

Assessment of teacher's perceived skills in affective assessment practices: A convergent parallel design

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Abstract

The study assesses teachers perceived skills in affective assessment practices in secondary schools. A convergent parallel mixed model design was used, three research questions and hypotheses served as its guiding principles. For this study, 383 junior secondary school teachers were drawn from simple random technique to select nine schools from the 27 junior secondary schools as part of the multistage procedures. A 16-item questionnaire and open-ended questions were utilized in a semi-structured teacher interview that was created. Using Cronbach's alpha, a reliability coefficient of 0.87 was established. Only 27.3 percent of respondents reported to have sufficient knowledge of the affective assessment instrument, according to the results. The interviewees claimed to have little familiarity with the affective assessment methods, thus, only 30.8% always employ affective assessment techniques. The affective assessment tools are only occasionally used. According to the findings, teachers' biggest concerns were allocating their limited time effectively and evaluating their crowded classes. Regardless of gender, there are no significant difference in the knowledge, usage, and challenges of teachers in affective evaluation techniques ($\chi^2_{cal} = 1.474$, $t\text{-value} = 1.534$, $t\text{-value} = 0.317$, $p > 0.05$) It is recommended, among others, that teachers take training to learn about and experiment with various affective assessment tools.

Keywords: Assessment, Affective domain, and convergent parallel design

Introduction

The majority of Nigerian students does not possess the values, abilities, competencies, attitudes, and knowledge necessary to effectively contribute to long-term national development because of the country's educational system. This is crucial since our educational system has frequently fallen short of what are considered to be best evaluation procedures (Asuru, 2017, Asuru & Ogidi 2014). Teaching and learning assessment must be organically woven together for our educational system to promote progress. Additionally, the majority of graduates do not integrate well enough into the world of employment due to their inadequate or low level of education and connectivity with industry and the private sector. Nigerian education has not been able to produce the required level of technology proficiency and innovation inclination. This reveals that the majority of our students and learners across all educational levels are not obtaining the essential knowledge, skills, competencies, values, and attitudes that will aid in their self-realization and ultimately enable them to make the greatest possible contribution to the growth of the country. As a result, they are denied the

opportunity to receive a top-notch education that would have allowed them to improve society.

For a very long time, educational systems all over the world have been extremely concerned with the procedures for determining, assessing, and monitoring students' learning results. Determining the degree of learning that has (or is) occurring has become increasingly crucial throughout time, having an impact on both educators in general and evaluators in particular. Without educational assessment, there would be no teaching profession. It explains the procedure the teacher uses in the classroom to gauge each student's performance on assessment tasks, whether in a group or individually, using a variety of assessment techniques, in order to gauge how well each student is meeting the desired learning objectives (Alkharusi et al., 2012). In general, assessment is the act of gathering measuring data and arranging it in a comprehensible way so that judgment (evaluation) may be formed based on it. It entails comparing data and relating measuring data to established standards (Asuru, 2019). Assessment is the main goal of the educational ecosystem. It comprises all of the techniques for acquiring information required to make

judgments about the learner, the instructor, the instructional process, the curriculum, the school, educational policy, and society at large, according to Afemikhe, et. al. (2016). In order to understand, improve, and adapt teaching and learning, it collects and analyzes data, making it a powerful tool for communicating educational expectations and progress (Asuru & Ogidi 2014).

As a result of this, assessment is rightfully seen as an integral component of daily life in the classroom. This is due to the fact that assessment permeates every teaching/learning interaction, whether it be directly or indirectly, formally or informally, or even consciously or unconsciously. It can be challenging to distinguish between teaching and assessment, as is evidenced by a critical examination of any classroom (Asuru, 2017, Asuru & Spencer 2018). As aptly noted by Odinko (2014), the major steps in classroom assessment process are; identifying the performance objectives; identifying assessment procedure; identifying assessment techniques; judgement formation; and grade and grading.

Generally, classroom assessment covers a wide range of activities that are centered on the daily chances and interactions that let teachers gather data on students' understanding and application of material in order to enhance both teaching and learning. This forms the ordinary course of classroom work that is different from end of programme assessment exclusively used for certification, placement and the like. There are varied tools/methods used in the classroom to assess the extent of learning. The major methods include questioning, observation, project, non-verbal cues, class test, spot test, demonstration, interview, discussion, portfolio and assignment. It has become essential to implement a comprehensive system reform to achieve the level of school quality because of the underlying distortions in our educational system, which are mostly the result of a subpar evaluation regime. A school's effectiveness in developing, instilling, or imparting the necessary skills, values, knowledge, attitudes, and competencies on the learner is defined as the nature of classroom interactions and processes that each student experiences. Quality education leads to

improved school performance, which in turn is the outcome of creative assessment practices.

As it aspires to promote quality education to attain the central role of education in sustainable national development, the issue of quality evaluation is crucial in bringing about the essential paradigm change in our educational system. Also worth noting is the relationship between high-quality evaluation and high-quality instruction. In essence, quality evaluation encourages quality education, which in turn creates the appropriate form of human capital that can trigger the growth-promoting externalities required for national development (Asuru, 2017). A dramatic paradigm shift in our assessment enterprise is required to accomplish it.

Asuru (2017) promoted a psycho-legal convergence model that will establish a cutting-edge assessment mechanism in light of this. In order to create mechanisms that would contextually reposition assessment for improved school quality, the psycho-legal convergence model integrates psychometric, psychological, pedagogical, and legal frameworks (Asuru, 2017). As illustrated in Fig. 1, it is an eclectic design that, in order to better assessment, functionally combines, integrates, and aggregates the necessary test-based, personality, teaching, learning, and legal procedures.

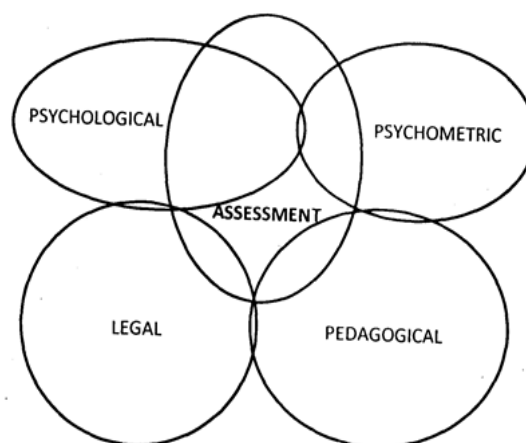


Figure 1: A Psycho-Legal Convergence Model

Our educational system has historically placed an undue emphasis on the cognitive domain at the expense of the affective and psychomotor domains when it comes to teaching, learning, and assessment. A shift from the current cognitive-based teaching, learning, and assessment to a more inclusive integrated and robust assessment system that will produce a total personality, capable of inducing and driving quality in our education system, is necessary for our education to play a pivotal role in national development. Based on this idea, Asuru (2010) argued for the integration of the three behavioral domains in teaching, learning, and evaluation. Since the cognitive and psychomotor objectives include certain affective components, learning is anticipated to result in both cognitive and affective changes (Asuru, 2015). In order for the educational opportunities provided to students to produce the intended outcome, there must be a fine blending (integration) of all three domains—a blend that will appropriately equip the person to tackle the difficulties of his environment. His emotional state, for example, has a direct bearing on both his attitude toward and interest in mastering a certain skill or profession. According to Nwachukwu and Ogudo (2014), a learner's passion is a major factor in determining whether or not he will devote his entire personality to mastering a certain skill. The same holds true for values that influence decisions about behavior, attitudes, and preferences. They serve as indicators of what a person values and strives to achieve. These give the necessary learning incentive (Asuru, 2010). The Walker Centre for Teaching and Learning (nd) underlined once more that it is instructive to manage evaluation at three broad levels: assessing learners' attitudes, self-awareness, and reactions to instructions, as well as assessing their knowledge and abilities connected to the course. The topic of soft skills has become relevant in assessment based on this concept. Soft skills are relatively recent additions to the literature on the affective domain. They are a group or collection of behaviors, manners, beliefs, attitudes, or personality traits that contribute to outstanding academic performance and make a student easy to deal with. Taxonomically speaking, soft skills are a group of abilities that relate to self-

management, planning, and organizing as well as communication and teamwork.

Affective assessment practices involve evaluating and measuring students' attitudes, values, beliefs, and emotions to gain insight into their social-emotional development and well-being. These practices go beyond traditional academic assessments and focus on assessing the affective domain of learning. According to Nwachukwu and Ogudo (2014), it involves encouraging students to reflect on their own emotions, attitudes, and values related to their learning experiences. These assessments can provide valuable insights into students' motivation, engagement, and overall well-being. Also, actively observing and noting students' behaviors, interactions, and expressions during classroom activities, discussions, or group work. This allows teachers to assess students' social skills, emotional regulation, and overall engagement. Nwachukwu and Ogudo (2014) noted that affective assessment also include engaging in one-on-one or small group interviews with students to discuss their attitudes, values, and emotions related to specific learning experiences. These discussions give the students a more intimate and participatory platform to communicate their ideas and emotions.

Assessing how well teachers comprehend and use tests that gauge students' attitudes, values, beliefs, and emotions is part of assessing teachers' perceived competency in affective assessment procedures. It focuses on the teacher's capacity to monitor and encourage the social-emotional growth, motivation, and general wellbeing of the students. Nwachukwu and Ogudo (2014) findings showed that most teachers do not evaluate all of the aspects of learning but instead only focus on the cognitive aspect at the expense of other areas. This is also in line with Adetayo's (2008) findings that secondary school students' cognitive abilities are more highly valued by teachers than their affective and psychomotor abilities. It is in the light of this that the study tends to assess teachers perceived skills in affective assessment practices in secondary schools.

The study assesses teachers perceived skills in

affective assessment practices in secondary schools. Specifically, to:

1. investigate the knowledge of teachers towards affective assessment instrument.
2. find out how frequently junior secondary school teachers use affective assessment tools.
3. find out the challenges of teachers in the usage of the affective assessment instruments in secondary schools.

Research Questions

1. What is the knowledge of teachers towards affective assessment instrument?
2. How frequently does junior secondary school teachers use affective assessment tools?
3. What are the challenges of teachers in the usage of affective assessment instruments in secondary schools?

Hypotheses

1. There is no significant difference in the level of male and female teachers' knowledge in affective assessment practices.
2. There is no significant difference in how frequently junior secondary school male and female teachers use the affective assessment tools.
3. There is no significant difference in the challenges of male and female teachers in the usage of affective assessment instruments.

Methodology

Convergent parallel mixed model research design was used for the study. According to Creswell and Plano Clark (2011), convergent parallel design involves taking qualitative and quantitative analysis, comparing or linking them, and then interpreting the results. When using this strategy, researchers typically collect both types of data at the same time, give each method equal weight, maintain the independence of the data analysis, combine the results during the overall interpretation, and look for convergence, divergence, contradictions, or relationships between the two sources of data.

The population consist of 1,888 junior secondary school teachers in Obio Akpor LGA, Rivers State made up the study's population. For this study, 400 junior secondary school teachers made up the sample size. According to Krejcie and Morgan (1970), a sample size of 380 is needed for populations under 50,000. The multistage sampling technique was employed to determine the study's sample size. First, nine schools were selected among the 27 junior secondary schools using a basic random sample procedure. Each of the nine schools had a sample taken using proportionate sampling. Finally, the instrument will be given to the teachers and schools that have been chosen using the convenience sampling technique. 383 of the 400 questionnaires that were given out were immediately collected from the respondents.

A researcher-designed instrument titled "Knowledge, Usage and Challenges of Affective Assessment Questionnaire" (KUCAAQ) was used. Section A consists of information about the respondents' personal information. The respondents were asked to describe teachers' knowledge of affective evaluation instruments in Section B. This section consists of 7 items which include "I am aware of rating scale", "In my class, students frequently utilize rating scales to score how they feel or how they think they performed". The Session C consist of how frequently secondary school teachers used the evaluation tools which comprised of 4-items. The respondents were asked to describe any difficulties using affective assessment in Section D, this consist of 5 items. The items in section B featured a yes/no dichotomy for responses. Each item in part C was rated on a four-point scale: Always (A), Occasionally (S), sparingly (R), and never (N), whereas section D's elements were rated as Agree (A), Strongly Agree (A), and Disagree (D). The reliability coefficient of 0.87, 0.811 and 0.729 was obtained for knowledge, usage and challenges subscales using Cronbach alpha technique.

By way of enriching and crosschecking data obtained in the questionnaire, a semi-structured teacher interview which used open-ended

questions was designed. It was selected in this study because it is useful in that it provides clues into the reality of teachers' practices, thus filling any gaps that might have arisen from utilizing the questionnaire. Unlike the structured interview which uses questions followed by choices from which the interviewee selects the answer, the semi-structured interview does not provide answers, thus allowing for free individual responses. The interview covers the knowledge, usage and challenges of affective assessment instrument. All in all, the items in the interview are aimed at eliciting answers that will

be compared with answers to questions in the questionnaire. The number of interviewed teachers is eighteen.

Both quantitative and qualitative data were collected concurrently on the spot by aid of research assistance. Two teachers each from the selected nine schools were interviewed. For the research questions, simple percentages, mean, and standard deviation was used. The hypotheses were tested using the chi-square and independent t-test at the 0.05 level of significance.

Results

Table 1: Frequency and percentage of knowledge of teachers towards affective assessment instrument

S/N	Items	Yes	No
	Problem-solving/Communication Rating Scale	F(%)	F(%)
1.	I am aware of rating scale	133 (34.7)	250 (65.3)
2.	In my class, students frequently utilize rating scales to score how they feel or how they think they performed.	149 (38.9)	234 (61.1)
3.	The opportunity to self-report cooperative performance on a scale from 1 (bad) to 10 (excellent) is given to students.	127 (33.2)	256 (66.8)
	Journaling		
4.	Students write down their thoughts and feelings as they reflect on an action or learned concept in a notebook.	123 (32.1)	260 (67.9)
5.	Students talk about how they feel about challenges, fun, accomplishment, and teamwork.	82 (21.4)	301 (78.6)
	Checklist		
6.	I am aware that a checklist can be used to determine whether a particular behavior was present during a performance.	40 (10.4)	343 (89.6)
	Rubrics		
7.	Students are assessed on specific strengths and weaknesses.	78 (20.4)	305 (79.6)
	Overall percentage	105 (27.3)	278 (72.7)

According to table 4.1 result, 65.3% of teachers are not familiar with the rating scale, demonstrating that they lack adequate knowledge of affective evaluation tools. Students are not permitted to rate their own cooperative performance on a scale from 1 (poor) to 10 (excellent), according to the majority of teachers (66.8%). Additionally, 89.9% of the respondents were unaware that checklists might be used to determine whether a particular behavior was present during a

performance. However, only 27.3% of respondents asserted to have sufficient knowledge of the affective evaluation tool. The participants also admitted to having little awareness of affective evaluation techniques, but they did mention different assessment methods. "I do not understand what affective assessment mean" a teacher remarked. Additionally, the respondents mentioned that they primarily employ cognitive-based evaluation.

Table 2: Frequency of how junior secondary school teachers use the affective assessment tools

S/N	Items	Always	Most times	Sometimes	Never
1.	Problem-solving/Communication Rating Scale	29 (7.6)	118 (30.8)	140 (36.6)	96 (25.1)
2.	Journaling	30 (7.8)	84 (21.9)	146 (38.1)	123 (32.1)
3.	Checklist	18 (4.7)	96 (25.1)	138 (36.0)	131 (34.2)
4.	Rubrics	30 (7.8)	91 (23.8)	88 (23.0)	174 (45.4)

Table 2 reveals that only a relatively small percentage of respondents, 30.8% always employ affective assessment techniques. 32.1% of the teachers never used journaling, and very few do. Comparably, 34.2% of teachers never utilize affective assessment tools, compared to 36.0% who occasionally use checklists to evaluate students' affective domain. The majority of teachers, 45.4%, do not use rubrics. As a result, the respondents rarely make use of

affective assessment tools. The results of the interview provided support for this finding. The affective assessment tools are allegedly only occasionally used, according to all the interviewees. All interviewees cited that administrative factor attribute to the rate in which students are tested. For instance, a teacher claimed that she neglected the students' affective domain because "the administration requires test scores, so we administer tests."

Table 3: Challenges of teachers in the usage of affective assessment

S/N	Items	Mean	Standard deviation	Remarks
1.	Limited time allocation	3.11	0.76	A
2.	Lack of training	2.84	0.64	A
3.	Low remuneration	3.04	0.50	A
4.	Assessing overcrowded classes	3.47	0.26	A
5.	Scoring of students' affective assessment	2.66	0.83	A
	Grand mean	3.02	0.60	

*A stands for Agree

Table 3 highlights the challenges that teachers most frequently encountered when using affective assessment techniques. The majority of respondents agreed that the mean scores for the most common challenges teachers encountered in their classroom assessment practices were limited time allocation (3.11), a lack of training (2.84), low pay (3.04), assessing crowded classes (3.47), and scoring students' affective assessments (2.66). All the standard deviation values were less than 1.00, demonstrating that no responses deviated significantly from their mean scores.

The lack of time and crowded classrooms were also mentioned as obstacles to the adoption of the affective framework of evaluation by every interviewee. However, other intriguing impediments that were brought up have to do with assessing skills. Teachers haven't had any training in doing this kind of assessment, according to one teacher, while a second respondent brought up the problem of rewards and motivation for teachers, asking: "How do you expect teachers with financial constraints to perform their job well?" he said. The students' lack of motivation was another obstacle.

Table 4: Summary of analysis on difference in the level of male and female teachers' knowledge in affective assessment practices

VARIABLE	N	Df	$\chi^2_{cal.}$	p-value	Level of Sig.	$\chi^2_{crit.}$	Decision
Male	178	1	1.474	0.371	0.05	3.89	No Significant
Female	205						

Table 4 revealed that the χ^2 cal is 1.474 with $df = 1$ and $p > 0.05$. The obtained p -value of 0.371 is greater than 0.05, therefore the null hypothesis that there is no significant difference in the level of male and female teachers' knowledge in affective assessment practices is accepted.

Table 5: z-test analysis in the frequency with which male and female junior secondary school teachers use the affective assessment instruments

	VARIABLES	N	Mean	Std. Deviation	Df	Z-cal	Zcrit	Level of Sig.	Decision
Assessment	Male	178	2.57	0.43	381	1.534	1.960	0.05	Not Significant
	Female	205	2.53	0.40					

The results in Table 5 show that male and female teachers had mean scores of 2.57 and 2.53 respectively. Their scores have standard deviations of 0.43 and 0.40, respectively. However, it was discovered that the estimated z -value of 1.534 is less than the z -critical value of 1.960 at the 0.05 level of significance, therefore

the null hypothesis is accepted when this mean difference was subjected to an independent z -test statistics. As a result, there is no significant difference in the frequency with which male and female junior secondary school instructors use the affective evaluation instruments.

Table 6: z-test analysis in the challenges of male and female teachers in the usage of affective assessment instruments

	VARIABLES	N	Mean	Std. Deviation	Df	Z-cal	Zcrit	Level of Sig.	Decision
Assessment	Male	178	2.49	0.14	381	0.317	1.960	0.05	Not Significant
	Female	205	2.53	0.54					

The mean scores for male and female teachers are 2.49 and 2.53, respectively, according to Table 6 results. Their scores have standard deviations of 0.14 and 0.54, respectively. However, it was discovered that the estimated z -value, which is 0.317, is less than the z -critical (1.960) at the 0.05 level of significance, therefore the null hypothesis is accepted when this mean difference was subjected to an independent z -test statistics. The challenges faced by male and female teachers using affective assessment tools in secondary schools are therefore the same.

Discussion of Findings

The results indicated that teachers lack adequate knowledge of affective assessment instruments, because most of the teachers are unaware of the rating scale. Also, most of the teachers said that it is not permitted for students to rate their own cooperative performance on a scale. As a result, the respondents rarely make use of affective assessment tools. This is consistent with Nwachukwu and Ogudo (2014) findings that

there are significant difficulties in implementing assessment across the three domains and that the majority of teachers only pay attention to the cognitive domain. Similarly, Nwachukwu and Ogudo's (2014) findings showed that most teachers do not evaluate all of the aspects of learning but instead only focus on the cognitive aspect at the expense of other areas. As a result, teachers do not involve in effective evaluation of students in all three areas of learning but instead focus solely on the cognitive. This is also in line with Adetayo's (2008) findings that secondary school students' cognitive abilities are more highly valued by teachers than their affective and psychomotor abilities. The educational possibilities offered to students must carefully blend (integrate) all three domains in order to achieve the desired result—a blend that will adequately prepare the individual to face the challenges of his environment. In order for our education to play a key role in the development of the country, it is necessary to move away from the current cognitive-based teaching, learning, and assessment methods and move toward a more inclusive, integrated, and robust

assessment system that will produce a total personality capable of inducing and driving quality in our educational system. Based on this idea, Asuru (2010) argued for the integration of the three behavioral domains in teaching, learning, and evaluation. More specifically, the interviewees claimed to have little familiarity with affective assessment techniques. "I do not understand affective assessment mean," a teacher remarked. The respondents and interviewees acknowledged that their assessment processes fell short of being fully thorough and acknowledged that there were some challenges to the application of affective assessment. They said that these challenges were limited to big classrooms, a lack of time, and inadequate training. Teachers haven't had any training in doing this kind of assessment, according to one teacher, while a second respondent brought up the problem of rewards and remuneration for teachers, asking: "How do you expect teachers with financial constraints to execute their job well? A barrier that results in a drop in motivation.

Conclusion

This study made attempts to pinpoint teachers assessment practices that focus on the classroom and their understanding of affective assessment skills. Assessment results must be integrated into lessons for them to be effective. Therefore, it is likely that putting such an affective model into practice will improve instruction and student learning. Students are guided blindly through the teaching and learning process by teachers with weak assessment literacy skills, who are more likely to harm than benefit them. As a result, teachers need the appropriate training in assessment-related issues in order to perform their responsibilities as effectively as possible. Without support, such as professional development, it is uncommon for someone to master solid assessment techniques. If educators desire meaningful change, they must give up their tried-and-true, antiquated teacher-centered approaches.

Recommendations

1. Teachers should undergo training so they may become familiar with and try out various affective assessment instruments.
2. Teachers should employ as many different forms of assessment as they can to find different aspects of intelligence.

3. To prevent crowded classrooms, stakeholders should provide adequate physical infrastructure.

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