FACTORS INFLUENCING ATTITUDE OF TEACHER LIBRARIANS TOWARDS INFORMATION TECHNOLOGY IN KADUNA STATE

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ABSTRACT

The study aimed at examining the factors that influence the attitude of teacher librarians towards information technology in Kaduna State secondary schools. Survey research method was adopted. The study population comprises all the five hundred and four (504) schools. Out of this population two hundred and sixty four (264) was used as sample size for the study. Questionnaire was the instruments used for data collection. The data collected were presented and analyzed using descriptive statistics. The study found that teacher librarians have positive attitude toward information technology as shown from the respondents who opined that information technology can enhance students learning. The study also found that the possible constraints which tend to have unanimous consensus among the respondents were inadequate trainings on the job, lack of access to technology, poor infrastructural/social facilities and the epileptic power supply which adversely limit use of the technologies in secondary schools. The inferential analysis showed that the constraints to information technology usage in the secondary schools are positively correlated with the attitude of the teacher librarians towards the information technology use for teaching and learning in the schools. The study concluded that inadequacy of information technology resources, lack of confidence; anxiety, inadequate training, and lack of access to technology, poor infrastructural/social facilities and epileptic power supply were some of the constraints that significantly influence the teacher librarians' attitude towards information technology usage in the schools.

INTRODUCTION

Information Technology (IT) has been reported to be the most significant factors influencing teaching in contemporary times and these electronic drive technologies are used for accessing, processing and dissemination of information. It also has the capability to create, store, transmit or share information. According to Ibrahim (2011), the technology promotes the efficiency

and effectiveness of professionals in the teaching, learning process.

Teacher librarians are information specialists who work collaboratively with classroom teachers in planning, teaching, and evaluating students. They hold both recognized teaching and librarianship qualifications (ATLC 1998). It therefore implies that they lay the foundation on which knowledge is built, and how they perceive and embed the technology cannot be overemphasised. Attitude is a state of mind of an individual towards something that can be either favorable or unfavorable (Smith & Mackie 2007).

Positive attitudes of teacher/ librarians are assumed to be fundamental in the acceptance, implementation and success of new technologies. For IT to be successful, it is suggested that teacher/librarian need to be positive (Fine, 1986; Evald, 1996).

Factors Influencing Teacher Librarian Attitude and Usage of Information Technology (IT)

The factor influencing teacher/ librarian's attitude comprises of the followings:-

Teacher librarians' attitude in the use of IT

Teacher librarians constitute the key element in this transformation based on the adoption of IT to learning and teaching in schools. Teacher librarians' positive view towards IT application depend on their experience with IT, especially on how to use these technology in classroom environment (Zhang,

2007). If teachers perceived information technology programs as neither fulfilling their needs nor their students' needs, it is likely that they will not integrate the technology into their teaching and learning.

Teacher librarian characteristics

Teachers' characteristics (e.g. individual's educational level, age, gender, educational experience, experience with the computer for educational purposes and financial position) can influence the attitude of teacher librarian toward IT (Rogers, 1995, Schiller, 2003). The report by the National Center for Education Statistics (2000) indicated that teachers with fewer years of experience were more likely to use computers in their classes than teachers with more years of experience. More specifically, teachers with three years or less teaching experience reported using computers 48% of the time; teachers with 4-9 years, 45% of the time; those with 10-19 years, 47% of the time, while teachers with 20 years or more reportedly used computers only 33% of the time. This may be due, in part, to the fact that new teachers have been exposed to computers during their training and therefore, have more experience using this tool. Then, one of the factors that determine the extent to which teachers use computers in their classes may be the number of years they have been teaching. But an informal observation by Hawthorn (2000) reveals that older higher educators are naturally wary of IT use in general. The popular saying "you

cannot teach an old dog new trick" seem to describe their disposition. If this is so, the situation portends great danger and poor use of IT in secondary schools. This is because older teacher librarians are in most cases the senior teachers occupying professorial chairs. Also the task of curriculum design, development and revision rest largely on older teacher librarian. Their IT behavior becomes much more replicated in pre-service teacher librarians than the IT behavior of the younger colleagues. Their disposition and skills will no doubt affect their views and perception on how and what IT training content need be integrated into teacher education curriculum.

The attitudes of teacher librarian towards technology greatly influence the use of computers into their teaching (Schiller, 2003). Therefore, an understanding of Individual characteristics can influence teacher librarian attitude towards IT in teaching.

Competence on IT

Computer competence is defined as being able to handle a wide range of varying computer applications for various purposes (Becker et al, 2004). According to Braunt (2003), as cited in Bordbar (2010), teacher librarian computer competence is a major predictor of integrating IT in teaching. The success of educational innovations depends largely on the skills and knowledge of teacher librarians, whereas lack of knowledge and skills is the second most inhibiting obstacle to the use of computers in schools.

Similarly, in the United States, Knezek and Christensen (2000) hypothesized that high levels of (attitude), skill and knowledge (proficiency), and tools (level of access) would produce higher levels of technology use that will reflect on student achievements positively. Their model postulated that educators with higher levels of skill, knowledge, and tools would exhibit higher levels of technology use in the classroom. Therefore, teacher librarian should develop their competence based on the educational goals they want to accomplish with the help of IT.

Self-efficacy

Self-efficacy is the confidence that one has in one's ability to do the things that one tries to do. Bandura (1986) earlier defined self-efficacy as people's judgment of their capabilities to organize and execute the course of action required to attain designated types of performances. It is concerned not with the skills one has, but with the judgments of what one can do with whatever skills one possesses. It involves a generative capability in which one must organize cognitive, social and behavioral sub-skills into integrated courses of action (Saks, 1995).

Similarly, Tella, Jr. and Tella (2006) see self-efficacy as an individual's perceived ability to attain designated types of performance and achieve a specific result. In the study of self-efficacy teacher librarians try to accomplish their goals, and make good decisions that translate into meaningful achievements. They choose to perform more challenging tasks and are more creative.

Therefore teacher librarians feel reluctant to use computer if they lack confidence. "Fear of failure" and "lack of IT knowledge" Balanskat *et al.* (2007) have been cited as some of the reasons for teacher librarian lack of confidence to use IT in their teaching. Becta (2004) stated that "many teacher librarians who do not consider themselves to be well skilled in using IT feel anxious about using it in front of a class of children who perhaps know more than they do".

Anxiety

Anxiety may arise in a specific situation that the person seeks to avoid, this state is called phobia. There are many definitions and interpretation of the term anxiety. According to French (1997) anxiety is a state of emotional and physical disturbance induced in a person by a real or imagined threat. Andreasen (2000) on the other hand, believes that anxiety is a term used by mental health professionals to mean the same as fear or worry.

Information technology anxiety, according to Aliyu (2010) in his work terms information anxiety as a situation produced by the ever widening gap between what we understand and what we think we should understand ,when information doesn't tell us what we want or need to know. They all refer to a complex combination of negative emotional responses that include worry, fear, apprehension or agitation. These responses are generally learned from direct experiences when a person comes in contact with a threatening object or situation.

Therefore, one clear obstacle that teacher librarians face towards information technology is their computer skill, in particular, operating the mouse and interpreting the navigation information on a screen.

Culture

"Teacher librarians are involved in the process of change whether they are implementing a program for the first time, making changes to an established program, or participating in some aspect of ongoing school improvement" Oberg, (1990). The very essence of the work of teacher librarians is to improve teaching and learning which requires that they work within the culture of the school and that they also work to change the culture of the school. Therefore, Oberg (2009) assert that teacher librarians need to be familiar with the culture of the school. For example, what are the dominant teaching practices? What is the school's experience with and capacity for change? How are teachers expected to work (in isolation or collaboratively)? What is the role of the principal? How is a student's success defined and measured? Without this knowledge, even well-defined innovations which began with energy and enthusiasm are likely to flounder (Klinger, *et al.* (2009).

Therefore, the role of the teacher librarian involves understanding the nature of school culture and the process of change. If teacher librarians are knowledgeable about school culture and the change process, they will be able to set reasonable and attainable goals for themselves and for the school library

program. They also will be patient and understanding of the evolution of the school library program (Oberg, 2009).

Professional development

Professional development of teacher librarians is central to successful technology and education program. Baylor and Ritchie (2002) carried out a quantitative study that looked at the factors facilitating teacher skill, teacher morale, and perceived student learning in technology-using classrooms. They found that professional development has a significant influence on how well IT is embraced in the classroom. Also, they added that teacher librarians' training programmes often focus more on basic literacy skills and less on the integrated use of IT in teaching. Despite the numerous plans to use technology in schools, however, teacher librarians have received little training in this area in their teacher education programs (Varsidas & McIsaac, 2001).

According to Schaffer and Richardson (2004), when technology is introduced into teacher education programs, the emphasis is often on teaching about technology instead of teaching with technology. Hence, inadequate preparation to use technology is one of the reasons that teacher librarians do not systematically use computers in their classes. Teacher librarians need exposure to practical technology during their teacher training programs so that they can see ways in which technology can be used to augment

their classroom activities (Rosenthal, 1999).

Accessibility to technology

Technological change has a challenge to teacher librarians in secondary schools. Teacher librarians in developed countries moved quickly to learn and adopt new information technologies (Ramzan, 2004). IT was introduced to perform library functions, teaching and learning and also provide innovative user services. Teacher librarians gained knowledge of new technologies through continuing education programs, professional training, and revisions to library school curricula, which helped them benefit from the new technologies. Access to IT infrastructure and resources in schools determine the attitude of teacher/librarian towards IT in education (Plomp, *et al.*, 2009). Effective use of IT in teaching in schools depends mainly on the availability and accessibility of IT resources such as computer hardware, etc. Therefore, access to computers and hardware are key elements to teacher librarian attitude towards information technology

STATEMENT OF THE PROBLEM

Teacher librarians play prominent roles molding citizens. These categories of teachers are affected by the dynamics of embedded technology utilized by teacher librarian to achieve the objectives of teaching and learning. It is therefore, imperative to undertake a research to investigate the factors influencing the efficiency and effectiveness of

teacher librarians towards use of information technology in Kaduna State secondary schools? Emphasis is laid on addressing the challenges of the proliferation of information technologies. Reffell and Whitworth (2002) noted that the ability of teacher librarian to use computers effectively has become an essential part of education. Has this feat been achieved in Kaduna State? Therefore this constitute the crux of the paper:

1. Examine the attitude of teacher librarians towards information technology in Kaduna State Secondary Schools?
2. Identify factors affecting the attitude of teacher librarians towards Information Technology in Kaduna State Secondary Schools?

Hypothesis

Ho.   The constraints to information technology usage in Kaduna state secondary schools do not significantly influence teacher librarians' attitude towards their provision in the school.

METHODOLOGY

The Survey research method was adopted for the study. The population for the study comprised of the 12 education divisional headquarters with 504 schools in the three senatorial zones of Kaduna State. Out of the population from each of this division, 30% of schools were selected. This conformed to the opinion of Roscoe (1969) and Afolabi (1993) that 30% of a selected population is sufficient for generalization. A sample of 264 secondary schools was taken out of which a total number of 221 teacher librarians were selected. Purposive sampling technique was adopted for the study because the numbers of schools in the zones were not equally distributed as well as teacher librarians who are the subject of this research work. The instrument used for data collection for the study was a structured questionnaire. To attain the objectives of the study, the questionnaire was divided into two parts; part one was for school principals and made up of three questions on the types of information technologies in their respective secondary schools. Part two of the questionnaire was for teacher librarians with two sections: Section A requires personal data; Section B seeks to find out Teacher librarians attitude towards IT.

The data collected were analyzed using the descriptive statistics to obtain relevant information about the variables of the teacher librarians. Inferential statistics of Spearman rho correlation procedure to test the hypothesis, it choice was based on non-quantitative measurement of the responses and tested at a probability level of 0.05 with 95% confidence interval ($P \leq 0.05$).

RESULTS

The results of the research objectives and testing the null hypothesis are presented in Tables 1-3.

Assessment of the teacher librarians' attitude towards

In Table 1 the opinions of the respondents on their respective attitude to the various devices for information technologies in the schools are scored on a five point scale. For purpose of interpretation, the five point scale was re-categorized into two for easy comprehension.

From the response of the teacher librarians for item 1 in the table the teacher librarians feel compatible with the idea of the information technology as a tool in teaching and learning in the school. This is the opinion of 211 (95.5%) of the total respondents. Only 10 (4.5%) of the teacher

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librarians disagreed with this opinion. The respondents did not agree that the use of information technology in teaching and learning stress them. This is clearly explained in item 2 of the table where 198 (89.6%) of the teacher librarians did not agree that the use of information technology in teaching and learning usually stress them. Ironically, 180 (81.4%) of the teacher librarians did not agree that they learn more from the use of information technology than they do from books. But 161 (72.9%) of them did not agree that the idea of using a computer in teaching and learning makes them skeptical.

Table 1: Respondents' ratings of teacher librarians' attitude towards information technology in the schools

Teacher librarian attitude towards information technology	Ag	%	Da	%
Feel compatible with the idea of the information technology as a tool in teaching and learning in the library	211	95.5	10	4.6
The use of information technology in teaching and learning stress me out	23	10.4	198	89.6
I learn more from information technology than i do from books	41	18.5	180	81.5
The idea of using a computer in teaching and learning makes me skeptical	60	27.2	161	72.9
Information technology enhances students learning in the library	204	92.3	17	7.7
The use of computer in teaching and learning scares me	23	10.4	198	89.6
The computer is a valuable tool for teacher librarians	179	81.0	42	18.2
Information technology makes teaching in the library more interesting	208	94.1	13	6.0
Information technology provide better learning experience	190	85.9	31	14.1
Information technology is not conducive tool for student learning in the library because it is not easy to use in the library	36	16.3	185	83.8
Information technology gives opportunity to learn more	183	82.8	36	17.2
The computer is not a conducive tool for teaching because it creates technical problem	28	12.7	193	87.3
I can do what the computer can do equally as well	27	12.2	194	87.8
Information technology help student to express their thinking in better and difference ways	197	89.1	24	10.9
Information technology cant address the needs of the school system	111	50.3	110	49.8

Keys= DA - Disagree; AG - Agree

In line with this positive attitude, 198 (89.6%) of the teacher librarians did not agree that the use of computer in teaching and learning

scares them. In what could be called a display of a positive attitude by the teacher librarians, 204 (92.3%) of them agreed that information technology enhances students learning in the school. This is further emphasized in their response to item 7 where 179 (81.0%) of the teacher librarians agreed with the opinion that the computer is a valuable tool for teaching and learning. And in item 8 of the table, 208 (94.1%) of the respondents agreed that information technology makes teaching in the school more interesting. This positive attitude explain the opinion of 190 (86.0%) of the respondents who agreed that information technology provides better learning and teaching experiences in the school.

The positive attitude of the teacher librarian was further demonstrated in item 10 of the table where 185 (83.8%) of the respondents disagreed with the notion that information technology is not conducive for student learning in the library because it is not easy to use in the library. In like manner, 183 (82.8%) of the respondents agree that the use of information technology gives more opportunity to students in learning. Therefore 193 (87.3%) of the respondents disagreed on item 12, where it was suggested that computer is not a suitable tool for teaching and learning because of technical problems. This explains why 194 (87.8%) of the respondents disagreed that they can do what the computer can do also. In line with this attitude, 197 (89.1%) of the

respondents agreed that information technology helps students to express their thinking in better and different ways. However, there was no consensus among the respondents on whether information technology can address the needs of the school system or not as expressed in item 15 of the table. In the overall assessment, it could be said that the teacher librarians have positive attitude towards information technology in the secondary schools.

Assessment of factors influencing teachers' attitude towards information technology in the secondary schools

The identification of the factors that influence the teacher librarians' attitude towards the use of the information technology in the schools was the focus of the last objective of the study. The objective was investigated with the sixth research question which sought to identify the factors affecting the attitude of secondary schools teacher librarians towards information technology in the state. The opinions of the respondents on the suggested constraints are presented in frequencies and percentages in Table 2 and Figure 1.

The respondents did not really agree that the teacher librarian attitude towards information technology in the secondary schools could be attributed to the problem of competency in the table,

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Table 2: Respondents' opinions on the factors influencing teachers' attitude towards information technology in the secondary schools

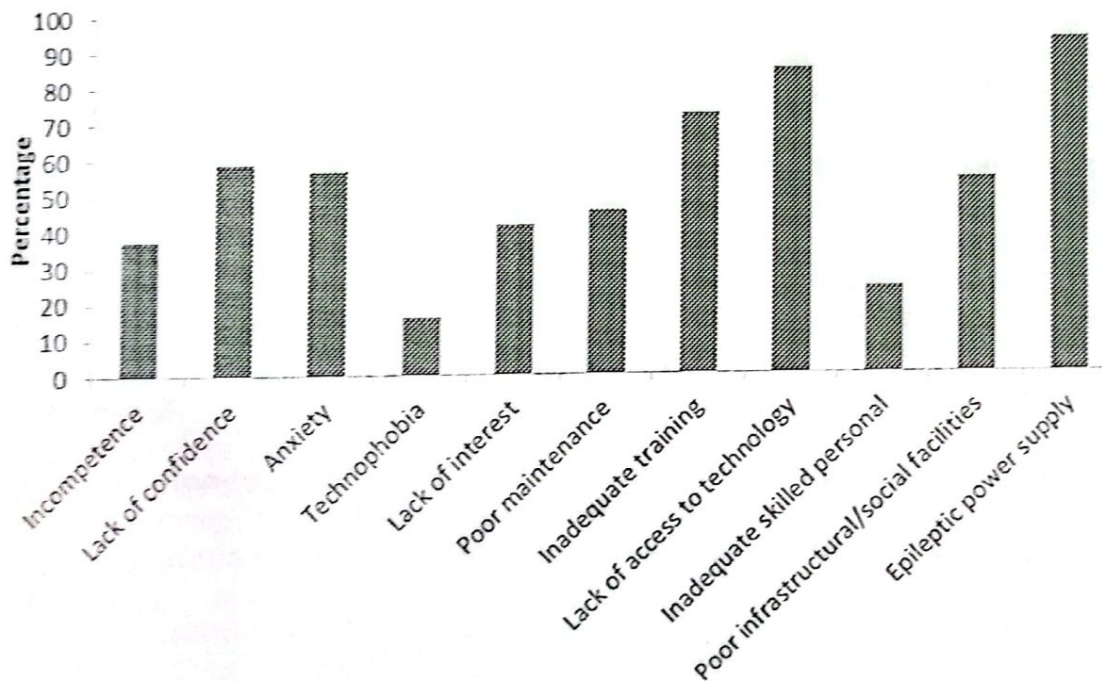| Factors influencing teachers' attitude towards information technology in the secondary schools	Frequency	Percent (%)
1. Incompetence	83	37.6
2. Lack of confidence	130	58.8
3. Anxiety	126	57.0
4. Technophobia	36	16.3
5. Lack of interest	93	42.1
6. Poor maintenance	102	46.2
7. Inadequate training	161	72.9
8. Lack of access to technology	189	85.5
9. Inadequate skilled personal	54	24.4
10. Poor infrastructural/social facilities	121	54.8
11. Epileptic power supply	208	94.1

Fig 1. Respondents' opinions on the factors affecting teachers' attitude towards information technology in the secondary schools

(62.4%) of the respondents disagreed with this notion. Only 83 (37.6%) of the respondents agreed that incompetence could be a determining factor of the teacher librarians' attitude. Though this tended to be a minority opinion but the response to item 2 of the table clearly revealed that incompetence could be a factor. In item 2, 130

(58.8%) of the respondents were of the opinion that the teacher librarians attitude is also affected by lack of confidence to adopt the available information technology for the teaching and learning in the schools. And in item 3, 126 (57.0%) of the respondents were of the view that the teacher librarians' attitude could be associated with anxiety. But the respondents did not agree that Technophobia (inability to adopt new technology), lack of interest and lack of the necessary manpower or poor performance could be associated with the factors influencing the teacher librarians' attitude towards the information technology in secondary schools. Possible constraints which tended to have unanimous consensus among the respondents were Inadequate training on the job, lack of access to technology, poor infrastructural/ social facilities and the epileptic power supply which tended to limit the usage of such devices in the secondary schools. The last constraint is really a major limitation in the use of information technology because most modern information devices required the use of electricity to power them. This could explain the dependence on the Manual Typewriter which was found to be of high usage among the secondary schools in this study.

Test of hypotheses

Ho: The constraints to information technology usage in Kaduna state secondary schools do not significantly influence teacher librarians' attitude towards their provision in the school.

This hypothesis was tested with the scores on the factors affecting the use of information technology in the secondary schools examined in Table 2 along with the scores of the respondents on the teacher librarians' attitude examined in Table 1. The result of the test conducted with the Spearman rho procedure for the two variables is summarized in Table 3.

Table 3: Correlation between constraints to information technology usage and teacher librarians' attitude towards the provision of information technology in Kaduna state secondary schools.

Variables	Mean	S.D.	S. E.	r-calc.	DF	P	r-critic.
Attitude	3.50	0.515	0.035	0.434	219	0.000	0.133
Factors	6.49	2.225	0.150				

The two variables as indicated in the table are significantly correlated. The observed correlation coefficient is 0.434 at 219 degree of freedom. The critical value for the correlation coefficient at the 219 degree of freedom is 0.133. The observed Libran... value is higher than the critical value and the observed probability level of significance for the test is 0.000 (P < 0.05). By these observations, the null hypothesis that the constraints to information technology usage in Kaduna state secondary schools

not significantly influence teacher librarians' attitude towards their provision in the school could be rejected. The implication is that the identified factors could significantly influence the attitude of the teacher librarians towards the information technology provided in the secondary schools. Among the constraints confronting the teacher librarians were the lack of confidence which could be associated with the inadequacy of IT resources, inadequate training, lack of access to some of the information technology, the epileptic power supply and poor infrastructural/social facilities in the locations were the secondary schools are located. These findings agree with Bordbar (2010) where it was reported that teacher librarian information technology competence is a major predictor of IT integration in teaching and learning.

CONCLUSION

Based on the findings of the study, it could be concluded that attitude of teacher librarians is positively correlated with usage of available information technology resources in the schools. However, inadequacy of information technology resources, lack of confidence, anxiety, inadequate training, and lack of access to technology, poor infrastructural/ social facilities and epileptic power supply were some of the constraints that significantly influence the teacher librarians' attitude towards information technology usage in the schools.

RECOMMENDATIONS

Based on the findings, it was recommended that teacher librarians should be encouraged to sustain their attitude toward the use of information technology, through sponsorship of conferences, workshops and additional training qualifications on the use, types and maintenance of information technology to enhance teaching and learning.

Challenges to effective use of information technology by teacher librarians require that on the job, access to information technology, availability of infrastructures and overcoming epileptic power supply must be accorded top priority. Efforts should be made for constant power supply. Where the National power is not available, provision should be made for alternative source of power supply.

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