INTEGRATING PEDAGOGY AND TECHNOLOGY IN TEACHER DEVELOPMENT PROGRAMMES AT ZIMBABWE OPEN UNIVERSITY: PRACTICES AND ISSUES

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ABSTRACT

Since there seemed to be minimal integration of technology and pedagogy in teacher development programmes in Open and distance education a case study was conducted to determine ways by which technology had been integrated in teacher development programmes at Zimbabwe Open University (ZOU) and to establish impediments that were there in trying to effectively integrate technology in teacher pedagogy at ZOU. The case study investigated opinions held about the integration of pedagogy and technology in the teacher development programmes by students and tutors. The study established that tutors only used modern technology effectively as they communicated with students via telephone. Use of modern technology in tutorials was very minimal. There was a clear indication that lecturers' use of technology lagged behind technological advancement and this was attributed to technological phobia. On line discussions were one way by which technology use could be integrated in teacher development programmes. In addition, e- marking could be done and power point and videos could be used in tutorial sessions. Tutors had inadequate experiences using digital technologies even those which were available at ZOU. Tutor and student continual training by Zimbabwe Open University on the usefulness of technology and that tutors at ZOU should make deliberate effort to use technological devices that are already at the institution were recommended.

Key words: Integration, technology, teacher development, Open and distance learning

1. INTRODUCTION

At Zimbabwe Open University the teacher development department operates under the faculty of Arts and Education. Several teacher education courses are offered in the department of teacher department, among which are the Post Graduate Diploma in Education (PGDE), Bachelor for Early Childhood Development (BECD) and Diploma in Primary Education (DIPED). Assessment in the teacher development programmes involves assignments, examinations, practicum and research projects. Teaching Practice is one strategy by which students in this department are developed. The delivery strategies are mainly,printed modules, face to face tutorials, tutorial letters and Internet. Despite the varied nature of student teacher learning activities and varied delivery strategies there seemed to be minimal integration between teacher trainee pedagogy and technology in teacher development programmes.

2. REVIEW OF RELATED LITERATURE

Webb and Cox (2004) conducted a study titled, 'A review of pedagogy related to information and communications technology.' The study reviewed research on pedagogy associated with the use of Information Communication Technology in primary and secondary schools. The study established that new affordances provided by ICT-based learning environments require teachers to undertake more complex pedagogical reasoning than before in their planning and teaching that incorporates knowledge of specific affordances and how these relate to their subject based teaching objective as well as the knowledge they always needed to plan for their learners' learning. The study showed that teachers' beliefs about the value if ICT for learning and the nature of successful learning environments are important in teachers pedagogical reasoning.

Beauchamp (2004) carried out a study titled, 'Teacher use of the interactive whiteboard in primary schools: Towards an effective transition framework.' The study was conducted at a time

when there was a growing use of interactive whiteboard (IWB) in primary schools in UK. The IWB presented challenges and opportunities to teachers in terms of staff development and training. The study found out that the IWB was being used as a neutral tool- predominantly to write and draw as they would with the ordinary white board. The study established that fairly meaningful use of IWB was observed in cases in which teachers had progressed in the acquisition of the necessary skills, from using saved word processing files, to using powerpoint, to using graphics including those from the internet, to using video clips. At the time the study was conducted some teachers had not yet got to grips fully with IWB. The study also established that the use of IWB by pupils needed to be developmental. The study provided implications for teacher education and training for schools – both prior and subsequent to the introduction of the IWB. Training in specific technical and pedagogical competencies needed for effective interactive use of the IWB in classroom teaching prior and during use of IWB was recommended by the researcher.

Koehler and Mishra (2009) in their research article titled, 'What is technological pedagogical content knowledge?' the researchers outlined some factors that complicate the relationships between teaching and technology. For instance, social and instructional contexts are often unsupportive of teachers' efforts to integrate technology use in the work of teachers. This idea is also supported by Mumtaz (2006) in a study titled, 'Factors affecting teachers' use of Information and Communications Technology: A review of the literature.' They say limited resources within schools are a great impediment to the take up of ICT. Lack of computers and software in the classroom can seriously limit what teachers are able to do with ICT. Limited resources result in lack of computer integration (Mumtaz, 2006, citing Rosen & Weil). Teachers often have inadequate or inappropriate experiences using digital technologies for teaching and

learning. In line with this, Mumtaz (2006:337) says, 'Actual ICT take up depends largely on teachers' personal feelings, skills and attitudes in ICT in general.' Research shows that teachers who had a high value for ICT and perceived it to be useful completely transform their teaching(Cox et al cited in Mumtaz, 2006). Many teachers earned degrees at a time when educational technology was at a very different stage of development than today. So they do not appreciate their value or relevance to teaching and learning. Some teachers honour the idea that teaching with technology is a complex and ill structured task ,(Koehler and Mishra 2009).Another factor that has shown to impact on teachers' integration of computers in the classroom is students' expertise in computer use (Huckocy et al cited by Mumtaz,2006).Teachers need to be given the evidence that ICT can make their lessons more interesting, easier and more fun for them (Mumtaz, 2006).There are some factors that encourage teachers to use technology more prominently. Teachers who are already users of ICT have confidence in using it and technical support encourages teachers to use ICT, (ibid).

Studies by Mumtaz (2006), Koehler et al (2009) and Webb & Cox (2004) are quite related to this study which sought to determine the factors that influence integration of technology and the ways in which teacher pedagogy had integrated technology in teacher development programmes at Zimbabwe Open University.

3. PROBLEM STATEMENT

There is minimal integration of technology and pedagogy in teacher development programmes in Open and distance education.

4. AIM OF THE STUDY

The study sought to determine ways by which technology had been integrated in teacher development programmes at Zimbabwe Open University (ZOU) and to establish impediments that were there in trying to effectively integrate technology in teacher pedagogy at ZOU.

5. OBJECTIVES OF THE STUDY

The objectives of the study were to:

- establish ways by which teacher development programmes at ZOU were incorporating technology in teacher development pedagogy
- determine other ways by which technology could be incorporated in teacher development pedagogy
- ascertain the forms of impediments that are there in an effort to effectively integrate technology in teacher development courses and
- offer suggestions on what could be done to promote effective use of technology in teaching students in teacher development programmes.

6. METHODOLOGY

6.1 Design

The qualitative design was employed to conduct the study. The study was a case study of opinions held about the integration of pedagogy and technology in the teacher development programmes by students and tutors at Zimbabwe Open University, Midlands Region only. According to Maxwell (2005) a case study is a type of qualitative research design. It is able to describe the contemporary phenomenon in the real life context, Yin (2013).

6.2 Sample

Five students pursuing the Bachelor of education in early childhood development programme and another five students in the Post graduate diploma in education programme and five tutors were conveniently and purposively sampled for participation. The ten students were asked to fill in the questionnaire after writing the morning exams in the month of May 2015. The five tutors completed the questionnaire at the time they collected candidates' projects for marking in the same month. Consent to participate in the study was sought from each participant. Participant triangulation was meant to increase the trustworthiness and dependability of the findings of the study.

6.3 Instruments

The researchers used open ended questionnaires which were self administered.

6.4 Data Presentation and Analysis

Data were analysed globally across respondents. Data were presented qualitatively using thick descriptions. Data were organised according to research questions in the mind of the researchers.

7 FINDINGS AND DISCUSSION

7.1 Participants' views on how technology was being integrated in teacher development programmes

Participants opined that tutors often communicated with students via telephone especially by way of sending students urgent messages through text messages. It was also stated that some few tutors communicated with their students asynchronously through e-mail. According to one student, 'The regional coordinator sends us soft copies of modules via e-mail, in case hard copies of modules are not available'. Conducting students by phoning them on their mobile phones and relaying information to students was another way by which four students and the five lecturers

incorporated technology in assisting students to do their studies. Four tutors expressed the mind that tutors did not use technology meaningfully in tutorials. This view was also expressed by nine out of the ten students who took part in this study. One student had the following statement to make, 'In the tutorials all we see lecturers using is whiteboard and whiteboard marker.' .Since thirteen out of the fifteen participants gave the view that use of modern technology in tutorials was very minimal, it could be a clear indication that lecturers' use of technology lagged behind technological advancement. This lag in technological use could be attributed to technological phobia as some tutors may be comfortable in doing things the old way they are used to.

7.2 Views on how else technology use could be enhanced in teacher development programmes

Synchronous communications were stated as one way by which technology could be integrated in teacher development programmes by three lecturers and three students. On line discussions on Teaching practice experiences were stated by three students as one way by which technology use could be integrated in teacher development programmes. However, this would be only possible in situations where necessary technologies were available to the tutor and the student. Four lecturers and three students opined that tutorial materials including hand outs, exam and assignment writing tips, could be e-mailed to students. Only two students and one lecturer pointed out that e- marking could be done, which could be instrumental in giving more quick feedback to students compared to the physical posting of assignments via post offices. Seven out of the fifteen participants also pointed out that tutors could use power point and videos in tutorial sessions. In support of this opinion one lecturer had the following contribution to make 'Video recording and video plays and replays could be done in micro and peer teaching sessions. These are undoubtedly handy in making peer and microteaching meaningful and exciting to students.'

7.3 Challenges to effective integration of technology in teacher development programmes

Tutor lack of interest in integrating technology in teacher development activities was a challenge which was stated by eight students and three students. Seven out of ten students and three lecturers gave the mind that technological phobia among lecturers and students was a hindrance to any attempts at promoting effective integration in teacher development programmes at Zimbabwe Open University. One student had the following view point, 'Students and lecturers are just old fashioned, they are fearful of trying out new things'. One lecturer had the following sentiment to express 'At the regional campus, it is well known that power point equipment and video recording equipment is available but this just lies idle, lecturers do not use the equipment to integrate pedagogy and technology.' These views held by participants about students and lecturers lacking motivation in using modern technology and being fearful of making deliberate effort to use modern technology are in support with Koehler and Mishra (2009) who say a challenge to the integration of technology and teaching is the honouring the idea that technology is a complex and ill structured task. Tutors' and student lack of requisite skills was stated as another challenge by nine out of the fifteen participants. According to one tutor,' Tutors have inadequate experiences using digital technologies. Tutors cannot use packages such as moodle.' According to seven participants, resources necessary for the integration of technology and tutoring in teacher education were either in short supply or were not available. One lecturer made the following statement in support of the view that the inadequacy or lack of resources necessary the effective integration of pedagogy and technology in teacher development programmes at Zimbabwe Open University was a challenge, 'E-learning accessories are not yet available in some regional centres. Technical support is needed as it encourages students and lecturers to use ICT.'

8. RECOMMENDATIONS

Basing on views expressed and suggestions given by the participants the researchers recommend the following:

- Tutor and student continual training by Zimbabwe Open University on the usefulness of technology in general and on specific skills necessary in tutoring and learning through use of modern technology. Tutors in teacher development need to be given the evidence that ICT can make their tutorials more interesting and fun and easier for them and their students.
- Tutors at ZOU to make deliberate effort to use technological devices that are already at the institution such as power point accessories which are already in place to help in making tutoring and student learning effective.

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