# JOURNAL OF
## SCIENCE EDUCATION AND RESEARCH
## (JSER)

ELSEVIER

Scapus

R^G

Editor in-Chief
PROF. PATRICK C. IGBOJINWAEKWU

Editor In-Chief
PROF. PATRICK C. IGBOJINWAEKWU

# JOURNAL OF SCIENCE EDUCATION AND RESEARCH

## (JSER), 1, APRIL - MAY; 2025

--------------------------------------------------------------------------------

--------------------------------------------------------------------------------

----------------------------------------------------------------------------

# EDITORIAL

Journal of Science Education and Research (JSER) is a peer-reviewed published Bimonthly. It aimed at advancing knowledge and professionalism in all aspects of educational research, including but not limited to innovations in science education, educational technology, guidance and counselling psychology, childhood studies and early years, curriculum studies, evaluation, vocational training, planning, policy, pedagogy, human kinetics, health education and so on. JSER publish different types of research outputs including monographs, field articles, brief notes, comments on published articles and book reviews.

We are grateful to the contributors and hope that our readers will enjoy reading these contributions.

**Prof. Patrick C. Igbojinwaekwu**
**Editor-in-Chief**

-------------------------------------------------------------------------

# TABLE OF CONTENTS

---------------------------------------------------------------------------------

# STRATEGIES FOR IMPROVING THE PERFORMANCE OF OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS IN KEYBOARDING SKILLS IN TERTIARY INSTITUTIONS IN DELTA STATE

**Chiedu N. Augustina**
**augustinachiedu8@gmail.com**
Department Office Technology and Management (OTM)
Federal College of Education (Technical), Asaba. Delta State.

**Abstract**

*This study investigated strategies for improving the performance of Office Technology and Management (OTM) student in keyboarding skills in tertiary institutions in Delta State. The need for this study arose from observed differences in students' proficiency in keyboarding, a core practical skill essential for success in the OTM programme. The study adopted descriptive survey design. The target population consisted of 645 OTM students across selected tertiary institutions in Delta State from which a sample of 182 students was drawn using a convenient sampling technique to ensure adequate representation. A structured questionnaire was used as the main instrument for data collection and the data were analyzed using mean scores. The findings revealed that key strategies for improving student's performance include the use of interactive keyboarding software, consistent practical sessions, proper ergonomic setup, qualified instructors with ICT skills and a conducive learning environment. The study also emphasized the importance of adopting blended learning approaches to bridge theoretical instruction and practical applications. Based on the findings, it was recommended among others that institutions should invest in modern training tools, conduct regular assessments to monitor students' progress and provide ongoing training for lecturers to enhance instructional delivery. These strategies when effectively implemented will significantly enhance the acquisition and mastery of keyboard skills among OTM students.*

**Keywords**: Tertiary Institutions Performance, Online teaching

--------------------------------------------------------------------------------

## Introduction

Keyboarding is the process of producing words as printed document using either computer or android phones. Kurue (2022) defined keyboarding as process of inputting data/information into a computer using keyboard by means of touch method on a standard alphanumeric keyboard such as QWERTY keyboard.

Keyboarding is seen as a way of inputting a text on a standard alpha-numeric keyboard using touch typing method. Keyboarding is used in every aspect of life. One constantly need keyboard training in the educational system for its sustainable development. Education resource centre (CTERC) 2012 in Otuya (2020) asserted that the main goal of keyboarding is touch skill which can enable an individual to enter text especially on a computer at a faster rate with hand, once this skill is imbibed; students can strike at the right keys on the keyboard without looking at them or at a finger. Keyboarding skill is essential requirement for effective performance, professional upliftment of office technology and management students. However, most OTM students seem not to have high speed that will enhance work performance in employment. Willer (2019) stated that Keyboarding is one of the skill-based courses in business education which is the act of providing easy access to information across the globe. It enhances efficiency of knowledge delivery, provides solution to insufficient lecture spaces and clash in timetables.

Skills are the ability to perform a given task and doing it well through the experiences gained in a particular training or practice. Adigun (2015) in Nwokedi (2020),viewed skills as the abilities acquired through deliberate, conscious and systematic efforts to smoothly perform functions involving ideas, things or people. Ekpenyong in Chiedu et al (2018) asserted that skill is the ability to use one's knowledge effectively and readily in execution of performance, technical expertness, a power or habits of doing any particular thing completely, this definition stresses that a skill is based on using knowledge expertly, the objective of which is to bring that knowledge to maximum level of competency thus practical skills can be described in terms of learners' behavior and their willingness towards learning a particular skill to maximum level expected of them for gainful employment in the global labor market especially in office technology and management.

Keyboarding skill according to Chiedu and Ogah (2022) is the abilities and aptitudes that gives one the opportunity to communicate fluently with the keyboard, touch type

--------------------------------------------------------------------------------

speedily and accurately and fit into the world of work in today's' digital world. Schemeh (2021) sees keyboarding skill as the ability to communicate with computer through akeyboard to formulate thoughts, compose sentences and emit them through fingers without a conscious thought of how our fingers make the words. For a student to be able to communicate with the computer, the student must use all the five fingers of each hand in a conventional manner.  Student's ability to communicate with the keyboard would be of great advantage to their entire academic career and they will also find it an essential skill for every job in this globalized world.

Modern technology  have changed people's lives, ways of living and has turned the world into a knowledge -based including education which has subjected teachers, students both young and old to utilize it for delivery of instruction and to promote learning through online learning.

Online learning is a face-to face blended delivery model such as use of CDs, Emails, Whatsapp, Messenger, and internet. Web-based keyboarding software is a strategy that can help students' master difficult skills like typing. It takes a lot of practice to become an efficient touch typist but it pays off and in learning to type properly, the students can take on challenges through incremental progress., knowing how to use a computer and type efficiently can allow the students to be more productive, by mastering touch typing students can become motivated both in and out of the classroom and also they can learn the importance of protecting their identity and how to avoid scammers, hackers and viruses. It teaches students how to have a positive relationship with the world of technology by choosing a web-based typing program that includes digital citizenship lessons, you can help your students prepare for a safe and productive future in the 21st century, students can watch their progress towards their goals in real time, it is easy to see how their hard work and practice pay off. It introduces students to type coding concepts and teaches them how to accurately type code in JavaScript, HTML etc. According to oxford dictionary, touch typing is "the practice or skill of typing using all the fingers and without looking at the keys". Online keyboarding can be accessed anywhere at the student's convenience. The students will be able to access lessons and practice in stages regardless of whether they are at home, in a physical classroom or anywhere else as long as they have an internet connection. Some typing program such as Typing agent, extend this value by providing additional web-based lessons in key skills like digital citizenship and coding. With phones, laptops students can learn to type from their own classrooms or even at home. In schools it will be easy to set uponline typing programs as long as the students have account linked to their class(s),

---------------------------------------------------------------------------------

all that is needed to be done is to have students log in and continue their progress. They do not require teachers to spend sufficient amount of time choosing activities. It aids communication, increases productivity (having the ability to type fast with accuracy in a variety of tasks such as researching, creating presentations, developing resource guides, inputting data.

Adaptable program strategy is a strategy that makes students to type easily, adjust to their strength and capabilities. These programs will automatically monitor student's proficiency levels and deliver appropriate typing lessons for their skill levels. An adaptive online typing program is especially important for students with low vision and glare issues since the colors and font size can be easily customized. It uses a very traditional approach to teaching keyboarding skills, but the ability to change the sound effect scheme easily has been a motivator for students. (Nwakaebeya, 2023), continuing he explained that adaptive online typing eases frustration- students without keyboarding skills that are required to type for a project can quickly become frustrated and disengaged.

It makes them to be more focused on what they are learning there by increasing their confidence to do assignments that require typing skills. It builds self-esteem and self-confidence as they receive automated feedback and proceed through the course at a pace that is right for them.

Adaptive online typing supports digital equity- there are some students who would otherwise have the opportunities to master keyboarding skills outside of the school. This make it important to provide the opportunity to learn keyboarding skills it helps to provide more equal opportunities in the classroom. Keyboarding skills not only help them with education programs and projects but also to open more opportunities to them in the future. This is learned over time with correct instruction and regular practice with two hands and all ten fingers. It freezes up cognitive energy so you focus on the ideas instead of just the language. Obikeze and Onyechi (2011), online learning means formal and non-formal education electronic delivery method such as internet learning delivery packages such as Mavins beacon teaches typing software which can be installed in a computer or learning keyboarding. The software rates its users at the completion of each task on accuracy, typing and words per minute and at the end of the exercise the task can be printed.

----------------------------------------------------------------------------------

Keystroke strategy- is designed for individuals who use a screen reader. The print is very small so it is ideal for screen reader users or those that do not want be looking at the screen for while typing, the keyboard on one side of the screen. The setup would likely appeal more to an adult than a child, but one could use the customizable lessons to add some fun into the program by creating "fun" things to type.

## Statement of Problem

Office technology and management is a work oriented educational programme which aims at skill acquisition for paid employment, self-reliance and employer of labour, it also involves the acquisition and development of skills, competencies, and attitudes to function effectively towards national and manpower development. These skills are used in every aspect of life. One constantly needs these training in the education system for sustainable development. Keyboarding skills are essential tool or requirement for effective performance and professional upliftment. But in spite of this laudable objectives of keyboarding skills strategies, students seem not to have high speed and adequate knowledge that will enhance work performance in employment.

## Purpose of the Study

The main objective of this study is to examine strategies of online teaching for improving Office Technology and Management (OTM) student's performance in keyboarding skills. Specifically, the study sought to ascertain:

1. The impact of online teaching for improving office technology and management student's performance in keyboarding skills in tertiary Institutions in Delta State.
2. The challenges faced in online in teaching for improving office technology and management student's performance in keyboarding skills in tertiary Institutions in Delta State.

## Research Questions

The following research questions guided the study;

1. What are the impact of online teaching for improving office technology and management student's performance in keyboarding skills in tertiary institutions in Delta State?
2. What are the challenges faced in online teaching for improving office technology and management student's performance in keyboarding skills in tertiary institutions in Delta State?

--------------------------------------------------------------------------------

## Method

The study adopted descriptive survey design. The study was carried out in four tertiary institutions in Delta State namely: Federal College of Education (Technical) Asaba Delta State, College of Physical Education Mosogar, College of Education Warri, Delta State University, Abraka. The population of the study is 645 final year students of office technology and management in these four institutions. Convenient sampling technique was used to sample 182 respondents. The instrument for data collection was a structured questionnaire. A structured questionnaire on a four point scale of Strongly Agreed (SA), Agree (A), Strongly Disagree (SD), Disagree (D) were used. The instrument was validated by two chief lecturers from office technology and management in Federal College of Education (Technical) Asaba, their corrections and observations were used to improve the quality of the instrument used to collect data. Cronbach alpha method was used to determine the internal consistency which yielded a reliability coefficient of 0.73. One Hundred and Eighty two copies were distributed to the respondents in their various areas with the help of two research assistants. The instruments were administered for two weeks and all were retrieved which indicated hundred percent (100%) return rate of the instrument, mean score was used to answer the research questions and analyzed the data collected. The decision rule was that any mean score 2.50 was regarded as agreed while the mean score below 2.50 was regarded as disagree.

**Research Question 1:** What are the impact of online teaching for improving office Technology student's performance in keyboarding skills in tertiary institution in Delta State?

**Table 1: Respondents' mean rating on the impact of online teaching for improving office technology and management technology student's performance in keyboarding skills in tertiary institutions in Delta State.**

| S/N | ITEM STATEMENT | SA | A | D | SD | X | DECISION |
|-----|----------------|----|----|----|----|------|----------|
| 1 | Provision of business world with multi skilled knowledge | 66 | 56 | 35 | 25 | 2.89 | agreed |
| 2 | Management of information efficiently | 70 | 52 | 37 | 23 | 2.93 | Agreed |
| 3 | Equipped students with a comprehensive range of skills | 68 | 54 | 40 | 20 | 2.70 | Agreed |
| 4 | Enable students to have access to unlimited source of information | 80 | 55 | 41 | 6 | 3.15 | Agreed |

| 5 | Promote critical thinking Encourages students way of learning | 75 | 60 | 25 | 21 | 3.03 | Agreed |
|---|---|---|---|---|---|---|---|
| 6. | Facilitates efficiency in the performance of functions | 68 | 62 | 40 | 12 | 3.02 | Agreed |
| 7. | Increases productivity and computer related job opportunities | 72 | 57 | 42 | 22 | 3.17 | Agreed |
| 8. | proficiency in communication skills | 83 | 57 | 31 | 11 | 3.16 | Agreed |
| 9. | improve students perceptions | 76 | 66 | 25 | 15 | 3.12 | Agreed |
| 10 | Enhance accuracy in touch typing | 70 | 58 | 40 | 14 | 3.01 | Agreed |
| | **Grand mean** | | | | | 3.02 | Agreed |

**Source:** Field Survey, 2023

The result of data analysis in Table 1 indicates that the respondents agreed with all the items. This suggests that online teaching for improving office technology and management student's performance in keyboarding skills in Tertiary institutions in Delta State has positive impact on the students.

**Research Question 2**: What are the challenges of online teaching for improving office Technology student's for performance in keyboarding skills in tertiary institutions in Delta State?

------------------------------------------------------------------------------------

**Table 2: Respondents mean rating on the challenges of online teaching for improving office Technology and management student's performance in keyboarding skills.**

| S/N | ITEM STATEMENT | SA | A | D | SD | X | DECISION |
|---|---|---|---|---|---|---|---|
| 1 | Difficulty of engaging students | 61 | 52 | 40 | 29 | 2.79 | Agreed |
| 2 | Problems with spelling or language related issues | 64 | 58 | 35 | 25 | 2.88 | Agreed |
| 3 | Lack of facilities for online teaching | 61 | 48 | 45 | 28 | 2.78 | Agreed |
| 4 | Poor quality video and audio connection | 60 | 52 | 40 | 30 | 2.78 | Agreed |
| 5 | Inadequate gadget | 63 | 56 | 48 | 15 | 2.91 | Agreed |
| 6. | Loss of focus | 67 | 60 | 35 | 20 | 2.95 | Agreed |
| 7. | Unchanged devices | 70 | 51 | 46 | 15 | 2.96 | Agreed |
| 8. | Unreliable devices | 65 | 43 | 40 | 34 | 2.76 | Agreed |
| 9. | Inadequate supply of facilities to enhance their studies | 58 | 54 | 42 | 28 | 2.78 | Agreed |
| 10 | Inadequate fund | 72 | 48 | 43 | 19 | 2.95 | Agreed |
| | **Grand mean** | | | | | 2.85 | Agreed |

**Source:** Field survey, 2023

The result of data analysis in table 2 indicates that the respondents agreed with all the items. This implies that online teaching has negative impact on office Technology and management students.

**Discussion**

The analysis of the data reveals a range of mean scores from 2.76 to 2.96 with a grand mean of 2.85. This overall mean suggests a moderate level of agreement among respondents that there are notable challenges associated with online teaching in enhancing OTM students' keyboarding skills.

The highest individual mean scores (items 7 and 10 at 2.96 and item 6 at 2.95) indicates that these items were identified as the most significant challenges by the respondents. These could involve critical issues such as lack of hands on practice, insufficient real-time feedback or poor Internet connectivity which are often major drawbacks of online learning particularly for skill-based courses like keyboarding.

The lowest mean scores (item 8 at 2.76, followed by items 3, 4 and 9 at 2.78) still suggest some level of agreement that these are challenges but perhaps not as strongly perceived as the other with the grand mean of 2.85, it can be concluded that on average, respondents recognized online teaching as presenting moderate challenges to effective keyboarding instructions. This implies that while online teaching may offer flexibility and accessibility, it may fall short in delivering the practical hands-on experience necessary for developing proficiency in keyboarding skills.

**Conclusion**

The researcher concluded that learning keyboarding skills online enhances accuracy as it harnesses muscle memory in the fingers to assist with spelling, once the students master the fingering on the keyboard and consistently use the same finger for a letter, they automatically remember where the fingers goes without conscious thought of striking on the right keys as far as the students have mastered the home keys as may be required.

**Recommendations**

Based on the findings of the Study, the following recommendations were made;

1. Tertiary institutions should invest in modern training tools, conduct regular assessments to monitor students' progress.
2. Institutions should provide ongoing training for lecturers to enhance instructional delivery.
3. Management of Colleges of Education should provide adequate computers for learning keyboarding online, it will enhance the use of keyboards for keyboarding instructions.
4. OTM lecturers should be sponsored to update their knowledge on ICT Skills.

------------------------------------------------------------------------------

**References**

Adigun, J.F (2015). *Introduction of Business Management.* Ibadan: University Press Ltd.

Barara, B. L. (2021). Online Education in the Post-COVID era. *Nature Electronics, 4:*5-6 https://doi.org/10.1038/s41928-020-00534-0.

Cahapay, M.B. (2020). Rethinking education in the new normal Post-COVID-19 era a curriculum, Studies perspective. *Aquademic 4(2);* 1-5. Httpps//doi.or/10.1007/s41928-020-00534-0.

Daniel, S.J (2020). Education and the Covid-19 Pandemic Prospects. Hpps://doi.org/10.1007/s11125-020-09464-3.

Ekpenyong , L.E.(2018). Learning to solve problems with technology, a seminar presented in a workshop in main auditorium Delta State University, Abraka. Federal Republic of Nigeria (FRN,2004). National Policy on Education Lagos. NERDC Press,

Ezewafor, J.I. (2018). Entrepreneurial skills. In Egbon, E.A. & Ile, C.M. (ed). National Issues in Entrepreneurship. *An overview Chike Okoli Centre for Entrepreneurial studies.* NnamdiAzikiwe University, Awka. Onitsha: Nuben Press Ltd.

Olumiwa, B.A (2020). Barriers to integration of web 2.0 technologies in teaching/learning of business education courses in Nigerian Universities. *Nigerian Journal of Business Education , 2(1), 28-38.*

Shemeh , S H (2021). Improving office technology and management and industry collaboration for manpower training in the era of new technologies. *Nigerian Journal of Business education, 2(1),1-9.*