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**PUBLIC AND PRIVATE JUNIOR HIGH SCHOOL STUDENTS’  
ATTITUDE TO INFORMATION AND COMMUNICATIONS  
TECHNOLOGY IN CAPE COAST**

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**ABSTRACT**

*The views of public and private Junior High School students towards the study of ICT in selected schools in Cape Coast Metropolis have been assessed. Descriptive research design was employed in this study and the respondents were purposively drawn from three private and four public schools located in different circuits in the Metropolis to respond to a questionnaire. The data was analysed using Independent t-test to test the formulated hypothesis at 0.05 significant level of alpha. The result revealed that students in public and private schools in the Cape Coast Metropolis have no significant difference in attitude towards the study of ICT. Also, the result showed that there is no statistical difference in attitude among male and female students in public and private Junior High schools in the Metropolis.*

**Keywords:** *Attitude, character traits, deprived school, private school, public school*

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## INTRODUCTION

In making basic school education available to all Ghanaians, the government of Ghana has liberalised the education sector to make it more accessible for children to attend school. The government of Ghana allowed private owned schools to operate alongside with the public schools which are managed by the state.

A study has indicated that making technology abounds is not as important as the content aimed at developing the rural poor by making relevant knowledge accessible to them. This makes meaning than mere computers and softwares to third world countries which have no bearing on life in those countries (Arunachalam, 2002). Life of people are generally improved if communities and schools buy into technology that are relevant. Marti´nez-Fri´as (2003) estimated that by the year 2003 and beyond, majority of decisions relating to science and technology, economics and business development will be based on information which was generated electronically. Access to information is a key factor in the generation of wealth and a nation’s level of development depends largely on technological update available to them.

The rapid and efficient growth of industries in the twenty-first century depends largely on technology and ICT. Medicine, military, industries, agricultural sectors among others also have a strong link to ICT. It is in view of this that the recent developments in computer skill and knowledge have become a factor in the recruitment of prospective employees. ICT is so important in today’s world which makes it imperative for every young person to become competent in the use of ICT for the many tasks that he/she will have to accomplish [Curriculum Research and Development Division] (CRDD, 2007). This was the rational around the design and introduction into Junior High School syllabus for teaching and learning of ICT in Ghana. The introduction of Information and Communications Technology (ICT) into the curriculum of Ghana for both public and private institutions in 2007, is to complement the total education of students in the various educational institutions (Michayahu, 2010).

## RESEARCH PROBLEM

It has been established that there is a digital divide in the use of technology (Marti´nez-Fri´as, 2003). Accessibility of microcomputers to students in schools were also not equitably distributed in the urban and rural areas where public and private schools are found (Marshall & Bannon, 1986). The availability of these microcomputers was more to the advantage of students in the urban areas than those in the rural areas. In Ghana, a lot of schools especially

the first cycle institutions do not have equitable distribution of ICT related materials and even teachers to teach ICT (Ministry of Education-Ghana, 2010).

Public and private schools in Ghana run the same teaching syllabus which includes ICT and the attitude of students to the learning of the subject is of a primary concern. In achieving the optimum performance in any field of study, attitude counts a lot. It has been found in a research of how human attitude influences a person's way of behaviour which could be positive or negative (Siragusa & Dixon, 2008; Ajzen & Fishbein, 1980). Attitude of students in any field worth investing into to know what is pertaining. ICT has so many tentacles that needs to be addressed to make the teaching and learning of the subject interesting since it is one of the new subjects introduced in the JHS curriculum in 2007 in Ghana (Michayahu, 2010).

Attitude of JHS students in general, towards the study of ICT in the Cape Coast Metropolis was researched into (Nutakor, 2014). However, a specific category with respect to public and private schools in the Metropolis was not studied. This has created a knowledge gap as to what type of attitude students in public and private schools have. This area of knowledge has to be bridged since there is no available study in the Metropolis to this effect. It is for this reason that a research was embarked upon to investigate and find out what sort of attitude JHS students have towards the study of ICT in public and private schools in the Metropolis.

### **HYPOTHESES**

1.  $H_0$ : There is no significant difference in the attitude of public and private school students towards the study of ICT in JHS.

$H_1$ : There is a significant difference in the attitude of public and private school students towards the study of ICT in JHS.

2.  $H_0$ : There is no significant difference in attitude towards the study of ICT among male students in both public and private JHS in Cape Coast Metropolis.

$H_1$ : There is a significant difference in attitude towards the study of ICT among male students in both public and private JHS in Cape Coast Metropolis.

3.  $H_0$ : There is no significant difference in attitude towards the study of ICT among female students in both public and private JHS in Cape Coast Metropolis.

$H_1$ : There is a significant difference in attitude towards the study of ICT among female students in both public and private JHS in Cape Coast Metropolis.

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**LITERATURE REVIEW**

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Siragusa and Dixon (2008) in their study has identified that the attitude of students towards the study of ICT was positive. Interacting with ICT is one of the most ways that students could have pleasant thing to say about the subject. The study also found that students did not only have positive feelings about the study of ICT but also, they have an anxiety when interacting with ICT tools. Anxiety may cause students to make use of the ICT tools and at times, it could also deter them from using it either.

In a study, Rashid and Riaz (2003) carried a research in Allama Iqbal Open University and they also found that students have positive attitude towards the learning of ICT. The study projected that these students are ready to study the subject to the advance level. The readiness of these students to learn ICT to the advance level is very encouraging in the sense that they could be a reference point and motivation to other students who are in their age group. The enthusiasm that would be displayed by students who are prepared to study ICT to the advance level could serve as a link to draw their colleagues.

In Ireland, public primary schools did not have the competence in performing computer related task but could do basic tasks such as booting computer and turning it off. The study noted that just a few could print documents on their own from a computer (Inspectorate, Department of education and Science, 2008). Though these students cannot perform any meaningful task with computer. However, if the interest is there, coupled with positive desire to learn, it would be enough motivation to train such students to use computers on their own. Having a good desire to study ICT would lead to acquiring the necessary task relating to the use of computers.

In Belgium, a study conducted revealed that male students do not have anxiety in the use of computers for that matter ICT but the opposite is for their female counterparts. Also, females have more negative attitudes towards computer and internet while the males have positive attitude towards the use of computers and the internet (Broos, 2005). Having positive anxiety towards ICT is to say that students have positive attitude towards the study of ICT or the other way round. The male students were eager to know more about computers and how to make use of them to enhance their learning and solve their own problems.

An earlier study (Kaino & Salani, 2004), in Botswana has also revealed that students did not consider the use of calculators to be useful in learning. In a study done in Gaborone, it was reported that more females than males found computers to be more useful (Kaino, 2005). However, many boys found computers to be useful in searching for jobs, whereas many

females found them useful in internet access. This finding has clearly pointed to the fact that females have positive attitude to learning of computers as well as their male counterparts. “Studies on students’ perceptions on the usefulness of technology have been linked to participation in the subject studied. In mathematics for example, students’ perceptions on usefulness were associated with activities and tasks performed in class (Koehler & Meyer, 1990)”. Males and females do appreciate the use of computers in learning and career choices (Kaino, 2005). How students appreciate a particular discipline may also have bearing on their perception as noted earlier and the same could be extended to computer studies and their general attitude to ICT. The joy in using computers could also be influenced by students’ perceptions on the usefulness of computers. Learning has been associated with the value students placed on a subject they study and how they enjoyed studying such subjects (Kuhn, 1980). The level of premium a student puts on a subject could serve as intrinsic motivation that could drive him or her to do more and perhaps change their overall attitude in a favourable way.

## **METHODOLOGY**

### **RESEARCH DESIGN**

Cross-sectional survey design was adopted to help find solution to the problem being investigated. Descriptive research gives the opportunity to use both quantitative and qualitative data in order to find data and characteristics about the population or phenomenon that is being studied. This design had helped to determine the tool for data collection and how it should be analysed and reported.

### **PARTICIPANTS**

There are 80 public and private JHS with a total enrolment of 2,954 in JHS 2 in the entire metropolis as at the time the data was collected in 2014. The JHS 1 and 3 were not considered for the study in that the JHS1 students were assumed not to have full exposure to the study of ICT because they might have spent less a time (months) on the average of three months studying ICT. Though the JHS 3 students had much time (months) to be taught ICT, they were not involved in the data collection because they were about to prepare for their final examinations so were not allowed by school authorities to collect data from them.

The accessible population for the study consisted of 4 public and 3 private Junior High Schools in three circuits in the Metropolis. These schools were purposively chosen on the assumption that students in the sampled schools represented the character traits of the entire population in the Metropolis. Quota sampling technique was adopted in which 36 students

were assigned to each school with 18 females and 18 males in each school which sum up to 252 students. Random sampling was employed to get the students by using the class registers as the sampling frame for the respondents in the chosen schools. All the instruments were collected just after completion which yielded 100 per cent retention.

## INSTRUMENT

The instrument used to collect the data was a questionnaire named “Students’ Attitude Toward Computers” (PAC) which was adapted from Woodrow (1992). The adapted questionnaire (PAC) was made up of three sections (Section A – C). Section A was the biographical data composed of four closed ended items while the rest of the Sections had thirty-one items. Section B was a four-point Likert Scale in exception of 5 items which were a seven point Scale (1-7) and Section C was a four-point Likert Scale. The Likert Scale was scored “Strongly Agree” = 1, “Agree” = 2, “Disagree” = 3 and “Strongly Disagree” = 4. The seven point scale was also scored in order of magnitude from ‘1’ up to ‘7’.

## DATA COLLECTION PROCEDURE

The respondents were guided to complete the questionnaire. The subject teacher helped to control the class from making noise while the instrument was administered to the students. The instruments were collected just after the respondents have completed them. The motive of collecting the questionnaires just after completing them in class was to get almost all the instruments to avoid them being misplaced.

## DATA ANALYSIS

Predictive Analytics Software (PASW) version 18 for Windows was used to aid in data analysis after coding the data collected with the help of the instrument. The means for the attitudinal items were computed and independent t-test was run. The formulated hypotheses were tested at 0.05 level significance of alpha value.

## RESULTS

### Assessing the difference in attitude of students in public and private schools to the study of ICT

**Table 1: Summary of Independent sample t-test of public and private JHS**

Type of School	N	Mean	SD	T	df	Sig (2-tailed)
Public	134	2.531	0.215			
				0.509	242.678	0.611
Private	118	2.519	0.158			

Table 1 shows the independent sample t-test on the attitude of public and private school students towards the study of ICT at the JHS. From the data presented in Table 1, it can be observed that the mean difference of score among the students in the public and private schools was not statistically significant. The mean score of students in the public and private are  $M = 2.53$  ( $SD = 0.215$ ) and  $M = 2.52$  ( $SD = 0.158$ );  $t(242.68) = 0.509$  respectively. At the level of significance,  $\text{Sig. (2-tailed)} = 0.611$  and  $p = 0.61$ ; the p-value in Table 1 is greater than the alpha value of significance. Hence, the null hypothesis was failed to be rejected of the fact that the p-value was more than 0.05. It can therefore, be concluded that there is no significant difference in attitude of students in public and private Junior High Schools towards the study of ICT in the Cape Coast Metropolis.

#### Assessing the attitude of male students towards the study of ICT in public and private school

**Table 2: Summary of Independent sample t test of male students in both public and private JHS**

Type of School	Gender	N	Mean	SD	t	df	Sig (2-tailed)
Public	male	70	2.568	0.202			
					1.945	125	0.054
Private	male	57	2.501	0.176			

The independent sample t test in Table 2 shows that male students in public and private schools have mean scores of 2.57 (0.202) and 2.50 (0.176);  $t(125) = 1.945$  respectively is not statistically significant. At the level of significance,  $\text{Sig. (2-tailed)} = 0.054$  and  $p = 0.054$ ; the p-value is more than the level of significance set to test the hypothesis. Hence the null hypothesis is failed to be rejected. Therefore, it can be concluded that there is no statistical difference among male students in public and private schools in the Metropolis to the study of ICT among the JHS students.

#### Assessing the attitude of female students towards the study of ICT in public and private school

**Table 3: Summary of Independent sample t test of female Students in both Public and Private JHS**

Type of School	Gender	N	Mean	SD	t	df	Sig (2-tailed)
Public	Female	64	2.491	0.223			
					-1.344	106.203	0.182
Private	Female	61	2.536	0.139			

In Table 3, the result indicates that female students in public and private schools have mean scores of 2.49(0.223) and 2.54(0.139),  $t(106.20) = -1.34$  respectively and this result is not statistically significant. At the level of significance, Sig. (2-tailed) = 0.18 and  $p = 0.18$ ; the  $p$ -value is more than the level of significance which was set to test the hypothesis formulated. It can therefore, be concluded that there is no statistical significance difference among female students in public and private schools to the study of ICT in the Metropolis.

## DISCUSSION

In finding out the difference in attitude of public and private school students in these schools the result revealed that, there is no statistical difference in attitude of the students in the public and private schools towards the study of ICT in JHS in the Cape Coast. This result is interesting in the sense that private schools are generally perceived to have been performing better academically as established by other studies in Cape Coast. The private schools have most of infrastructure to help teach ICT and the opposite is the case in most public schools in the Cape Coast Metropolis. Parents and guardians usually provide their wards the necessary learning materials including personal laptops or desktop computers for use at home which is real in the homes of students in the public sector schools. It could also mean that in developing a positive attitude to ICT studies is not necessarily the availability of computers and its accessories at the JHS but it involves other factors. The result also draws attention to the calibre of teachers in these sector schools who are teaching ICT. Almost all the teachers in the public JHS are trained teachers and have studied child psychology and various pedagogical approaches in helping students to learn. In the case of the private schools in the Metropolis, they have ‘pupil-teachers’ who were not trained forming the core of their staff. At times, one or two retired teachers from the public schools do join private schools to augment the staff in such schools. There are cases where university graduates without teaching background also get employed in the private schools as teachers.

Another issue worth discussing is the fact that students may have a general mind set which they are operating in towards the study of ICT at the JHS. There is an indication that the best environment and resources can be made available to students but they could not just perform to expectation in a subject. This could buttress the assertion that students did not want to use calculators to assist in their studies although it was made available (Kaino & Salani, 2004). Calculator is an ICT tool and if student did not see the need of using them to enhance their studies then it may suggest that they were not ready to use it at all.

The result that there is no significant difference in attitude among females and males in both public and private schools raises a lot of interest. This is because private schools have always been considered to have been doing better in terms of academics in the Metropolis. However, the result in this study has indicated that there is no statistical significant difference in attitude towards the study of ICT among public and private schools. It therefore, means that students in the public and private schools perhaps have the same mind set in terms of gender to the study of ICT. It also shows the environment, the teachers of ICT are not actually contributing much to influence any significant difference in students' attitude. The perception that students in private schools are better taught could have influenced a significance difference in attitude of students in the private schools more than their counterparts in public schools.

## REFERENCES

1. Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
2. Arunachalam, S. (2002). Reaching the unreached: How can we use ICTs to empower the rural poor in the developing world through enhanced access to relevant information? 68th IFLA Council and General Conference. Retrieved May, 2012 from <https://www.itu.int/osg/spu/wsis-themes/UNMDG/IFLA-Glasgow.pdf>.
3. Broos, A. (2005). Gender and Information Technologies (ICT). Anxiety: Male Self-Assurance and Female Hesitation. *Cyberpsychology behaviour*, 8(1).
4. Curriculum Research and Development Division (CRDD) (2007). *Syllabus for Information and Communications Technology for Junior High Schools*.
5. Inspectorate, Department of Education and Science (2008). *ICT in schools: Inspectorate evaluation studies*. Dublin, Ireland: Evaluation Support and Research Unit, Inspectorate, Department of Education and Science. Retrieved from [www.education.ie/servlet/blobServlet/ICT\\_in\\_schools\\_insp\\_report.pdf](http://www.education.ie/servlet/blobServlet/ICT_in_schools_insp_report.pdf).
6. Kaino, L. M. (2005). Analysis of ICT availability, utilization and policy in Botswana schools. *African Journal of Education Studies*, 3(1), 287-308.
7. Kaino, L. M., & Salani, E. B. (2004). *Students' gender attitudes towards the use of calculators in mathematics instruction*. Paper for presentation at the International Conference on Psychology of Mathematics Education (PME), Bergen, Norway, July 14-18, 2004.

8. Koehler, M. S., & Meyer, M. R. (1990). Internal influence on gender differences in mathematics. In Fennema, E. & Leder, G. C. (Eds). *Mathematics and Gender*, pp. 60-95 New York; Teachers' College press.
9. Kuln, G. (1980). Research on mathematics attitude. In Shumway, R.J. (Ed). *Research in mathematics education*, pp. 356-385,. N.V.T.M. Virginia.
10. Marshall, J. C., & Bannon, S. H. (1986). Educational Computing in Rural Versus Urban Settings. *Research in Rural Education*, 3, 3.
11. Marti'nez-Fri'as, J. (2003). The importance of ICT for developing countries: *Interdisciplinary Science Reviews*, 28, 1, 13.
12. Michayahu, A. K. (2010). Educational Reforms In Ghana, 1974-2007 Retrieved November 8, 2011, from <http://ghanaweb.com/GhanaHomePage/blog/article>.
13. Ministry of Education- Ghana (2010). Education Sector Performance Report for 2010. Retrieved February 9, 2011 from [www.idpfoundation.org/Ghana%20MoE%20Ed%20Performance%20Re](http://www.idpfoundation.org/Ghana%20MoE%20Ed%20Performance%20Re).
14. Nutakor, C. K. (2014). Junior high school pupils' attitude towards the study of information and communications technology in cape coast metropolis of Ghana. *International Journal of Scientific Knowledge*, 4(5), 1-5.
15. Rashid, M., & Riaz, A. (2003). *Executive Student's Attitude Towards Technological change a case study of Allama Iqbal Open University*. Retrieved November 10, 2011, from <http://www.google.com.gh/url?sa=t&rct=j&q=Attitude%20toward>.
16. Siragusa, L., & Dixon, K. (2008). Planned behaviour: Student attitudes towards the use of ICT interactions in higher education. In *Hello! Where are you in the landscape of educational technology?* Proceedings ascilite Melbourne 2008. Retrieved June 3, 2011, from <http://www.ascilite.org.au/conferences/melbourne08/procs/siragusa.pdf>.
17. Woodrow, J. E. (1992). The influence of programming training on the computer literacy and attitudes of pre-service teachers. *Journal of Research on Computing in Education*, 25(2), 200–218.