International Journal of Research in Business Studies and Management
Volume 7, Issue 6, 2020, PP 24-31
ISSN 2394-5931

Contemporary Problems and Prospects of Technology-Based Behaviour and Performance Assessment (Tbbpa) in Senior Secondary Schools in Rivers State, Nigeria

Iremeka, Felicia Ukamaka, Amaeze, Fidelis Eze, Ezurike, Chukwuemeka Alexander

Department of Educational Foundations, University of Nigeria, Nigeria.

***Corresponding Author:** Amaeze, Fidelis Eze, Department of Educational Foundations, University of Nigeria, Nigeria*

ABSTRACT

The study was spurred by incessant subjectivity in the assessment of students' behavior and performance in secondary schools in Rivers State, which is devoid of technology enhanced objective assessment. Two research questions were answered with corresponding null hypotheses. The study adopted a descriptive survey with a population of 7,143 teachers. The sample for the study was 714 teachers drawn using proportionate stratified random sampling technique representing 10% of the population. A face and content validated instrument titled "Contemporary Problems and Prospects of Technology-Based Behaviour Assessment Scale" (CPPTBBPAS) was used for data collection. Internal consistency reliability coefficient of 0.88 for CPPTBBPAS was established through Cronbach alpha. Mean and standard deviation were used to answer the research questions while z-test was used to test the null hypotheses at 0.05 level of significance. The findings revealed among others that, the major problems on the use of technology assisted assessment were lack of computers, flash drive, server, computer room, fund, teachers' attitude towards the use of computer and administrative hitches. Based on the findings, the researchers recommended among others that, the government and the host community in conjunction with churches and well meaning Nigerians should assist the schools in the provision of computers, flash drivers, servers, workshops on technology and power generating sets for enhanced assessment, teaching and learning.

Keywords: *Contemporary Problems, Prospects, Technology, Assessment and Secondary Schools*

INTRODUCTION

Education is very vital in overall development of an individual. Education helps one to develop in the cognitive domain, affective domain and psychomotor domain. Since senior secondary education is that level of education after the primary education before the tertiary education, it behooves that the students should be properly monitored and assessed before they are taken to the next level of education. Secondary education is guided by goals and objectives. The goals of education according to Federal Republic of Nigeria (2014:3) are based on:

1. development of the individual into a morally sound, patriotic and effective citizens;
2. total integration of the individual into the immediate community, the Nigerian society and the world;
3. provision of equal access to qualitative educational opportunities for all citizens at all levels of education, within and outside the formal school system;
4. inculcation of national consciousness, values and national unity; and
5. development of appropriate skills, mental, physical and social abilities and competencies to empower the individual to live in and contribute positively to the society.

In a definite definition of the goals of the secondary education, the following specific objectives of Post-Basic Education (secondary education) as enshrined in FRN, 2014: 17) are to:

1. provide holders of the Basic Certificate and Junior Arabic and Islamic Studies Certificate with opportunity for education of higher level irrespective of gender, social status, religious or ethnic background;
2. offer diversified curriculum to cater for the differences in talents, disposition, opportunities and future roles;

3. provide trained manpower in the applied sciences, technology and commerce at sub-professional grade;
4. provide entrepreneurial, technical and vocational job specific skills for sef-reliance, and for agricultural, industrial, commercial and economic development;
5. develop and promote Nigeria languages, art and culture in the context of world's cultural heritage;
6. inspire students with desire for self-improvement and achievement of excellence;
7. foster patriotism, national unity and security education with emphasis on the common ties in-spite of our diversity; and
8. raise morally upright and well-adjusted individuals who can think independently and rationally, respect the views and feelings of others and appreciate the dignity of labour.

These goals and objectives give direction to the activities that are required at this level of education. Frantic pursuit and actualization of these goals and objectives is hinged on the development of cognitive, affective and psychomotor domains.

These areas of development are very necessary for self reliance and effective functioning in the society. Assessment is instrumental in successful achievement of these goals and objective is to a very high extent.

Assessment could be seen as the process of using test instrument to elicit some characteristics, traits, attributes or qualities from the assessed. Assessment in education is simply termed educational assessment. Assessment is a word that embraces diverse kinds of tests and measurements. Educational assessment is the type of assessment in education that is geared towards ascertaining the extent to which students have mastered skills or acquired knowledge of subject matter (Amaeze, 2014). Educational assessment is a formal attempt to determine students' status with respect to educational variables of interest (Popham, 2002).

Assessment is a defined process or pattern of using test instrument or any valid and reliable instrument for the purpose of prognostic or diagnostic evaluation, measurement or testing of a desirable trait, characteristics, attribute, attitude or ability of the tested (Amaeze, 2017). Educational assessment could be formative or summative. Formative educational assessment is the type of assessment that is given to students while the instruction is still ongoing. Formative educational assessment is given when the instructor or teacher has not completed the syllabus or curriculum (Amaeze, 2017).

On the other hand, summative educational assessment is that type of assessment that is carried out by the classroom teacher at the completion of a syllabus or curriculum (Amaeze, 2014). Educational and instructional assessments are commonplace in our secondary schools evidently with analogue approach. Educational assessment in most schools has moved from analogue to digital format.

The 21st century has predominated educational activities with the inclusion of technology. Educational assessment is very pivotal in the achievement of lofty and noble goals and objectives of secondary education and requires swift adherence in line with technological advancement.

The advent of technology in the school system is greeted with a lot of problems of adherence, compliance and availability of basic technological gadgets and their application. Most of our information Technology centres are flooded with rickety quality technology appliances. Devastatingly, Uzochukwu (2018) noted that public secondary education has not gotten the prerequisites for technology-based educational activities. Consequentially, public schools do not have enough computers, teachers, space, accessories and the needed connectivity for arduous technology education (Idowu, 2017).

It is worthy to note that the dearth availability of technology gadgets and accessories have undermined the essence of technology-based assessment in most of the schools in Rivers State, Nigeria. Attitudinal incoherency, lackluster disposition, lackadaisical behaviour and poor maintenance culture have ripped-off the classy condition of the available technology materials.

Contemporary, schools are faced with dearth supply of technology materials, poor attitude of teachers and students towards embracement of technology for instructional purpose and administrative insensitivity (Amaeze, 2014). Adversely, the essence of technology based assessment can be defeated if technology

materials are wrongly used or abused. The essence of technology-based assessment can also be dashed if the operational and functional abilities of the teachers and students are questionable. Though, technology-based assessment reduces the stress of marking and exterminates the issue of missing scripts and results, it is also bedeviled with the confrontation of erratic power supply, little space for the centre and insufficient computers.

Technology based-assessment can be properly embraced in our secondary schools if the teachers, school administrators and students will develop positive attitude towards it's usage. The prospect of technology based-assessment can be secured in secondary schools in Rivers State through the provision of functional computers, technology accessories, workshops and development programmes for the teachers. Advantageously, Udo (2016) reported that computer based test is prominent in the achievement of objective assessment in the schools. Technology based assessment require enough computers, flash drives, constant power supply, printers, internet connectivity, CD, tables, chairs, extension sockets and experienced information technology experts (Benson, 2015). The prospect of technology-based assessment is based on the availability and usability of technologies in the assessment of students. The usage of technology-based assessment format is envisaged to add glamour and increase the reputations of secondary education in Rivers State. Based on this backdrop, it became pertinent and most expedient to investigate the problems and prospects of technology-based assessment in secondary schools in Rivers State with a view of proffering solutions on the best unmistakable workable measures.

Statement of the Problem

The beauty of educational assessment lies in objectivity. Undue favouritism through subjective evaluation has not only ruined our evaluation and assessment process but has made mockery of the whole educational system. Subjective and conventional assessment format and methods have engraved the abilities of the students in the face of errant teachers. Most of the teachers tend to trade sex, molestation and evil association with grades. Poor assessment format may misrepresent the true score of the student. The functionality of technology education in secondary schools in Rivers State is better imagined than in practice owning to the debilitating hindrances. The rebirth of technology-based assessment in our schools may revamp and ignite objectivity in our assessment format which may be inherent in the achievement of secondary education goals and objectives. This unsatisfactory state of affaire called for urgent concern, hence, the researchers were disheartened and poised, thus investigated the contemporary problems and prospects of technology-based assessment in senior secondary schools in Rivers State, Nigeria.

Aim and Objectives of the Study

The study was aimed at investigating the contemporary problems and prospects of technology-based assessment in senior secondary schools in Rivers State, Nigeria. Specifically, the study sought to:

1. Ascertain the contemporary problems of technology-based behaviour and performance assessments in senior secondary schools in Rivers State, Nigeria.
2. Determine the prospects of technology-based behaviour and performance assessments in senior secondary schools in Rivers State, Nigeria.

Research Questions

The following research questions were answered in this study.

1. What are the contemporary problems of technology-based behaviour and performance assessments in senior secondary schools in Rivers State, Nigeria?
2. What are the prospects of technology-based behaviour and performance assessments in senior secondary schools in Rivers State, Nigeria?

Hypotheses

The following hypotheses were tested at 0.05 level of significance.

1. There is no significance difference between male and female teachers on the contemporary problems of technology-based assessment in senior secondary schools in Rivers State, Nigeria.
2. There is no significance difference between experienced and less experienced teachers on the prospects of technology-based assessment in senior secondary schools in Rivers State, Nigeria.

METHODOLOGY

The study adopted a descriptive survey with a population of 7, 143 teachers. The sample for the study was 714 teachers drawn using proportionate stratified random sampling technique representing 10% of the population.

A validated instrument titled "Contemporary Problems and Prospects of Technology-Based Behaviour and Performance Assessment Scale" (CPPTBBPAS) was used for data collection. Internal consistency reliability coefficient of 0.88 was established through Cronbach alpha. Mean and standard deviation were used to answer the research questions while z-test was used to test the null hypotheses at 0.05 level of significance.

RESULTS

Research Questions1.

What are the contemporary problems of technology-based behaviour and performance assessment in senior secondary schools in Rivers State, Nigeria?

Table1. *Mean and standard deviation on the contemporary problems of technology-based behavior and performance assessment in senior secondary schools in Rivers State*

S/N	Contemporary problems of technology-based behavour and performance assessment	Male Teachers			Female Teachers		
		Mean	Std	Decision	Mean	Std	Decision
1	Insufficient computers	3.09	.46	Agreed	3.28	.45	Agreed
2	Negative attitude of students towards computer usage	3.23	.49	Agreed	3.43	.49	Agreed
3	Insufficient space for technology-based unit	3.10	.46	Agreed	3.43	.49	Agreed
4	Poor teachers' computer compliance	3.12	.38	Agreed	3.29	.45	Agreed
5	Lack of finance for purchase and procurement of the facilities	3.13	.48	Agreed	3.28	.45	Agreed
6	Negative attitude of the school administrators towards technology-based assessment	3.15	.66	Agreed	3.29	.45	Agreed
6	Problem of accessibility of available technological facilities	3.16	.73	Agreed	3.28	.45	Agreed
7	Erratic power supply problem	3.32	.56	Agreed	3.43	.49	Agreed
8	Problem of item writing	3.09	.519	Agreed	3.42	.49	Agreed
9	Lack of time frame for the administration of the test	2.79	.54	Agreed	3.57	.49	Agreed
10	Insufficient supply of computer accessories	2.51	.65	Agreed	3.28	.45	Agreed
	Grand mean and standard deviation	**3.06**	**0.54**		**3.36**	**0.47**	

Table 1 revealed that items with serial numbers 1 to 10 have mean values above the criterion mean value of 2.50 and were agreed by the respondents as the contemporary problems on technology-based behavior and performance assessment in senior secondary schools in Rivers State, Nigeria.

The contemporary problems of technology-based behavior and performance assessment are: insufficient computers; negative attitude of students; problem of space; poor teacher's computer compliance; lack of finance; negative attitude of the school administrators; problem of accessibility of available technological facilities; power supply problem; poor item writing format; insufficient time frame for the administration of technology-based behavior and performance assessment and insufficient computer accessories.

Research Questions2. What are the prospects of technology-based behavior and performance assessment in senior secondary schools in Rivers State, Nigeria?

Table2. *Mean and standard deviation on the prospects of technology-based assessment in senior secondary schools in Rivers State*

S/N	Prospects of technology-based behavior and performance assessment	Experienced Teachers			Less Experienced Teachers		
		Mean	Std	Decision	Mean	Std	Decision
11	Provision of computers can enhance technology-based assessment	2.51	.99	Agreed	3.28	.44	Agreed
12	Proper orientation services on the usage of technology-based assessment is instrumental in students' attitudinal development on computer usage	2.62	.80	Agreed	3.13	.43	Agreed
13	Provision of space for technology-based unit is a yardstick for technology-based assessment.	2.92	.78	Agreed	3.08	.62	Agreed
14	Workshops for teachers can enhance their computer prowess	3.24	.50	Agreed	3.43	.49	Agreed
15	Effective budgetary practices can assist in the provision of computers	2.89	.97	Agreed	3.11	.54	Agreed
16	Proper orientation on the importance of technology-based assessment by information and technology experts can help the school administration on technology-based assessment	3.07	.52	Agreed	3.14	.55	Agreed
17	Accessibility of computer facilities promotes technology-based assessment	2.99	.76	Agreed	3.10	.56	Agreed
18	Provision of alternative source of power will enhance technology-based instruction	3.12	.51	Agree	3.03	.63	Agreed
19	Teachers' training of the best ways of writing item for technology-based assessment is needful.	2.73	.80	Agree	2.54	.97	Agree
20	Allocation of sufficient time for Lack of time frame for the administration of the test	2.88	.78	Agree	2.67	.95	Agree
21	Provision of computer accessories will facilitate technology-based assessment	2.92	.77	Agree	2.88	.90	Agree
	Grand mean and standard deviation	**2.89**	**0.74**		**3.04**	**0.64**	

Table 2 showed that items with serial numbers 11 to 21 have their various mean values above the criterion mean value of 2.50 and were agreed by the respondents as the prospects of technology-based behavior and performance assessment in senior secondary schools in Rivers State, Nigeria.

The prospects for technology-based behavior and performance assessment can be met through: provision of computers; proper orientation of students on the usage of computer for technology-based assessment; provision of enough space in the technological-based behavior and performance assessment units; intensive workshop for the teachers on technologic-based assessment; effective budgetary system; proper orientation on the importance of technology-based assessment to the school administrator; provision of alternative source of power; regular teacher training and development on ICT, allocation of time for technology-based behavior and performance assessment and provision of computer accessories.

Hypothesis1. There is no significance difference between male and female teachers on the contemporary problems of technology-based assessment in senior secondary schools in Rivers State, Nigeria.

Table3. *z-test between male and female teachers mean response on the contemporary problems of technology-based assessment in senior secondary schools in Rivers State*

Gender	N	Mean	Std	df	z-cal	z-crit.	Decision
Male teachers	401	3.06	0.54				Hypothesis
Female teachers	313	3.36	0.47	712	7.50	1.96	is rejected

Table 3 revealed that male teachers have mean and standard deviation scores of 3.06 and 0.54 while the female teachers have mean and standard deviation scores of 3.36 and 0.47 respectively. With degree of freedom of 712, the calculated z-value of 7.50 is greater than the critical z-value of 1.96.

Therefore, the null hypothesis is rejected. By implication, there is a significance difference between male and female teachers on the contemporary problems of technology-based assessment in senior secondary schools in Rivers State, Nigeria.

Hypothesis2. There is no significance difference between experienced and less experienced teachers on the prospects of technology-based assessment in senior secondary schools in Rivers State, Nigeria.

Table4. *z-test between male and female teachers mean response on the prospects of technology-based assessment in senior secondary schools in Rivers State*

Experience	n	Mean	Std	df	z-cal	z-crit.	Decision
Experienced teachers	328	2.89	0.74				Hypothesis
Less experienced teachers	386	3.04	0.64	712	3.00	1.96	is rejected

Table 4 revealed that experienced teachers have mean and standard deviation scores of 2.89 and 0.74 while the less experienced teachers have mean and standard deviation scores of 3.04 and 0.64 respectively. With degree of freedom of 712, the calculated z-value of 3.00 is greater than the critical z-value of 1.96. Therefore, the null hypothesis is rejected. By implication, there is a significance difference between experienced and less experienced teachers on the prospects of technology-based assessment in senior secondary schools in Rivers State, Nigeria.

Discussion of Findings

Contemporary Problems in Technology-Based behavior and performance Assessments

The findings of this study revealed that the major contemporary problems on the use of technology assisted behavior and performance assessments were lack of computers, flash drive, server, computer room, fund, teachers' attitude towards the use of computer and administrative hitches and poor item writing format; insufficient time frame for the administration of technology-based assessment.

The advent of technology in the school system is greeted with a lot of problems of adherence, compliance and availability of basic technological gadgets and their application. Most of our information Technology centres are flooded with rickety quality technology appliances. The findings of Uzochukwu (2018) are in tandem with that of this study when noted that public secondary education has not gotten the perquisites and prerequisites for technology-based educational activities. Consequently, it was found that public schools do not have enough computers, teachers, space, accessories and the needed connectivity for arduous technology education (Idowu, 2017).

It is worthy to note that the dearth availability of technology gadgets and accessories have undermined the essence and frolics of technology-based assessment in most of the schools in Rivers State, Nigeria. Contemporary, attitudinal incoherency, lackluster disposition, lackadaisical behaviour and poor maintenance culture have ripped-off the classy condition of the available technology materials.

In consonance with the findings of this study, it was reported that schools are faced with dearth supply of technology materials, poor attitude of teachers and students towards embracement of technology for instructional purpose and administrative insensitivity (Amaeze, 2014). Adversely, the essence of technology based assessment has been defeated due because technology materials are wrongly used or abused.

This has contributed immensely in dashing the essence of technology-based assessment for operational and functional abilities of the teachers in these schools. Though, technology-

based assessment reduces the stress of marking and exterminates the issue of missing scripts and results, it is also bedeviled with the confrontation of erratic power supply, little space for the centre and insufficient computers.

Prospects of Technology-Based Behavior and Performance Assessment

The prospects for technology-based behavior and performance assessment can be met through: provision of computers; proper orientation of students on the usage of computer for technology-based behavior and performance assessment; provision of enough space in the technological-based assessment units; intensive workshop for the teachers on technology-based assessment; effective budgetary system; proper orientation on the importance of technology-based behavior and performance assessment to the school administrator; provision of alternative source of power; regular teacher training and development on ICT, allocation of sufficient time for technology-based assessment and provision of computer accessories.

Technology based- behavior and performance assessment can be properly embraced in our secondary schools if the teachers, school administrators and students will develop positive attitude towards it's usage. The prospect of technology based-assessment can be secured in secondary schools in Rivers State through the provision of functional computers, technology accessories, workshops and development programmes for the teachers (Amaeze, 2014).

Advantageously, Udo (2016) reported that computer based test is prominent in the achievement of objective assessment in the schools. In the same vein, technology-based assessment require enough computers, flash drives, constant power supply, printers, internet connectivity, CD, tables, chairs, extension sockets and experienced information technology experts (Benson, 2015). The prospect of technology-based assessment is based on the availability and usability of technologies in the assessment of students. The usage of technology-based assessment format is envisaged to add glamour and increase the reputations of secondary education in Rivers State.

CONCLUSION

Based on the findings of this study, the researchers concluded that in secondary schools in Rivers State are bedeviled with problems from the teachers, students and the schools administrators. However, these problems were as a result of negative attitude, lack of training and development of teachers, students and the school administrators on the use of computer-assisted instruction, learning and assessment.

RECOMMENDATIONS

Based on the findings, the researchers recommended among others that:

1. The government and the host community in conjunction with churches and well meaning Nigerians should assist the schools in the provision of computers, flash drivers, servers and power generating sets for enhanced teaching and learning.
2. The school administrators should organize workshops and training for teachers and students in order to teacher them the rudiments and skills of technology-based assessment.
3. High technological officers should be employed in the technology-based units that can oversee the activities of technology-based assessment.

REFERENCES

[1] Amaeze, F.E. (2014). *Evaluation of universal basic education in Imo State, Nigeria.* Unpublished Masters Dissertation, Faculty of Education, University of Port Harcourt.

[2] Amaeze, F.E. (2017). *A causal model of psychological variables on Physics academic performance of senior secondary school students in Imo State, Nigeria*. Unpublished Ph.D Thesis, Faculty of Education, University of Port Harcourt.

[3] Federal Republic of Nigeria. (2014). *National Policy on Education 6th edition.* Abuja: Nigerian Educational Research and Development Council.

[4] Idowu, A.A. (2017). Availability, accessibility and utilization of technology facilities in secondary schools in Ekiti State. *Journal of Educational and Policy Administration,* 1(1), 15-24.

[5] Popham, W.J. (2002). *Classroom assessment: What teachers need to know.* Boston: Allyn & Bacon A Pearson Education Company

[6] Udoh, O.P. (2016). Computer-based test and extermination malpractice in secondary schools in Akwa Ibom State. *International Journal of Educational Advancement,* 1(2), 55-64.

[7] Uzochukwu, H.O. (2018). Information communication technology and effective school administration in Rivers State. *Journal of Information Management Series,* 1(1), 19-28.\

Citation: *Amaeze, Fidelis Eze, et al,"Contemporary Problems and Prospects of Technology-Based Behaviour and Performance Assessment (Tbbpa) in Senior Secondary Schools in Rivers State, Nigeria" International Journal of Research in Business and Management, 7(6), 2020, pp. 24-31*