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Usability of ICT Tools for Data Collection on Students Learning Ability Among Primary School Counsellors in Kwara State

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ABSTRACT

The study focuses on the usability of ICT tools for the data collection on students' learning ability among primary school counsellors in Kwara State. The study explores the potential benefits and challenges of using ICT tools for data collection in the field of education. The research design for the study was a descriptive survey research design of ex-post-facto type. Two research questions were raised to guide the study. The population of the study covered all the primary school counsellors in Kwara State using the purposive and convenient method to select one hundred counsellors to fill the researcher's instrument. The data collected from the study was analyzed using percentage and t-test statistical methods at a 0.05 level of significance. The result finding showed that all ICT usability levels are identified as low required by primary school counsellors in Kwara State. From the findings of this study, it was evident that primary school counsellors in Kwara State were not conversant with the use of ICT tools in the data collection of their student's learning ability. The study recommends that the government should make available more technology tools to advance the work of counsellors, faster and easier in terms of accessibility, storing and retrieving to avoid loss of vital information that will be useful for students.

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1. INTRODUCTION

Information and communication technologies (ICT) provide many benefits in the educational system, such as classroom management, educational research, teaching and learning processes, multimedia and hypermedia learning, and school administration. Previous studies documented the systematic use of ICT to enhance students' academic achievement (Carle et al., 2009; Bolaji & Adeoye, 2022) through application multimedia (Schweppe et al., 2015) and hypermedia (Chrisman & Harvey, 2018), classroom and workload management (Lai & Pratt, 2008), improving school administration and management (Baskin & Williams, 2006), and support research (Birnbaum, 2004). Counselling aspect is a lifelong process and is considered one of the most important aspects in the lives of every individual. Since our perceptions of individuals start back to primary school years, it is not at all shocking to say that counselling services are provided for individuals who are at the primary school level. The use of computers and ICT in counselling is not at all recent and it dates back to the first use of computer programs in counselling services in the 1960s. The emergence of ICT has greatly changed the way we live and the world that is fast-paced and unpredictable. As Maree (2017) stated, as cited in Haberstroh et al. (2009), the emergence of the internet, ICT and social networks is changing the lifestyle, learning modes and career future of the young generation who are different from the older generations such as the baby boomers. Nevertheless, for both young and older generations these days, the internet has gradually become an integral and important part of everyone's lives where it is used as a medium of communication, entertainment and information or data gathering. Hence, this increasing use and reliance on the internet and technology has created opportunities for counsellors to enhance and improve his or her services to all (Zainudin, 2019).

Katz (2019) postulated that in addition to learning and instruction, two other major areas in education can conceivably benefit from the use of computers which may be described as the climax of technological development. These are educational administration and Organization; and auxiliary specializations in education such as counselling. Less attention has been paid to the topic of administration and organization or auxiliary specializations than to learning-related topics in the literature (Gaynor, 2017). Nevertheless, the advantages of computer utilization in the areas of administration and counselling are evident in such modes as guidance, testing, curriculum evaluation, records and scheduling Salisbury (2011) as a management tool, and as a storage and retrieval device (Ely, 2013). As such, the computer facilitates the work of both the school principal and the school counsellor.

The key question that remains is whether the computer's proven contribution to learning and instruction can be successfully transferred to the field of counselling. Super (2017) answered this question by stating that although radical innovations such as computer-assisted counselling are likely to encounter initial resistance, after familiarization and proven effectiveness, counsellors will readily utilize computer-processed information. The computer is an especially potent tool for information storage and retrieval Das et al. (2013) counsellor accuracy and efficiency improved record-keeping decision-making strategies and counselling-related simulations. Crabbs (2013) added that computer-assisted counselling is a cost-effective method of tabulating and manipulating data. Pogrow (2011) summed up the potential of the computer for the counsellor as a delivery system designed to improve school effectiveness and efficiency by reducing personnel time that would otherwise be required for the same task. The goal of the computerized counselling package described in this paper is to provide school counsellors with an efficient counselling instrument (Sampson, 2013). This package allows for the utilization of all information vital to the diagnostic process and enables the counsellor to evaluate educational situations with improved accuracy.

The main innovations suggested by computerized counselling are time-saving, information gathering, information processing and retrieval. Information which usually takes days or even weeks to process by traditional methods is processable within minutes with the assistance of a computer (Sampson, 2013). The computerized counselling package does not demand radical changes in counselling methods. The package provides counsellors with familiarity with traditional counselling procedures with a potent and refined instrument for data storage and information processing thus paving the way for improved efficiency, depth and utility in the counselling process while counselling by well-known and acceptable methods.

In the school counselling services context, ICT has many potential applications such as electronic discussion forums, accessing students' information, delivering individual and group counselling sessions, and depositing student information for research (Oraegbunam, 2009). Multimedia, hypermedia, and websites are important to optimize school counselling services (Beidoglu et al., 2015). Unfortunately, many school counsellors do not apply ICT to support school counselling services. Steele et al (2014) revealed that only 28% of school counsellors perceived that ICT can be used to support the school counselling core curriculum services. Thus, most school counsellors (72%) had the perception that the application of ICTs would make little contribution to their work. Owen and Weikel (2009), also reported that although around 88% of school counsellors in one U.S. state were already using computers, most of them only used routine applications such as word processing, record keeping, and class schedule. It seems that even school counsellors who do accept ICT do not apply it in the development of school counselling services. To date, there have been no studies on school counsellors' attitudes to the use of ICT in school counselling services. The Technology Acceptance Model (TAM) provides a framework for predicting ICT use based on users' beliefs and attitudes about technology (Handayani, 2016; Teo et al., 2009). However, there are only a few studies of the TAM in the education context. For example, the TAM model has been tested in studies on the intention to use hypermedia (Gao, 2005) and e-learning (Alsofyani et al., 2012; Cheung & Vogel, 2013), and in a study of pre-service teachers' intentions to use ICT (Teo et al., 2009). None of these studies address the usability of ICT among counsellors. The current study makes a unique contribution to the literature by assessing the usability of ICT tools for data collection among primary school counsellors considering gender, age and work experience as an indicator.

1.1 Theoretical Framework

Davis et al. (1989) developed a theory of 'action relating to reasons' so-called Technology Acceptance Model (TAM). Later based on their work, Venkatesh and Davis (2000) investigated the reasons some people use computers and their attitudes towards them that called TAM. The model, the perceived usefulness and ease of use with attitude towards using ICT and actual use (system use). They tested this model with 107 adult users, who had been using a managerial system for 14 weeks. They found that people's computer use was predicted by their intentions to use the computer and that perceived usefulness was also strongly linked to these intentions. According to Venkatesh and Davis (2000) when teachers are presented with a new technology, two key factors would influence their decision from the extended variables around them about how and when they will use it:

External Variables – It represent the challenges that teachers face that come from outside their sphere of control when integrating a new technology in their teaching and learning

process. These challenges include Limited accessibility and network connection; Schools with limited ICT facilities; Lack of effective training; Limited time and Lack of teachers' competency.

Perceived usefulness (PU) – It represents the degree to which they believe that using a particular technology would enhance their job performance. If teachers feel there is no need to question or change their professional practice then, according to studies, they are unlikely to adopt the use of ICT tools. However, if they perceive ICT to be useful to them, their teaching and their pupils' learning, then according to the empirical evidence of previous studies (Cox et al., 1999) they are more likely to have a positive attitude toward using ICT in the classroom. The following factors have been identified as key elements to teachers' perceived usefulness of ICT tools: Work more quickly; Job performance; Increased productivity; Effectiveness and Usefulness.

Perceived ease-of-use (PEOU) – It represents the degree to which they believe that using a particular system would be free from effort. Previous studies have identified several factors relating to the perceived ease of use of ICT, in a study on experienced practising ICT users. The Impact project (Watson, 1993) and other studies identified a wide range of skills and competencies which teachers felt they needed to find ICT easy to use. Some of these are: Easy to learn; Clear and understandable; Easy to use; Controllable and Easy to remember.

Attitude toward use: - Teacher's positive or negative feelings about performing the target behaviour (e.g., using a system). Teachers' attitudes to many of these factors will depend upon how easily they perceive using ICT tools on a personal level as well as for teaching in the classroom.

Behavioural intention: -The degree to which the teacher has formulated conscious plans to perform or not perform some specified future behaviour.

Social influence processes: - Subjective norm, voluntariness, and image and cognitive instrumental processes (job relevance, output quality, result demonstrability, and perceived ease of use) as determinants of perceived usefulness and usage intentions. Factors that surround the use of ICT in counselling services are numerous and paramount for data collection, retrieval and accessibility within a short time frame.

1.2 Purpose of the Study

The main purpose of this study is to assess how counsellor in primary school uses ICT tools for data collection on students' learning ability. Other purposes are

- i. To assess the level of ICT usage of primary school counsellors in data collection.
- ii. To examine gender differences in ICT usage among primary school counsellors in data collection.

2. METHODS

The research design for this study was a descriptive survey research design of ex-post-facto type. This approach does not involve the manipulation of variables in the study. It is, therefore, after the fact study. It neither adds to nor deducts from the existing fact. The population of this study covered all the primary school counsellors in Kwara state, Nigeria. The purposive and convenient methods were used, purposive in the sense that only one hundred counsellors were used and convenient because only those who were ready to fill the instrument were selected. The questionnaire used was a 1-5 scale system usability scale SUS by (Sauro, 2011) and this is a standard questionnaire to perform Usability Testing. The instrument was administered to the respondents, on their meeting day. The collection of instruments was done on the same day. The 100 instruments administered were retrieved

completely. The data collected from the study was analyzed using percentage and t-test statistical methods at a 0.05 level of significance.

3. RESULTS AND DISCUSSION

Table 1 shows the distribution of respondents by gender, age and work experience. It shows that 100 respondents participated in the study. The male participants were 36(36%) while 64(64%) were female, 11(11%) were below the age of 50 years, while 89(89%) were above 50 years. 6(6%) of the respondents were within 1-3years; 14(14%) were 4-6years while 80(80%) of the respondents were above 7 years.

Research Question One: What is the level of ICT usage of primary school counsellors in data collection?

Data presented in Table 2 shows that all items on ICT usability identified had mean rating between 2.75 and 1.15 which are below the cut-off point average of 2.50 with a grand mean of 1.98 which fall at a very low required response option. This result showed that all ICT usability levels are identified as low required by primary school counsellors in Kwara State. The value of standard deviation which ranges from 1.63 – 0.74 showed that respondents were homogeneous in their opinion on ICT usability among primary school counsellors in Kwara state. It could be inferred that the level of ICT usability among primary school counsellors in Kwara State was low.

Research Question Two: What is the difference in the usability of ICT of males and females among primary school counsellors in data collection?

Significant at $p < 0.05$

The data in Table 3 revealed that there are 36 and 64 male and female primary school counsellors respectively. Male participants had a slightly higher mean ($\bar{X} = 28.71$; $SD = 14.61$) than female participants ($\bar{X} = 27.96$; $SD = 14.57$) but the difference was not statistically significant. The Table revealed that there was no significant difference between the mean responses of male and female primary school counsellors in Kwara State ($t_{98} = 0.07$, $P > 0.05$). This indicated that male and female primary school counsellor in Kwara state did not differ statistically significantly in their responses regarding ICT usability. This further meant that gender has no significant difference in terms of ICT usability among primary school counsellors in Kwara State.

Table 1. Demographic Distribution of Respondents

Variables	Frequency	Percentage (%)
Gender		
Male	36	36
Female	64	64

Total	100	100
Age		
Below 50 years	11	11
Above 50 years	89	89
Total	100	100
Work Experience		
1-3 years	6	6
4- 6 years	14	14
7years and above	80	80
Total	100	100

Table 2. Mean ratings and standard deviations on usability of ICT tools among primary school counsellors in data collection

S/N	ITEMS	Mean	SD	Remarks
1	I am thinking of using the system to enhance my job.	1.85	1.48	Low
2	I find the system complicated to use.	1.80	1.51	Low
3	I find the system easy to use.	2.15	1.50	Low
4	I need help from other people or technicians in using the system.	1.15	0.74	Low
5	I feel the features of this system are working properly.	2.40	1.74	Low
6	I feel that there are a lot of things in my job that are inconsistent with the system.	2.10	1.30	Low
7	I feel that other people will quickly understand how to use the system.	1.69	1.46	Low
8	I find the system confusing.	2.40	1.49	Low
9	I feel there are no obstacles in using the system.	1.50	1.50	Low
10	I need to familiarize myself first before using the system.	2.75	1.63	Moderate
	Grand Average Mean	1.98	1.44	LOW

Table 3.T-test on the difference between the mean ratings of male and female primary school counsellors in the usability of ICT tools for data collection.

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	36	28.71	14.61	0.07	98	0.61	NS
Female	64	27.96	14.57				

4. DISCUSSION OF FINDINGS

The result of the first research question showed that the level of ICT usability among primary school counsellors in Kwara State was low. This is in line with the finding of Super (2017) answered this question stating that although radical innovations such as computer-assisted counselling are likely to encounter initial resistance, after familiarisation and proven effectiveness, counsellors will rarely utilise computer-processed information. Given this suffering larger number of primary school counsellor could not make effective use of ICT for the benefit of their work. Owen and Weikel (2009), also reported that although around 88% of school counsellors were already using computers, most of them only used routine applications such as word processing, record keeping, and class schedule. It seems that even school counsellors who do accept ICT do not apply it in the development of school counselling services. The result of the second research question showed that there is no significant difference in the ICT usability of male and female primary school counsellors in Kwara State. This is in line with the findings of Cheung & Vogel (2013) who stated that the disparity of gender could not determine the level of ICT usability. However, certain factors such as ICT availability, prospect and self-efficacy in the population of primary school counsellors.

5. CONCLUSION

Going digital requires a sensible strategy of inclusive counselling service, the trend towards the increasing use of ICT. Particularly among primary school counsellors, presents opportunities and programmes launched by the Kwara State government for primary school staff for widening access to ICT gadgets can also enhance counselling services to a broader client population. At the same time, this trend presents opportunities for responding more flexibly to individual client needs. The evidence collated for the study suggests that many organisations provide counselling services through multi-channel strategies, in terms of enabling effective self-service as demanded by users rather than in terms of pushing everybody online. From the findings of this study, it was evident that primary school counsellors in Kwara State were not conversant with the use of ICT tools in the data collection of their student's learning ability. To this wise, inadequate access to ICT, difficulties faced in the use of ICT tools, and inadequate knowledge about the use of ICT tools in data collection among others have been identified

6. RECOMMENDATIONS

Having gone through the study the following recommendations are therefore highlighted for consideration by the state government and counsellor as follows:

- i. The government of the day should make available more technology tools to advance the work of counsellors, faster and easier in terms of accessibility, storing and retrieving to avoid loss of vital information that will be useful for students.
- ii. Counsellors should put in their best to learn needful innovation and advancement, the trend toward a larger population of clients desired services at a particular point in time.

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