

**INFORMATION AND COMMUNICATION TECHNOLOGY
COMPETENCIES AS CORRELATES OF BUSINESS SUBJECT
TEACHERS TASK PERFORMANCE IN STATE PUBLIC
SECONDARY SCHOOLS IN ANAMBRA STATE**

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Abstract

This study examined the relationship between information and communication technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State. The study adopted a correlational research design. The population comprised 1,013 business subject teachers in 269 state public secondary schools, while 202 teachers were sampled through stratified proportionate sampling. Data were collected with the Business Subject Teachers Information and Communication Technology Competencies Questionnaire and the Business Subject Teachers Task Performance Questionnaire. The instruments were validated by three experts, and reliability was established with Cronbach Alpha coefficients of 0.86 and 0.88 respectively. Pearson Product Moment Correlation was used to answer the research questions and test the hypotheses at the 0.05 level of significance. The findings showed that computer technology competencies had a very high positive and significant relationship with task performance ($r = .843, p < .001$). Internet technology competencies also had a very high positive and significant relationship with task performance ($r = .811, p < .001$). The study concluded that teachers with stronger computer and internet competencies tend to perform their teaching and administrative tasks more effectively. It recommended regular ICT training, improved access to computers, reliable internet connectivity, and stronger school-based support for technology use in business subject teaching.

Keywords: Business Subject Teachers, Computer Technology Competencies, Internet Technology Competencies, Task Performance, ICT Competencies

Introduction

Education plays a very important role in the economic development of a country as it is aimed at supplying the economy with human capital that can convert effectively and efficiently other resources into output of high value. It is perceived as the corner stone of economic and social development and a principal means of providing for the welfare of individuals. The level and quality of education obtained by citizens could determine the level of growth and development witnessed in the country. Because of its wide-ranging effects on growth and development in all areas of the economy, education is viewed as the key to bringing about positive change in society (Onwugbufo & Udebuana, 2021). This is because an educated person is one whose way of life is demonstrated in his conduct, the activities to which he is committed, his judgments, and his feelings. The importance of education is captured by the Federal Republic of Nigeria's (FRN) (2013) National Policy on Education which sees education as an instrument per excellence. This is an indication that the Federal government of Nigeria considers education as a tool for national development. In Nigeria, the educational system is delineated into different levels, namely pre-primary, primary, secondary and tertiary levels (Iwuanyanwu & Uwadiogwu, 2019). Secondary education is the focus of this study.

Secondary education is the education that students get after successfully completing nine years of basic education. The broad aims of secondary education in Nigeria, according to FRN, are to prepare individuals for meaningful life in society and for further education. The study focused on state public secondary schools. Mduma and Mkulu (2021) stated that state public secondary schools are secondary schools that get money from a general state, county, or local government tax in whole or in part. A state public secondary school is one that is overseen by a school board or other school administrative body and receives a major portion of its funding from the government. As a result, all secondary schools financed by public funds are referred to as state public secondary schools. The realization of the goals of state public secondary schools is dependent on the success of various subjects in state public secondary schools. Business subjects are subjects taken by students in junior and senior secondary schools.

Business subjects are subjects that develop students business and vocational skills and competences at the secondary school level. Business subjects are subjects taught in educational institutions that focus on imparting the art and science of business to learners ((Seyi & Olusola, 2023). At the junior secondary school level, Business subjects is divided into four key components: Office Practice, Commerce, Book-Keeping, and Keyboarding,

as revised by the Nigerian Educational Research and Development Council (NERDC) in 2013. Kaizer (2019) stated that business subjects equip students with the skills necessary for self-employment or to secure jobs upon completing their junior secondary education. In senior secondary schools, the business curriculum includes subjects such as Accounts, Word Processing, and Economics. Business subjects at the junior secondary and senior secondary aim to impart business knowledge and orientation that contribute to both personal and national development. Business subjects are taught at the senior secondary school level. Business subjects include Accounts, Word Processing, Economics, Commerce and Marketing (Seyi & Olusola, 2023). Successful teaching of these subjects is dependent on business subject teachers.

Business subject teachers are professional teachers who are trained to teach business-related subjects at the secondary school level. In secondary schools in Anambra State, they are the teachers assigned to handle subjects such as Accounting, Commerce, Economics, Marketing, and Word Processing. Muhwezi et al. (2022) described business subject teachers as teachers who are involved in the implementation of the business subjects' curriculum through planned teaching, assessment, and evaluation. Anyigor-Ogah (2023) viewed business subject teachers as teachers who require pedagogical and classroom management competencies for the effective teaching of business subjects in secondary schools. Similarly, Alonta et al. (2024) presented business subject teachers as teachers who help students acquire business, entrepreneurial, and work-related skills through business subjects. Therefore, business subject teachers can be understood as trained secondary school teachers who teach business subjects and help students attain the objectives of business education. Since the success of business subjects depends largely on how well these teachers carry out their duties, their task performance is important to the improvement of business education in secondary schools.

Task performance can be described as an act of accomplishing or executing a given task. It can also be defined as the ability to skillfully combine the right behaviour towards achieving organisational goals and objectives (Olaniyan, 2019). Performance encompasses the outcomes of employees' actions based on their expertise and skills. Consequently, business subject teachers task performance refers to how a member of the teaching staff fulfils their role duties, completes required tasks, and behaves in the school environment. It indicates an individual teacher's capacity to efficiently achieve independent goals in the workplace. Karakas (2020) defined business subject teacher task performance as the individual teacher's work achievement after exerting the necessary effort on the job, associated with meaningful work, an engaged profile, and supportive colleagues and employers. In this study, business subject teacher task performance refers to how effectively a business subject teacher carries out his professional duties and responsibilities.

Despite the growing emphasis on digital literacy and the recognised benefits of Information and Communication Technology (ICT) in improving teaching and learning, many Business Subject teachers in state public secondary schools in Anambra State still face challenges in effectively using ICT tools in their classrooms. This inability to leverage information and communication technology resources has contributed to a broader issue of poor task performance, which manifests in various ways, such as ineffective instructional delivery, inadequate classroom management, and subpar student outcomes. Okechukwu and Agbo (2021) stated that a significant number of business subject teachers in the Anambra State lack the necessary skills and confidence to integrate information and communication technology into their teaching practices. The report pointed out that teachers often resort to traditional teaching methods, neglecting the potential of information and communication technology to make learning more interactive and engaging.

Information and communication technology involves the use of computer systems and telecommunications equipment in information processing. ICTs are the technologies that are used in the electronic transmission, manipulation, and storage of data. Information and communication technology (ICT) is referred to as any electrical machine that allows individuals to alter information, such as words, figures, pictures, or sounds, (Ikwuka et al., 2021). Information and communication technology is the use of computer systems and telecommunication equipment in information processing (Okechukwu & Agbo, 2021). It is made up of three basic components which are; electronic processing using the computer, transmission of information using telecommunication equipment and dissemination of information in multimedia. Information and Communication Technology (ICT) refers to all electronic systems used for broadcasting, telecommunications, and computer-mediated communications. It makes use of online self-learning packages, interactive CDs chips, satellites, radio, optical fiber technologies, tele-presence systems, and many forms of computer hardware or software (Ementa & Okoli, 2023). They provide a variety of powerful tools that may aid in the transformation of the current isolated teacher-centered and text-bound classrooms into rich, student-focused, interactive knowledge environments. The use of information and communication technology gadgets has continued to have remarkable influence on the way information is shared and promoted especially in education (Garba & Yusuf, 2018).

Information and communication technology (ICT) in education covers the use of computer's online self-learning package, interactive CDs, satellites, radio, optical fiber technologies, e-presence system and all types of information and communication technology (ICT) hardware and software. Information and communication technology is the integration of computer technology, mainly in the form of internet, and information management systems. It give users the opportunities to handle text and images, numbers

and graphs, instructions, sound and music and process information by organizing and re organizing storing and retrieving, sorting and analyzing, presenting and communicating. According to Okechukwu and Agbo (2021), the role ICT plays in teaching and learning of business subjects cannot be overemphasized. Okechukwu and Agbo stated that the integration of ICT in education provides opportunities for students to operate computer, store information, manipulate and retrieve information, active learning and self-responsibility for learning such as distance learning, motivate students to continue learning outside school environment. Jack (2021) held that ICT has the capability of engaging students in instructional activities and increasing their learning by helping them to solve complex problems to enhance their cognitive skills. These technological tools and resources include computers, the internet (websites, blogs, and emails), live broadcasting technologies (radio, television, and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices), and telephony (fixed or mobile, satellite and video conferencing, among others.). The present study focused on computer and internet technologies.

Computer is an electronic device that receives, stores, processes and retrieves information. Computer technology focuses on the use of technological facilities for managing and disseminating information. Computer technology is important ICT tool because it exposes students to the use of various office technologies such as Microsoft Word, MS Excel, MS Power Point and MS Access for effective work performance. Okechukwu and Agbo (2021) noted that one of the major reforms needed in teacher education in Nigeria has to do with exposing teachers to and facilitating their acquisition of computer technology competencies. Computer technologies include all removable media such as optical discs, disks, flash memories, video books, multimedia projectors, interactive electronic boards, and continuously emerging state-of-the-art PCs (Okoli & Okudare, 2024). Jim et al. (2024) identified computer technology requirements for business subjects in the 21st century, including word processing, spreadsheets, database management, PowerPoint presentations, internet, digital cameras, projectors, and microfilming. The Federal Ministry of Education (2019) classified them into clusters: word processing, spreadsheet processing, PowerPoint presentations, database administration, and internet applications. Word processing teaches students about the effects of technology in the workplace and helps them build effective working abilities. Just like computers, internet technology is another component of ICT.

Internet technologies refer to products or services that can be accessed or utilized in conjunction with the World Wide Web. Abdullah et al (2019) stated that internet technologies are data resources that are maintained by contemporary digital equipment, modified and stored in cyberspace in a tangible and compact form. They can be accessed simultaneously from countless locations by multiple users. Sha et al. (2022) defined internet

technologies as web-connected devices such as desktop computers, laptops, mobile phones, data cards and portable gaming consoles. These technologies assist students in accessing information from any location. Zhou et al. (2020) described internet technologies as electronically stored information that is accessible through electronic systems and networks. In the context of this study, internet technologies refer to digital documents made available to library users through computer-based information retrieval systems (Ukwetang et al., 2021). Egbri (2015) asserted that internet application are programmes and softwares that allow users to access the world wide web such as electronic libraries, e-mails, browsers, search engines and social media. These technologies have become a valuable source of knowledge due to their efficient presentation using multimedia techniques. Zhou et al. (2020) noted that examples of internet technologies are e-mail, online libraries, social networks and web browsers. In this study, internet technologies encompass both intangible and tangible activities, facilities, tools, equipment and software that aid or enable Internet users to obtain advantages.

Despite the importance of ICT in teaching and learning, many business subject teachers in state public secondary schools still struggle with the practical use of technology. Some continue to depend heavily on traditional teaching methods even when digital tools could make instruction more engaging and efficient. This concern is particularly important in Anambra State, where business education is relevant to the state's strong commercial and entrepreneurial environment. The central issue is whether teachers' competencies in computer and internet technologies are related to how well they perform their tasks in school.

Statement of the Problem

Poor task performance among business subject teachers has been observed in some secondary schools in Anambra State. The problem is seen in ineffective instructional delivery, weak use of available teaching resources, limited classroom innovation and inadequate use of technology in teaching business concepts. Although literature generally presents ICT as useful for teaching and learning, some teachers still view its use as distracting or difficult to manage. Others may be willing to use ICT but lack the necessary competencies to do so confidently. This creates a gap between the expected benefits of ICT and the actual classroom practice of business subject teachers. The problem addressed in this study is the lack of clear empirical evidence on the relationship between computer technology competencies, internet technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State.

Purpose of the Study

The purpose of this study was to determine the relationship between information and communication technology competencies and business

subject teachers' task performance in state public secondary schools in Anambra State. Specifically, the study sought to:

1. Determine the relationship between computer technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State; and
2. Determine the relationship between internet technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State.

Research Questions

The following research questions guided the study

1. What is the relationship between computer technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State?
2. What is the relationship between internet technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State?

Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

1. There is no significant relationship between computer technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State.
2. There is no significant relationship between internet technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State.

Methods

The study adopted a correlational survey research design. This design was appropriate because the study was concerned with determining the strength and direction of the relationship between ICT competencies and task performance, rather than establishing cause and effect. The study was carried out in state public secondary schools in Anambra State, Nigeria. The state was considered suitable because business subjects are taught across its public secondary schools and because the state has a strong commercial and entrepreneurial character. The population consisted of 1,013 business subject teachers in 269 state public secondary schools across the six education zones in Anambra State. A sample of 202 teachers was drawn using stratified proportionate sampling. The six education zones were used as strata to ensure fair representation.

Two instruments were used for data collection: the Business Subject Teachers Information and Communication Technology Competencies Questionnaire and the Business Subject Teachers Task Performance Questionnaire. The ICT competencies questionnaire contained clusters on computer technology competencies and internet technology competencies.

However, this study focused on two clusters: computer technology competencies and internet technology competencies. Both instruments used a four-point rating scale of Strongly Agree, Agree, Disagree and Strongly Disagree.

Face and content validation of the instruments were conducted. The face validation of the instruments were done by three experts, two from Department of Vocational Education and one expert from Measurement and Evaluation in the Department of Educational Foundations all in the Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam. Reliability was established through a pilot test involving 20 business subject teachers in state public secondary schools in Enugu State. Cronbach Alpha produced reliability coefficients of 0.88 and 0.89 for the computer and internet competency clusters respectively, with overall reliability coefficients of 0.86 for the ICT competencies questionnaire and 0.88 for the task performance questionnaire. Out of the 202 copies of the questionnaire administered, 187 copies were retrieved in good condition and used for analysis, representing a 93% return rate. Data were analysed using Pearson Product Moment Correlation. The hypotheses were tested at the 0.05 level of significance.

Results

Research Question 1

What is the relationship between computer technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State?

Table 1: Mean, Standard Deviation and Pearson Correlation on Computer Technology Competencies and Business Subject Teachers' Task Performance (N = 187)

Variables	N	Mean	SD	r	p	Remark
Computer technology competencies	187	3.86	0.62	.843	< .001	Very high positive relationship
Business subject teachers' task performance	187	3.78	0.66			

Table 1 shows that computer technology competencies had a mean of 3.86 with a standard deviation of 0.62, while business subject teachers' task performance had a mean of 3.78 with a standard deviation of 0.66. The correlation coefficient of 0.843 indicates a very high positive relationship. This means that teachers with stronger computer technology competencies tended to report stronger task performance.

Research Question 2

What is the relationship between internet competencies and business subject teachers' task performance in state public secondary schools in Anambra State?

Table 2: Mean, Standard Deviation and Pearson Correlation on Internet Competencies and Business Subject Teachers' Task Performance (N = 187)

Variables	N	Mean	SD	r	p	Remark
Internet competencies	187	3.80	0.65	0.811	< .001	Very high positive relationship
Business subject teachers' task performance	187	3.78	0.66			

Table 2 shows that internet competencies had a mean of 3.80 with a standard deviation of 0.65, while business subject teachers' task performance had a mean of 3.78 with a standard deviation of 0.66. The correlation coefficient of 0.811 shows a very high positive relationship. This suggests that better internet competencies are associated with better task performance among business subject teachers.

Hypothesis 1

There is no significant relationship between computer technology competencies and business subject teachers' task performance in state public secondary schools in Anambra State.

Table 3: Test of Significance of Pearson Correlation on Computer Technology Competencies and Business Subject Teachers' Task Performance (N = 187)

Variables	N	Mean	SD	r	p	Decision
Computer technology competencies	187	3.86	0.62	0.843	< .001	Rejected
Business subject teachers' task performance	187	3.78	0.66			

Table 3 shows that the relationship between computer technology competencies and business subject teachers' task performance was significant at the 0.05 level. Since the p-value 0.001 was less than 0.05, the first null hypothesis was rejected. This means that computer technology competencies had a significant positive relationship with business subject teachers' task performance.

Hypothesis 2

There is no significant relationship between internet competencies and business subject teachers' task performance in state public secondary schools in Anambra State.

Table 4: Test of Significance of Pearson Correlation on Internet Competencies and Business Subject Teachers' Task Performance (N = 187)

Variables	N	Mean	SD	r	p	Decision
Internet competencies	187	3.80	0.65	.811	< .001	Rejected
Business subject teachers' task performance	187	3.78	0.66			

Table 4 shows that the relationship between internet competencies and business subject teachers' task performance was significant at the 0.05 level. Since the p-value 0.001 was less than 0.05, the second null hypothesis was rejected. This means that internet competencies had a significant positive relationship with business subject teachers' task performance.

Discussion of Findings

The first finding showed a very high positive and significant relationship between computer technology competencies and business subject teachers' task performance. This result is meaningful because many of the daily responsibilities of a business subject teacher can be made easier and more accurate through computer use. Teachers who can use computers confidently are better able to prepare lesson notes, design instructional materials, organise assessment records, prepare presentations and keep

administrative information in a more reliable form. In a subject area that deals with business information, records and practical office skills, computer competence is not simply an added advantage; it is part of what makes teaching more functional.

This finding agrees with the position of Okechukwu and Agbo (2021), who emphasized the usefulness of ICT in teaching and learning business subjects. It is also supported by Ikwuka et al. (2021), who treated ICT competence as part of what teachers need for effective classroom practice. The finding further aligns with Ekunke and Adewumi (2024), who linked teachers' ICT skills with effective instructional delivery, and Okoye and Ekere (2024), who reported the relevance of ICT competencies among business studies teachers. In practical terms, the result suggests that when business subject teachers are trained to use computer tools well, their classroom preparation, delivery and record management are likely to improve.

The second finding showed a very high positive and significant relationship between internet competencies and business subject teachers' task performance. This finding is also expected because the internet gives teachers access to current information, teaching resources, professional networks and communication channels. A business subject teacher who can search effectively, evaluate online materials, use email, access educational websites and manage web-based resources can enrich lessons with relevant examples and updated business information. The internet also supports continuous learning, which is important in a field where business practices and technologies are constantly changing.

This result is consistent with Onyekwelu (2024), who reported a strong relationship between ICT competencies and teachers' job performance in public secondary schools in Anambra State. It also agrees with Ementa and Nwankwo (2023), who identified competency improvement needs among business teachers in Anambra State. The finding shows that internet competence is not only about browsing online; it is about knowing how to use online resources responsibly and productively for lesson preparation, communication, professional growth and instructional support. For business subject teachers, this competence can make teaching more current, more practical and more connected to real business situations.

Conclusion

Based on the findings, the study concludes that computer technology competencies and internet technology competencies are significantly related to business subject teachers' task performance in state public secondary schools in Anambra State. The two relationships were very high and positive, indicating that teachers who possess stronger computer and internet skills tend to demonstrate better performance in their professional duties. The findings do not suggest that technology alone causes good teaching, but they show that computer and internet competencies are strongly associated with effective lesson preparation, instructional delivery, assessment,

communication and record keeping. Strengthening these competencies is therefore important for improving the quality of business subject teaching in state public secondary schools.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. School administrators and education authorities should organise regular training programmes to improve business subject teachers' computer technology competencies, especially in word processing, spreadsheets, presentation software, database management, record keeping and computer-assisted instructional delivery.
2. Government and school administrators should provide functional computers and maintain ICT facilities in state public secondary schools so that teachers can practise and apply the skills acquired during training.

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