

41st Association for Educational Assessment in Africa

Theme: Transforming Educational Assessments : Towards Quality Learning and Informed Decison

Sub Theme: Leveraging Technology in Educational Assessment

Title: Effect of Adoption of Technology on Candidates' Performance in the West African Senior School Certificate Examination during Pandemic in Nigeria



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INTRODUCTION

- Academic performance is influenced by quality of teaching & environmental factors.
- COVID-19 forced shift to online & broadcast learning.
- Exposure to diverse tech tools.
- Digital divide, low ICT skills, mental health stressors.
- WAEC exam schedule shifted from May/June to Aug/Sept 2020

STATEMENT OF THE PROBLEM

- COVID-19 disrupted all levels of education.
- No empirical study on its effect on WASSCE performance in Nigeria.

Hence, Lagos Section Research Department investigated the influence of COVID-19 pandemic on performance trends.

RESEARCH QUESTIONS

The following research questions guided the study:

- What were the interventions adopted by secondary schools during COVID-19?
- How comparable are WASSCE performance before, during, and after COVID-19?



METHODOLOGY

Design Design:

Mixed-method survey: This design involved an initial phase of collecting and analysing quantitative and qualitative data.

Population:

- Principals, teachers, undergraduates, WASSCE statistics (2018–2022).


Sample and Sampling Technique:

- 803 respondents (This consisted of 500 principals/ teachers and 303 undergraduates)

METHODOLOGY

Multi-stage sampling techniques:

- Purposive sampling technique was used to select two neighbouring states in each of the six already clustered geo-political zone in Nigeria based on proximity.
- *From each state selected, ten (10) senior secondary schools and one tertiary institution were purposively selected based on geographical spread. This was to ensure wider coverage.*
- From each selected school, the school principal was purposively selected because of the amount of information at their disposal, while five (5) teachers who were involved in online teaching and learning during COVID-19 pandemic were purposively selected by the principal.

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- *Also, 40 undergraduates (100 level or 200 level students) that sat WASSCE(SC) in 2020 were conveniently selected based on accessibility from each tertiary institution in each of the selected states.)*
 - Furthermore, English Language, General Mathematics, Physics, Chemistry, Literature-in-English, Government, Economics, Civic Education were purposively selected based on based on high candidature.

METHODOLOGY

Instrument and Instrumentation

Three instruments were used:

Two questionnaires

One proforma

Respondents:

Sampled teachers/principals

Undergraduates

Validity

- Face validity
- Content validity

Reliability

- (Cronbach Alpha)
- Undergraduates' questionnaire: .78
- Teachers/principals' questionnaire: .82

Proforma

- Developed for data collection
- Peer-critiqued for quality

METHODOLOGY

Data Collection:

- The instruments were administered to the principals and teachers in the selected states during the conduct of WASSCE (SC) 2023 while the research team visited the selected tertiary institutions to administer the undergraduates' questionnaire.
- 63.1% retrieval rate was recorded for the undergraduates
- and 69.4% for the teachers/principals.

Data Analysis:

- For this study, the years 2018 and 2019 were summed up as the pre-COVID period,
- 2020 was regarded as the COVID year, while 2021 and 2022 were summed up as the post-COVID period.
- Thereafter, Percentages & thematic analysis were done.

Results and Discussion

A photograph of a business meeting in progress. Several people in professional attire are gathered around a table. In the foreground, a person's hand is visible, holding a white coffee cup. Another person is holding a tablet displaying a document with charts and text. A third person is holding a smartphone. The background is slightly blurred, showing an office environment with large windows.

Research Question 1:

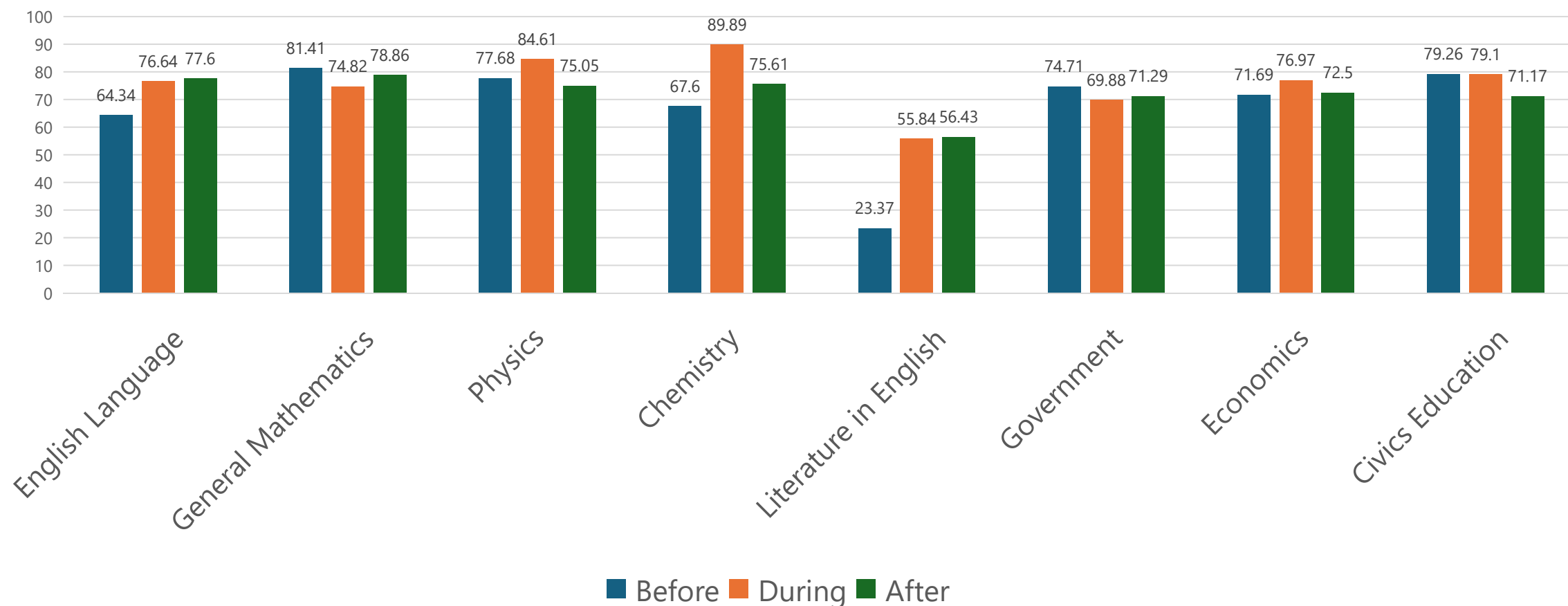
What were the interventions adopted by secondary schools during COVID-19?

<i>S/N</i>	<i>Teachers/Principal</i>	<i>Undergraduate</i>
1	Students were grouped into smaller units to attend lessons	Students were taught in different group not more than 30 persons in a group
2	You tube videos were engaged	
3	Visual learning through projectors	Classes were organised on Zoom
4	Individualized instructions	Classes on Radio
5	Social media	Google classroom
6	Concept mapping strategy was utilized	Seeking ways to encourage broad compliance with health guidelines during the pandemic especially among youth
7	Formation of small groups in the neighbourhood	Online teaching and learning with universal learning solution
8	Facebook	
9	Use of WhatsApp group chat	Use of WhatsApp group chat
10	Processing based learning	Calling the teachers for clarification on grey areas and sometimes having a group reading though not that comfortable
11	Team Teaching strategy	Programmes were sponsored on Television to teach

Research Question 2:

How comparable are the candidates' performance in WASSCE (SC) before, during and after COVID-19 in Nigeria?

Candidates' Performance in WASSCE SC Before, During and After COVID 19 Pandemic



INFLUENCE of COVID-19 on WASSCE PERFORMANCE

Overall Trends

Subjects with improvement during COVID-19: English Language, Physics, Chemistry, Literature in English and Economics

Subjects that declined during COVID-19: General Mathematics, Government, Civic Education.

Post-COVID performance: Some subjects (e.g., English Language, Literature) sustained gains, while others (Physics, Civic Education, Economics) struggled to return to pre-pandemic levels.

👉 *This suggests that the pandemic had **mixed effects**:*





Conclusion

- There is no doubt that the outbreak of COVID-19 brought a symbolic change to Nigerian education system, in terms of various avenues for teaching and learning, other than the traditional face to face method of teaching and learning.
- *Although many challenges were identified as form of impediment to effective teaching and learning during the pandemic, solutions were also provided to combat some of the challenges by the concerned stakeholders.*
- The findings indicated that the various avenues introduced during the pandemic period to teach students were helpful and it reflected in the performances of candidates that sat WASSCE (SC) 2020 as compared to the years before and after COVID-19 pandemic.



Recommendations

Based on the findings, the following were suggested as the way forward:

*Since there are great benefits in Online/Radio /TV learning platforms these should be further be developed to compliment physical classes
More training should be given to teachers on ICT and its usage in teaching and learning.*

Government should ensure stable power supply.



THANK YOU FOR
LISTENING