

Vocational Teachers' Perception of their Uses of Assessment in Government Technical Colleges in Rivers State

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Abstract

The study was aimed at finding out opinions of vocational teachers of their uses of assessment in government technical colleges in Rivers State. Descriptive survey design was adopted for the study. The population consisted of 110 Vocational teachers (80 less experienced vocational teachers [0-5 years] and 30 highly experienced vocational teachers [6 years and above] in the four government technical colleges in Rivers State. No sample was done since the population size was considered manageable. Three research questions and three null hypotheses were generated and formulated respectively to guide the study. A questionnaire structured on a four point rating scale was used to collect data for the study. The instrument was face and content validated by five experts and the reliability coefficient of 0.80 was obtained with Cronbach's Alpha coefficient method. Data were analyzed using mean and standard deviation to answer the research questions, while t-test statistics was used to test the hypotheses. The findings of this study revealed among other things, that vocational teachers agree on the uses of assessment on academic achievement of students, there are types of valid and reliable assessment instruments/tools that vocational teachers should use to assess students and assessment process has a good impact on students in learning. Based on the findings, it was recommended that teachers should ensure that they use proper assessment instruments/tools to assess learning outcome.

Keywords: Vocational teachers, perception, teaching, assessment, students, test, instrument

Introduction

Technical and Vocational Education and Training (TVET) is recognized as the aspect of education that leads to the acquisition of relevant skills by individuals to enable them live and contribute to the economic and technological growth of the society. TVET as defined by UNESCO (2001) and adopted by the Federal Republic of Nigeria in her National Policy on Education (2013) is a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related science and the acquisition of practical skills, attitude, understanding and knowledge relating to occupation in various sectors of economic and social life.

Basically, technical colleges in Nigeria offer TVET programmes for the purpose of producing middle level skilled manpower required for the nation's economic and technological development (FRN, 2013). The National Business and Technical Examination Board (NABTEB) awards National Technical Certificate (NTC) to students who have completed their post-primary education at technical colleges (NABTEB, 2004). The NTC curriculum is aimed at training skilled technical manpower equipped with the necessary technical knowledge and practical skills that will qualify them to be capable to function very well in all sectors in the industry after their graduation (Okwelle, 2011).

Training aimed at producing middle level skilled manpower needed for the nation's economic and technological development requires the services of qualified technical vocational teachers that will help to achieve the objectives of preparing students to acquire better knowledge and psycho-productive skills in recognized occupation (Agwi & Amadike, 2016). To achieve this objective, the progress reports of the students need to be carried out comprehensively with the use of appropriate assessment tools.

Assessment as a concept is the process of gathering data from diverse sources in order to have a clearer understanding of the learner's attributes during the period of teaching and learning (Asuru, 2015). Similarly, Offor (2013) viewed assessment as the process of collecting information about a student to aid in making an evaluation about the progress and development of the student. Assessment is an evaluative and interpretative appraisal of performance which provides information that enables the teacher and the school personnel to make decision regarding the children they serve (Idowu & Esere, 2009). Assessment can be formative or summative; with formative assessment taking place as instruction progresses while summative assessment is done at the end of a programme (Egwim & Amaechi, 2015; Okwelle, 2011)

For instruction in the field of technical vocational education and training to produce good results there must be effective and factual assessment (Okwuanaso & Okeke, 2005). In this context, the assessment of students' competencies in vocational skills training programmes using tools/equipment and machines become an inescapable activity and responsibility of every vocational teacher (Okwelle, 2011). It is the teacher's responsibility to guide a student through each stage of learning and determine whether or not the student attained the degree of performance needed or desired. Since assessment is placed highly among the activities of teaching learning process, it is important that teachers in the field of technical vocational education and training (TVET) should assess their students using valid and reliable instrument, if the aims of instruction are to be achieved (Adesope, 2015).

Vocational teachers seem not to be serious in adopting the use of effective assessment instruments/tools in assessing students during teaching and learning (Okwelle & Okeke, 2012). Even when they assess the students, teachers do not make use of the required types of assessment instruments/tools to assess students in all domains of learning that will help them to acquire knowledge, skill and values necessary for their usefulness in the society (Okwelle, 2003, 2011). The problem of the study therefore, is on how vocational teachers perceive their uses of assessment in government technical colleges in Rivers State.

Purpose of the Study

The purpose of this study was to investigate the perceptions of vocational teachers on their uses of assessment in government technical colleges in Rivers State. Specifically, the study intended to:

1. Determine vocational teachers' perceptions regarding the uses of assessment on academic achievement of students.
2. Find out the perception of vocational teachers regarding types of assessment instruments/tools they use in assessing students' achievement
3. Find out the perceptions of vocational teachers regarding the impact of assessment on students' in learning.

Research Questions

The following research questions guided the study:

1. What are the perceptions of vocational teachers regarding the uses of assessment on academic achievement of students?
2. What are the perceptions of vocational teachers regarding types of assessment instruments/tools they use in assessing students' achievement?
3. What are the perceptions of vocational teachers regarding the impact of assessment on students' in learning?

Hypotheses

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

1. There is no significant difference between the mean responses of less experienced vocational teachers (0-5 years) and highly experienced vocational teachers (6 years and above) regarding the uses of assessment on academic achievement of students.
2. There is no significant difference between the mean responses of less experienced vocational teachers (0-5 years) and highly experienced vocational teachers (6 year and above) regarding types of assessment instruments/tools they use in assessing students' achievements.
3. There is no significant difference between the mean responses of less experienced vocational teachers (0-5 years) and highly experienced teachers with (6 years and above) regarding the impact of assessment on students' in learning.

Materials and Methods

A descriptive survey design was used in this study. The study was carried out in the four government technical colleges in Rivers State, located at Ahoada, Ele-ogu, Port Harcourt and Tombia. The population of the study comprised 110 vocational teachers (80 less experienced vocational teachers with (0-5 years) teaching experience and 30 highly experienced vocational teachers with (6 years and above) teaching experience) as at 2016/2017 academic session. The entire population of 110 respondents was used for the study without sampling size was considered manageable.

A 23 item structured questionnaire titled "Vocational Teachers Perceptions of uses of Assessment Questionnaire" (VTPAQ) was the instrument used to collect data for the study. The VTPAQ had four sections A to D. Section A sought information on selected personal data of the respondents, Section B to D consisted of the 23 – items relevant for answering research questions posed in the study. The response format of VTPAQ was a four point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with corresponding values of 4, 3, 2 and 1 respectively.

The VTPAQ instrument was validated by three experts in vocational and technology education and two experts in measurement and evaluation from Rivers State University, Port Harcourt. In order to establish reliability of the instrument, the VTPAQ was administered to 15 vocational teachers who were not part of the study sample. The scores obtained were subjected to internal consistency reliability technique using Cronbach's Alpha method to yield reliability coefficient of 0.80, a value which was considered adequate for the study.

A total of 110 copies of the instrument were distributed to the respondents directly by the researchers with the help of four research assistants. The total number of copies retrieved were 105 (75 less experienced vocational teachers and 30 highly experienced vocational teachers) representing 98 percent return. The number was considered adequate and was used for analysis of the study. Mean and standard deviation were used to answer the research questions, while t-test was used to test the hypotheses at 0.05 level of significance. For

research questions, real limit of numbers of 3.50-4.00 (Strongly Agree), 2.50-3.49 (Agree), 1.50 – 2.49 (Disagree), 0.50-1.49 (Strongly Agree) were used. Standard deviation values were used to determine the level of homogeneity among the respondents. In testing the hypotheses, the null hypotheses were accepted if the calculated t-value is less and equal to the critical t-value. On the other hand, where the calculated t-value is greater than the critical t-value the null hypotheses were rejected.

Results

The analysis of data in relation to each of the research questions are presented in Tables 1-6.

Research Question 1: What are the perceptions of vocational teachers regarding the uses of assessment in academic achievement of students?

Table 1: Mean and Standard Deviation on teachers' perception of their uses of assessment on academic achievement of students

S/N	Items	Less Experienced Teachers N = 75		Remarks	Highly Experienced Teachers N = 30		Remarks
		\bar{X}	SD		\bar{X}	SD	
1	Assessment helps to ascertain the extent to which learning has taken place.	2.90	0.97	Agree	2.87	0.96	Agree
2	Assessment is used to obtain information about knowledge gained by the learners	2.84	0.95	Agree	2.73	0.93	Agree
3	Assessment helps to measure the effects of the instructional process	3.05	0.99	Agree	3.00	0.98	Agree
4	Assessment helps to analyze students' learning and development	2.92	0.98	Agree	3.03	0.99	Agree
5	Assessment is used to gauge the learners academic strengths and weaknesses	2.75	0.95	Agree	2.60	0.92	Agree
6	Assessment helps to ascertain how much learning has occurred in the learner	2.61	0.94	Agree	2.97	0.97	Agree
7	Assessment is used to gather data in order to have a clearer understanding of the learners.	3.00	0.95	Agree	2.93	0.95	Agree
8	Assessment result is used to judge the quality of education system	2.96	0.97	Agree	2.77	0.94	Agree
Grand mean/SD		2.88	0.89		2.86	0.85	

The results in Table 1 show that the respondents rated all the items as “Agree” with mean values between 2.50-3.49 limits. The grand means of 2.88 and 2.86 respectively, show that the respondents considered that uses of assessment in teaching and learning process is vital in determining the progress of the learners in any instructional process. The standard deviation which ranged from 0.93 to 0.99 indicates closeness in the opinions of both categories of respondents.

Research Question 2

What are the perceptions of vocational teachers regarding types of assessment instruments/tools they use in assessing students’ achievements?

Table 2: Mean and Standard Deviation on types of assessment instruments/tools in use

S/N	Items	Less Experienced Teachers N = 75		Remarks	Highly Experienced Teachers N = 30		Remarks
		\bar{X}	SD		\bar{X}	SD	
9	Test as an assessment instrument is used to evaluate cognitive domain	2.70	0.89	Agree	2.65	0.83	Agree
10	Teacher made test is an assessment tool for assessing students’ achievements.	2.73	0.90	Agree	2.55	0.81	Agree
11	Observation is a type of assessment tool for assessing students achievements	2.56	0.82	Agree	2.59	0.840	Agree
12	Interview is not an appropriate assessment instrument for assessing students’ achievements	2.37	0.79	Disagree	2.21	0.75	Disagree
13	Questionnaire is not an appropriate assessment instrument for assessing students’ achievements	2.11	0.76	Disagree	2.16	0.70	Disagree
14	Checklist is an assessment tool in use for assessing students’ achievement	2.88	0.92	Agree	2.75	0.91	Agree
15	Project as an assessment instrument is used to evaluate psychomotor domain	2.65	0.87	Agree	2.59	0.89	Agree
Grand mean/SD		2.57	0.85		2.50	0.81	

Data in Table 2 indicate that the respondents agreed with items rated items 9, 10, 11, 14 and 15; while they disagreed with items 12 and 13. The standard deviation which ranged from 0.75 to 0.92 indicated closeness in the opinions of both categories of respondents.

Research Question 3

What are the perceptions of vocational teachers regarding the impact of assessment on students' in learning?

Table 3: Mean and Standard Deviation on impact of assessment on students

S/N	Items	Less Experienced Teachers N = 75		Remarks	Highly Experienced Teachers N = 30		Remarks
		\bar{X}	SD		\bar{X}	SD	
16	Students can improve on their learning due to scores obtained from assessment	2.51	0.81	Agree	2.58	0.80	Agree
17	Assessment score will motivate the learners to put more effort in their studies	2.67	0,85	Agree	2.59	0.84	Agree
18	Assessment scores will help the students to know their areas of weakness and strength	2.75	0.89	Agree	2.85	0.81	Agree
19	Students' interest in learning can be developed if they are properly assessed	2.45	0.80	Disagree	2.35	0.78	Disagree
20	Assessment records can help to learners to seek for guidance on their choice of career	2.34	0.75	Disagree	2.49	0.79	Disagree
21	Students can be encouraged to be more serious if they are performing well.	2.65	0.70	Agree	2.75	0.86	Agree
22	Assessment records allow students to be motivated by their parents	2.80	0.90	Agree	2.65	0.85	Agree
23	Assessment records can help students to make wise choice of their career opportunity	.87	0.95	Agree	2.55	0.83	Agree
Grand mean/SD		2.63	0.84		2.60	0.82	

Data in Table 3 show that the respondents agreed with items 16, 17, 18, 21, 22 and 23 items 19 and 20 but disagreed with items 19 and 20. The standard deviation which ranged from 0.80 to 0.92 indicated closeness in the opinions of both categories of respondents.

Hypothesis 1

There is no significant difference between the mean responses of less experienced vocational teachers (0-5 years) and highly experienced vocational teachers (6years and above) regarding the uses of assessment on academic achievement of students.

Table 4: t-Test Analysis of vocational teachers uses of assessment

Respondents	N	\bar{X}	SD	Df	P	t-cal	t-cri	Decision
Less Experienced Teachers	75	2.88	0.96	103	0.05	4.15	1.96	Ho ₁ Rejected
Highly Experienced Teachers	30	2.86	0.95					

Table 4 reveals that the calculated t-value of (4.15) is greater than the critical t-value of (1.96) at df = 103 and 0.05 level of significance. This is an indication that there is no significant difference between the mean responses of male vocational teachers and female vocational teachers regarding the uses of assessment on academic achievement of students. The first null hypothesis was therefore accepted.

Hypothesis 2

There is no significant difference between the mean responses of less experienced vocational teachers (0-5 years) and highly experienced vocational teachers (6years and above) regarding types of assessment instruments/tools they use in assessing students' achievements.

Table 5: T-test analysis vocational teachers on the uses of assessment

Respondents	N	\bar{X}	SD	Df	P	t-cal	t-cri	Decision
Less Experienced Teachers	75	2.57	0.85	103	0.05	2.24	1.96	Ho ₁ Rejected
Highly Experienced Teachers	30	2.50	0.81					

The result in Table 5 shows that calculated t-value of (2.24) is greater than the critical t-value (1.96) at df = 103 and 0.05 level of significance. This implying that there is no significant difference between the responses of male and female vocational teachers regarding types of assessment instruments/tools they use in assessing students' achievement during teaching and learning period. The second null hypothesis was therefore rejected.

Hypothesis 3

There is no significant difference between the mean responses of less experienced vocational teachers (0-5 years) and highly experienced teachers (6years and above) regarding the impact of assessment on students' in learning.

Table 6: t-Test Analysis of vocational teachers on the impact of assessment on students learning

Respondents	N	\bar{X}	SD	Df	P	t-cal	t-cri	Decision
Less Experienced Teachers	75	2.63	0.84	103	0.05	1.68	1.96	Ho ₃ Accepted
Highly Experienced Teachers	30	2.60	0.82					

The result in Table 6 shows that the calculated t-value of (1.68) is less than the critical t-value of (1.96) at $df = 103$ and 0.05 level of significance. This is an indication that there is no significant difference between the mean responses of male and female vocational teachers regarding the impact of assessment on students in learning. The third null hypothesis was therefore accepted.

Discussion

Data presented in Table 1 revealed that there are reasons while teachers' uses assessment on academic achievement of students during teaching and learning period. This is in line with the view of Okeke (2004) that the most important reason for assessing students by the teacher is to measure their individual performance as a means of improving instruction and promoting learning. There is therefore, the need for effective and factual assessment of students during the period of teaching and learning in the field of technical and vocational education and training as to achieve the objective of producing good results.

The results in Table 2 showed that there are types of assessment instruments/tools that vocational teachers should use to assess their students during teaching and learning period. This finding supports Egwim & Amaechi (2015) and Offor (2013) who pointed out that assessment is the process of collecting information about a student to aid in making an evaluation about the progress and development of the student to achieve this objective the use of appropriate type of assessment instrument/tool should be observed by the teacher.

The result in Table 3 indicates that in the opinions of the respondents, assessment of students usually have an impact on students in learning. This finding are consistent with the view of Emaikwe (2014) that assessment is the process of defining, selecting, designing, collecting, analyzing, interpreting and using information to increase students' learning and development. There is therefore, the need to assess student learning outcome, through this process the behaviour of the students can be measured, the result obtained can be used in taking relevant decisions about the student and the programme.

The results of the three hypotheses tested showed that two null hypotheses were rejected, while one was accepted. On hypothesis 1, it shows that there is no significant difference between the mean responses of less experience vocational teachers and highly experienced vocational teachers regarding the uses of assessment on academic achievement of student. This is in line with the ascertain of Asuru (2015) that assessment as a concept is the process of gathering data from diverse sources in order to have a clearer understanding of the learner's attribute during the period of teaching and learning. For hypothesis 2, the analysis revealed that there is no significant difference between the mean responses of less

experienced vocational teachers and highly experienced vocational teachers regarding types of assessments/tools they use in assessing students achievements. Egwim & Amaechi agreed with this finding when he said that assessment is the process used by all assessors in gathering pertinent information to help make decision about students using assessment instruments/tools such as tests, observation, interview, questionnaire, checklist and projects. Finally, for hypothesis 3, the analysis revealed that there is no significant difference between the mean responses of less experienced vocational teachers and highly experienced vocational teachers regarding the impact of assessment on students' in learning. This finding is consistent with the view of Emaikwu (2014) that assessment is the process of defining, selecting, designing, collecting, analyzing, interpreting and using information to increase students' learning and development.

Conclusion

The acquisition of skills and competences in the use of tools/equipment and machine in vocational skill training by the students form a major task of instruction and assessment for the ward of the NTC certificate to those that have completed their studies. To this end students are required to carry out practical activities following logical steps before arriving at final stage of the task. The steps involve before the final stage or finished product needed to be assessed comprehensively and systematically if the objective of the training to be achieved. The researchers strongly believe that the use of appropriate type of assessment instruments/tools by the teacher determined by the study will help to achieve the objective of training at the post-primary school level.

Recommendations

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

1. Teachers of technical vocational education and training programmes should as matter of urgency ensure that they use proper assessment instruments/tools to assess learning outcome.
2. Data gathered from diverse sources after assessment should be properly interpreted for clearer understanding of the teaching and learning.
3. Vocational teachers as a matter of urgency should ensure that they attend seminars/workshops from time to time
4. Head of institutions should ensure that teacher will always submit their assessment records to the appropriate authorities for proper check
5. Educational supervisors should ensure that teachers should always adopt the use of both formative and summative assessment to assess students performance.

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