Utilizing Interventionist - Participatory Research Strategies in establishing the efficacy of E-learning Technology in Open and Distance Learning.

David Chakuchichi
Associate Professor of Applied Social Science
Zimbabwe Open University

Paper presented at the Distance association of Southern Africa (DEASA) Conference held in Lilongwe, Malawi, September 2010

ABSTRACT

Research in open and distance learning (ODL), in an era of technological advancement, e-learning innovations, social inclusion and multiculturalism, should essentially take cognisance of the cognitive situates of the participants. The interventionist participatory approach, grounded in the critical inquiry research paradigm, was found to be most appropriate in establishing efficacy of e-learning technology since it is open, descriptive, critical, interactive and eclectic while fostering the co-construction of meanings by both researchers and participants. Most importantly, interventionist participatory approaches enable ODL practitioners and participants to be active in analyzing issues and finding solutions to their problems in the face of e-learning technology. E-learning which involves the students' interface with a whole range of information computer technology creates a new culture in ODL. Online programmes are fast becoming the norm for a student population that lacks the requisite skills. E-learning therefore presents anxieties as students try to fit in the new ODL environment. Appropriate evidence based research strategies are therefore imperative in order to establish the efficacy of the e-learning technology in the context of the ODL practitioner and students. Traditional research strategies still ignore the complex interaction between technological interventions and learner capacities to utilize them. In ODL, both practitioners and participants need to be integral in the process of problem analysis, development of solutions and the strengthening and formation of initiatives which give the ODL students a voice to define the efficacy of the e-learning innovations at their disposal. The interventionist-participatory research strategies take into consideration the role and complexities of the social contexts of the ODL learner and the potential for influencing ODL practices, products and programmes. Thus interventionist participatory strategies are well placed as evidence based research strategies to evaluate the efficacy of e-learning technology and in the transformation of ODL theory and practice.
Introduction

Interventionist participatory research designs are relevant in that they ensure how social and contextual variables interact with cognitive variable within practice (Collins, Joseph and Bielaczyce, 2004). In contrast researchers, policy makers and practitioners have criticized other research designs as having little impact on practice or theory as the findings indicate trivial effect. Interventionist participatory methods directly impact typical practical action contexts thereby appraising processes and systems to make implications for best practices. In this regard interventionist research methods present a potential advantage in research relevance.(Dede, 2004). Therefore interventionist participatory approaches could enable ODL practitioners and participants to be active in analyzing issues and finding solutions to their problems in the face of e-learning technology.

E-learning technology include any aspect where student teacher interaction is technology transmitted such as in internet, video, and teleconferencing. E-learning is therefore a recent innovation in education and therefore requires consistent appraisal to ensure optimum usability. E-learning technology lends itself handy to open and distance learning (ODL) practices as it essentially mitigates the distance between the teacher and the learner and while at the same time facilitating social and academic integration. Sharples (2005) defines learning as a continual conversation with oneself, with the external world and with other learners and teachers (McKenzie 2010:2). Sharples extends Pask’s conversational theory by insinuating that information computer technology is itself a partner in the conversational framework which in other words is the “shared conversational space”. The effectiveness of E-learning technology in facilitating the conversational practice can be interrogated using the interventionist participatory methods of inquiry which are able to contextually and situational appraise the e-learning process. The interventionist participatory method brings out knowledge in the same manner where “learners in cooperation with peers and
teachers (researchers) construct transiently stable interpretation of their world” in a typically constructivist approach (Sharples in McKenzie 2010: 2).

**Purpose of the Study**

The study sought to establish the efficacy of e-learning technology in the Zimbabwe Open University through utilization of the interventionist participatory research design. Efficacy of e-learning technology was in this study viewed as the stakeholders belief in it as effectively mitigating the distance between the learner and the teacher. The study would take responses by the participants to indicate how strongly they believed in the utilization of e-learning technology in their studies.

The study assumed that participants experienced some challenges in the use of e-learning technology and therefore focused on how the system could be improved to provide adequate efficacious service. Also the participants’ belief in technology did not essentially translate to belief in its usability. Belief in E-learning technology usability involve participant situational readiness and accessibility of the system. The study therefore envisaged that while e-learning technology in ZOU provided sufficient conversational space, lack of student readiness impeded the efficacious utilization of the facility. What then were the challenges facing the students in the utilization of the e-learning technology in the Zimbabwe Open University?

**Method**

That study utilized interventionist participant design in order to ascertain the efficacy of the e-learning technology in ZOU. The methodology relied on researcher-participant (stakeholder) interaction through focus group discussions and interviews in order to accurately evaluate e-learning efficacy in ZOU. The focus group Discussions and the in-depth interviews were the strategies used to
collect verbal information. A convenience sample of 50 students was used for this study.

Three groups were set up in order to find their belief in the e-learning facility and also to establish any impediments to the efficacy of the system. Two groups of 8 students each formed the Focus Group Discussion (FGD) while 34 participants formed the in-depth interview group.

The instrument of the study was a 15 item questionnaire. The respondents were required to show their belief in the e-learning facility and their belief in its usability for their own studies. The same instrument was used for both the focus group discussion and as the interview schedule.

Thematic analysis was used to construct the findings from the record of discussions and responses of the in-depth interviews.

Findings

The interventionist participatory research designs were useful in producing critical information on the efficacy of the e-learning in the Zimbabwe Open University. The responses were drawn from the contextual experiences of the learners in line with their expectation. Using the conversation theory (Sharples 2005) as a platform, the participants were supposed to point out how they interact with the e-learning technology, how they interact with themselves how they interact with peers and with tutors. The participants responses were categorized into the following three themes;

- Efficacy of e-learning technology
- Participants readiness to use e-learning technology
- The need for stakeholder consultation
The focused group discussions indicated that students had the following challenges:

- Access to Information Computer Technology.
- Inadequate Information Computer Technology skills
- Timely information dissemination from the Zimbabwe Open University about the e-learning facility.
- While they believed in the e-learning technology most of them doubted its utility because of numerous power outages in Zimbabwe.
- Efficacy was viewed as the contextual to accessibility to e-learning technology.
- Some participants saw efficacy as in their ability to use e-learning technology.
- Generally the participants indicated a requirement to train in the use of e-learning technology.

From the group discussion participants freely contributed their points of view regarding efficacy of the e-learning technology. Their contributions were authentic and realistic in the light of prevailing situational conditions.

The in-depth interviews landed similar information although in different terminology and accent. Most participants (91%) believed in the e-learning technology which they called;

Moving with the times!

However they conceded that they needed time to train in the e-learning technology requisite skills in order to derive maximum benefit from the facility. The participants pointed out that ZOU should provide them with access to e-learning technology if they were going to use it as the delivery vehicle of instruction as indicated in the above sentiments;

Its not our choice. ZOU should do something about access to computers!

We were fine with print modules and we never complained.
Yes its modern times but what is the point if we do not have access in the remote areas.

It is difficult to have faith in anything that uses electricity because most of the time it is out in this country.

In seeking to understand whether the participants believed they had skills in using e-learning technology, some participants said that they would need training first and that they need assistance in acquiring computers. The following sentiments support this assertion;

We have learnt many other new things why not computers!

Give us loans to buy the machines and then we can do it.

For any new thing you need thorough training then it will not be a problem. The problem is communication. We need computer cafes in every region. It is expensive to use internet cafes in town.

Why just change without notice? We want to complete our studies so we have to follow what you say.

Participants found efficacy in the e-learning technology but indicated that they did not believe in their readiness to use the e-learning technology. The participants believed they needed adequate training to be able to utilize e-learning technology effectively.

The results of the in-depth interview correlated positively with the outcome of the focused group discussions. Most importantly pertinent information regarding how to implement the project successfully was given. Participants needed sufficient information and consultation about any changes and developments in their programmes. They also require training in order to utilize new technology.
The interventionist participatory research design was found to be very user friendly and efficacious in soliciting information contextual and situational in real practice.

**Discussion**

Interventionist participatory research designs, by allowing participants and researchers to interact and discuss challenges and mitigation, add value to the both the process and the product (Shumba, Kaziboni and Chakuchichi 2005). In that respect the methodology is interventional as it puts the participants in a position where contextual and situational variables interact within cognitive variables in order to determine possible solutions, (Dede 2005). The potential advantage of the interventionist participatory design is that it interrogates typical settings and practices in the context of the critical inquiry theory but in the process creating preventive and proactive discourse (conditions for success). From the interaction of contextual and situational aspects and the cognitive situates of participants lead to a substantial influence of the conversations to desirability, practicality and effectiveness of new strategies. In this case the e-learning project is evaluated in context of the experiences and expectation of the participants leading to an appreciation of new realities and appropriate implementation strategies. The efficacy of the e-learning technology was effectively validated through participants’ expressions and its usability efficacy was affected by the participant situational lack of the requisite skills. In an effort to improve implementation of the e-learning project participants suggest conditions for success which in a way amounts to value addition.

**Implications**

The study on utilizing interventionist participatory research designs in establishing the efficacy of e-learning technologies gave rise to the following implications;
- That there is need for adequate lead time before project implementation to allow for information dissemination and skills training
- There is also need to carry out a needs assessment to ensure readiness in the acceptance of the e-learning project
- Stakeholder consultation is critical in project implementation
- Information relating to practice and efficacy of the e-learning technology is best established through intervention participatory research designs.
- Training can enhance efficacy usability of new technology.

These implications spell out precautionary measures that should be taken before a new programme is implemented. ZOU is therefore to engage in adequate information dissemination and consultation before implementing changes that affect practice in ODL.

**Conclusion**

The study indicated that the interventionist participatory research design was useful in establishing the efficacy of e-learning technology. The design was interventionist in that the researchers gave information that would help the participants understand and appreciate the developments in the project. The information helped participants to appreciate their situation and the need to embrace the changes. The study was also participatory in that participants constructed new knowledge together with the researcher as the discussion and interviews progressed. The efficacy of the usability of the e-learning technology was established however the participants pointed out that they required training and access to utilize it.
Recommendations

The study made the following recommendation on the research methodology and the efficacy of the e-learning technology;

1. The interventionist participatory research design is useful in understanding the contextual perspectives and situational aspects of practice and implementing change.

2. Interventionist participatory research design have inbuilt mechanism for damage control in a manner that makes the participants to accept change. Therefore the design is useful instituting any changes in operations, practices and processes.

3. Interventionist participatory research designs can be used to establish and authenticate efficacy of models, practices and innovations in ODL.

4. Interventionist participatory approaches enable ODL practitioners and participants to be active in analyzing issues and finding solutions to their problems in the face of e-learning technology.

5. Interventionist-participatory research strategies are critical in taking into consideration the role and complexities of the social contexts of the ODL learner and the potential for influencing ODL practices, products and programmes

References


http://pcf4.dec.uwi.edu/viewpaper.php?id
