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VIEWS OF PRIMARY SCHOOL TEACHERS ON THE USE OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) IN TEACHING AND LEARNING

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ABSTRACT

The study sought to find out the teachers' views in the use of ICT in curriculum implementation in Bindura urban District. In this study the descriptive survey design was used in this study. One hundred and ten teachers participated as research subjects. Questionnaires were administered to one hundred teachers and ten were interviewed .Data were qualitatively analysed. Analysis was made basing on the trends and patterns emerging from summarized data. The study revealed that teachers are well aware of the benefits of ICT in curriculum implementation. Teachers lacked relevant knowledge on how to use ICT in teaching and learning. The study also revealed that there is lack of ICT infrastructure in schools and teachers did not have access to computers. The study recommends in-service training for teachers and a review of the teacher education training curriculum.SDC and SDA to be made aware of the importance of ICT in teaching and learning. The study recommends inclusion of ICT as one of the core curriculum subjects in the primary school curriculum as well extensive staff development of teachers on the use of ICT in teaching and learning.

Key Words: Information Communication Technology, Teaching and learning

1. INTRODUCTION

The world is fast becoming a global village as a result of the development in information and communication technology (ICT). Zimbabwe has also embraced ICT as a tool for teaching and learning. This has been demonstrated by the inclusion of computer education in all sectors of education from primary to tertiary education. This therefore means that it is important for educational institutions including schools to embrace use of ICT in teaching and learning.

2. LITERATURE REVIEW

A number of factors impact on use of ICT in schools. Teachers' attitudes have been found to be major predictors of the use of new technologies in instructional setting. According to Mumtaz (2000) teachers' beliefs about teaching and learning with ICT are central to integration. To be successful in computer use and integration, teachers need to engage in conceptual change regarding their beliefs about the nature of learning, the role of the student and their role of student and

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their role as teachers. The successful use of ICT in the classroom largely depends on teachers' attitudes and beliefs relating to these (Neiderhausser et. al. 1999). Therefore teachers who have positive attitude towards ICT will be positively disposed towards using it in the classroom. Such attitudes are a result of ICT knowledge and familiarity with technology (Afshari et. al. 2009).

Teachers' lack of knowledge and skills is one of the main hindrances to use of ICT in education (Mamum and Tapir 2009, Iheneider 2009,). Integrating technology into the curriculum requires knowledge of the subject area and an understanding of how the students learn and a level of technical expertise. Therefore lack of knowledge regarding use of ICT tools and software has also limited the use of ICT in teaching and learning. Becta (2004) in Australia research, Newhouse (2002) found out that many teachers lacked the knowledge and skills to use computers and were not enthusiastic about the changes and integration of supplementing learning associated with bringing computers into teaching practices. Current research has shown that the level of barriers differs from country to country especially in developing countries.

Lack of training opportunities for teachers in the use of ICT in the classroom environment is one of the top three barriers to teachers' use of ICT in teaching (Pelgrum (2001). According to Ozden, (2007) limited teacher training in the use of ICT in schools is an obstacle. Gomes (2005) also confirmed that lack of training in digital literacy, lack of pedagogic and didactic training in how to use ICT in classrooms and lack of training concerning the use of technologies were obstacles to using new technologies in classroom practice.

Gomes (2005) gives the advantages of bringing ICT into the classroom as impacting positively on teaching practices and real change in the pedagogical approaches. Teachers will change their roles and class organisation and invest energy in preparing, introducing and managing new learning arrangements. According to Pittard et al (2003:13) ICT facilitates a shift in pedagogy away from a teacher led transmission model towards one that is more learner centred and in which pupils experience greater autonomy in learning. Henness et al (2003) speak of ICT supporting the processes of checking, trailing and refinement facilitating immediate feedback and encouraging self-correction. In the context of mathematics and science they identify benefits of problem solving strategies based on repeated trial and improvement, promoting experimentation and offering opportunities for investigation and exploration leading to refinement of ideas and self-correction of conjecture. However the same author offers a warning that overuse of ICT may detract from the teaching of basic subject skills that need to be learned possible at the expense of their not being able to

3. STATEMENT OF THE PROBLEM

The President of the Republic of Zimbabwe, Robert Mugabe (2012) initiated ICT capacity building by donating computers to schools in Zimbabwe. Reports are that most donated computers are lying idol. The blame has been on the inability of the teachers to use them for teaching and learning. This study sought to investigate the views of primary school teachers on the use of information technology ICT) in teaching and learning.

4. RESEARCH QUESTIONS

- To what extent are Primary schools ready to use ICT for teaching and learning?
- Are Primary teachers aware of the use of ICT in teaching and learning?
- To what extent are primary school teachers ICT literate and aware of the benefits of I.C.T

5. METHODOLOGY

The descriptive survey was used in this study and it was preferred because it is the best method of collecting data for the purpose of describing a population large enough to be observed. The descriptive survey is used to describe characteristic of a population or phenomenon being studied. It does not answer how when and why characteristic occur rather it addresses 'what' question. In this study the population was made up of 400 primary school teachers in Bindura urban

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primary schools. The sample was made up of 100 teachers who were randomly selected from the 8 primary schools in Bindura Urban. The 100 teachers responded to the questionnaires and 10 were interviewed. Interviews were used as a form of triangulation.

5.1 Data Collection

Primary school teachers responded to questionnaires. Only ten teachers were interviewed. Questionnaires included open-ended and close-ended. The interviews allowed the researchers to explain purpose of the research and what he or she wants from the interviewees and provided opportunities for follow up on misinterpretations of questions by participants and clarify them.

5.2 Data Analysis

Data was analyzed using SPSS. Frequencies and percentages were computed basing on the data, trends and patterns emerged from the data.

6. RESULTS AND DISCUSSION

Biodata forTeachers

Table 1: Age

		Frequency	Percent
Valid	25-30 yrs	15	15.0
	31-35 yrs	16	16.0
	36-40 yrs	27	27.0
	40 yrs and above	42	42.0
	Total	100	100.0

Table 1 shows that the majority of the respondents were 40years and above which constituted 42 % the total subjects under study. Those below thirty five years constituted 31% of the total respondents. From the data the majority of the teachers who are above 40yearsare teachers who were trained before the introduction of computers in teachers colleges. They are likely to show little interest in using ICT for teaching.

Figure 1: ICT qualifications

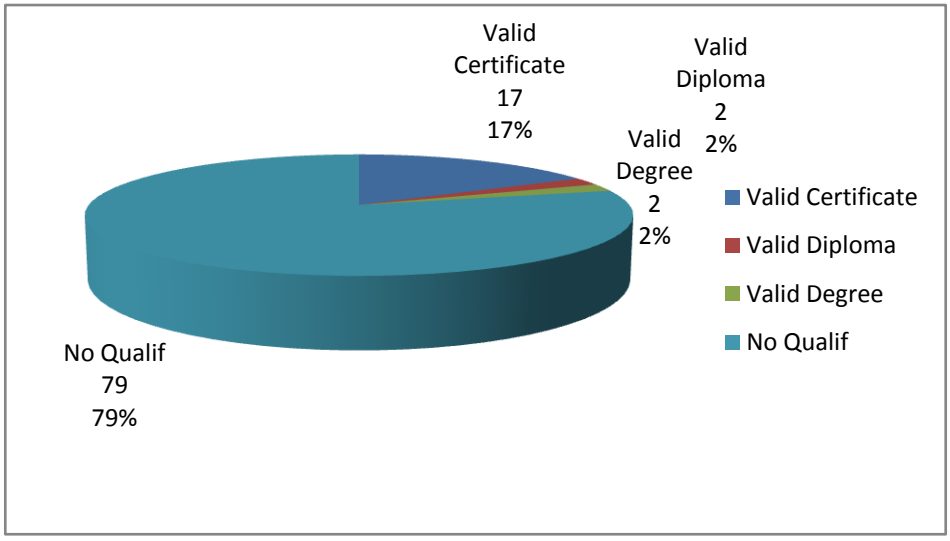

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Figure 1 shows that majority of the teachers do not possess an ICT qualification as evidenced by the 79% responses. Only 21 % of the respondents indicated that they have a certificate, diploma or degree. This has an impact in teaching and learning because

In table 3shows the qualification the participants possess. Most of the respondents had Diploma in education qualification which had the highest figure of 75%. The other qualifications included Bachelor of Education (BED) and Certificate in Education (CE) with 6 and 7 percent respectively. In addition to these we also had 11% other qualifications. The table shows that Bindura Urban schools has majority of teachers with Diploma in education qualifications. This impact on the way they teach and receive new knowledge of using computers in teaching and learning. ICT qualification is a pre requisite in order for one to use ICT in teaching and learning.

Table 2 : Availability of Computers for use by Teachers

	Frequency	Percent
Yes	52	52.0
No	48	48.0
Total	100	100.0

Table 5 showed that most teachers 52%do not have access to computers while 48% had access to computers in their schools. This means more than half of the total respondents had access to these gadgets. The responses indicate gap in the use of ICT for teaching and learning. The teachers are expected to use ICT in teaching and learning yet they have no access to computers?

teaching while 19% of teachers offered students' computer based teaching. The responses indicate that most teachers do not use of computers for teaching and learning. Use of computers has many benefits which include reduction of workload, pupils being able to control their learning, promotes critical thinking, enabling a wider range of experience, and aiding pupils with learning difficulties. However not using computers in teaching and learning is doing injustice to the pupils.

Table 3: Availability of Computer to Students

	Frequency	Percent
Yes	87	87.0
No	13	13.0
Total	100	100.0

Table 3 shows that most of the teachers 81% indicated that their pupils had access to computers in schools while13% of the teachers indicated that the students do not have access to computers. The data shows that most pupils have access to computers.

Table 4: Availability of Software Packages for teaching

	Frequency	%
Yes	15	15.0
No	83	83.0
Total	98	98.0
Missing	2	2.0
Total	100	100.0

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Teachers were asked to indicate if their schools had software packages for fo teaching and learning. Table 4 shows that a few teachers have access to computer educational software packages with only 15% of the respondents noted while the majority of the teachers with 83% had no such access. Teachers are the facilitators of learning they need to have the resources to make that happen. Software packages for teaching are a necessity in use of ICT in curriculum implementation, yet these are not available in schools understudy.

Table 5: Availability of computers for Pupils

	Frequency	%
Yes	24	24.0
No	76	76.0
Total	100	100.0

Teachers were asked to indicate if computers were adequate to their pupils. Table5 showed the majority of the teachers do not have enough computers for their students per class since only 24% of the respondents showed to have enough of them. From the results obtained it can be noted that the core business of teaching and learning is not fully supported by ICT. The other 76% had inadequate or no computers at all, hence this affect teaching and learning using computers.

Table 6: Use computers in Scheming and Planning

	Frequency	**%**
Yes	14	14.0
No	86	86.0
Total	100	100.0

Teachers were asked to indicate if they use computers for scheming and planning. Very few of the teachers make use of computers during their scheming and planning; only 14% of the teachers use computers. The majority 86% did not use computers for scheming and planning. Use of computers in scheming and planning reduces workload for the teacher and he or she is able to adjust work plans quickly and easily. Not using computers for scheming and planning means more work for the teacher. If teachers are not using computers for scheming and planning it is unlikely that they use computers for teaching and learning.

Table 7: Use for Teaching

	Frequency	%
Yes	6	6.0
No	94	94.0
Total	100	100.0

Teachers were asked to indicate if they use computers for teaching. Table 7 shows that only 6% of the teachers used computers when conducting class room teaching as well as assessment of student work performance. Most teachers94% was not using computers during teaching and learning disadvantages the pupils of so benefits of ICT.

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Table 8: ICT Qualifications versus Ability to Use a Computer

			Are you able to Use a computer?		
			Yes	No	Total
QB1a: Do you possess ICT qualifications?	Yes	Count	21	0	21
		Do you possess ICT qualifications?	100.0%	.0%	100.0%
	No	Count	58	21	79
		Do you possess ICT qualifications?	73.4%	26.6%	100.0%
Total		Count	79	21	100
		Do you possess ICT qualifications?	79.0%	21.0%	100.0%

The table 8 above, it can be noted that there is an association between possessing an ICT and being able to operate a computer as evident by the fact that 100% of the teachers with computer qualifications are able to operate computers. Only 73% of teachers without ICT qualifications are able to operate a computer.ICT Qualification is major if one is to operate a computer meaningfully.

There is no relationship between ICT qualification and computer use for teaching.

Use of the computers in schools is not realised since 38.1% of qualified ICT qualification holder teachers who have access to use computers for teaching while we have 61.9% of qualified teachers who cannot execute what they have trained for. On the other hand we had 13.9% of teachers who do not have ICT qualifications but are using computers for teaching, while 86.1% have no qualifications and are not using computers for teaching. This shows a sorry state in the use of computers for teaching and learning where those with qualifications are not using computers while those without qualifications are using computers.

7. DISCUSSION

Computers are not being utilised for teaching and learning, with the majority of teachers which is 86.1% in table 9 stating that they are not using computers for teaching and learning. This percentage is linked with 81% who do not have literacy in ICT. Lack of knowledge and skill has been found to be a barrier in the implementation of ICT in schools. According to Pelgrum (2000), educational factors including levels of teachers own education and literacy, and access to professional development play an important role in the integration of ICT in teaching and learning. Lack of knowledge by teachers, according to Pelgrum makes them technophobic, thereby hindering them from teaching from using ICT in teaching and learning. This study found out that computers are not being used in Bindura urban schools.

From the data most teachers are able to use computers with 79% of the respondents indicating that they can operate a computer while 21% of the teachers cannot. The 21% of the respondents' constitute a significant number in this day and age. A teacher who does not have the basics computer knowledge cannot be expected to use computers for teaching and learning. According to Tella at. El. 2007, lack of technical support in schools and teachers' expertise in using ICT are prominent factors hindering teachers' readiness and confidence in using ICT. Only 19% of the respondents indicated that they are using computers for the core function of teaching and learning. The interviewed teachers revealed that computers were used in scheming and planning as well as lesson delivery.

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The majority of the respondents (92%) indicated that they had computers at their schools with only 8% indicating that they did not have. Of the 92% who have computers, only 52% have access to the computers for teaching and learning purposes. Facts gathered through interviews showed that computers are in the schools were being used for administrative purposes and some were in the computer laboratories. This was buttressed by the fact that pupils had more access to computers than their teachers. Results obtained from this research confirmed that computers are used by school bursars, clerks and a few computer teachers. From the interviews, there is an indication the ICT teacher teaches pupils how to operate and how to use the computer. They is no using the computer for teaching and learning by other teachers teaching other curriculum subjects. Pupils are exposed to computers but only for computer literacy. The classroom teachers who facilitate learning of other subjects have limited or no access to computers. As a result, it can be noted that this scenario showed a gap in the use of computers for teaching and learning. The computers, if were used by the class teachers will be used as visual aid, access to information and pupils will be able to learning on their own.

According to Hennessy (2010) effectively introducing computers is largely dependent upon availability of hardware, software and infrastructure. Clearly, if technology cannot be accessed by teachers then it will not be used for teaching and learning. Teachers need to have access to technology in their classrooms in order for them to be able to use it. The majority of teachers 99% indicated that they needed staff development, in the use of ICT in teaching and learning. This 99% indicated that they are knowledgeable of the benefits of integrating ICT in teaching and learning. From the responses, teachers showed willingness to learn about ICT and are aware of the associated benefits. The research conducted by Ma et. al. (2005) indicated teacher's perception about usefulness of ICT has direct and significant effect on their intention to use it. This indicates that, integration of ICT into teaching and learning in Bindura urban schools is not being hindered by teachers but by other factors such as lack of infrastructure, knowledge, hardware and software.

8. RECOMMENDATIONS

The study recommends the following:

- Schools should be resourced with ICT infrastructure to be able use ICT for teaching and learning
- The teachers should be trained to use ICT for teaching
- Students need to be introduced to the use of ICT for learning

9. CONCLUSION

The study concluded that primary schools were not ready to use ICT in teaching and learning and they did not have adequate infrastructure. The study also concluded that teachers were not trained in use of ICT for teaching and learning and do not have access to computers

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