

Computer Skills and Teacher Accomplishment in Private Secondary Schools in Kampala City

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Abstract:- This study investigated the relationship between Computer skills and teacher accomplishment in private secondary schools in Kampala City, Uganda. The study was guided by the following specific objectives; i) To assess the relationship between computer accessibility in teaching and teacher accomplishment, ii) To examine the relationship between computer utilization and teacher accomplishment, and iii) To examine the relationship between computer knowledge and skills and teacher accomplishment in private secondary schools in Kampala City, Uganda. This investigation accepted the correlational research strategy coupled with a quantitative approach. A sample size of 35 respondents was considered constituting of head teachers and teachers from the five selected private secondary schools in the city. Both descriptive analysis and correlation analysis was employed to provide answers to the study phenomenon. The study revealed that there's strong positive and important connection among computers accessibility in teaching and teacher accomplishment s in private secondary schools in Kampala City, Uganda. The study also revealed that there is a moderately positive and significant relationship between computer utilization and teacher accomplishment in private secondary schools in Kampala City, Uganda. Further, Additionally, the investigation found a significant beneficial and substantial connection amongst computer knowledge and skills and teacher accomplishment within Kampala City private high schools, Uganda. Therefore, this investigation concludes that Computer skills constituting of computer accessibility in teaching, computer utilization, as well as computer knowledge and skills has a statistically significant relationship in regard to teachers' productivity at work within private high schools in Kampala City, Uganda in that an increase in the different aspects of Computer skills resultantly leads to an improvement in teacher accomplishment within private high schools within Kampala City, Uganda. This investigation recommends that the Education Ministry as well as policymakers ought to create interventions, policies, and programs that better support an enhancement in Computer skills among teachers in the different schools as this would improve teacher accomplishment outcomes in both government and private secondary schools in Kampala City, Uganda.

Keywords:- Computer Skills, Computer Accessibility in Teaching, Computer Utilization, Computer Knowledge and Skills, and Teacher Accomplishment.

I. INTRODUCTION

➤ Background

Like most countries, Uganda has drafted obligations to meet the long-term growth objective SDG 4: By 2030, high-quality training. SDG 4 guarantees reasonable, comprehensive, high education quality and encourages prospects for lifetime education for everyone. Most developing countries prioritize raising the quality of education because they believe that doing so could result in fundamental changes in production and strengthen the long-term economy (Garba et al., 2019). With the rampant evolution of information and communication technologies over the centuries, the integration of computer skills /technology is a booster for education interventions to achieve SDG 4.

Computer skills have had notable positive impacts in some parts of the world, workplaces, and government organs. However, Computer skills and their impact on teacher's accomplishments have been left unchecked. The capacity to utilize technological devices such as computers effectively is known as Computer skills, and skill levels range from basic computer use to sophisticated solutions to problems and programming skills (Holm, 2024).

In 2020, through The National Development Plan, the Ministry of Education and Sports (NDP) II plus NDP III, which support the development of human capital in the sector by leveraging ICT use and penetration to produce higher-quality learning outcomes, were in line with the Education Digital Agenda 2021–2025 and the ICT in Education Policy (MoES, 2020). Enhancing Uganda's delivery of education services via long-term digital transformation was the agenda's main goal.

Uganda has both state and non-state players within the field of learning systems and these include the MoES, the Higher Education National Council, UNICEF Uganda, the Uganda National Commission for UNESCO, the Uganda National Examinations Board, the National Curriculum Development Center, and the Ministry of Education and Sports. Despite efforts from several education actors and

these policy frameworks, there is a notable gap in assessing how Computer skills among teachers impacts their accomplishment.

➤ *Problem Statement*

Computer skills have grown into a necessary ability within the present-day digital society throughout various professions, including education (Paje et al., 2021). The global trends when utilizing information and communication technology, or ICT within classrooms have continued underscoring of the critical importance related to Computer skills among teachers. The Global Teacher Status Index highlights a significant disparity in teacher performance globally, with sub-Saharan Africa often lagging (Peter Dolton, Oscar Marcenaro, Robert De Vries, Po-Wen She, 2018).

The Worldwide Teachers Quality Ranking Report 2018 positively correlated with global rankings of computer usability in the education sector. Countries like China and Taiwan with high Computer skills and usability in the education sector had a high global teacher status index score compared to countries with low Computer skills and integration in the education sector. The report (Peter Dolton, Oscar Marcenaro, Robert De Vries, Po-Wen She, 2018) revealed a low indices score in sub-Saharan Africa with Uganda at 25.1/100 index score 4 times less than the top most China.

Preliminary observations and anecdotal evidence suggest that while some teachers in secondary schools are proficiently aware of computer use in education, a big percentage struggle with basic computer skills. As the Uganda Education Digital Agenda 2021-2025 (MoES, 2020) aims to address these issues by promoting the integration of a tool digitally and skills within an education system, a gap within computer literature among teachers has been under looked and left unaddressed.

The effects of knowledge of computers on teacher accomplishments are profound and tutors who are proficient in using ICT are better equipped to access and utilize a wealth of educational resources, facilitate interactive and engaging learning experiences, and efficiently manage administrative tasks. Teachers who are not computer literate may find it challenging to integrate digital tools into their

teaching practices, stay updated with the latest educational technologies, and efficiently manage student records and communications (Jaimovich & Analia, 2012).

As the educational landscape increasingly incorporates digital technologies, the lack of Computer skills can hinder teachers' professional development and limit their access to resources and training opportunities thus a disadvantage, potentially affecting their job satisfaction and career progression.

➤ *Main Objective.*

To investigate the relationship between Computer skills and teacher accomplishment in private secondary schools in Kampala City, Uganda.

➤ *Specific Objectives.*

- To assess the relationship between computer accessibility in teaching and teacher accomplishment in private secondary schools in Kampala City, Uganda.
- To examine the relationship between computer utilization and teacher accomplishment in private secondary schools in Kampala City, Uganda.
- To examine the relationship between computer knowledge and skills and teacher accomplishment in private secondary schools in Kampala City, Uganda.

➤ *Null hypotheses*

- **H01:** There is no relationship between computer accessibility in teaching and teacher accomplishment in private secondary schools of Kampala City, Uganda.
- **H02:** There is no relationship between computer utilization and teachers' accomplishment in private secondary schools of Kampala City, Uganda.
- **H03:** There is no relationship between Computer knowledge and skills and teachers' accomplishment in private secondary schools of Kampala City, Uganda.

➤ *Conceptual Framework*

This conceptual framework presents a diagrammatic illustration on the association among a teacher's work performance and their Computer skills.

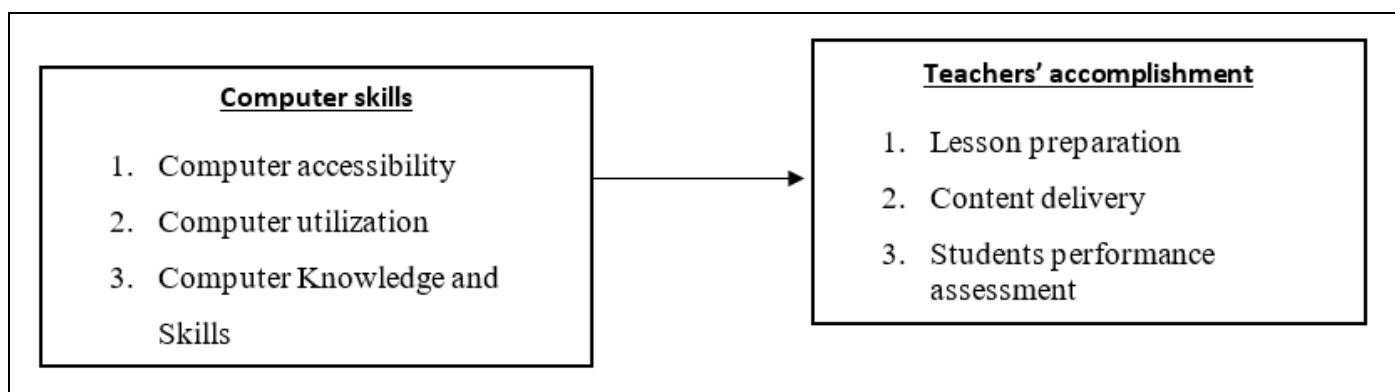


Fig 1 Conceptual Framework

➤ *Significance of the Study*

Education is a strong foundation and pillar of a country's social and economic development. The doctrines of innovation and creativity in education are several folds fastened by integration of Computer skills. Understanding the impacts of computer skills on teachers' accomplishments within private secondary institutions would greatly support policy formulation and implementation, advocate for teacher empowerment and professional growth, and boost administrative efficiency and student learning outcomes.

II. LITERATURE REVIEW

The integration of Computer skills in education has become a pivotal aspect of modern teaching practices, particularly in secondary schools. The rapid advancement of technology necessitates that teachers not only have access to computers but also effectively utilize them to enhance their teaching performance. This literature review explores the facets of computer accessibility, utilization, and the overarching role of Computer skills in education, focusing on private secondary schools.

➤ *Theoretical Review*

The Human Capital Theory, created by Becker in 1962, served as the investigation's compass. These theories posit that investments in individuals improve their skills and knowledge, leading to increased productivity, performance, and economic growth (Petchko, 2018). Suhendi and Amineh (2018) argue that the application of this theory in the education perspective is that Computer skills as a form of investment through improved accessibility, and utilization enhance the learning and teaching environments which increases the effectiveness of studies. This in turn leads to better teacher accomplishment and greater future education contributions by these individuals. This theory was adopted and applicable to this study since it provides a connection between Computer skills as a form of investment which influences teacher accomplishment outcomes.

➤ *Conceptual Review*

- *Computer Skills in Education.*

The integration of computers into the process of learning and instruction, especially within the classroom, is referred to as Computer skills in education. It includes the application of computers and their usage within a dissemination Of data or knowledge. Computing devices were utilized in schools for a variety of tasks, including writing papers, information probing on using the web to browse, using multimodal within the classroom, and more (Garba et al., 2019).

- *Computer Accessibility in Education*

The availability of computer resources is a fundamental component that influences teachers' ability for incorporate of technology with own methods of teaching. A study Wanjala et al. (2011) by highlights that access to the internets and computer significantly affects teacher's readiness and ability for integration of ICT within the instructional practice. Schools with well-equipped computer

labs and reliable internet connectivity inclined to possess instructors that make usage of technology effectively in their classrooms(Masingila et al., 2018).

In many developing regions, including Kampala, infrastructure challenges such as inadequate power supply, limited internet access, and insufficient number of computers can hinder effective computer utilization (Ategeka et al., 2019). These limitations create a digital divide, where only a fraction of the teachers can regularly access and use computers, thus affecting overall accomplishment and educational outcomes.

- *Computer Utilization in Education.*

Schindler et al. (2017) state that the use of computers, the internet, and cell phones is at an all-time high and is predicted to continue rising as innovation becomes more accessible, particularly to customers in developing nations. Kozcu Cakir, Guven, and Celik (2021) claim that as technology advances globally, a wider range of technological products are introduced, which boosts people's interest in and curiosity about technology.

The effective utilization of computers in education involves integrating technology into the curriculum. Teachers must not only use computers for administrative tasks but also for instructional purposes such as preparing lessons, delivering multimedia presentations, and facilitating interactive learning sessions. Starkey (2020) notes that the integration of ICT in teaching practices can lead to improved student engagement and better learning outcomes.

Teachers' attitudes towards technology significantly influence their utilization of computers. A positive attitude towards ICT, coupled with a belief in its potential for improvement in learning and teaching, encourages more frequent as well as effective utilization of technologies (Hennessy et al., 2018). Conversely, resistance to change and lack of confidence can impede the adoption of computer-based teaching methods.

- *Role of Computer Skills in Education*

Technological developments have contributed to the establishment and growth of online libraries, which have eliminated the need for physical space and enabled global collaboration among scholars, educators, and students. Subject matter experts have convened in online forums to deliberate on certain subjects and assess teaching methodologies, curricula, and assessment strategies (Camelleri, 2021).

Computer skills enable teachers to enhance their teaching effectiveness by granting entry to the wealth of statistics plus educational resources online. Studies have shown that teachers who are proficient in using computers can make better captivating as well as interactive educational opportunities to pursue students, which can lead to better understanding and retention of knowledge (Tondeur et al., 2016).

As the new competence based curriculum aims at the shift where teachers can use technology to create a more collaborative and dynamic learning environment where students actively participate in their education, shifting the focus of education from teacher-centered to student-centered. According to Liu et al. (2017), ICT supports diverse learning styles and enables personal learning experiences, which can accommodate individual student wants.

Beyond instructional benefits, Computer skills also enhance teachers' administrative efficiency. Tasks such as grading, record-keeping, and communication with parents and colleagues can be streamlined through utilization of technologies. This efficiency enables a teacher towards allocating more time and resources to instructional activities, thereby improving their overall accomplishments. (Gil-Flores, Rodríguez-Santero, & Torres-Gordillo, 2017).

III. METHODOLOGY

➤ *Research Design*

This investigation adopts a correlational investigation design coupled with a quantitative approach. A correlational study design is concerned with examining an association between variables in the given population of study (Kassu, 2019). Therefore, this research design enabled the researcher in examining a connection amongst teacher accomplishment and Computer skills in private high schools within Kampala City, Uganda. A quantitative approach enabled the researcher to obtain the quantitative data that was utilized to provide an understanding to the study phenomenon.

➤ *Target Population and Sample Size*

This investigation considered a population target of all private secondary schools in Kampala city. However, due to the time constraint the researcher considered 5 private secondary schools from which a sample was selected that participated in the study. This research considered a size of the sample like 35 responders which constituted of a total of 5 head teachers and a total of 30 teachers selected from the five selected private secondary schools in Kampala city to provide quantitative data that was used to provide answers to the study objectives.

➤ *Sampling Procedure*

To choose the respondents who took part in the study, the researcher used basic random sampling. Convenient sampling involves the researcher selecting participants who are readily available and easily accessible and this was used to select the school head teachers basic sampling at random is employed for the selection teachers from these different schools to participate in the study so as to provide quantitative data.

➤ *Data Collection Methods*

• *Questionnaire Survey Method*

A questionnaire survey method is a way of attaining information through a sequence of inquiries and additional directives to collect statistics as of responders

(Mathiyazhagan, 2018). The questionnaires survey method was vital in order to generate uniform information which ensured the comparability of data using easy to understand structured questions. Thus, these methods were utilized as this enabled this investigator towards obtaining and collection of quantitative data from the respondents in the shortest time possible.

➤ *Data Collection Instruments*

• *Structured Questionnaire*

A structured questionnaire is a tool used to collect information from respondents constituting of closed-ended responses to the questions from which respondents are required to choose (Acheung, 2014). This investigation utilized structured questionnaires for the collection of quantitative statistics as of teachers which contained closed-ended questions and encoded answers that were self-administered to the respondents in the different selected private secondary schools in Kampala City. The structured questionnaires were used since they require little time and gather a lot of information on the phenomenon under study.

• *Data Analysis*

Quantitative data analysis enables the researcher to measure, analyze, and understand a phenomenon through running statistical tests and descriptive analysis. The study employed both descriptive and correlation analysis methods in analyzing the quantitative primary data collected. Descriptive analysis was used when analyzing respondents' demographics presented in form of frequencies and percentages. To examine Spearman's rank correlation investigation of the connection amongst both dependent and independent variables was employed to give the empirical evidence on the study hypotheses at a .05 significance level. The Correlation of Spearman's Rank measures the relationship between two ordinal or nominal variables (Jerrold, 2016).

• *Ethical Consideration*

Before undertaking the study, the researcher acquired an introductory letter from an Islamic University in Uganda as a prerequisite for obtaining permission from authorities in the different schools to conduct the study in their premises. The researcher also first sought for respondent's consent to participate in the study before questionnaires were given to them and a rationale of the research was conveyed to the respondents from the beginning of this study. Additionally, this investigator ensured confidentiality of these respondents and the information that was provided as this is a fundamental ethical pre-requisite in research.

➤ *Study Findings*

The findings presented in this chapter include; descriptive statistics on the demographic composition of the respondents and correlation analysis to provide answers to the study objectives.

➤ *Findings on the Demographic Compositions*

The study assessed demographically compositions for responders who took part in this investigation from different

selected private secondary schools in Kampala City and the results are presented within Table 1;

Table 1 Demographic Composition of Respondents

Demographic Composition			
Category	Items	Frequency	Percentage
Gender	Male	22	62.9
	Female	13	37.1
	Total	35	100.0
Age Groups	20-29 years	5	14.3
	30-39 years	15	42.9
	40-49 years	11	31.4
	50 years and Above	4	11.4
	Total	35	100.0
Highest Level of Education	Diploma	6	17.1
	Bachelor’s Degree	20	57.1
	Master’s Degree	9	25.8
	Total	35	100.0
Years of Teaching Experience	0-5 years	11	31.4
	6-10 years	15	42.9
	11-15 years	6	17.1
	16 years and Above	3	8.6
	Total	35	100.0
Subjects Taught	Sciences	15	42.9
	Humanities	20	57.1
	Total	35	100.0

Source: Field data, 2024

These results within Table 1 indicate that most respondents who participated in study 22 (62.9%) were males and the least proportion of responders who were part of the investigation 13 (37.1%) were females. The study also shows that a bigger number of 15 (42.9%) responders were aged 30-39 years, followed by 11 (31.4%) responders who are 40-49 ages, then 5 (14.3%) responders who are 20-29 ages, and the least proportion 4 (11.4%) responders are 50 ages and Above. Additionally, According to the investigation's conclusions, nearly all participants, or 20, (57.1%), had completed their bachelor's degree. Nine respondents, or 25.8%, had completed their master's degree and the least proportion 6 (17.1%) responders had diplomas education levels.

➤ *Findings on the Objectives of the Study*

The results are shown in this section in relation to the specific investigation objectives.

Relationship between Computer Accessibility in Teaching and Teacher accomplishment in Private Secondary Schools in Kampala City, Uganda

This investigation sought to assess the relationship between computer accessibility in teaching and teacher accomplishment within private high schools in Kampala City, Uganda. The relationship was analyzed using Spearman’s Rank correlation analysis and these findings are shown in Table 2.

Table 2 Correlation Findings Between Computer Accessibility in Teaching and Teacher Accomplishment in Private Secondary Schools in Kampala City, Uganda

		Computer Accessibility in Teaching	Teacher accomplishment
Computer Accessibility in Teaching	Spearman’s Correlation Coefficient	1.000	.647**
	Sig. (2-tailed)	.	.000
	N	35	35
Teacher accomplishment	Spearman’s Correlation Coefficient	.647**	1.000
	Sig. (2-tailed)	.000	.
	N	35	35

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, 2024

These outcomes within Tableau 2 indicate that there’s a strong positive and substantial connection between computer accessibility in teaching plus teacher accomplishment within private secondary schools in Kampala City, Uganda ($r = 0.647$, $N = 35$, $P\text{-value} = .000$) at a .01 significance level. This study's findings imply that an increase in computer accessibility in teaching strongly and significantly leads to an improvement in teacher accomplishment in private high schools within Kampala City, Uganda.

Relationship between Computer Utilization and Teacher accomplishment in Private Secondary Schools in Kampala City, Uganda

This investigation also sought to examine a connection amongst teacher accomplishment and computer utilization in private secondary schools in Kampala City, Uganda. This relationship is analyzed using Spearman’s Rank correlation analysis and the results are presented in Table 3.

Table 3: Correlation Findings between Computer Utilization and Teacher accomplishment in Private Secondary Schools in Kampala City, Uganda

		Computer Utilization	Teacher accomplishment
Computer Utilization	Spearman’s Correlation Coefficient	1.000	.528**
	Sig. (2-tailed)	.	.000
	N	35	35
Teacher accomplishment	Spearman’s Correlation Coefficient	.528**	1.000
	Sig. (2-tailed)	.000	.
	N	35	35

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, 2024

These outcomes in Table 3 indicated that there’s a moderately positive and substantial relationship between computer utilization and teacher accomplishment within Kampala City’s private high schools, Uganda ($r = 0.528$, $N = 35$, $P\text{-value} = .000$) at a .01 significance level. The study findings imply that an increase in computer utilization moderately but significantly leads to an improvement in teacher accomplishment in private high schools within Kampala City, Uganda.

Relationship between Computer Knowledge and Skills and Teacher Accomplishment in Private Secondary Schools in Kampala City, Uganda

This investigation further seeks to inspect a connection amongst skills and teacher accomplishment and computer knowledge in private high schools within Kampala City, Uganda. The relationship was analyzed using Spearman’s Rank correlation analysis Table 4 presents the findings.

Table 4 Correlation Findings between Computer Knowledge and Skills and teacher Accomplishment in Private Secondary Schools in Kampala City, Uganda

		Computer Knowledge and Skills	Teacher accomplishment
Computer Knowledge and Skills	Spearman’s Correlation Coefficient	1.000	.672**
	Sig. (2-tailed)	.	.000
	N	35	35
Teacher accomplishment	Spearman’s Correlation Coefficient	.672**	1.000
	Sig. (2-tailed)	.000	.
	N	35	35

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, 2024

The outcomes within Tableau 4 indicate that there’s a strong optimistic and substantial connection between skills teacher accomplishment and computer knowledge in private senior schools within Kampala City, Uganda ($r = 0.672$, $N = 35$, $P\text{-value} = .000$) at a .01 of significance This study findings imply that an increase in computer knowledge and skills substantially and significantly leads to an improvement in work performance of teachers within

Kampala City’s private senior schools in, Uganda.

IV. CONCLUSION

This investigation concludes that Computer skills constituting computer accessibility in teaching, computer utilization, as well as computer knowledge and skills have a statistically significant relationship with the effectiveness of teachers' work in senior private schools in Kampala City, Uganda where an increase in the different aspects of Computer skills resultantly leads to an improvement in teacher accomplishment within Kampala City’s private secondary institutions in, Uganda.

RECOMMENDATIONS

This investigation recommends that the school administrators and stakeholders should ensure efficiency and promote Computer skills such as accessibility, utilization, and computer knowledge among teachers as these play a significant role in influencing the Work performance of teachers within independent secondary education institutions under Kampala City, Uganda.

This investigation also recommends that the Ministry of Education and policymakers should design interventions, policies, and programs that better support an enhancement in Computer skills among teachers in the different schools as this would improve teacher accomplishment outcomes in both government and private secondary schools in Kampala City, Uganda.

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