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Shift in Public Examination Landscape: Prospects and Challenges of West African Senior School Certificate Examination as Computer-Based Examination in The Gambia

Pa Mahmud Kah

Banjul Unit of the Research Department, WAEC Banjul Office, The Gambia

Presentation Outline

- ▶ Introduction
- ▶ The Gap
- ▶ Research Questions
- ▶ Methodology
- ▶ Results and Discussion of Each Research Question
- ▶ Conclusion
- ▶ Recommendations

INTRODUCTION

- ▶ Computer-based examination (CBE) is a method of administering test using computer, it is widely used in developed countries. Advocates of CBE have identified many prospects of this approach to assessment which include:
- ▶ it is more efficient than paper-based tests, year-round testing, flexible scheduling, individualized testing environment, faster score reporting, worldwide testing opportunities for distance and traveling students, enhanced consistency, and security (Abubakar & Adebayo, 2014).
- ▶ According to Parshall et al. (2001), computerized examinations are frequently perceived as being "state of the art" and automatically better than traditional paper and pencil examinations.

INTRODUCTION CONTD...

Challenges associated with paper-based test:

- ▶ Paper-based tests are fraught with different forms of examination malpractice, such as bringing in unauthorized materials, spying on other candidates, substitution of answer sheets, impersonation etc.
- ▶ Tedious processes,
- ▶ High risks of accidents during travel,
- ▶ high cost of administering the examination,
- ▶ subjective scoring and plausible manipulation of results,
- ▶ late release of results and
- ▶ missing scripts (Alabi et al. 2012).

THE GAP

Due to the numerous challenges associated with paper-based test as well as the current global challenges orchestrated by the Covid-19 pandemic, which led to a paradigm shift in educational activities. Thus, stakeholders in education calls for the migration of examinations from paper-based tests to computer-based test, this study investigated the prospects and challenges of conducting WASSCE as a computer-based examination in The Gambia.

RESEARCH QUESTIONS

The following research questions guided the study:

1. How prepared is the Council to conduct WASSCE as a computer-based examination in The Gambia in terms of:
 - a) item pool;
 - b) availability of software and hardware;
 - c) competent personnel; and
 - d) staff orientation?
2. How prepared are the schools to write WASSCE as a computer-based examination in The Gambia in terms of:
 - a) available ICT facilities;
 - b) power supply;
 - c) students' proficiency in the use of computers;
3. What are the anticipated benefits of conducting WASSCE as a computer-based examination in The Gambia?
4. What are the anticipated challenges of conducting WASSCE as a computer-based examination in The Gambia?
5. How can the anticipated challenges be addressed?

METHODOLOGY

- ▶ Research Design: The study adopted the survey research design.
- ▶ Population: WAEC stakeholders (final year secondary school students, teachers, principals, Ministry of Basic and Secondary Education officials and WAEC staff).
- ▶ Sample and Sampling Technique: Multi-stage sampling technique was employed to select a sample of 482 respondents.
- ▶ Research Instruments: Questionnaires and Interview guide.
- ▶ Validity and Reliability: The questionnaires were pilot tested on the representative sample while the interview guide were subjected to expert judgment.
- ▶ Data Collection: Face to face with the assistance of research officers.
- ▶ Data Analysis: Descriptive statistics and thematic approach.

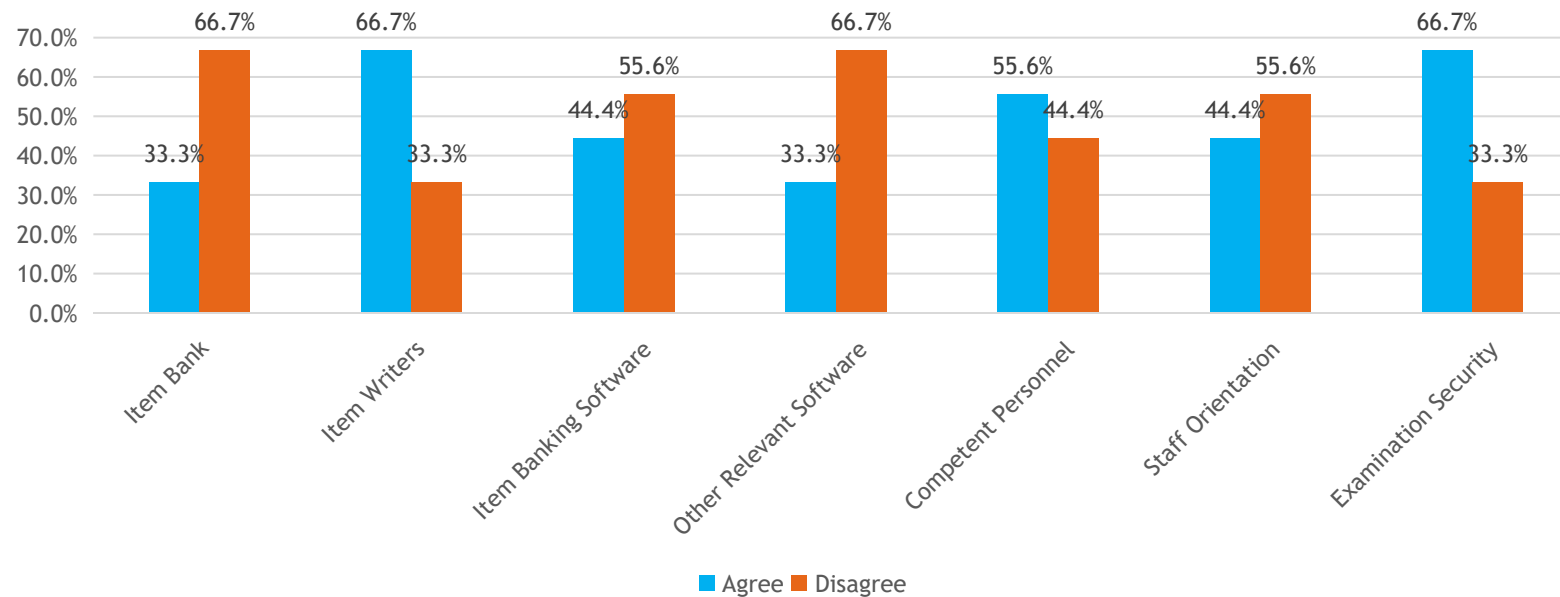
RESULTS AND DISCUSSION

Research Question 1

1. How prepared is the Council to conduct WASSCE as a computer-based examination in The Gambia in terms of: item pool; availability of software and hardware; competent personnel; and staff orientation?

Figure 1

WAEC Staff's Views on the Readiness of the Council to Conduct WASSCE As a Computer-Based Examination



Research Question 1 Contd...

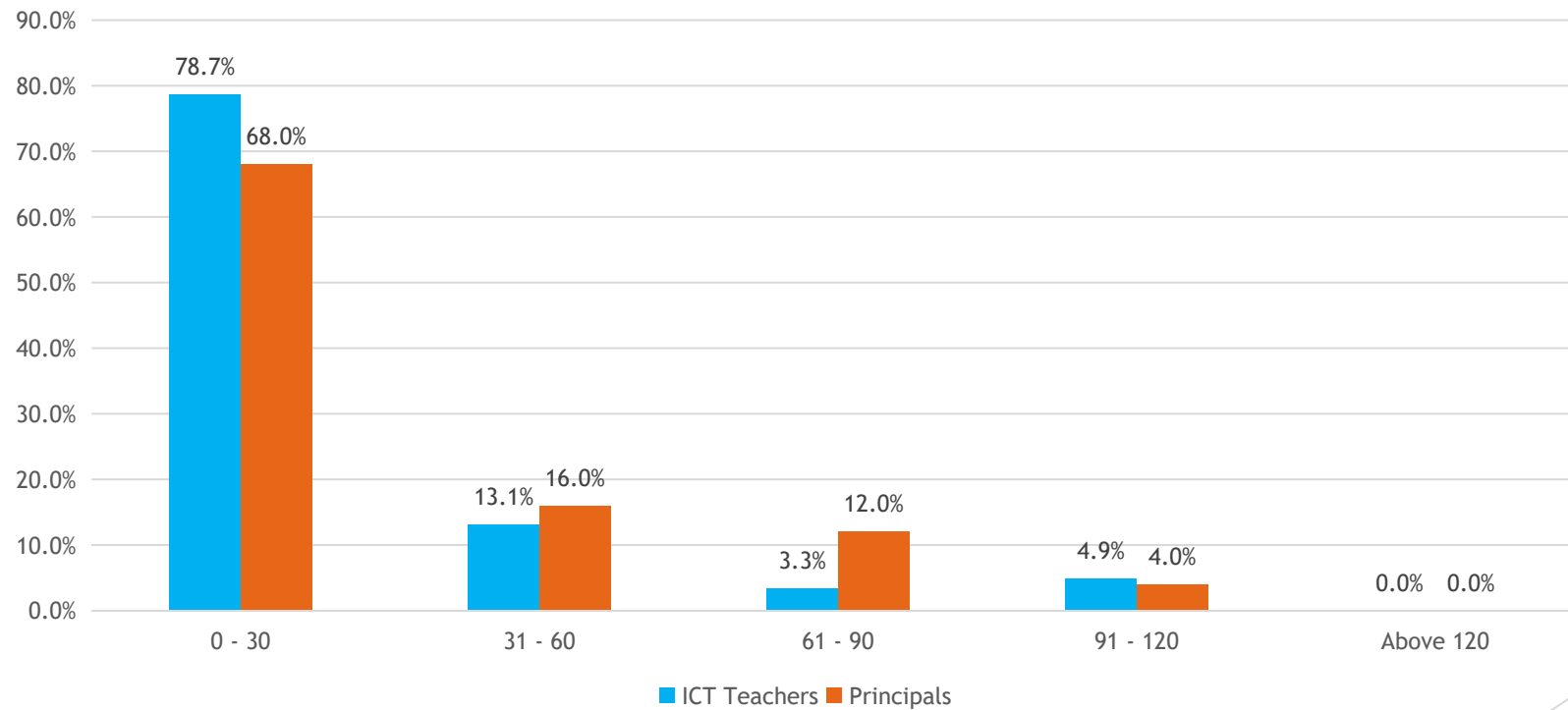
- ▶ Figure 1 revealed that only 33.3% of the WAEC staff respondents agreed that the Council was ready to conduct WASSCE as a computer-based examination.
- ▶ Figure 1 also revealed that at least 55.6% of respondents agreed that the Council was ready to conduct WASSCE as a computer-based examination in terms of available item writers, competent personnel and examination security. This implies that the Council has the competent human resource as well as the necessary security required to drive CBE in The Gambia.
- ▶ However, Figure 1 showed that majority of the staff opined that the Council was not ready in terms of item bank (66.7%), item banking software (55.6%), other relevant software (66.7%) and staff orientation (55.5%).
- ▶ Therefore, the findings suggests that the Council should make effort to improve staff orientation on the benefits of CBE and acquire item banking software and other relevant software for a smooth transition to CBE in The Gambia.

Research Question 2

2. How prepared are the schools to write WASSCE as a computer-based examination in The Gambia in terms of: available ICT facilities; power supply; and students' proficiency in the use of computers?

Figure 2

Number of Computers in the School's Computer Laboratories



Research Question 2 Contd...

- ▶ Figure 2 revealed that majority, 78.7% and 68% of the ICT teachers and principals respectively indicated that they had at most 30 computers in their ICT laboratories. If WASSCE is to be conducted as CBE, this number may be inadequate considering the number of candidates per centre. The implication of the finding is that there will be many sets for a paper with large candidature which will increase the duration of the examination.
- ▶ In addition, in respect to the question on constant power supply, majority of respondents disagreed that there was constant power supply or a functional generator/alternative power supply or uninterrupted power supply (UPS) appliances in most schools.
- ▶ Furthermore, on student's proficiency in the use of computers, majority of respondents in all categories attested that students in their school can carry out basic tasks using the computer.

Research Question 3

3. What are the anticipated benefits of conducting WASSCE as a computer-based examination in The Gambia?

- ▶ *quick processing of examination*
- ▶ *early release of results*
- ▶ *saves time and cost*
- ▶ *eliminate human errors on the conduct of examination*
- ▶ *reduces leakage and examination malpractice*
- ▶ *develops computer literacy skills and career prospects in ICT for students and teachers.*
- ▶ This implies that conducting WASSCE as CBE will enhance the validity and reliability of the examination results and improve the operational efficiency and effectiveness of the Council in The Gambia.

Research Question 4

4. What are the anticipated challenges of conducting WASSCE as a computer-based examination in The Gambia?

- ▶ *low level of computer literacy among students/teachers*
- ▶ *inadequate ICT laboratories and facilities in schools*
- ▶ *lack of servers for internet distribution*
- ▶ *inadequate internet connection*
- ▶ *erratic electricity supply*
- ▶ *high cost of installing CBE equipment in schools*
- ▶ *misuse of equipment and the challenge of maintenance and sustainability of CBE equipment.*
- ▶ These findings implies that there are a number of challenges that would need to be addressed for the successful conduct of WASSCE as computer-based examination.

Research Question 5

5. How can the anticipated challenges be addressed?

- ▶ *provision of well-equipped ICT facilities in schools*
- ▶ *provision of adequate internet connection*
- ▶ *provision of servers and constant power supply*
- ▶ *institution of security measures against damage of equipment*
- ▶ *stakeholder sensitisation*
- ▶ *provision of robust item pool*
- ▶ *using IRT to calibrate items and*
- ▶ *training for both students and teachers as means of preparing the ground for conducting WASSCE as CBE in The Gambia.*
- ▶ It was also suggested that a road map for WASSCE as CBE be set up and followed towards achieving the objective. This includes piloting CBE in selected schools with facilities across the country.

CONCLUSION

This study explored the prospects and challenges of conducting WASSCE as CBE in The Gambia. Findings revealed that even though schools and WAEC are not yet ready to conduct WASSCE as CBE in terms ICT facilities, servers, adequate power supply and adequate staff/stakeholder orientation and item bank, it is quite possible for the Council to work with its stakeholders towards conducting WASSCE as CBE in The Gambia. It also showed that the prospects of conducting WASSCE as CBE is enormous and better adapted to the trend of technology and globalisation. It was also observed that migration from the traditional paper-pencil test to CBE in the conduct of WASSCE in The Gambia has several anticipated challenges as well as possible remedies. The consideration of suggested remedies will facilitate and smoothen the transition from paper-pencil tests to CBE in The Gambia.

RECOMMENDATIONS

- ▶ The government through the Ministry of Basic and Secondary Education should work towards providing: CBE Policy and commitment towards its implementation; ICT infrastructure and facilities in schools; and Reliable electricity supply in The Gambia.
- ▶ School authorities should ensure that reliable internet connection and alternative power supply are provided in schools.
- ▶ WAEC should create awareness amongst stakeholders on CBE; train staff and examination officials towards CBE system of learning and assessment; provide ICT infrastructure and equipment for CBE administration and put in place a robust item banking system.
- ▶ WAEC should pilot test WASSCE as CBE in schools that are currently well equipped with ICT laboratories across the country.

THANK YOU!