p is the estimated proportion (taken at 50% since the proportion for the study was not known), W is the margin of error allowed, taken at 5% for the proposed study and, Z is the value corresponding to the level of confidence taken in the proposed study, the confidence level was 95% (so as to allow for all possible intervals) and therefore Z = 1.96. Substituting the above features, the sample size was calculated as follows: $n = 1.96^2 * 0.5 * 0.5/0.05^2 = 384$. Since N=1130, the sample size $= \frac{384}{1+\frac{384}{1130}}$ $=286.6 \cong 287$.

Three main instruments were used to collect data, namely a questionnaire for B.Ed (CRE) pre-service teachers, an interview schedule for B.Ed CRE trainers, and a focus group discussion guide for pre-service teachers. The use of the three tools was a necessary triangulation process that enabled collection of data from diverse sources. Both quantitative and qualitative data analyses were conducted in order to better understand the CRE pre-service teacher's perspectives regarding microteaching applications in the courses of methods.

Data were analysed using descriptive statistics for all the quantitative data. Coded data was entered into the Statistical Package for Social Science (SPSS) version 20 which was then used to screen data for missing values and response rate. Means and standard deviations were used to summarize CRE pre-service teacher and trainers' perceptions regarding the constructs under study. This allowed for identification of the most typical response and the consistency with which it was made across the respondents. Thematic analysis was used to explore pre-service teacher perceptions derived from focused group discussions as well as, capturing perceptions of CRE trainers. Thematic analysis was preferred since, as noted by Creswell (2012), it allows an examination of responses for prominent, recurrent themes across and within respondents. Besides, it allows for processing of data inductively rather than deductively. Consequently, recurrent themes and sub-themes arising from respondents were presented in form of data matrices.

RESULTS AND DISCUSSION

The study sought to establish the forms of support extended to CRE pre-service teachers in development and use of educational media during microteaching. An examination of forms of support offered was conducted via pre-service teachers' questionnaire, focused group discussions with groups of pre-service teachers and interviews with CRE trainers.

Forms of Support: A Descriptive Analysis of Pre-service Teachers' Perceptions

Descriptive statistics, in particular, means and standard deviations were used to examine pre-service teacher perceptions regarding forms of support offered to them in their endeavour to develop and use educational media during microteaching. Choice of mean scores was informed by the fact that means represent typical responses on particular items. Standard deviations were used to reflect the consistency with which these typical responses were made. For this reason, mean response scores were computed and interpreted using the following threshold; $0.5 \leq R < 1.5$–strong disagreement; $1.5 \leq R < 2.5$–disagreement; $2.5 \leq R < 3.5$ moderate agreement, $3.5 \leq R < 4.5$ agreement; $4.5 > R$–strong agreement, where R represents the mean response score.

The results presented in Table 1 below show that pre-service teachers tended to agree that they received several forms of support in development and use of educational media mainly from CRE trainers. The mean response scores were mostly in the interval $3.5 \leq R < 4.5$ and standard deviations were small signifying consistent agreement. More specifically, they tended to agree that they received support from trainers on how to innovate educational media using materials in the local environment (M = 3.99, SD=0.808); that trainers were normally available to guide integration of educational media during micro teaching (M=3.96, SD= 0.868); that trainers were fully committed to seeing integration of educational media in CRE instruction (M=3.87, SD=0.874); and that trainers helped source for materials and resources for educational media development (M=3.71, SD=0.711) among other support.

Table 1: Pre-service Teachers' Perceptions on Forms of Support offered

Support items	Mean	Std. Dev
Support from the instructor on how to innovate educational media using materials in the local environment	3.99	.808
The instructor is normally available to guide on integration of educational media during microteaching	3.96	.868
The school organizes for access to educational media not available in the institution	3.88	.565

The instructor is fully committed to seeing integration of educational media in CRE instruction	3.87	.874
The instructor expertly sources for materials and resources for educational media development	3.71	.711
Assistance from the instructor on how to develop educational media for CRE instruction	3.71	.927
Provided with diverse educational media	3.54	.795
Assistance from the media technologist in setting up relevant media materials	3.45	.976
The university has a designated media centre for pre-service teachers	3.43	.871
The instructor exposes pre-service teachers to organization and care of educational media	3.40	.893
The microteaching rooms have enough spacing for use of educational media	3.34	.842
Pre-service teachers are given ample time with educational media during microteaching.	3.16	.754

The respondents were further asked to specify other forms of support towards development and use of educational media received. Their views on this item were as presented in Table 2. The first form of support identified was *media set up*. Respondents reported that they received support on how to connect and use different media such as audio visuals and projectors. They also indicated having received support in handling devices such as laptops and projectors. The second form of support that emerged is *lesson management*. Respondents noted that they were given support on how to identify the relevant stages during CRE instruction when educational media could be introduced. Besides, they were given tips on how to share scarce media among groups as well as how to segment and use chalk/white board. The third form of support identified involved *clean up*. Respondents agreed that they had received support from trainers on how to collect and clean up media, and how to store educational media after use. Moreover, they were given support on display surfaces for charts and posters.

Table 3: Other Forms of Support: Trainees' Perspective

Question	**Forms of Support**	**Commentary**
Please specify any other forms of support in the development and use of educational media that you may have received during microteaching.	Media set-up	✓ *How to connect and use different media such as projectors* ✓ *Connecting and using audio-visuals* ✓ *Handling delicate media devices such as laptops and projectors*
	Lesson Management	✓ *Appropriate stages during lessons when media should be introduced* ✓ *How to share scarce media among groups* ✓ *Appropriate division and use of white/chalkboard*

	Clean up	✓ *How to collect and clean up media after use* ✓ *How to store educational media after use* ✓ *How to identify ideal surfaces for displaying charts used in lessons*

A Focus group perspective on Forms of support offered

Two items were used to conduct focused group discussions with pre-service teachers on the issue of support given towards use and development of educational media. Respondents were first asked to identify the forms of support received in developing and using educational media for teaching CRE during microteaching. Next, they were asked whether the support offered was readily available. The results of the discussions were as summarized in the data matrix in Table 4 below.

Table 4: Forms of Support: Focus Group Discussion Results

Question	**Forms of support**	**Commentary**
What kind of support do CRE pre-service teachers receive in development and use of educational media during microteaching?	Institutional support	• *Procurement of materials for production and development of educational media* • *Procurement and provision of educational media such as visuals, audio, audio-visuals and projectors* • *Providing an enabling environment* • *Attitudinal support*
	Instructor support	• *Identification, production and use of a variety of educational media* • *Matching educational media to lesson objectives and activities* • *Production and development of media* • *Setting up media.*
Question	**Rating**	
Would you rate support given to the development and use of educational media during microteaching as very strong, strong, moderate or weak?	Strong (n=6, 37.5%)	• *Trainers ensure that pre-service teachers strengths and weaknesses are identified and corrected accordingly* • *Some institutions take microteaching seriously and provide necessary support in terms of technical manpower, materials and space* • *Pre-service teachers are able to interact with materials*
	Moderate (n=10, 62.5%)	• *Instructor and pre-service teachers have to make do with scarce media available* • *Not much follow up sessions are provided to ensure expertise in media development* • *Students lack basic knowledge on educational media prior to microteaching session*
Question	**Response**	

In your view, how does support given to development and use of educational media during the first microteaching session affect subsequent sessions?	• *Improves pre-service teachers subsequent planning and organization of educational media* • *Prepares pre-service teacher on expectations of subsequent sessions* • *Gives pre-service teachers a framework for building upon in subsequent sessions*

On the question of forms of support, two distinct categories emerged. First, the respondents pointed towards *instructor guidance.* It was argued that trainers supported in the identification, production and use of educational media commensurate with content. Second, respondents identified *media provision* as another form of support extended to them during microteaching. It was noted that pre-service teachers were provided with media in the form of Manila paper, computers and audio visual materials either from the department or the library department.

On the question of whether or not the support was readily available, a large proportion of the respondents (56.3%) tended to disagree. Responses that consistently came out indicated that media technicians were not readily available due to the many microteaching sessions that were being conducted concurrently. Others observed that at times, lecturers showed little enthusiasm and went about their own businesses during the sessions. On the contrary, 43.7% indicated that they found support to be readily available. They argued that trainers did show commitment and guidance during sessions although they were often overwhelmed by the large numbers of pre-service teachers.

The implications from the collated results of perceptions of pre-service teachers on forms of support given in the development and use of educational media during micro teaching sessions show that despite having to deal with large numbers of students and several sessions that run concurrently CRE trainers try their best in sourcing and availing relevant media and also support pre-service teachers to develop, set up and clean the media. These forms of support reiterate UNESCO's view that "Developing teachers' capacity to enhance the quality of learning remains essential and that education quality improves when teachers are supported with ICT usage and deteriorates if they are not" (Ping, 2014). Supporting pre-service in developing and using educational media therefore goes a long way to making the learning real. McCoog (2008), for instance, argues that "teachers use of the internet is necessary in order to connect children to the real world in an increasingly global learning environment."

The bottom line is that to prepare students for the 21st century, the use of technology in educational systems ought to be broad and intensive and hence pre-service teachers should be supported to adopt skills relevant for the century. It is argued that use of technology should embrace familiarization, utilization, integration, re-orientation and evolution (Hooper & Rieber, 1999). Consequently, there is need to encourage the use of technology as value addition to content presentation (Crocco & Cramer, 2005). The finding showing that some teachers hardly offer any support and go about their own business during microteaching sessions is surprising in the sense that it contradicts tenets that point to technology as a consistent part of daily curriculum (McCoog, 2008; Moersch, 2011; Walker, Raymond & Giles, 2010).

CRE Trainers' Perceptions on Forms of Support Offered to Pre-service Teachers

Three items on the instructor's interview schedule were used to examine their perception on the form of support offered to CRE pre-service teachers in the development and use of educational

media during microteaching sessions. First, the researcher sought to find out kinds of support given to pre-service teachers. Second, the trainers were asked to rate the support given. Third, they were asked their views with regards to how support given in the first session affected subsequent sessions. Results of the analysis of instructor's responses are presented in the data matrix in Table 5.

Table 5: Forms of Support: Trainers' Perspective

Question	Forms of Support	Commentary
Identify the forms of support received in developing and using educational media for teaching CRE during microteaching.	**Instructor guidance**	✓ *Identification, production and use of educational media commensurate with content* ✓ *Preparation of charts and photographs for display*
	Media provision	✓ *Provision of educational media such as manila paper and computers* ✓ *Provision of audio-visual materials from department and library department*
Question Was this support readily available? Comment.	**Response** **No (n=9, 56.3%)**	✓ *Media technician not readily available due to the many concurrent microteaching sessions* ✓ *Sometimes, lecturers show little concern and engage in their own activities*
	Yes (n=7, 43.7%)	✓ *Trainers show commitment and guidance during sessions but are at times overwhelmed by the large numbers* ✓ *Materials availed prior to commencement of sessions*

As shown from the table, two kinds of support were identified. Institutional support centred mainly on procurement and provision of relevant media that included visuals, audio, audio-visual and projectors. In addition, institutions oversaw provision of an enabling environment for use of educational media. On the other hand, instructor support was offered in the form of use of the media. Respondents noted that besides guiding pre-service teachers on identification, production and use of the relevant media, they also supported them with matching educational media to lesson objectives and activities. Moreover, they supported change in attitude towards media use and setting up the media.

On the question of how they rated support given to the development and use of educational media during microteaching, 37.5% of the respondents gave a strong rating to the support given. This set of respondents argued that other than identifying and correcting pre-service teachers' strengths and weaknesses, they in conjunction with parent universities also provided support in terms of technical manpower, materials and space. On the contrary, 62.5% rated the support as moderate arguing that the scarce media available hardly allowed for appropriate support. Besides, the student population was such that not much follow up sessions are provided to ensure expertise in media development.

When further asked their views on how support given for development and use of educational media during the first microteaching session impacts on subsequent sessions, respondents indicated that in addition to improving pre-service teachers subsequent planning and organization of educational media, it prepares pre-service teachers on expectations in subsequent session as well as giving them a framework for building upon in subsequent sessions.

These findings showing support for CRE pre-service teachers in development and use of educational media points to a desire to mould teachers, who are capable of using media to continually learn, remain aware of changing pedagogy and are reflective. This is consistent to findings that show expectations for teachers to facilitate and harness thoughtful reflection as well as critical thinking and responsibility among students (Lunenberg, Korthagen & Swennen, 2007). Furthermore, support in using educational media enables CRE pre-service teachers to acquire skills relevant for making meaning out of real life situations that they interact with (Fisher, 2006). In support of the notion of being supported to use educational media, particularly of the electronic nature, Teg (2007) argues that use of electronic media can facilitate vital feedback for pre-service teachers to improve.

Support given to pre-service teachers is particularly relevant in enabling them to appraise the kind of knowledge being relayed by the particular media. Though media, particularly videos, have been shown to provide examples that concretize content (Hiebert *et al.*, 2002). These authors note that the quality of knowledge being disseminated requires verification for quality. Besides, there is strong argument for use of video clips in provoking discussion and reflective thinking among teachers. Onsongo (2008) observes that use of teaching and learning resources in CRE instruction provides learners the opportunity for developing critical thinking and objectivity. This in essence requires that pre-service teachers are supported to acquire skills that can provoke discussions among students.

CONCLUSION AND RECOMMENDATIONS

Pre-service teachers perceive positively and appreciate the efforts made both at training and institutional levels to support them with development and use of educational media during microteaching. CRE trainers are readily available to support them with media set-up, lesson management and clean up despite the constraints experienced. The parent universities and relevant departments sources and provides relevant media albeit to a lesser degree.

To prepare CRE pre-service teachers for the 21st century, the use of technology in educational systems ought to be broad and intensive. Therefore, pre-service teachers should be supported to adopt skills relevant for the century during microteaching sessions through a ‘hands on’ experience with diverse media in order to build their confidence and attitude towards these media. There is need for pre-service teachers to be exposed to design and use of appropriate technology through institutional and trainer support.

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