

Primary School Teachers' Perception of the Benefits of Information and Communication Technology in Ogoja Education Zone of Cross River State, Nigeria

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Abstract

This paper is a report of a study carried out to examine primary school teachers' perception of the benefits of information and communication in Ogoja Education Zone of Cross River State, Nigeria. To achieve the purpose of the study, one research question was formulated to direct the study. Ex-post facto research design was adopted for the study. A sample of six hundred and twenty teachers was randomly selected for the study. The instrument for data collection was primary school teachers' perception on the benefits of ICT (PSTPBICT) Developed by the researcher. The reliability estimate of the instrument was established through the Cronbach alpha reliability method. Data collected were analyzed using simple percentage. The result of the analysis revealed the Primary school teachers' perception on the benefits of Information and Communication Technology in Ogoja education Zone. Base on the findings of the study, it was recommended that Teachers should organize or create awareness on Information and Communication Technology (ICT) to enhanced learning in the zone.

Keywords: primary school teachers, perception on the benefit of ICT.

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 .

LITERATURE REVIEW

Throughout the world, many countries have introduced Information and Communication Technology (ICT) into schools via different courses of action. Their use is also underlined by OECD (2001) as a necessity for improving quality in teaching and learning. Technology usage is an important indicator of teachers' preparedness to carry out the obligations of daily lessons. In fact, Woodow (1992) asserts that any successful transformation

in educational practice requires the development of a positive user attitude towards the new technology. The development of teachers' positive attitudes towards ICT is a very significant factor not only for increasing computer integrations but also for avoiding teachers' resistance to ICT use (Watson, 1998).

ICT integration in primary schools is needed in order to accomplish many objectives and improve the quality of lessons in all subject areas. ICT increasingly pervades various aspects of our daily lives like work, business, teaching, learning, leisure and health. The integration of ICT therefore can help revitalize teachers and students which is a great benefit. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. To achieve these objectives, teachers need to be involved in collaborative projects and the development of intervention change strategies which would include teaching partnerships with ICT as a tool (Gulbaha & Given, 2008).

Teacher's attitudes and perception are major predictors of the use of new technologies in an instructional setting. Teachers' attitudes towards ICT shape not only their own ICT experiences, but also the experiences of the students and pupils they teach. According to Zhao & Cziko (2001) three conditions necessary to introduce ICT into the classrooms are: "Teachers should believe in the effectiveness of technology, teachers should believe that the use of technology will not cause any disturbances, and finally teachers should believe that they have control over technology" (p.27).

Demetriadis (2003) reached similar conclusions in his research study where he noted that "training efforts are generally welcomed by teachers but consistent support and extensive training is necessary in order for them to consider themselves able to integrate ICT in their teaching methodologies". According to Rogers (1995), one of the major factors affecting

people's attitudes towards a new technology is related to the features of technology itself. Rogers pointed out five basic features of technology that affect its acceptance and subsequent adoption: relative advantage, compatibility, complexity and observe ability. Thus, a new technology will be increasingly diffused if potential adopters perceive that the innovation; has an advantage over previous innovations, is compatible with existing practices, is not complex to understand and use, shows observable results, and can be experimented with on a limited basis before adoption.

Preparing pupils and students for real life in our technological and diverse world requires that teachers imbibe ICT in significant learning experiences (Braun & Kraft, 1995). However, research studies show that most teachers do not make use of the potential of ICT to contribute to the quality of learning environments, although they value this potential quite significantly (Sweets, 2005). Harris (2002) conducted case studies in three primary and three secondary schools which focused on innovative pedagogical practices involving ICT. Harris (2002) concluded that the benefits of ICT will be gained when confident teachers are willing to explore new opportunities for changing their classroom practice by using ICT. As a consequence, the use of ICT will not only enhance learning environments, but will also prepare the next generation for future lives and careers (Wheeler, 2001).

Researchers have identified the importance of ICT in education. It has been found that ICT can promote pupils' 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 and broaden students, including those with special needs (Trinidad, Aldridge & Fraser, 2007; Hawkins, 2002).

Computer generated graphics have been used to illustrate relationships of all kinds, especially dynamic processes that cannot be illustrated by individual pictures (Franka, 1985). They are also said to improve school attendance levels and enable the creation of a new and more effective curriculum.

According to NCA (2007), using ICT in teaching can help pupils to:

- i. access, select and interpret information
- ii. recognize patterns, relationships and behaviour
- iii. model, predict and hypothesize
- iv. review and modify their work to improve quality
- v. communicate with others and present information
- vi. evaluate their work
- vii. improve efficiency
- viii. be creative and take risks and
- ix. gain confidence and independence

Evidence from research literature shows that researchers' pedagogies and pedagogical reasoning influence the uses of ICT and thereby, the pupils' educational 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 understand 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 whole class 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).

Teachers' own pedagogical beliefs and values play an important part in shaping technology and mediated learning opportunities. Becta (2002) was of the view that it is not yet clear from the research literature whether the results in technology are 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.

THEORETICAL BACKGROUND

It is necessary that one has an insight in to the background of theories that support a particular study and from where the problem may be identified and hypothesis formulated. The researcher examined learning micro models since the study dealt with primary school teachers' perception on the benefits of information and communication.

In the 1990's, several major research efforts were on the development and application of models for investigating the implementation of use of computers in class rooms in various parts of the world. The major proponents were Cicchelli & Baccher (1990); Collins (1994); Marcinkiewicz (1994); Richer & Welliver (1989); Sandholtz, Ringstaff & Dwyer (1992). Many of these researches based on teachers' concern about innovations and are often called concern-based models (CBAM). The application of CBAM or models based upon CBAM for research is concerned with the use of computers in classrooms, and has gained interest throughout the world. However, most interest appears to be with the levels of use (LOU) and stages of concern (SOC)

dimensions, that is, user focus (Marsh, 1988). Recently, there has been more interest including an innovation configuration, that is, innovation focus. This has been the basis of many of the frameworks being developed. Two of the few researchers to apply all three dimensions to a study were Carbines (1986) & Hope (1995) who considered the use of computer in primary school classes. Also, a number of smaller studies have been reported (Cicchelli & Baecher, 1990; Overbaugh & Reed, 1995), while some of the researchers in Europe like Vernooy – Gerritsen (1994) and United States of America like Marcinkiewicz & Welliver, (1993) have worked at modifying the stages of concern (SOC) and levels of use (LOU) to describe the use of computers in classrooms by teachers. Some like Moersch (1997) have attempted to construct instruments to measure the LOU of ICT by a teacher or class.

The ADL model of ICT uptake is another example of learning micro-model (Clarkson and Oliver, 2002). The main focus of the research which gave rise to the ADL model (which is an acronym for Autonomy, Dependence and Learning) was the development of a framework by which teachers' pedagogies and capabilities with ICT could be mapped into some multi-stepped scale as part of assessing their ICT uptake. A four-shaped typology of ICT uptake was developed. This typology was derived from a series of models of learning described by Brundage and Mckerracher (1980) and Boud (1988) and with considerable input from studies of teachers and their teaching practices with ICT. The model describes four stages dependence, counter-dependence, independence and interdependence. These stages signify typical phases through which all learners pass when they achieve mastery on any new topic they are learning. ICT however, is another topic for learners to master in this less technocentric conception of ICT uptake as a learning issue.

Furthermore, an extended version of the stages approach was developed and validated by Clarkson and Oliver (2002) which utilizes a 4 by 3 table with four stages of teacher development and three characteristics at each stage namely intellectual, attitudinal and performance. To improve triangulation and to ensure consistency of reaction from teachers, descriptions for the typology were further developed to provide a sensitive means to identify teachers' position. Three domains were developed for each of the stages to enable different aspects of teachers' experiences and predispositions to inform their placement. These three domains are described as: feelings, understanding and behaviours. The domains were chosen to match the domains of human activity proposed by Bloom in the 1950s and remain a useful distinction (Krathwohl, Anderson & Bloom, 2001). The stages describe teachers' affective stages, their cognitive states and the ways these are made manifest in their actual teaching. If these stages were truly distinct and credible, then it was expected in developing the typology that teachers would be located at one stage with their ratings for feelings, understandings and behaviours falling roughly into the same stage

RESEARCH QUESTION

What are primary school teachers' perceptions of the benefits of Information and Communication Technology (ICT) in Ogoja Education Zone?

DESIGN METHODOLOGY

The research design adopted for this study is the ex-post facto design because the researcher has no direct control of the independent variable as their manifestation had already occurred. The study was carried out in Cross River State, Nigeria. The population was made up of primary school teachers in Ogoja

education Zone totaling 4,473 in 415 schools.

The sample for this study consisted of six hundred and twenty (620) teachers randomly selected from 62 primary schools in Ogoja Education Zone of Cross River State. A breakdown of the figure shows that teachers were selected from each of the sixty-two (62) primary schools sampled for the study.

A further breakdown of the figure as shown in Table 1 reveals that 100 teachers were selected from Bekwarra Local Government Area, 120 teachers from Obanliku Local Government Area, 120 from Obudu Local Government Area, 130 teachers from Ogoja Local Government Area and 150 teachers from Yala Local Government Area respectively.

TABLE 1
Distribution of sample by Local Government

LGA	NO. OF RESPONDENTS	PERCENTAGE
Bekwarra	100	16.13
Obanliku	120	19.35
Obudu	110	17.74
Ogoja	130	20.97
Yala	150	24.19
Total	620	100

DATA ANALYSIS/DISCUSSION

What are primary school teachers' perceptions on the benefits of Information and Communication Technology (ICT) in

Ogoja Education Zone? The data were analyzed using simple percentage in answering the research question. The result is presented in Table 2.

TABLE 2

Results of responses of the respondents on primary school teachers' perceptions of Information and Communication Technology (N=620)

S/N	ITEMS	RESPONSES				Total %
		A		D		
		F	%	F	%	
6	I feel great with the inclusion of ICT in the primary school curriculum.	433	69.84	187	30.16	620 100
7	Learning is made an experience not an abstract with ICT development.	399	64.35	221	35.65	620 100
8	I have gained more self confidence through acquisition of ICT skills.	365	58.87	255	41.13	620 100
9	I become more flexible with the use of ICT.	240	38.71	380	61.29	620 100

10	My values about life have improved with ICT at my disposal.	385	62.10	235	37.90	620	100
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The result in Table 2 revealed that for Item 6, 433 (69.84%) of the total respondents agreed that they feel great with the inclusion of ICT in the primary school curriculum, while 187 (30.16%) disagreed that they feel great with the inclusion of ICT in the primary school curriculum. For Item 7, 399 (64.35%) agreed that learning is made an experience not an abstract with ICT development, while 221 (35.65%) disagreed with that statement. Result of responses on Item 8 indicated that 365 (58.87%) agreed that they have gained more self-confidence through acquisition of ICT skills; while 255 (41.13%) disagreed. For Item 9, 240 (38.71%) agreed that they become more flexible with the use of ICT; while 380 (61.29%) disagreed. Also, for Item 10, 385 (62.10%) respondents agreed that their values about life have improved with ICT at their disposal, while 235 (37.90%) disagreed.

DISCUSSION OF FINDINGS

The findings of this study are in agreement with the view of Watson (1998) who asserted that teacher attitudes and perception are major predictors of the use of new technologies in instructional settings. Teacher attitudes towards ICT shape not only their own ICT experiences, but also the experiences of the students and pupils they teach. Zhao and Cziko (2001) observed that three conditions are necessary to introduce ICT into classrooms; teachers should believe in the effectiveness of technology, teachers should believe that the use of technology will not cause any disturbances, and finally, teachers should believe that they have control over technology. Demetriadis, et al. (2003) gives similar conclusions in their research study. "Training efforts are generally welcomed by teachers but consistent support and extensive training is necessary in order for

them to consider themselves able to integrate ICT in their teaching methodologies" Rogers (1995) averred that one of the major factors affecting people's attitudes towards a new technology is related to the features of technology itself. Rogers pointed out five basic features of technology that affect its acceptance and subsequent adoption: relative advantage, compatibility, complexity, observability and friability. Thus, a new technology will be increasingly diffused if potential adopters perceive that the innovation would have an advantage over previous innovations which can be compatible with the existing practices, it is complex to understand and use or shows observable results that can experiment within a limited basis before adoption.

CONCLUSION/RECOMMENDATION

Based on the findings of the study, the following recommendations are made:

1. Government should provide computers at affordable prices to all the teachers in the educational zone.
2. Teachers should organize or create awareness on Information and Communication Technology (ICT) to enhance the student.
3. Government should provide necessary facilities that would guide against the constraints facing the use of ICT.

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