CONSTRUCTION AND VALIDATION OF AN INSTRUMENT FOR EVALUATING TEACHING QUALITY IN OGUN STATE SECONDARY SCHOOLS, NIGERIA.

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Abstract

This study sought to develop and validate an instrument for evaluating teaching quality in senior secondary schools in Ogun state, Nigeria. Instrumentation research design was adopted for this study. The population of the study comprised all Senior Secondary Two (SS2) students in Ogun State. Stratified sampling was used in selecting SS2 students and the teachers from all the 20 educational blocks in Ogun state. A total of 1580 students from the public schools were used for the study. Two research questions and two corresponding hypotheses were formulated to guide this study. The data collected were analyzed using descriptive and inferential statistics. The hypotheses were tested at 0.05 level of significance. Following the items development and validation process, two instruments were developed which are extracted from various related literature; Student Evaluation of Teaching Quality Questionnaire; for students' assessment of their own learning effectiveness and Teaching Quality Assessment Questionnaire; for evaluating teachers teaching quality by external evaluators (Quality Assurance Personnel). The hypotheses were tested using exploratory factor analysis for hypothesis 1, test -retest reliability for hypothesis 2. The result obtained includes; norms, for the participants' male and female (students and teachers) in the schools, high construct validity and reliability coefficient when compared with other standardized.

Keywords: *Construction, Validation, Instrument, Evaluation, Teaching Quality*

Introduction / Background

Teaching is in no doubt one of the complex and most demanding profession. It is a profession that requires creativity y and innovation. No educational system would achieve quality teaching without having quality teacher. Therefore, the quality of education at any level depends on the teachers and quality of teaching they give (Owoyemi and Adesoji, 2012). Learner centered teaching is regarded as the central issue of the 21st century. Consequently, the most powerful and engaging aspects of learning and students' collective experiences need to be backed up with the services of highly qualified teachers with the ability to deliver quality teaching (Tomlinson 2004). The teacher's ability to give quality teaching and make impact in the learners is one of the most important factors that affect learning (Ogbonnaya, 2008). This is because the quality of their teaching can either facilitate or hamper students' learning.

Teaching quality can be defined as the extent to which the teaching activities fulfil what it intends to accomplish in terms of objectives, purposes and functions. Practically, it constitutes a set of actions and activities that improve student outcomes. (Lloyd, Wittenstein, & Swanson, 2011). Maurli (2014) asserted that teaching quality is the effectiveness of the teaching force. According to Catano & Harvey, (2011), there are basically nine teaching quality competencies identified, these are

communication, availability, creativity, individual consideration, social awareness, feedback, professionalism, conscientiousness `and problem solving.

Good teaching means teaching that conforms with the moral and rational principles of teaching practice, which invariably means that the content being taught meets the standards of the discipline in terms of both adequacy and completeness. The method used also is in accordance with the age, students' learning style and geared towards involving the capabilities of students associated with the content being taught. Quality teaching therefore becomes the foundation of good teaching which exemplifies the teacher expertise. Thus, good teaching could be observable when direct instructional model of teaching is ongoing. Successful teaching is teaching that produces the desired outcomes thereby giving students opportunity to acquire skills, knowledge and understanding at acceptable and reasonable level when they are engaged in the classroom. Teaching quality can be evaluated and assessed using (1) self-report, (2) peer report and (3) student report among others. Over time, student rating has dominated as the primary methods of measuring teaching quality (Bergstrand & Savage, 2013). Student evaluation of teaching quality is important when related to subject organization, impact of the teaching on their own learning, teacher's delivery and personality and not for evaluating content appropriateness of teaching goals and objectives (Berk, 2005).

Statement of the Problem
In the recent times, the evaluation of teaching quality especially at the secondary school level is becoming a major concern. The existing system of evaluating teaching quality has always viewed the students' test scores as the resultant impact of quality teaching. This system of evaluation has failed to address quality of teaching in the light of how much students learn and are involved in their own learning. If the need for evaluating the quality of teaching is to address its impacts on students' learning outcome in terms of how it improves learning, how students learn and how they are involved in their own learning, then the predetermined system of evaluating teaching which focuses on standardized test scores and students' results after test and examinations may not be much appropriate in addressing the issue of holistic learning. Considering this therefore, it is expected that this instrument should be improved in order to provide the students with the opportunity to evaluate teaching quality in terms of how teaching facilitate their own learning.

Research Questions
1. To what extent will the Teaching Quality Evaluation Instrument have high coefficient of concurrent validity?
2. Will gender difference in the students' evaluation of teaching quality be significant?

Research Hypotheses
1. The Teaching Quality Evaluation Instrument will not yield significantly high coefficient concurrent validity.
2. There will be no significant gender difference in the evaluation of teaching quality by the participants.

1. Student Assessment of Teaching Quality Questionnaire
This is made up of 20-items on a 4 – points Likert scale, designed by the researcher. This instrument is designed to determine the student's opinion and perception on teaching quality considering how much they learnt and were involved in the teaching process. The students are expected to assess the

quality of teaching delivered by a teacher using this instrument. Specifically, to determine how involved and how much students learnt during the teaching – learning process.

Sample items are presented following in the table below.

Table 1: STUDENT EVALUATION OF TEACHING QUALITY QUESTIONNAIRE.

Student evaluation of teaching quality	5 SA	4 A	3 D	2 SD
1. My teacher observes when I am not following in the class				
2. My teacher explained the class expectation and procedure before teaching				

2. **Teaching Quality Assessment Questionnaire.**

This is a rating scale designed by the researcher with use of related literatures to assess the quality of teaching. It consists of 30-items divided into six phases A (establishing a culture of learning), B (Instructional Quality and delivery), C (Managing Classroom Procedure), D (Content Pedagogical Knowledge), E (Presentations/ Instructional Resources) and F (Using Questioning as an Assessment Technique in Instruction). It is designed on a 4 – point Likert scale (Excellent, Satisfactory, Fair, Unsatisfactory). This instrument is to be used by the quality assurance team, principal or other school management board in assessing the quality of teaching being delivered by teachers. Sample of items are presented in Table 2 following

Table 2: Teaching Quality Assessment Questionnaire

A. Establishing a culture for learning	4 Excellent	3 satisfactory	2 Unsatisfactory	1 Poor
1. The teacher sets realistic expectation for the students learning				
2. The teacher's classroom interaction supports students learning				

The data collected from two instruments were treated statistically using both descriptive and inferential statistics. All hypotheses were tested at 0.05 level of significance. Descriptive statistics was used to show means, standard deviation and standard scores for norms and testing of the hypotheses. Two null hypotheses were formulated to guide the research. The frequency, percentage distribution, means and standard deviation was used to describe the demographic variables while Hypothesis 1 was tested using factor Analysis and Hypothesis 2 was tested using Test Retest Reliability test.

Table 2 Descriptive of statistics of the respondents.

Distribution	Frequency (N)	Percentage (%)	mean	SD
Gender Student				1.44
				0.49
Male	876	55.4		
Female	704	44.6		
Total	**1580**	**100.0**		
Age				1.56
				0.64
16 years and below	820	51.9		
17 to 18	630	39.9		

19 and above	130	8.2
Total	**1580**	**100.0**
Gender of Observed Teachers		1.36	0.48
Female	35	66.07
Male	21	33.92
Total	**56**	**100.0**

Source: Field work.

The evidence from table 2 shows the demographic characteristics of the respondents. The results show that about 55.4% and 44.6% are male and female student's respondents that participated, with mean and standard deviation of 1.44 and 0.49 respectively of which 51.9% are ages of 16 years and below, 39.9% are 17 to 18 years of age while 8.2% are within the ages of 19 and above years of age of mean of 1.56 and standard deviation of 0.64. It further shows that the total observed teachers for the instruments are 56 of which 35(66.07%) are female and 21(33.92%) are male with mean of 1.36 and 0.48

Testing of Hypotheses
Hypothesis Three: Teaching Quality Evaluation Instrument will not yield significantly high coefficient concurrent validity

Table 8: Pearson Product Moment Correlation showing the Concurrent and Predictive Validity of the Observation Instrument of Teacher and the Student Instrument.

Instruments	N_1	N_2	$\bar{X}_1$	$\bar{X}_2$	SD_1	SD_2	Test retest	
							r-cal	p-val
Teachers	28	28	59.30	58.00	15.87	15.48	0.568	0.04
Students	790	790	31.63	31.83	6.33	6.13	0.020	0.76

Significant at p<0.05

Table above show that r-cal of 0.568 and 0.020 is significant for the teaching quality instrument at p(0.004<0.05), while r-cal of 0.020 is not significant at p(0.05<0.76), hence the null hypothesis is rejected for the teaching quality observation instrument and accepted for the student instrument. Thus, Teaching Quality Evaluation Instrument will yield significantly high coefficient concurrent validity for the teaching quality observation instrument. This statistically explains that the students do not much skill in measuring or evaluating teaching quality.

Hypothesis Four: There will be no significant gender difference in evaluating teaching quality.

Table 9: Independent sample t-test showing the gender difference on the student instrument and the observation instrument.

Group	Gender	N	Mean	Std. Dev	Df	t-cal	p-val	Remark
Student	Female	876	31.2820	6.07019	1578	3.25	0.001	Sig.
	Male	704	32.3054	6.39694				
Teachers	Female	40	61.45	15.43	54	2.10	0.04	Sig.
	Male	16	52.76	14.63				

Table 9 shows that a calculated t-value of 3.53 resulted in the gender difference in students teaching quality instrument at df of 1578 and 54 respectively for the student and teaching quality instrument

which is significant when compared with the critical t – value of 1.96 given 1578 degrees of freedom at 0.05 level of significance.

Similarly, a calculated t-value of 2.10 resulted as the difference in teachers teaching quality instrument due to gender, which is equally significant when compared to the critical t- value of 2.00 given 54 degrees of freedom at 0.005 level of significance. The null hypothesis was rejected and thus there is a significant gender difference in evaluating teaching quality. This indicates that some students evaluate teaching quality based on the gender of their teachers

Discussion of findings.

Hypothesis one states that Teaching Quality Evaluation instrument will not yield significantly high coefficient concurrent validity. This finding agrees with Oni (2010) in his study that instructional format provided by the teacher seems to be the medium of effective learning and that good teaching makes learning more meaningful. He went further to affirm that while good teaching helps the learner to learn more quantitatively and qualitatively, poor teaching would lead to poor learning and hence poor performance. The research has clearly shown that quality teaching matters to student learning. (McCaffrey, Lockwood, Koretz, & Hamilton, 2003; Rivkin, Hanushek, & Kain, 2000; Rowan, Correnti & Miller, 2002; and teacher effects on student learning have been found to be cumulative and long- lasting.

Hypothesis two states that there will be no significant gender difference in the evaluation of teaching quality by the participants. The findings in this study agrees with (Centra & Gaubatz, 2000) in their study involving gender and student teacher perception found that females with male teachers reported a significantly less favorable overall impression of their teachers (Cromie, Pyke, Silverthorn, Jones, & Piccinin, 2003). Centra and Gaubatz, 2000 reportedthere might be some gender differences mostly with females evaluating female teachers, the effects sometimes are minimal and most likely caused by differences in teaching style.

Conclusion

Based on the preceding discussion, the following conclusions were drawn:

1. The teaching quality Evaluation instrument will not yield significantly high coefficient concurrent validity, this indicates that quality teaching matters a lot, which means that the quality of teaching the teacher provides helps in improving the students learning experience.
2. There will be no gender difference in the evaluation of teaching quality by the student. This indicates that there is sometimes gender difference especially in the female students evaluating female teachers, it shows that female students tend to evaluate the female teachers higher than the male teachers.

Recommendation

Based on the findings of this study, the following recommendations are put forward for consideration:

There is need to constantly expose the teachers to relevant and up to date trainings, seminars and workshops and other courses to enhance their skills thereby increasing their ability to offer quality teaching while growing their expertise in the profession.

There is need to sensitize the students on how to evaluate teaching, specifically considering how much they have learnt from the teaching given and not just on the behaviour or gender of the teacher.

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