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An Assessment of Level of Computer Literacy and Phobia among Private Secondary School's Principals in Kaduna North Local Government Area of Kaduna State, Nigeria

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Abstract

This study assessed the level of computer literacy and phobia among private secondary schools' principals in Kaduna North Local Government Area (LGA) of Kaduna State, Nigeria. Specifically, this study intends to achieve the following objectives: - estimate the level of principals'; and vice-principals' computer literacy and phobia in private secondary schools in Kaduna North LGA; evaluate the level of availability of computer systems for usage in private secondary schools; determine the extent computer literacy and phobia influence principals' and vice-principals' computer utilization for effective school management in private secondary schools; and estimate the significant relationship between computer literacy, phobia, and principals' and viceprincipals' computer utilization in private secondary schools. Data were collected using questionnaire administered to ninety (90) respondents. The analytical tools used to achieve stated objectives include descriptive statistics; econometrics multiple regression analysis; and Pearson correlation analysis. The results revealed that the level of computer literacy of private secondary schools principals in handling computer, using E mail, using cyber-café is significantly higher than vice-principals. Sixteen (16) or 19% of total surveyed principals of private secondary schools had no computer qualification. Forty- four (44) or 51% of total surveyed private secondary had no internet facilities within the school systems. This implies that e-facilities, e-library, einformation, and e-communication are totally absent in those schools systems. Our results indicated the effectiveness of predictor variables (computer literacy and phobia) in influencing principals' and teaching personnel's computer use for record keeping and schools management with an F-ratio of 13.756 which was significant at 1% probability level, the Coefficient of Multiple Determinations (R^2) value of 0.516, and the adjusted R square value was 0.492. The Pearson correlation coefficient between computer utilization and level of computer literacy in private secondary schools was 0.209 which was significant at 0.10 level of probability indicating that there is an interrelationship between principals' and vice-principals' computer utilization and computer literacy for effective school management. Based on our findings, we recommend that private secondary schools should have a fully computerized center with internet facilities for e-library-information and e-communication system.

INTRODUCTION

1.1 Background to the Study

The computer is an electronic machine capable of inputting, processing, and outputting data based on a logic supply. Computer literacy is the ability to identify and operate the software and hardware of a computer so as to achieve a desired goal. The committee on the National Policy on Computer Education (NERC, 1998) recommended the procurement of at least one computer for a school's administration (Lawal, 1997). Principals, vice-principals', and teaching personnel are faced with a tedious task of keeping the students attendance, record books, cumulative report cards, and students performance in cognitive, affective, and psychomotor domains (Emerson, 1989). Computer technology plays a key role in nearly every aspect of life in assisting education programs and in preparing students to become full participants in the 21st century (LAC, 2014). The Literacy Assistance Center's (LAC) instructional technology initiative offer resources for integrating technology into the classroom (e-learning). When the computer is properly used, information holds great promise to improve teaching-learning activities Samuel and Ede (2005). Also, in the rapidly changing world of global market competition, automation, and increasing democratization, basic computer education is necessary for individuals to have the capacity and capability to access and apply information for development (Flectcher and Deeds, 1994; Oetting, 1983; Russel ,1995).

1.2 Statement of the Problem

Systematic research on what principals actually do and their relationship to stability and change is quite recent. Some of the earlier implementation research identified the role of the principal as central to promoting or inhibiting change (Sammons, 1999). During the 1980's research and practice focusing on the role of the principals, vice-principals, and other school leaders mounted, resulting in greater clarity and greater appreciation of the complexities and different paths to success. Using computers is the key in keeping school records, which by law must be kept by every educational institution at all levels, for the effective and smooth running of the school administration. Record systems that utilize computers give details about the students and entire staff in the schools. Record keeping in educational management and utilization are very vital to the continual existence of the school as an organization. Such records, if made available and put to use at the appropriate time, will enable both principals and teaching personnel to know something about their students, and through this, will be in a better position to assist the student academically, morally, and socially. In addition, they would be able to present the student information to whomever may need it (Ajayi, 1997).

LITERATURE REVIEW

2.1 ICT Adoption Failure in Africa

Africa is lagging behind in its effort of achieving an information society (Totolo, 2007). Sub Saharan Africa is both technologically and economically least developed and that has led to the slow transfer and adoption of information technology (Onyango, 2000; Udo and Edoho, 2000). Although Sub Saharan Africa has not responded very well to information technology adoption and other modernization attempts in the past (Totolo, 2007; Onyango, 2000), governments in Africa continue to invest in information technology. The principals are regarded as transformational leaders. According to Totolo (2007) *"Transformation leadership moves beyond managerial and instructional leadership to providing schools with strategies necessary to cope with change"*. Doyle and Smith (2001) argue that transformational leaders emerge during a crisis or when there is a need to make an important decision for the survival of the organization. Principals were assumed to be in a position to transform the school system through computer technology; therefore knowing whether they intend to adopt computers is crucial for technology implementation, transformational leaders should be seen to be in the forefront of computer technology adoption and use (Totolo, 2007).

2.2 The Challenges of Teachers Education with the New Information and Communication Technology in the 21st Century

Ukeje (1996) noted that education unlocks the door to modernization, but it is the teacher who holds the key to the door. It is the teacher who translates educational policies into practice and programmes into action. Teacher education is defined as that aspect of education which leads to the acquisition of practical and applied skills as well as basic scientific knowledge (NERC, 1998). Okafor (2006) asserted that teacher education seeks for the best way to produce good teachers. In the words of Okafor (1988) the quest to produce good teachers' leads to the formulation of many principles, laws, and competencies which distinguishes a professional educator from other occupation groups is imperative for effective teaching and learning. The importance which various Nigerians attach to teacher education is clearly manifested in the purpose of teacher education as outlined in the National Policy of Education (1988:38): "to produce highly motivated, conscientious, and efficient classroom teachers for all levels of our educational system; encourage further the spirit of enquiry and creatively in the teacher; help teachers fit into the social life of the community and society at large and enhance their commitment to national objectives; provide teachers with the intellectual and professional back-ground adequate to any changing situation not only in the life of their country, but in the wide world; and enhance teachers commitment to the teaching profession" (NERC 1988:38). Teacher education will continue to take cognizance of changes in methodology and the curriculum. Teachers will be regularly exposed to innovation in their profession. Governments will introduce measures to enable teachers participate more in the production and assessment of educational materials and teaching and development of curriculum innovation and new techniques (NERC 1998:38). The National Policy on Education is far from being actualized especially in the area of information communication and technology (ICT) innovation. Ameh (2006) noted that the ICT potentials are capable of transforming the nature of education where and how learning takes place and the roles of students and teachers, in the learning process. The power of ICT is determined by the ability of teachers to use the new tools for learning to create rich, new, and engaging learning environment for their students. The challenge for ICT in teacher education in the 21st century is to ensure that, the new generation of teachers as well current teachers, are well prepared to use new learning methods, processes, and materials with the new ICTs tools for learning. Obeng (2004) emphasized that teachers should be assisted to acquire computer units for themselves either through loans or grants. There should be continuous training in ICT for teachers so that they can be kept up-to-date in ICT. It is essential that teachers should have basic ICT skills and competence. The managers of educational institutions also need training and access to ICT facilities for administrative effectiveness (Maisamari, 2006). They must also provide leadership in determining how the new technologies can be used in the context of the culture, needs, and economic conditions within their country.

2.3 Significance of the Study

United Nations Educational Scientific Cultural Organization, UNESCO (2002) defined information and

communication technology (ICT) as the combination of information technology with other related technology particularly communication technology that deals with the design, realization, evaluation, use and maintenance of information processing systems. ICT is a powerful tool for change and development and is a vehicle to enhance teaching, learning and research. Hackbath (1996) asserted that several problems facing educational enterprises worldwide were complex and challenges are enormous for the future. Hence society is devising various means to make things easier and one is the technological revolution in education which calls for use of learning and instructional devices to simplify instruction. The prevalence and rapid development of information and communication technologies (ICTs) has transformed human society from the information technology age to the knowledge age (Galbreath, 2000). Teacher's principals and students use ICTs in education and should be comfortable with using of ICTs to enable them to stay current with industry and societal needs and to accomplish their everyday task (Oke, 2006). Obasi (1998) submitted that the application of the computer in teaching cannot be over emphasized. Information technology can be adapted to teaching and learning needs. Students learn in unique learning styles and the teacher opens the door to knowledge that can be shared by everyone. Teachers discovered ICT as an idea tool for conveying programmed instruction (Levi and Okeke, 2006). ICT is able to give significant improvement in the quality of teaching process by bringing in more originality. Students have to engage the new technology, not only the internet, but multi-user object oriented, digital-video etc. Students and teachers should involve in new type of teaching and learning e.g. collaboration, communication, presentation, publication, sharing and reflection on other works (Levi and Okeke, 2006). The fear of ICT and group work is overcome by experiencing success in learning through ICTs. ICT is a necessary tool for teacher education who in turn teach the youths, adult men and adult women the proper orientation for achieving various quality careers in education for useful living and self-reliance in a deregulated economy. Levi and Okeke (2006) observed that the success of any educational system is strictly tied to the quality of its teachers.

2.4 Objectives of the Study

The broad objective of this study is to assess the level of computer literacy and phobia among private secondary schools' principals in Kaduna North Local Government Area (LGA) of Kaduna State, Nigeria. The specific objectives were to:-

- (1) estimate the level of principals', and vice-principals' computer literacy and phobia among secondary schools;
- (2) evaluate the level of availability of computer systems for usage in the selected secondary schools;
- (3) determine the extent computer literacy and phobia influence principals' and vice-principals' computer utilization for effective school management; and
- (4) estimate the significant relationship between computer literacy, phobia and principals' and vice principals' computer utilization.

METHODOLOGY

3.1 The Study Area

This study was conducted in Kaduna North Local Government Area of Kaduna State. Kaduna state has a population of 6.1 million people according to 2006 census (FOS, 2006). The state shares common borders with Abuja in the South-East and six others states namely, Katsina, Kano, Zamfara in the North-North; Nasarawa, Plateau in the North-East; Niger in the North West(Figure 1 shows Map of Africa and Figure 2 shows Map of Nigeria).

3.2 Methods of Sampling /Sampling Designs

A simple random sampling technique was used for selecting secondary schools (private) to study and also for selecting respondents within the selected secondary schools. Simple random sampling is the most fundamental method of probability sampling, each member of the population has equal chance of being selected, and it gives fairness and unbiased results. Ninety (90) respondents in fourty-five (45) selected private secondary schools in Kaduna North LGA were randomly selected from senior and junior private secondary schools. More children attend private schools than public schools presently, so only private schools were the focus of this study were considered.

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Figure 1: Map of Africa showing Nigeria



Figure 2: Map of Nigeria showing Kaduna State.

3.3 Instrument for Data Collection

The researcher designed an instrument, principal questionnaire, for data collection. The principal's questionnaire

is made up of parts which include: Background information of the school principal, and the vice-principal; Principal and vice-principal computer literacy and phobia; and level of availability of computers for usage in the selected private secondary schools.

3.4 Validation of the Instrument

Validity is defined as the degree to which a measuring instrument measures what it is designed to measure. Many of the items in the instrument are four-point Likert scale type which were coded numerically (4,3,2,1) for analysis. A Likert scale is used to measure the responsibility perception of a certain phenomenon and this scale can be used to construct most of the question responses. The draft of the questionnaire was randomly given to principals for validation. Items were validated using test-re-test reliability (Asika, 2001).

3.5 Reliability of the Instrument

Reliability is the stability, dependability, and predictability of a measuring instrument. It is the accuracy and precision of a measuring instrument (Asika, 2001). In test-re-test reliability the same measuring instrument is used to take two separate measurements on the same population at different times. The higher the correlation between the two measurements, the higher the reliability of the measuring instrument (Asika, 2001). The reliability coefficient was 0.82.

3.6 Methods of Data Analysis

Analysis of research data include: data preparation, including editing and coding; and data tabulation, use of tables to process data for further analysis. The following analytical tools were used to achieve stated objective: descriptive statistics; econometrics multiple regression analysis; and Pearson correlation analysis. The Statistical Package for Social Science (SPSS) was used for the analysis of data collected.

3.7.1 Descriptive Statistics

The descriptive statistics involved the use of frequency distributions, means percentages, bar charts, etc, used to achieve objectives one (1) and two (2).

3.7.2 Econometrics Multiple Regression Analysis

To estimate the multiple regression analysis, linear, semi-log, and the Cobb-Douglas regression function were employed. The best regression fit was determined (Olayide and Olayemi, 1981). The model in its general form is $Y = (X_1, X_2, e_t)$ [1]

[2]

[3] [4]

Where,

Y = Computer utilization in selected secondary schools (units) X₁ = Principals' computer literacy and phobia (unit) X₂ = Vice-Principals' computer literacy and phobia (unit) e_t = Error-terms The explicit forms of these functions are shown in equations 2, 3, and 4. $Y = a + bX_1 + cX_2 + e_t$ (Linear-Form) $LogY = a + bLogX_1 + cLogX_2 + e_t$ (Cobb-Douglas) $Y = a + bLogX_1 + cLogX_2 + e_t$ (Semi-Log). These equations were used to achieve objective three (3)

3.7.3 Pearson Correlation Analysis

The Pearson correlation model is shown in equation 5:-

$$r = \frac{\sum X_i Y_i}{\sqrt{(Xi)^2 (Yi^2)}}$$
 [5]

Where, r is sample correlation coefficient, Y_i is level of principals' and vice principals' computer utilization, X_i is the level of principals' and vice principals' computer literacy and phobia. This will be used to achieve objective four (4).

RESULTS AND DISCUSSION

Table 1: Years of Experience of School's Principal in Selected Private Secondary Schools in Kaduna	1
North Local Government Area, Nigeria	

Years of Experience	Frequency	Percentage (%)
1-5	52	60.5
6-10	19	22.1
11-15	5	5.8
16-20	1	1.2
21-25	1	1.2
26-30	8	9.3
Total	86	100.0

Source: Field Survey, 2012

Eighty-two (82) percent which represent fifty-two (52) school principals in selected Private Secondary Schools had ten (10) years or less experiences as school principals (see Table 1).Nine (9) percent of the school principals in these selected private secondary schools had between twenty-six (26) to thirty (30) years' experience as school principals.

 Table 2: Number of Functioning Computers in Sampled Private Secondary Schools in Kaduna North

 Local Government Area, Nigeria.

Number of Functioning Computers	Frequency	Percentage (%)
1-5	38	44.2
6-10	22	25.6
11-15	13	15.1
16-20	3	3.5
21-25	1	1.2
26-30	2	2.3
>30	7	8.1
Total	86	100.0

Source: Field Survey, 2012.

Table 2 shows that 70% of the private secondary schools which represent sixty (60) secondary schools (private) had 10 or less functioning computers in the school. Few private secondary schools ,eight percent of sampled private secondary schools, had above thirty (30) functioning computers in the school system.

Table 3: Total Number of Computers Connected to Internet Facilities within the Privat	e Secondary
Schools in Kaduna North Local Government Area, Nigeria.	

s Frequency	Percentage (%)
29	33.7
11	12.8
2	2.3
44	51.2
86	100.0
	29 11 2 44

Source: Field Survey, 2012.

Table 3 shows that fifty-one (51) percent of the private secondary schools surveyed had no internet facilities in the school system. This implies that e-library system is absent or not available in those school systems.

Table 4: Total Number of Students	in Sampled Private	Secondary Schools in	ı Kaduna North Local
Government Area, Nigeria			

Total Number of Students /School	Frequency	Percentage
< 100	17	19.8
101-200	24	27.9
201-300	15	17.4
301-400	15	17.4
401-500	2	2.3
>500	13	15.1
Total	86	100.0

Source: Field Survey, 2012.

The total number of students in each of the sampled private secondary schools is presented in Table 4.

Analysis of the results shows that sixty-five (65) percent which represents fifty-six (56) private secondary schools had 300 or less students in their school systems.

Table 5: Computer Qualification Obtained by Principals in Selected Private Secondary Schools in Kaduna North Local Government Area, Nigeria.

Computer Qualification of Schools Principa	als Frequenc	y Percentage (%)
Certificate	16	18.6
Diploma	49	57.0
National Certificate of	3	3.5
Education (NCE)		
None (No Computer	16	18.6
Qualification)		
Total	84	100.0

Source: Field Survey, 2012

As shown in Table 5, 19% of private secondary schools principals' surveyed had no computer qualifications. This implies that those principals are not up to date in terms of ICT. They need training in to be ICT compliant.

 Table 6: Descriptive Statistics of Principal and Vice Principal Computer Literacy and Phobia in Kaduna

 North Local Government Area, Nigeria.

Items	Principals N (%)	Vice-Principals N (%)
Computer literacy Handling of computer	146 (33.7)***	98 (34.7)
Using E-Mail	141 (32.6)**	92 (32.7)
Using Cyber Café	146 (33.7)**	91 (32.4)
Level of phobia found computer confusing	88 (22.2)***	54 (19.8)
Computer is difficult	92 (23.1)***	66 (24.3)
Computer can affect sight	140 (35.1)*	90 (33.1)
Get scared with computer	78 (19.6)***	62 (22.8)

Source: Field Survey, 2012, *** Significant at 1% Probability Level, ** Significant at 5% Probability Level; * Significant at 10% Probability Level.

Table 6 showed that the levels of principals' computer literacy and phobia are significantly higher than of the vice-principals in private secondary schools surveyed at 1% level of probability.

Table 7: Econometric Multiple Regression Analysis (Cobb-Douglas Functional Form)

Variables	Regression Coefficient	Standard Error	t-Value	p- Value
Constant	0.983	0.312	3.150***	0.01
Level of Principals Computer Literacy and Phobia (X ₁)	0.95	0.343	2.771***	0.01
Level of Vice-Principals Computer Literacy and Phobia (X_2)	1.15	0.461	2.495**	0.05
$R^2 - 0.516$				0.01
$Adj R^2 - 0.492$				0.01
F-Value-13.756***				

Source: Field Survey, 2012

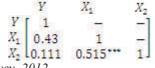
*** - Significance at 1% level of probability

** - Significance at 5% level of probability

* - Significance at 10% level of Probability

Table 7 showed the influence of principals' computer literacy and phobia; and vice-principals' computer literacy and phobia as factors on computer utilization of private secondary schools surveyed. Double – Logarithms Functional Form was selected as lead equation among the three equations fitted. The coefficients of multiple determinations (R^2) was 0.516, this implies that the two independent variables explained 51% of the dependent variable which is the computer utilization in private secondary schools surveyed. The F-Value of 13.756 was significant at 1% probability level which implies that all independent variables included jointly explained the variations in computer utilization in selected private secondary schools.

Table 8: Correlation Analysis between Private Secondary School Computer Utilization (Y), Level of Principals' Computer Literacy and Phobia (X_1) and Level of Vice-Principals' Computer Literacy and Phobia (X_2) in Kaduna North Local Government Area, Nigeria

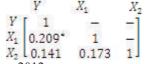


Data: Field Survey, 2012

*** - Significant at 1% Level of Probability

Table 8 showed the Pearson correlation between computer utilization in private secondary schools and the level of principals' computer literacy and phobia and level of vice-principals' computer literacy and phobia. The correlation coefficient between computer utilization and level of principals' computer literacy and phobia was positive with value 0.43 but not significant. The correlation coefficient between computer utilization and level of vice-principals' computer utilization and level of vice-principals' computer utilization.

Table 9: Correlation Analysis between Principals' and Vice Principals' Computer Utilization (Y), Level of Computer Literacy (X₁) and Computer Phobia (X₂) in Kaduna North Local Government Area, Nigeria.



Data: Field Survey, 2012

* - Significant at 10% Level of Probability

Table 9 showed the correlation analysis between of principals' and vice principals' computer utilization of private secondary schools surveyed, and level of principal's and vice-principals computer literacy which was positive and significant at 10% level of probability with value of 0.209. The correlation coefficient between principals' and vice principals' computer utilization of private secondary schools surveyed and level of principals'; and vice-principals' computer phobia was positive with value of 0.141 but not significant.

Discussing of Findings Based on Research Questions

Research Question 1

What is the level of principals' vice-principals' computer literacy and phobia in private secondary schools in Kaduna North Local Government Area?

The finding in this study revealed that 18.6 % of private secondary schools principals' had no computer qualification. The level of computer literacy of private secondary schools' principals in handling of computer, using E-mail; and using Cyber Café is significantly higher than vice-principals (Table 6). The level of phobia for principals of private secondary schools is significantly higher than vice principals', level of phobia under consideration include finding computer difficult; found computer confusing; computer can affect sight and get scared with computer amongst others (Table 6). This is in agreement with the findings of Fletcher and Deeds (1994), and Oetting (1983).Four variables which research has identified as making up a significant proportion of the variance in computer phobia are: principals' support of computer use; computer availability at school; perceived mathematical ability; and whether the teaching personnel had received formal computer training (Oetting, 1983). Russell (1995) explains six (6) stages that the naïve user goes through when using the computer. (eg; what the computer can do in learning the process, familiarity and competency of computer usage, and others). Understanding these stages of learning to use computers empowers the learner (teacher) through knowledge that the feelings of tension and frustration will be over-come (Russell, 1995). These findings present a powerful message for school reform and sustainable education.

Research Question 2

What is the level of availability of computers for use in private secondary schools in Kaduna North Local Government Area in Nigeria?

From the results presented in Table 2 and Table 3, sixty (60) or 70% of the total surveyed private secondary schools had 10 or fewer functioning computers available in their school systems. Forty-four (44) or 51% of the total surveyed private secondary schools had no internet facilities within the school systems. This implies e-facilities, e-library, e-information is totally absent in those school systems. Fifty-six (56) or 67% of the total surveyed private secondary schools had 300 or fewer students. The Literacy Assistance Center (LAC) is of the view that computer technology plays a role in nearly every aspect of life in assisting adult education programs and in preparing students to become full participants in the 21st century. The LAC instruction technology indicatives offer resources for the integration of technology into the classroom (e-learning). Samuel

and Ede (2005) observed that when the computer is properly used, e-information holds great promise to improve teaching-learning activities and in addition, to shape work force opportunities. Also, in the rapidly changing world of global market competition, automation, and increasing democratization, basic computer education is necessary for individuals to have the capacity and capability to access and apply information. The Economic Commission for Africa (ECA) has indicated that the ability to access and effectively utilize information is no longer a luxury but a necessity for development. Most Nigerian schools still go through the laborious and error prone exercise of manually registering student, maintaining records of student's academic performance, keeping inventory lists of supplies, doing cost of accounting, paying bills, and printing examination questions and reports, and others.

Research Question 3

To what extent do computer literacy and phobia influence principals' and vice-principals' computer utilization for effective school management in private secondary schools in Kaduna North Local Government Area Nigeria?

Table 7 showed the combined influence of principals' and vice-principals' computer literacy and phobia on computer utilization in private secondary schools yielded regression coefficients of 0.95 and 1.15 for principals and vice-principals computer literacy and phobia, respectively, which were significant. Cobb-Douglas functional form was chosen as lead equation. The coefficient of multiple determinations (R²) value is 0.516 and Adjusted R Square of 0.492. This implies that about 51.6% of the variance in computer utilization for private secondary schools was explained by the independent (explanatory) variables included in the model. Table 7 also revealed the F-ratio of 13.8 which was significant at 1% probability level. The F-ratio indicates the effectiveness of the predictor variable (computer literacy and phobia) in influencing principals and teaching personnel's computer use for record keeping and school management could not have occurred by chance.

Research Question 4

Is there any significant relationship among computer literacy, phobia and principals' and vice-principals' computer utilization in private secondary schools in Kaduna North Local Government Area Nigeria?

Table 9 revealed the inter-correlation among the variables studied, principals' and vice-principals' computer literacy, and phobia and computer utilization for record keeping in school management. The Pearson correlation coefficient between computer utilization and level of computer literacy in private secondary schools was 0.209 which was found to be statistically significant at 10 percent level of probability. This implies that there is inter-relationship between principals' and vice principals' computer utilization and computer literacy for record keeping and school management in private secondary schools. The Pearson correlation coefficient between computer utilization and level of phobia in private secondary schools was not significant.

Conclusion

This study confirmed that computer phobia appear to be a psychological indicator for computer utilization and usage because it affect the principals' and vice principals' in the utilization of computers for school management and record keeping in schools. The level of computer literacy has a significant relationship on the level of computer phobia and these impact computer utilization or usage. Results from this study have further shown that for proper school management and record keeping in private secondary schools, principals and vice-principals should embrace the utilization of the computer as the new technology.

Implications of Findings

The computer can improve principals and vice-principals' techniques of research work as well as the teaching learning activities. The cumbersome exercise of searching by hand through a library's card catalog or periodical indexes can be made easier by typing a few words pertinent to the topic into computer and such can be retrieved in just a matter of minutes. Computers hold records in a more compact and easy accessible way than the manual processing for record keeping. Computers can generate information for decision making on students' performance more flexibly and quickly.

Recommendations of the Study

The following recommendations were made based on the findings:

(1) Each Private Secondary School should have a fully computerized center with internet facilities (e-library, e-information).

Limitation of the Study

(1) Getting information from the sampled private schools is quite difficult; most schools are not willing to give out details of the schools and personal details of staff to me easily until they get assurance from me

that data collected are for research work.

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