

Teacher's Perception of the Contribution of ICT to Pupils Performance in Christian Religious Education

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ABSTRACT This study examined the teacher's perception of the contribution of ICT to the pupil's performance in CRE. The population of the study comprised 200 primary school teachers selected through census from 15 schools in Epe local government, Lagos State, Nigeria. The age of these teachers ranged from 28 to 45 years with the years of experience ranging from 2- 15 years. A modified questionnaire known as Teacher's Perception of ICT Contribution to Pupils Performance with $r = 0.75$ Cronbach alpha was used to gathered data on the study. Data collected were analysed using percentages and t-test statistical tools. The result indicates that teachers have strong perception that ICT contribute a lot to the performances of the pupils in CRE. Furthermore, the results indicate that teachers perceived differences in the pupils' performance when ICT is used to teach CRE than when it is not used. Moreover, irrespective of gender, teachers have the perception that ICT contribute immensely to the pupil's performance in CRE.

INTRODUCTION

The use of ICT in teaching is a relevant and functional way of providing education to learners in order to assist them imbibing the required capacity for the world of work. Very few jobs today do not require the use of skills in technology, collaboration, and teamwork; all of which can be acquired through teaching with ICT. This ICT is fundamentally changing the way we live, learn, and work (Aladejana 2007).

Information and communication technology (ICT) has transformed the means by which we inform ourselves; remain up to date with world events and areas of personal interest, and further learning. For many, books and journals are no longer the first or primary source of information or learning. We now regularly rely on images, video, animations and sound to acquire information and to learn. Increased and improved access to the Internet has accelerated this phenomenon. We now acquire and access information in ways fundamentally different from the pre-ICT era (Her Majesty Inspectorate of Education 2007). There have been numerous surveys designed to give information on the extent to which schools are developing the capacity to integrate ICT into

learning, teaching and management processes. The evidence gathered has shown a steady increase in the number of computers and other technologies over time, with most schools achieving the baseline targets for computer-to-pupil ratios. This finding, to a degree, masks considerable variation within and across schools with regard to regular access to reliable technologies and broadband connectivity. Evidence of the impact on learning and teaching indicates that, where the use of ICT is most effective in enhancing the learning experience, teachers have been able to integrate a number of technologies such as laptops, interactive whiteboards and the Internet. Such combinations of hardware, software and connectivity allow them to develop innovative approaches to learning and teaching (Becta 2007).

Religion has been rightly described as an essential factor in any society of the World hence it cannot be safely ignored or neglected. This is because it an inescapable, inevitable aspect of human life. Most nations and people has been nurtured, raised and developed on the platform of religions. The need for the Nigerian child to be adequately groomed morally can not be over-emphasized since this is crucially an important aspect of the development of human personality

and moral development. To moral maturity on the part of the citizen of a country is pre-requisite for the development of that country (Omogbe 1990). The traditional education aims in inculcating a high degree of morality. So is the Christian religious education emphasized the development of moral training in their adherents as fundamental education training to be received by them so as to be useful to themselves and society. Additionally, the national policy on Nigeria education stressed the importance of developing good ethics in pupils when it states in section 3 (3) the need for the inculcation of moral and spiritual values in interpersonal and human relation. What culminate the present study is the fact that despite popular awareness of the importance of ICT and the role its now playing in many aspects of life, most teachers particularly at the primary school level in Nigeria are yet to introduce it to the teaching and learning particularly in CRE.

Researches have identified the importance of ICT in education. It has been found that ICT can promote students' intellectual qualities through higher order thinking, problem solving, improved communication skills, and deep understanding of the learning tool and the concepts to be taught (Sutton 2006). ICT can promote a supportive, interactive teaching and learning environment, create broader learning communities, and provide learning tools for students, including those with special needs (Trinidad et al. 2001; Hawkins 2002). Computer-generated graphics have been used to illustrate relationships of all kinds, especially dynamic processes that cannot be illustrated by individual pictures (Franke 1985). They are also said to improve school attendance levels and enable the creation of a new and more effective curriculum. It is no more contestable that ICT has contributed to the teaching and learning and achievement in many subjects. Some areas of the curriculum have been the focus of considerable ICT development. Apart from initiatives to support literacy and numeracy, evidences of positive impact have been reported in mathematics, modern foreign languages, science, history, geography, physical education and the creative arts. But the evidence of its contribution to the pupil's performance in Christian religious knowledge from the teacher's point of view in the Nigeria context is yet to be ascertained. In the light of this therefore, this study examine the perception of teachers on the contribution of ICT to the pupil's performance in Christian religious education in Nigeria.

Literature Review

There has been considerable development in the provision of online resources for teaching across subject areas, from a range of sources, commercial and public. More specifically, learning of modern foreign languages has benefited greatly from the increased availability of online resources as well as technologies such as digital video and photography, while animations and simulations have enabled pupils to grasp more complex concepts in mathematics and the sciences (National Curriculum in Action-NCA 2007). These have been particularly effective in supporting understanding of abstract or microscopic concepts and processes in science. In religious education, it could be observe that ICT is helping pupils to learn and enabling them to consolidate and deepen their knowledge, understanding and skills. According to (NCA 2007), using ICT in teaching can help pupils to:

- access, select and interpret information,
- recognise patterns, relationships and behaviours
- model, predict and hypothesise
- test reliability and accuracy
- review and modify their work to improve the quality,
- communicate with others and present information,
- evaluate their work,
- improve efficiency,
- be creative and take risks, and
- gain confidence and independence.

ICT is a powerful tool that can improve teaching and learning in RE and can help to raise standards by encouraging pupils to:

- Ask questions to promote knowledge and understanding of religion(s) and shared human experience. This can be enhanced by using the Internet or CD ROM sources, a database or spreadsheet and communication technologies (e-mail and video conferencing).
- Explore decisions on religious, social or moral issues and their consequences/significance for the faith communities concerned.
- Assess, evaluate and use a wide range of resources (e.g. Internet and CD ROMs) critically to develop understanding of religious issues.
- Understand, analyse and evaluate interpretations and arguments.
- Organise information and ideas to communicate meaning and understanding effectively

(e.g. using a writing frame or concept mapping software).

- Communicate (via e-mail or video conferencing) with faith communities, organisations and experts.

The characteristics of ICT enable pupils to work effectively and to access much more information than non-ICT sources can allow:

- The speed and automatic functions of ICT enable pupils to explore aspects of RE more effectively.
- The capacity and range of ICT enables pupils to gain access to historical, recent or immediate information via the Internet, CD ROMs and video.
- The provisional nature of information stored, processed and presented using ICT allows work to be changed easily to meet the needs of different audiences.
- The interactive way in which information is stored, processed and presented enables pupils to explore models and to communicate effectively with others.

The evidence from the research literature shows that teachers' pedagogies and pedagogical reasoning influence their uses of ICT and thereby pupils' attainment. Teachers' subject knowledge and the way ICT is used in lessons is influenced by the teachers' knowledge about their subject and how ICT is related to it. Some teachers choose ICT resources that relate to a particular topic, while others use ICT to present the pupils' work in an innovative way, without any direct application to the topic. The evidence shows that when teachers use their knowledge of both the subject and the way pupils understood the subject; their use of ICT has a more direct effect on pupils' attainment. The effect on attainment is greatest when pupils are challenged to think and to question their own understanding, either through pupils using topic-focused software on their own or in pairs, or through a wholeclass presentation. The effects of using ICT to present and discuss pupils' work are less well researched, and therefore the effects on pupils' attainment are not so clear (Becta 2002).

The teacher's own pedagogical beliefs and values play an important part in shaping technology-mediated learning opportunities. Becta (2002) was of the view that it is not yet clear from the research literature whether this results in technology being used as a 'servant' to reinforce existing teaching approaches, or as a

'partner' to change the way teachers and pupils interact with each other and with the tasks. Teachers need extensive knowledge of ICT to be able to select the most appropriate resources. They also need to understand how to incorporate the use of ICT into their lessons; they may need to develop new pedagogies to achieve this.

ICT and the Changing Nature of Pedagogy

Researchers' and academics' conceptualisation of pedagogy has changed in with recent developments in our understanding of cognition and meta-cognition (Watkins and Mortimore 1997). Many writers have also suggested that developments in ICT provide very different learning opportunities, and a need to design a new 'integrated pedagogy' has been identified (Cornu 1995). For example, McLoughlin and Oliver (1999) define pedagogical roles for teachers in a technology-supported classroom as including setting joint tasks, rotating roles, promoting student self management, supporting meta-cognition, fostering multiple perspectives and scaffolding learning. An assumption here is that, the use of ICT is changing the pedagogical roles of teachers, and a compelling rationale for using ICT in schools is its potential to act as a catalyst in transforming the teaching and learning process (Hawkrigde 1990). The processes described by (Shulman 1987) will still be necessary but the decisions and outcomes from those processes may be different as teachers' knowledge, beliefs and values change in line with affordances provided by new technologies. A dynamic model for such a transforming pedagogy for ICT was derived from the Palm project (Somekh and Davies 1991). The authors identified pedagogical change as the following types of progress:

- 'From a view of teaching and learning as discrete, complementary activities to an understanding that teaching and learning are independent aspects of a single activity
- From a sequential to an organic structuring of learning experiences from individualized communicative learning from a view of the teacher's role as an organiser of learning activities to one as a shaper of quality learning experiences
- From a preoccupation with fitting teaching to a group, to a knowledge that teaching needs to be suited to individuals, which calls for continual self-monitoring to ensure

- sensitivity to unintended forms of bias and discrimination,
- From a view of the learning context as confined to the classroom and controlled by the teacher to one of the learning context as a supportive, interactive, whole school culture,
- From a view of technology as either a tutor or a tool to one where it is part of a complex of interactions with learners, sometimes providing ideas, sometimes providing a resource for enquiry, and sometimes supporting creativity.

Moseley et al.(1999), in a study of primary school teachers known to be achieving either average or above average gains on measures of relative attainment by pupils, focused on pedagogy using ICT. They also found a very complex picture in which it was difficult to characterise effective teachers using ICT. The teachers were supported in developing their practice in literacy and numeracy using ICT. The project explored link between teachers' thinking about their teaching behaviours or actions in the classroom and pupils' learning gains. The work indicated that a key feature of the more effective teachers was their use of effective explanations. Observations showed that these teachers used examples and counter-examples and involved pupils in explaining and modelling to the class. Teachers who favoured ICT were likely to have well-developed ICT skills and to see ICT as an important tool for learning and instruction. They were also likely to value collaborative working, enquiry and decision making by pupils.

There is evidence that ICT helps primary school teachers to be more effective in their teaching, especially if they are well resourced (Becta 2002). In this series of reports analysing pupils' attainment at Key Stage 2 alongside Office for Standard in education Ofsted (2002), statistically significant links have been revealed between the good use of ICT resources and higher attainment in ICT and other subjects. Given the nature of the analysis, this does not prove a causal link that is, that the good use of ICT causes higher attainment but it does point to an important and developing relationship. However, the reports also show that other factors, such as good leadership and the general quality of teaching, remain important.

According to the Office for Standard in Education - OFSTED (2002), it was reported that

in some religious education departments, pupils make good use of word-processing, desktop publishing or multimedia presentations to create writing frames; successfully focusing pupils' writing on specific questions and key ideas. When the headings or questions provided are challenging and focused on the lesson objectives, pupils are prevented from writing unstructured or purely descriptive text. Their report further showed that, there are relatively few instances of teachers using ICT creatively in lessons to enhance pupils' analytical skills or research. Only a few teachers are realising the full potential of ICT by devising activities that are either made possible by using computers or enable learning to be far more efficient. In one school, for example, ICT was used to enable pupils to compare texts on screen, to highlight similarities and differences and key ideas. One teacher made excellent, creative use of the Internet to home pupils' skills of enquiry and evaluation.

Office for Standard in Education (2004a) maintained that when pupils used ICT well, there was a clear improvement in the presentation of their work, in the range of information they had to draw on, in their capacity to enter imaginatively into others' situations and in their understanding and analysis of key concepts. According to them, despite improvements in teachers' skills, in most schools ICT is not yet integral to the learning process in religious education. The facility for pupils to use computers is often determined by the availability of ICT suites rather than by the demands of the curriculum.

Another report by OFTED (2004a) revealed that ICT made a relatively modest contribution to pupils' overall achievement in religious education mainly because, in most situations, computer-based work was not sustained beyond a single lesson. The impact on standards was more significant where pupils had regular access to relevant hardware. When pupils used ICT well, there was a clear improvement in the presentation of their work, in the range of information they had to draw on, in their capacity to enter imaginatively into others' situations (such as through virtual tours or reading accounts of people's personal dilemmas), and in their understanding and analysis of key concepts.

Considering the review above, this study was designed to examine the perception of teachers on the contribution of ICT to pupil's performance in Christian religious education. To achieve this

objective, the following research questions were developed to guide the study:

1. How has ICT contribute to the pupil's performance in CRE?
2. Are there differences in the perception of teachers regarding pupil's performance when ICT is used and when it is not?
3. Are there differences in the perception of teacher on the contribution of ICT to pupil's performance in CRE based on gender?

METHODOLOGY

This study adopts a survey method. This allows better description of events during the course of carrying out the study and also gave opportunities of involving many schools in the study.

Population and Sample: The population of the study comprised primary school teachers in Epe local government, Lagos State, Nigeria. A census of teachers in 15 purposefully selected primary schools in the local government area was taken. This gave a total of 200 teachers comprising 115 females and 85 males. The age of these teachers ranged from 28 years to 45 years with the years of experience ranging from 2- 15 years.

Instrument for Data Collection: A modified questionnaire known as Teacher's Perception of ICT Contribution to Pupils Performance was used to gathered data on the study. This is fifteen items likert type rating scale questionnaire. Responses in the questionnaire range from strongly agree to disagree. The instrument was subjected to a test retest method to ascertain its reliability. The correlation co-efficient yielded an $r = 0.75$ through Cronbach alpha. The instrument was divided into two sections. Section A required the respondents bio-data information include name of school, sex, age, educational qualification, years of teaching experience and positions. Section B contains the 10 items that measure the subject of the study 'contribution of ICT to pupils' performance'.

Procedure: All the selected teachers were administered the questionnaire in their various schools with the permission granted by the authority in each of the school. The maturity displayed by the participants during the administration of the instrument resulted to the high return rate of the instrument which was 100%.

Data Analysis: Data collected on the study were analysed using simple percentage and t-test statistical tools.

RESULTS

The results of the analysis are presented as follows.

Research Question 1: How has ICT contribute to the pupil's performance in CRE? Ten items was used to capture participants' response on this question. The result is presented in table 1.

In table 1, it is observed that the number and the percentage obtained on strongly agree and agree in each of the items on the perception of teachers regarding the contribution of ICT to the pupils performance in CRE is greater than the percentage and number of disagree. In the light of this, it is clear that the teachers have the positive perception that ICT actually contributes to the pupil's performance in CRE.

Research Question 2: Are there differences in the perception of teachers regarding the pupil's performance when ICT is used and during normal classroom? Only one item from the questionnaire was used to capture participants' response on this question. The result is presented as follows

The result in table 2 shows that the majority of the teachers (78.5%) indicate that pupil's performed better when ICT is used in CRE than when it is not. This provides additional result to what obtained in table 1.

Research Question 3: Are there differences in the perception of teacher on the contribution of ICT to pupil's performance in CRE based on gender?

In table 3, the results indicate that when the perception of the teachers on contribution of ICT to pupil's performance was compared based on gender, finding reveals that irrespective of gender, teachers have the same perception that ICT contribute immensely to pupil's performance in CRE.

DISCUSSION

This study has examined the teacher's perception of the contribution of ICT to the pupil's performance in CRE. The result so far demonstrates that teachers have strong perception that ICT has contribute a lot to the performances of the pupils in CRE. Furthermore, the results indicate that teachers have the perception that differences exists in the pupils performance when ICT is used to teach them CRE than when it is not used and moreover that irrespective of gender, teachers have the perception that ICT contributes immensely to the pupil's performance in CRE.

Table 1: Perception of ICT contribution to pupil's performance in CRE

S. No.	Items	No	SA	A	NS	D
1	ICT is a powerful tool that can improve teaching and learning in CRE	200	88(44)	63(31.5)	23(11.5)	26(13)
2	ICT has significantly improve the overall performance of my pupils' in religious education	200	90(45)	56(28)	21(10.5)	33(16.5)
3	The use of ICT has help the pupils retention in some difficult aspect of Christian religious education	200	102(51)	61(30.5)	15(7.5)	22(11)
4	ICT stimulate the pupils creativity in learning Christian religious education	200	141(70.5)	48(24)	3 (1.5)	8(4)
5	ICT help pupils work with one another in Christian religious education class	200	123(61.5)	47(22.5)	8 (4)	22(11)
6	Through the use of ICT, some pictures of events projected on the screen during CRE lesson create more interest in the pupil's and these improve their performance in the subject	200	71(35.5)	78(29)	11(5)	40 (20)
7	Generally, ICT improve the performances of the pupil's in CRE.	200	67(33.5)	61(30.5)	34(17)	38(19)
8	The use of ICT in the teaching of CRE has generally improve their performances in the subject	200	80(40)	75(37.5)	11(5)	34(17)
9	The part play by ICT in the performances of pupils in CRE cannot be quantified	200	90(45)	79(39.5)	9(4.5)	22 (11)
10	ICT help to raise standards by encouraging pupils to ask questions to promote knowledge and understanding of religion(s).	200	83(41.5)	76 (38)	11(5)	30 (15)

Table 2: Pupil's performance when ICT is used and in normal CRE classroom (N = 200)

Item	Yes	No
Pupils performed better in CRE when ICT is used than in a normal classroom.	157 (78.5)	43(21.5)

Table 3: Perception based on gender

Variables	No	Mean	SD	DF	t.obs.	t.table	P	Remark
Perception of male teachers	100	52.24	15.6	198	0.64	1.98	.05	N.S
Perception of female teachers	100	50.78	16.8					

The first result on this study that teachers generally have the perception that ICT contribute to pupil's performance in CRE is supported based on evidence by (Becta 2001) that ICT helps primary school teachers to be more effective in their teaching, especially if they are well resourced and that series of reports (e.g. OFSTED 2001) analysing pupils' attainment at Key Stage 2 alongside inspection judgments, statistically significant links have been revealed between the good use of ICT resources and higher attainment in ICT and other subjects. The report by Office of Standard in Education (2001), that in some religious education department's pupils makes good use of word-processing, desktop publishing or multimedia presentations to create writing frames, successfully focusing pupils' writing on

specific questions and key ideas based on use of ICT also support the present finding. Moreover, another report by OFTED (2004) which revealed that ICT made a relatively modest contribution to pupils' overall achievement in religious education mainly because, in most situations, computer-based work was not sustained beyond a single lesson lend credence to the finding of this study.

The second result which indicates generally that irrespective of gender, teachers have the same perception that ICT contributes immensely to pupil's performance in CRE than in a normal classroom. Already it has been pointed out in the background that it is no more contestable that ICT has contributed to the teaching and learning and achievement in many subjects, what else need to be said on this result? Numerous findings

of research have shown that ICT facilitate pupil's attainment. Lots of assertions also confirm the fact that pupils enjoyed learning through ICT with the argument that it helps their retention and make lesson more elaborate. The fact that this has been confirmed even before this study was conducted though not with CRE but with other subjects may be the reason behind this finding.

On the issue of no difference in the teacher perception of the contribution of ICT to pupil's performance irrespective of gender is an interesting one. This is because many people in the World today irrespective of gender recognized the role ICT is playing in almost every facet of human endeavour. Therefore, the issue of gender does not count here. Hence, no difference in the teacher's perception based on gender. Though in the 21st century gender is a very important factor to reckon with because its one of the issue of globalization where the whole World is trying to erase the issue of gender inequality by clamoring for gender equality. It's like this has begin to work to the favour of this struggle. This is because it could be observed that men and women are now begun to see things in the same way. We now saw women having the same perception of issues just like their men counterpart. In the light of this therefore, this result is not surprising.

CONCLUSION AND RECOMMENDATIONS

The various results on this study have shown how greatly ICT is contributing to the pupil's performance in CRE. This is to say that the role ICT is currently playing in the teaching and learning of CRE cannot be over-emphasized. Basically, therefore, primary school teachers in the country who have not introduced ICT in the teaching of CRE should start doing so now. It is noted that some teachers are not using ICT because they lack the necessary skills. Teachers in this category are called upon to take a step to enroll themselves for ICT training. This will not only benefit the pupils they teach rather they themselves will benefit immensely from it. Availability and accessibility of ICT equipment is another issue hindering its use in the teaching of CRE. The stakeholders of primary schools in the country are called upon to expedite action in making ICT equipments available in all primary schools. It is hope that when the equipments are available, it will go a long way to motivate teachers

to use them. Even teachers who are techno phobic may be healed of their diseases and become attracted in some way.

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