



## Assessment of UBE Teachers' Competence and Practice of Measurement of Non-Cognitive Domains in Assessing Upper Basic Students in Bauchi State, Nigeria

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### ABSTRACT

*This study assessed the UBE teachers' competence and practice of measurement of Non cognitive domains in assessing Upper Basic Students in Bauchi State. Three objectives were drawn which sought to determine the teachers' level of competence and practice, gender difference in the competence and practice and also difference in the competence and practice relative to teachers' qualification. An Expost facto research design was adopted and a total of 4584 served as population out of which a sample size of 360 was drawn and used. A researcher-developed instrument was applied on the subjects which proved to have a reliability index of 0.89. T-test and Analysis of variance were used as a inferential statistics for test of hypotheses while means and standard deviation were used as the descriptive statistics to answer research questions. The findings of the study revealed that UBE teachers in Bauchi State have average level of competence and practice of measurement of the non-cognitive domain. It was also found that there was no significant gender difference in UBE Teachers' competence and practice of measurement of non-cognitive domain. Based on this, it was recommended among others that governments at different levels should organize trainings and retraining of teachers through seminars, conference and workshops.*

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### INTRODUCTION

Assessment is an integral component of educational systems conducted at practically all levels of schooling. It is a form of evaluation that plays a significant role, especially in decision making about school programme. In education, assessment is an essential and a continuous process that forms the basis for all educational activities and serves a variety of functions such as feedback, placement, guidance and diagnosis. For example, it may be used in order to

measure students' attainment at the end of a course or study programme; evaluate diagnostically students' academic achievement and/or learning difficulties; evaluate students' aptitude, possibly for the purpose of assigning them to different courses or teaching set; evaluate the effectiveness of an educational programme or curriculum.

Assessment is a means whereby the teacher obtains information about knowledge gains, behavioural changes and other aspects of the development of



learners (Ogunleye, 2002). It involves deliberate effort of the teacher to measure the effect of the instructional process as well as the overall effect of school learning on the behaviour of students. It covers all aspects of school experience both within and outside the classroom. More so, it covers the cognitive as well as the affective and psychomotor aspects of learning.

However, not too many teachers are aware of the specific rules and regulations (guidelines) governing the conduct of assessment practices. The principles are left mostly in books and for those in the areas of measurement (theoretically treated in classrooms) but practically absent in schools. Knowledge of assessment techniques is an indispensable tool for any teacher/lecturer anywhere. Unfortunately, a very significant proportion of school teachers, especially at Upper Basic level, lack the necessary competence in assessment techniques in spite of the fact that tests and measurement is a compulsory course for all those trained to become teachers".

In Nigerian schools today, assessment of students' level of cognition has become the order of the day in our routine assessment practices. For example, based on experience, many students normally finish a two (2) hour paper in less than forty (40) minutes and end up getting good grades. Consequently, this could be attributable to the nature of questions, especially where most of the questions require students to list, mention, identify, enumerate, and the likes, which are more of testing lower order cognition. In fact, majority of teachers test students' ability to comprehend what they were taught with little or no emphasis on interest, attitudes, feelings, values, norms and or motor coordination.

### **Objectives**

The objectives of this study are:

1. To find out if there is gender difference in UBE teachers' competence and practice of measurement of non-cognitive domain in Bauchi State.
2. To find out if there is difference in UBE teachers' competence and practice of measurement of non-cognitive domain based on qualification.

### **Research Questions**

1. What is the level of UBE Teachers' Competence and Practice of the measurement of non-cognitive domains of behavior?
2. Is there any gender difference in the UBE teachers' competence and practice of measurement of non-cognitive domain in Bauchi State?
3. Is there significant difference in UBE teachers' competence and practice of the measurement based on qualification?

### **Hypotheses**

- HO1: There is no significant difference in UBE teachers' competence and practice of measurement of non-cognitive behavior based on gender.
- HO2: There is no significant difference in UBE teachers' competence and practice of measurement of non-cognitive behavior based on qualification.

## **REVIEW OF RELATED LITERATURE**

### **Conceptual Background**

This study revolves around the concepts of measurement of non-cognitive domains of behavior in continuous assessment practices. Based on this, the following concepts are reviewed:



### **Concept of Assessment**

The concept of assessment/examination is one of the most often heard words in any school setting. In view of the above, understanding the concept makes construction, conduct, administration/implementation and interpretation of the result of assessment/examination easier. For example, to some, assessment means a summative "mark or score awarded to the final examination to certify students". Some believe it to be a diagnostic and formative evaluation of students learning. Accordingly, Lawal (2011) asserted that assessment is the process of setting and planning of data for investigating the status of an individual or group usually with reference to expected outcomes. To him, it is a method of obtaining information on what students gain from schooling in terms of knowledge, industry, and character training. This was supported by Okwudire (2005) viewing assessment a systematic collection of data that give information about individual. It takes into account students' performance in test, assignment, project and other educational activities during a given period of educational pursuit. That is to say, it is a process of evaluating evidence of students' learning goals or the procedure by which evidence of expected behavior is collected with the aid of tests and some other tools or method.

### **Assessing Non-Cognitive Domain of Behavior**

Human behavior is divided into three domains: the cognitive, affective and psychomotor. The affective and psychomotor domains taken together are commonly referred to as the non-cognitive domain.

Traditionally, teachers have been more concerned with measuring

achievement and the mental ability of students which constitute the cognitive domain. However, the introduction of the Continuous Assessment (CA) scheme has drawn attention on the importance of assessing other aspects of human behavior in the non-cognitive domain such as interests, attitudes, social skills, physical and manual skills, values, belief etc. This is because if teachers are to help each child achieves his/her potentialities and become well-adjusted member of his/her society they need to understand him/her in totality, hence calls the need for assessing all the three domains of behavior.

### **Assessment of Affective Behaviour**

Affective behavior deals with emotions, that is feelings such as anger, fear, sadness, pleasure, hatred, love etc. It refers to the learner's internalization of emotions as values, beliefs, interest, attitude etc.

### **Techniques of Assessing Affective Behaviour**

There are four major techniques of assessing affective behavior. Each employs a variety of instruments or procedures. These techniques are:

1. Observational Techniques; anecdotal records, checklists and rating scales.
2. Self-report Techniques: Interest inventories, attitude scales, interview, questionnaire.
3. Sociometry
4. Projective Techniques

### **Assessment of Psychomotor Behaviour or Skills**

Psychomotor skills refers to the ability to coordinate the use of the large muscles of the body (located in the arms and legs) and the small or fines muscles (located in the fingers and toes) Yoloye (1984). Psychomotor skills are grouped into



two: Physical skills and manipulation skill. Physical skills also known as motor skills involve body movements and aim at fitness of the body. Examples of physical skills include jumping, running, swimming, wrestling, pole vault, weight lifting. These are mostly of interest to the Physical and Health Education Teacher.

Manipulative skills involve coordination between thought and motor activities such as ability to serve a tennis ball, writing and drawing, making a dress, giving a speech etc. these skills have more relevance to larger number of teachers than physical skills.

#### ***Techniques of Assessing Psychomotor Skills***

Psychomotor skills are assessed using a variety of instruments. Some of these instruments such as rating scale and checklists have already being discussed. In addition performance tests are widely used in measuring of psychomotor skills.

#### ***Review of Related Empirical Studies***

In the works of Esere and Idowu (2003) titled *Continues Assessment Practices in Nigerian Schools: A Review*; the results emanating from the student show that the continuous Assessment practices of most of the teachers fall short of being comprehensive inclusive of assessing cognitive, affective and psychomotor domains. Though they were systematic in nature, the results were faulty and deviated markedly from policy guides.

Sa'ad (2010) conducted a study on the implementation of holistic assessment measures among teachers in Ilorin, Kwara State. The study employed a qualitative approach through interview and focus group discussion in data collection involving 500 samples teachers. The finding revealed that 90% of the sampled teachers perceived holistic assessment as being useful in assessing students. On the contrary, on 5%

of the respondents admitted to employing the holistic approach. This was interpreted that 95% of the respondents do not factor affective and psychomotor measure into the overall performance of their students.

According to another study by Bassey (2013) on the implementation of the application of best assessment practice on the UBE teachers' characteristics in Cross River, the study revealed that assessment practices were not influenced by gender, socio-economic status, qualification and teaching experience.

#### **METHODOLOGY**

In this study an Ex post facto design was used. According to Kerlinger (1970), Ex post facto design is a research design in which the independent variable or variables have already occurred and which the researcher starts with the observation of dependent variable or variables.

A total of 4585 UBE teachers were used as the total population of the study. However, a sample size of 360 teachers was drawn from the population. This sample was obtained as adopted in the table of sampling by Research Advisors (2005).

A multi-stage cluster sampling technique was used as a sampling technique for the study. A multi-stage cluster sampling according to Gay (2010) is a cluster sampling that involves selection of clusters within clusters.

#### **DATA PRESENTATION AND ANALYSIS**

This chapter deals with the presentation and analysis of data collected from 357 UBE Teachers in relation to the hypothesis tested. However, it comprises the data presentation, analysis, discussion of findings and summary of results.

#### ***Data Presentation and Analysis***

The responses obtained has been presented and discussed as follows:



**Research Question 1:** What is the level of UBE Teachers' Competence and Practice of the measurement of non-cognitive domains of behavior?

**Table 1:** UBE Teachers' Level of Competence and Practice of Measurement of Non-cognitive domains of behavior in Bauchi State.

	N	Mean	SD
Knowledge	360	14.90	4.034
Valid N (Displayed)			

The above table showed that the mean and standard deviation scores obtained through the administered instrument (scale) on UBE Teachers' level of competence and practice of the measurement of non-cognitive domain.

**HO1:** There is no significant difference in UBE teachers' competence and practice of measurement of non-cognitive behavior based on gender.

**Table 2:** T-Test Analysis of on the UBE Teachers' Competence and Practice of measurement of non-cognitive behavior based on gender.

Gender	N	Mean	SD	T(cal)	DF	P-Level
Male	292	14.90	3.95	.108	358	.224
Female	68	14.86	4.34			

The result shown above proved there is no significant gender difference in the UBE Teachers' Competence and Practice of measurement of non-cognitive behaviour in Bauchi State. The T-cal (.108) is less than the P-value of 0.224 consequent upon which the null hypotheses is rejected and alternate one therefore preferred.

**HO2:** There is no significant difference in UBE teachers' competence and practice of measurement of non-cognitive behavior based on qualification.

**Table 3:** Analysis of variance on the UBE Teachers' Competence and Practice of measurement of Non-cognitive behavior

Qualification	N	M	SD		
NCE holders/Diploma	189	15.08	4.16		
Graduates	140	14.27	3.73		
Post Graduates	28	16.17	4.15		
Total	357	14.85	4.022		
Sources of Variance	SS	DF	MS	F	P-Level
Between Groups	106.69	2	53.35	3.341	.037
Within Groups	5652.4	354	15.97		
Total	5759.13	356			

The result of the data analysis based on the findings above showed that there is significant difference in UBE

Teachers' level of competence and practice of measurement of non-cognitive domain of behavior based on teachers' qualification.



Those teachers with postgraduate experiences have the highest mean scores 16.17 but based on the qualification of NCE/Diploma holders against that of university degree holders (graduates), the scores obtained were 15.08 and 14.27 respectively. The  $F_{cal}$  (3.41) obtained is greater than the  $P$ -value (0.037) consequent upon which the null hypothesis is rejected.

### SUMMARY OF FINDINGS

The following are the summary of findings drawn from this study:

1. The UBE teachers in Bauchi State have proven to have an average level of competence and practice and measurement of the non-cognitive domains.
2. There is no significant gender difference among UBE teachers in Bauchi State on the basis of competence and practice of the measurement of non-cognitive domain.
3. There is significant difference in UBE teachers' level of competence and practice based on qualification.

### DISCUSSION OF FINDINGS

Based on the findings of this study the first hypothesis tested revealed that UBE teachers in Bauchi State have possessed average level of competence and practice of the measurement of non-cognitive domains. This is in disagreement with the findings of Esere and Idowu (2003) who posited that practices of most teachers fall short of being comprehensive.

The second hypothesis tested revealed that there is no significant gender difference in UBE teachers' level of competence and practice of measurement of non-cognitive domains of behavior. It is in concordance with the findings of Bassey (2013) whose study revealed that

assessment practices were not influenced by gender.

The third hypothesis revealed that there is significant difference in UBE Teachers' competence and practice of measurement of non-cognitive domain of behavior based on qualification. This findings agrees with that of Mahmoud (2017) which showed significant different among teachers in current trend in assessment practices based on teachers' qualification.

### CONCLUSION

Given that the level of UBE teachers' competence and practice in Upper Basic Schools in Bauchi State is found to be average, more seriousness on the part of the government should be focused on refresher courses on continuous assessment in the areas of both theories and practice. The Federal Ministry of Education (1990) had revealed that the C.A is a mechanism through which the cognitive, affective and psychomotor domains of behavior take systematic account of children's performance while in school.

### RECOMMENDATIONS

Based on the findings of the study the following recommendations are offered:

1. Since the finding of the study had revealed that UBE Teachers in Bauchi State have possessed average level of competence and practice of the measurement of non-cognitive domains, more training through seminars, workshops and conferences should be encouraged.
2. UBE Teachers in Bauchi State should be sent for in-service training in order to acquire and obtain the minimum teaching



qualification or other relevant teaching qualification like Postgraduate Diploma in Education (PGDE).

3. It is recommended that more researches should be carried out in this area with a view to exploring more samples and generating more questions while drawing more hypotheses.

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