

## *Full Length Research*

# **Faculty of Education Lecturers' and Students' Perceptions on the utilisation of E-Learning at Midlands State University in Zimbabwe**

**\*Marimo Simon Tirivanhu, Mashingaidze Samuel and Nyoni Erick**

Department of Applied Education- Midlands State University

Accepted May 21, 2013

This paper focuses on the perceptions of lecturers and students in the utilisation of e-learning in the Faculty of Education at Midlands State University in Zimbabwe. The major question that guided the study was, "how the Faculty of Education lecturers and students perceived E-learning as a teaching and learning tool?" The respondents in this study were lecturers and students in the Faculty of Education. The descriptive survey design was employed in this study. The population comprised of 43 lecturers and 1230 students. Purposive sampling was used to select 35 lectures, 150 full-time students and 100 block-release students. A questionnaire was administered to the students and focused group discussions were held with the lecturers. Results indicate that both lecturers and students have a positive attitude towards the use E-learning since it enhances their learning activities, interaction and communication. The study reveals that limited use of E-learning results from lack of computers and access to internet in offices and inability by lecturers and students to use E-learning. The researchers recommend that the Faculty of Education should initiate staff development workshops and seminars which focus on how to use E-learning methodologies. The Faculty of Education should facilitate the provision of computers in offices connected to internet. The lectures should give students assignments that compel them to use E-learning.

**Keywords:** E-learning, internet, computers, perceptions, teaching tools.

## **INTRODUCTION**

The Faculty of Education at Midlands State University (MSU) in Zimbabwe has five departments, namely, Applied Education, Adult Education, Educational Foundations, Management and Curriculum Studies, Educational Technology and Gender Studies. The department of Applied Education enrolls most of the students in the Faculty of Education. The Faculty of Education offers the following programmes; Master of Education, Postgraduate Diploma in Education, Post Advanced Level Bachelor of Education Honours and a Post Diploma Bachelor of Education on full-time and block-release basis. The faculty wide modules are taught from the departments within the faculty whilst content

modules are taught from the departments outside the Faculty of Education but within the University. The Department of Educational Foundations, Management and Curriculum Studies offers all the foundations modules, the Department of Educational Technology, offers all Information Communication Technology (ICT) related modules, the Department of Gender Studies offers a Gender module and the department of Applied Education, offers the pedagogical modules. The Faculty of Education currently has 1230 students and 43 lecturers. Jowah (2012) observes that there is an increasing tendency of academic institutions making tremendous strides towards E-learning (electronic learning). The Midlands State University is by no means an exception to this move. The introduction or implementation of E-learning in the university was meant to deliver high quality teaching and learning in university education and is seen as key to excellence in modern

---

\*Corresponding Authors Email: [marimost@msu.ac.zw](mailto:marimost@msu.ac.zw)

higher education (Chitanana, 2008). According to Chitanana (2008) and Volley and Lord (2000), universities that do not embrace the opportunities presented by technological development will be left behind in the race for excellence in education and will be unable to meet the needs of a knowledge-based society and as a result, will not survive the increasing demand for university education. E-learning has brought about new strategies and methods in formulation of content and delivery. Lecturers have now seized to be the only fountains of knowledge. There is a shift from lecturer centred approaches to student centred approaches. The change encourages the interaction between the lecturer and the students and student-student interaction. Zengeya (2008) argues that learning and teaching are changing as lecturers explore the possibilities presented by new technologies, for example, through the creation and use of databases and other digital learning and teaching resources.

The MSU Strategic and Business Plan (2005-2015) states that the MSU has committed itself to the use of e-learning technologies as a principal mode of teaching and learning. The institution aims at taking advantage of the opportunities presented by the information technology revolution to enhance teaching and learning as well as research output and dissemination of knowledge, as one of the key result areas. Midlands State University has introduced E-learning into the mainstream of its educational programmes across all its seven university faculties. The MSU Strategic and Business Plan (2005-2015) also reflect that there are a number of computer laboratories equipped with state of the art computers, around the campus including the Hellenic hall in Gweru Central Business District. These are connected with a high speed fiber optic campus wide network. One can get access to the e-learning platform through a workstation in one of the laboratories. The Faculty of Education offers two common modules, namely, BED 103 Introduction to Communication Technology and HCS115 Introduction to Information Technology in an attempt to ensure that students obtain maximum benefits from the ICT. The modules prepare students in the use of computers as a research and communication tool among other things (Chitanana, 2008). The challenge is whether the lecturers in the Faculty of Education are implementing the E-learning tool in earnest in the teaching and learning of students.

### **Conceptual framework of e-learning**

For the purposes of this study, the term E-learning includes the use of computer-based technology to facilitate teaching and learning, in addition to internet tools such as e-mails, chat groups, discussion boards and online media. Chitanana and Museva (2012) and Chitanana (2008) agree that there is no universal

definition or a single agreed definition of e-learning. This was also supported by Bakare (2007) who asserts that there is still lack of consensus about what E-learning is and that its boundaries are porous. Stockley (2003) and Rosenberg (2001) assert that E-learning is the delivery of learning, training or education programme by electronic means that necessitate a broad array of solutions that enhance knowledge and performance. Jowah (2012) defines E-learning as the use of Information and Communications Technology to deliver support and enhance teaching and learning. Zengeya (2008) says, E-learning has become an all-inclusive term for using information communication technology to deliver learning and training programmes electronically. This suggests that all forms of network and wireless techniques that can be used for the purposes of teaching and learning are termed E-learning. According to Chitanana (2008) MSU has invested in technology to fulfil students' demands for a convenient and flexible learning environment. (ibid) E-learning is a new pedagogical tool that is beginning to gain recognition at MSU as a critical tool for flexible teaching and learning. Chitanana and Museva (2012) observe that on enrolment with University, students are required to open an E-learning account through the university E-learning portal. Through their E-learning accounts, students have access to additional learning materials posted by their lecturers. Students are expected to interact with their lecturers and colleagues online, taking part in discussions and undertaking collaborative work facilitated by the technology. One of the strategic focuses of the MSU is its emphasis on Information Communication Technology (ICT) competence. It is a requirement that every student who goes through the Faculty of Education passes at least one compulsory module in ICT so as to boost their computer literacy. E-learning has gone a long way in making sure that the lecturers and students are on the edge. The E-learning platform, affords students access to module contents, engage in collaborative exchange about topics on the module through the use of communication tools such as, e-mails, discussion fora and chats. Thus social aspects of learning are not overlooked, that is, interaction among lecturers and students (Jowah, 2012).

### **Importance of e-learning**

E-learning is a facility that unlocks doors and various opportunities for teaching and learning (Bakare, 2007). Chitanana and Museva (2012) agree that e-learning offers many opportunities for supporting students on block-release and that it has a competitive advantage over conventional methods due to the speed and efficiency of the internet, especially in reaching off campus students (ibid), they observe that E-learning in the department of Adult Education has created a flexible

learning environment which offers adult learners access to a wide range of learning materials and learning opportunities. Through the MSU E-learning portal, students have the opportunity to exploit student to student online interaction where considerable learning can be achieved through collaborative efforts among learners. Students are more likely to be motivated and increase their performance if they see some benefits of a system to their learning. Zengeya (2008) and Chitanana (2008) state that one of the advantages of E-learning to students is its access. E-learning can provide a student with information that can be accessed in a setting that is not constrained by time and place. Students can go through the lessons or content at their own pace. This global reach allows learning institutions to offer a wide variety of learning options regardless of the learners' location. E-learning can be delivered anywhere in the world as long as the appropriate equipment and infrastructure are provided. For the MSU, E-learning has the potential to increase access to the university education for the different types of students who include conventional, parallel, block-release and visiting students. University's policy of flexible packaging is enhanced through E-learning by adding an element of flexible delivery of learning materials. Other benefits, such as, just-in time delivery, reduced travel, lower costs and increased variety, are added to the appeal of E-learning. E-learning can provide instant feedback to students by lecturers. There are tools, such as agenda tools through which lecturers can use to provide an overview of the module structure as well as dates for assignments, assessments, and lectures etcetera. Gone are the days of notice boards; lecturers just post announcements that students can access on the platform of using their emails. Students are not just passive recipients of content uploaded by their lecturer's and/or tutors. They can proactively contribute to the course by uploading their contributions using the file upload tool (Jowah, 2012). Bukaliya and Mubika (2011) assert that ICT has played a major role in linking businesses and individuals far apart, in terms of geographical distance. This implies that ICT brings people who are far away from each other together. E-learning also promotes student interaction through discussion forums. Bukaliya and Mubika (2011) propose the need for institutions to put in place measures to ensure that adequate access to technical support is provided. Focusing on schools the authors further suggest that teachers needed training which should be offered on a continuous, rather than on a one –off basis so that their information technology knowledge will be up graded overtime. It is, indeed, hoped that the benefits from the use of e-learning can be fully realised by the lecturers and students in teaching and learning. Mechanisms need to be put in place to ensure that lecturers and students utilise E-learning for further development and communication.

## Statement of the problem

The Faculty of Education at Midlands State University has got students who pursue their degree programmes on two modes of entry. There is a group of students who attend their lectures on a full-time residential basis and the other group attend their lectures on block-release during school holidays and are on a full-time employment. In order to assist the students the Faculty of Education should intensify the use of E-learning for teaching and learning purposes and, therefore, enhance their learning prowess. The researchers' observations are that the majority of the lecturers in the Faculty of Education are not implementing E-learning in their teaching. Lecturers seem to be having challenges in utilising E-learning. The study aims at establishing the perceptions of lecturers and students in implementing E-learning as a teaching and learning tool in the Faculty of Education by the lecturers and students. The position of the Faculty of Education in as far as the utilisation of E-learning has to be established. The researchers will also suggest possible ways of improving the utilisation of E-learning in the Faculty of Education.

## Research questions

In order to establish the perceptions of lecturers and students in implementing e-learning in the Faculty of Education, the following questions were to be answered:  
What are the perceptions of lecturers and students in implementing E-learning?  
What could be done to improve its implementation?

## METHODOLOGY

The strategy that was employed is the concurrent triangulation strategy. The researchers used both quantitative and qualitative methods of data collection concurrently and this helped the researchers to understand the phenomenon of interest (Creswell, 2009). In this study concurrent procedures involved collecting both quantitative and qualitative data at the same time during the study in an attempt to confirm and cross validate or corroborate the findings followed by integrating the information of the overall results (Creswell, 2009). The population comprised 43 lecturers and 1230 students in the Faculty of Education. The purposive sampling procedure was employed to select the lecturers and the students. The sample comprised of 35 lecturers and 150 full-time students and 100 block-release students. A questionnaire was self administered to the students in order to solicit students' perceptions on the use of E-learning. Focus group discussions of five members were held to find out lecturers' perceptions on

the implementation of e-learning and their suggestion for improvement. The researchers sought expert advice in constructing the instruments. A pre-test of the questionnaires and interviews was done with the lecturers and students who were not going to form part of the sample. The researchers sought informed consent from the respondents. The purpose of the research was explained to the respondents and procedures to be followed during the research. The study made an analysis of perceptions of lecturers and students in the Faculty of Education on the implementation of E-learning. Qualitative data collected was analysed using the constant comparative approach and cross case analysis. Quantitative data collected was analysed using the descriptive statistics through converting figures into percentages.

## RESULTS

### Lecturers' responses on the perceptions of utilisation of E-learning

The information presented was collected from the 35 lecturers' perceptions on the utilisation of E-learning as a teaching and learning tool to support their teaching and learning process. The findings from the lecturers' interviews revealed that 15 of the 35 lecturers do not have access to a computer in their offices. The following are some of the responses from these lecturers:

*'... In my office there is no computer and four of us share the office and colleagues have acquired their own laptops'.*

*In my office there is no computer and I normally use the university computer laboratories'.*

Only 5 of the lecturers interviewed were using the computer for their planning and for teaching students. Lecturers indicated that they do not have access to computers. All the 35 lecturers in the Faculty of Education were aware that the MSU has E-learning as a teaching tool. The lecturers interviewed including those who had indicated that they were using e-learning in their teaching revealed that there is need for professional development and in-service workshops and seminars aimed at improving their utilisation of E-learning. The respondents revealed that 26 out of the 35 lecturers interviewed lacked competence in using E-learning. The lecturers lacked confidence and expertise in implementing e-learning. The 35 lecturers interviewed indicated that they were prepared to implement E-learning and were also prepared to assist students in using E-learning, for example, downloading module outlines, assignments, lecture notes or hand-outs and interacting with the students. A number of challenges that are hindering the implementation of e-learning were revealed in interviewing the lecturers as follows:

- Lack of computer access in lecturers' offices

- Inadequate in-service or staff development training for lecturers
- The lecturers lacked expertise in using the computers, therefore, affecting their confidence
- Unavailability of local internet in some offices, hence problems of internet access
- Some lecturers lacked interest in utilising the internet
- There was lack of support or initiative in the departments and at faculty level
- The Faculty of Education and departments do not have a policy on the use of e-learning
- The lectures lacked awareness regarding ways to integrate the e-learning into the teaching and learning of their modules.
- The other challenge mentioned was the lack of computer laboratories dedicated for use by Faculty of Education for the lecturers to teach their modules.

The following were suggestions coming from the lecturers interviewed to improve the utilisation of E-learning in the Faculty of Education: The Faculty of Education through the department of Educational Technology should organise regular workshops, in-service training programmes, seminars and continuing professional development in order to boost the expertise and confidence of the lectures in implementing E-learning as a pedagogical tool. The Executive Dean of the Faculty of Education who was interviewed as one of the lecturers lamented that the faculty and the departments should craft a policy governing the implementation of e-learning that conforms to the university policy.

### Results from the students' questionnaire on their perception on E-learning.

The researcher administered two hundred and fifty questionnaires to the Faculty of Education students in order to establish their perceptions on the use of E-learning. The students were comprised of 150 full-time students in residence and 100 block-release students. The frequencies and percentages of respondents selecting "strongly agree (SA), agree (A), not sure (NS), disagree (D) and strongly disagree (SD)" against the given items are presented in Tables 2 and 4. The responses were measured on a five-point likert-type scale (1-strongly disagree and 5-strongly agree). Strongly agree plus agree adds up to an agreement and strongly disagree plus disagree adds up a disagreement. The item numbers in the tables are as they appeared on the original questionnaire administered to the respondents. (Table 1)

The responses from the block-release students' questionnaire indicate that only 30% of the students had computers at their homes and 25% of the students had e-mail addresses. Seventy-four of the students are not able to use the internet and only 42% of the students have opened an E-learning account (Table 2).

**Table 1.** Block-release students' perceptions on utilisation of E-learning for learning purposes N=100.

Question	Yes	%	No	%
1. I have a computer at home	30	30	70	70
2. I have an e-mail address	25	25	75	75
3. I am able to use internet	36	36	74	74
4. I have internet connectivity at home	21	21	79	79
5. I have internet connectivity at work	12	12	88	88
6. I visit internet cafes for internet	15	15	85	85
7. I have an e-learning account	42	42	58	58

**Table 2.** Block-release students' perceptions on utilisation of E-learning for learning purposes N=100

Question	SA	%	A	%	NS	%	D	%	SD	%
1. I am confident in using a computer for my learning	21	21	17	17	32	32	22	22	8	8
2. I have the necessary skills for using the internet in my learning	18	18	23	23	9	9	26	26	14	14
3. I have the necessary skills to use the e-learning	11	11	10	10	29	29	46	46	4	4
4. I am confident finding information from the e-learning facility	12	12	9	9	28	28	37	37	14	14
5. I have difficulties in accessing and using my e-learning account	7	7	9	9	45	45	35	35	4	4
6. E-learning is good for my learning	13	13	11	11	25	25	34	34	17	17
7. E-learning can improve my learning experience	23	23	24	24	33	33	16	16	14	14
8. E-learning makes it easier to study modules content	9	9	11	11	35	35	36	36	9	9
9. Distance has been solved due to E-learning	13	13	12	12	37	37	34	34	14	14
10. E-learning promotes interaction with fellow students	12	12	17	17	31	31	27	27	13	13
11. E-learning facilitated increased communication with my lecturers	8	8	7	7	35	35	39	39	11	12
12. E-learning improves my active participation in learning	11	11	13	13	34	34	32	32	20	20
13. E-learning supports the development of higher level of thinking skills	16	16	15	15	29	29	38	38	12	12
14. E-learning promotes more individualised learning programmes	15	15	14	14	41	41	25	25	5	5
15. Studying through e-learning is a good idea	16	16	17	17	33	33	34	34	10	10
16. E-learning facilitates access to materials for block-release students	21	21	29	29	30	30	16	16	14	14
17. E-learning promotes interaction with lectures	23	23	13	13	24	24	30	30	10	10
18. Lecturers upload materials on e-learning	11	11	13	13	36	36	35	35	5	5

**Scoring guide**

Each positive item receives a score based on points  
 Strongly agree =5 Agree =4 Not sure =3 Disagree =2  
 Strongly disagree =1

The scoring for each negative item should be reversed  
 Strongly agree =1 Agree =2 Not sure =3 Disagree =4  
 Strongly disagree =5

Of the 100 students who filled in the questionnaire 52

**Table 3.** Full-time students' perceptions on utilisation of e-learning for learning purposes N=150

Question	Yes	%	No	%
1. I have a computer at home/hostel	37	25	113	75
2. I have an e-mail address	119	80	31	20
3. I am able to use internet	133	88	17	12
4. I have internet connectivity at home/hostel	46	31	104	119
6. I visit internet cafes for internet	51	41	99	59
7. I have an e-learning account	120	80	30	20

students indicated that they were able to use the internet with 33 students not comfortable to use the internet. The students' responses show that they were not sure whether E-learning and internet improves interaction with their peers and lecturers. The students' responses revealed that they did not appreciate the importance of E-learning as a pedagogical tool. Only 24% of the lecturers upload the materials on E-learning for their students (Table 3). The responses from the 150 students in residence revealed that 25% have computers in their homes or hostel and 80% have e-mail addresses. Eighty-eight percent of the students indicated that they were able to use E-learning and internet and seemed to appreciate the importance of E-learning and internet in their learning. One hundred and twenty students out of the one hundred and fifty students have opened an E-learning account. The results in Table 4 indicate that 51% of the students were confident in using the computer for their learning. Twenty-seven students indicated that E-learning makes it easier to study modules content. The findings reveal that most of the students are not fully utilising the E-learning as indicated by 27% of the students who said E-learning facilitates increased communication with their lecturers. Only 19% of the students who filled in the questionnaire indicated that their lecturers were uploading materials on e-learning.

## DISCUSSION

The study focussed on how the Faculty of Education lecturers and students perceived the utilisation of e-learning as one of the pedagogical tools. A number of aspects of E-learning were analysed as they are employed by the various departmental lecturers and students in the Faculty of Education at MSU in Zimbabwe. The findings of this study confirm Chitanana's (2008) observation that the use of E-learning at the MSU has not been fully imbedded into the University's teaching culture and practice and that there was a slow rate of adoption of E-learning by lecturers. The lecturers in the Faculty of Education revealed that they did not have computers in their offices and were not using the computers for planning lectures and teaching. Responses

from both the block-release students and full-time students also indicated that lecturers were not uploading assignments, module outlines and lecture notes. This implies that lecturers largely depend on traditional practice by using hard copies of written notes (yellow pages) to deliver their lectures with very few reference readings from the search engines. The module outlines were either written on the board or provided hard copies without using the E-learning or any reference to E-learning. The results indicate that the lecturers and students in the Faculty of Education perceived E-learning as a useful pedagogical tool but they were not comfortable to use it. This is confirmed by the results which show that 26 of the 35 lecturers interviewed lacked competence in using E-learning. The lecturers revealed that they lacked confidence and expertise in implementing e-learning. These findings suggest that lecturers must become knowledgeable about the operations of E-learning so that they are self confident in integrating the tool effectively in their lectures. Lecturers must become fearless in using E-learning and empowered by the opportunities it offers. The findings indicate that both lecturers and students have a positive attitude towards the use of E-learning since it enhances their learning activities and interaction and communication between students and lecturers. This is supported by Chitanana (2008) and Chitanana and Museva's (2012) assertion that lecturers and students were aware of the importance of E-learning in their teaching and learning process. However, there is need to ensure that student to student and lecturer to student interactions be improved via E-learning in order to facilitate active student learning. Bukaliya and Mubika (2011) advocate for continuous training in order to upgrade information technology knowledge of the lecturers. The study reveals a number of reasons for the limited use of e-learning, such as, lack of computers with internet in offices and inability of both lecturers and students to use E-learning. Fifteen of the lecturers interviewed revealed that they had no computers in their offices, for purposes of researching its either they were using their own laptops or computers from the university laboratories. The Faculty of Education through its various departments should make an effort for the provision of

**Table 4.** Full-time students' perceptions on utilisation of e-learning for learning purposes N=150

Question	SA	%	A	%	NS	%	D	%	SD	%
1. I am confident in using a computer for my learning	52	35	31	21	17	11	42	28	8	5
2. I have the necessary skills for using the internet in my learning	43	29	24	16	37	25	33	22	9	6
3. I have the necessary skills to use the e-learning	44	29	21	14	33	22	45	30	7	5
4. I am confident finding information from the e-learning facility	37	25	33	22	41	27	29	19	10	7
5. I have difficulties in accessing and using my e-learning	46	31	22	15	43	29	21	14	18	12
5. E-learning is good for my learning performance	53	35	37	25	21	14	33	22	6	4
6. E-learning can improve my learning experience	45	30	42	28	30	20	18	12	15	10
7.E-learning makes it easier to study modules content	24	16	17	11	42	28	27	18	40	27
8. Distance has been solved due to E-learning	23	15	18	12	45	30	34	23	30	20
9. E-learning promotes interaction with fellow students	35	23	23	15	37	25	33	22	22	15
10.E-learning facilitates increased communication with my lecturers	25	17	13	9	48	32	35	23	29	19
11.E-learning improves my active participation in learning	28	19	18	12	45	30	39	26	20	13
12.E-learning supports the development of higher level of thinking skills	23	15	19		43	29	40	27	15	10
13.E-learning promotes more individualised learning programmes	16	10	21	14	52	35	21	14	40	27
14. Studying through e-learning is a good idea	24	16	15	10	56	37	30	20	25	16
15.E-learning facilitates access to materials for students	26	17	14	9	45	30	40	27	25	17
16.E-learning promotes interaction with lecturers	22	15	28	19	52	35	32	21	16	10
17. Lecturers upload materials on e-learning	14	9	15	10	35	23	75	51	11	7

computers connected to internet to all the faculty lecturers. Bukaliya and Mubika (2011) proposed the need to put in place measures to ensure adequate access to technical support in institutions.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the findings the researchers concluded that e-learning was not being fully utilised by both lecturers and students in the Faculty of Education at Midlands State University in Zimbabwe. The results of this research portray a limited number of lecturers in the Faculty of Education implementing E-learning in their teaching and learning. There is need for professional development training that focuses on offering technical skills and pedagogical skills of implementing the tool. The

following recommendations are made:

- The Faculty of Education should facilitate the provision of computers to lecturers in offices and these should be connected to internet
- Lecturers and students should have a computer laboratory dedicated to the Faculty of Education for teaching and learning purposes.
- Lecturers from the department of Educational Technology should organise regular in-service training or staff development for the lecturers in the Faculty of Education regarding ways of integrating E-learning into the teaching and learning of modules.
- The lecturers should give students assignments that compel them to use E-learning.
- The Faculty of Education should craft a policy in regards to the use of E-learning by its members.

## REFERENCES

- Bakare TV (2007). Computer Awareness and the Usage of E-learning Facilities Among Adult Education Students in the University of Lagos. *J. Nig. Nat. Council for Adult Educ.*, 14:1.
- Bukaliya R, Mubika KA (2011). Teacher Competence in ICT: Implementation for Computer Education in Zimbabwe Secondary schools. *Int. J. Soc. Sci. Educ.* 1 (1).
- Chitanana L (2008). The Adoption of E-learning at Midlands State University: Opportunities and Challenges. *The Dyke*. 3 (2): 1-15.
- Chitanana L, Museva L (2012). Adult Education Students' Perceptions of E-Learning: A Case Study of Midlands State University. *The Dyke* 6 (2): 29-47.
- Creswell JW (2009). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. (2<sup>nd</sup> Ed.). Thousand Oaks: Sage Publications, Inc.
- Jowah H (2012). E-Learning Student Manual Version 1.0. University of Zimbabwe. <http://tsime.uz.ac.zw> [accessed 5/01/2013].
- Midlands State University (2005-2015). Strategic and Business Plan.
- Rosenberg M (2001). *E-learning Strategies for Delivery Knowledge in the Digital Age*. New York: McGraw Hill
- Stockley D (2003). "E-Learning Definition and Explanation." *E-campus.com.au*.
- Volley T, Lord D (2000). Critical Success Factors in online Education. *The Int. J. Educ. Manag.*, 14 (5), 216-223.
- Zengeya MA (2008). Information and Communication (ICT) Skills for Bachelor of Education Degree Students at the University of Zimbabwe: Implications for University Policy on a Computer Course for Undergraduate Student Teacher. *Zimbabwe J. Educ. Res.* 20 (3).