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## TABLE OF SPECIFICATION AND ITS RELEVANCE IN EDUCATIONAL DEVELOPMENT ASSESSMENT

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**ABSTRACT:** *The study examined the Table of Specification and its Relevance in Educational Assessment. The sample employed for the study is made up of one hundred and twenty (120) students randomly selected from four departments at the Faculty of Education, University of Lagos, Akoka, Nigeria. A questionnaire developed by the researcher was used for the study. Three Research Questions and three null Hypotheses were formulated and tested at 0.05 level of significance using independent t-test of difference and Pearson Product Moment's Correlation Statistical analyses. It was found out that the three hypotheses posited were significant. There was significant difference between Table of Specification and its Relevance in Educational Assessment, positive relationship exists between problems of Table of Specification and its Relevance in the Educational Assessment and there is significant relationship between general pattern of preparing Table of Specification and its Relevance in the Educational Assessment. It was recommended that teachers should endeavor to construct a well test blue print that will help improve the validity of teacher evaluation based on given assessment, teachers must ensure that the test constructed measure an adequate sampling of the class at all level of domains and teachers and students must comply with all the laid down when preparing Table of Specification in schools.*

**KEYWORDS:** Table of Specification, Relevance, Educational Assessment, Test blue print.

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### BACKGROUND TO THE STUDY

As a student have you ever felt that the test you studied for was completely or partially unrelated to the class activities you experienced? As a teacher have you ever heard those complaints from students? This is not an uncommon experience in most classrooms. Frequently there is both a real and perceived mismatch between content examined in class and the material assessed on at the end of chapter /unit test. This lack of coherence leads to a test that fails to provide evidence from which teachers can make valid judgments about students' progress ( Brookharl ,1999). One strategy teacher can used to mitigate this problem is to develop a table of specification. In this paper the writer examined the table of specification and its relevance in Educational Assessment.

Table of specification, sometimes referred to as test blue print, is a table that helps teachers align objectives, instruction and assessment. Notes, Zuelk, Wilson and Yunker (2004) reiterated that this strategy can be used for a variety of assessment methods but is not commonly associated with constructing traditional summative tests. Gregory (2006) Sees table of specification as an activity which enumerates the information and cognitive tasks on which examinees are to be assessed. It is clearly defined as possible scope which laid emphasis of the test and relates other objectives to the content in order to ensure a balanced test items.

Gronlund and Linn (2000) assert that table of specification may be referred to as content of a course or curriculum that can be broadly defined to include both subject matter content and instructional objectives. This simply means the performance of students is expected to demonstrate. Both of these aspects are concerned with content validation. Table of specification as “test blue print” master chart; matrix of content and behavior” prescription; recipe; roadmap” test specification (Bloom, Hasting & Madaus 1971, Mehrens & Lehmann. 1975, Carey 1988; Gredler 1999; Grunlund 2000; Kubiszyn & Borich Ooster 2003.

Mehrens and lehmann (1993) See table of specification as a (blue print) of a test, the content areas to be covered and the relative emphasis to be placed on each areas and instructional objectives. Akem (2006) views the table of specification as a guide to assist a teacher or examiner in the evaluation system. “The table shows the total number of items to be allocated to each instructional objectives, it also suggest what might be covered under each item, take decision on what types of items to be used. In fact the blue – print stage” is the last and crucial stage in an evaluation plan since it enables the teacher to combine properly the objective and the content areas, bearing in mind the importance and the weight attached to each areas.

Akem and Agbe (2003) revealed that table of specification is an outline relating behavior to topics. By it, teacher can determine what topics are being stressed and also assist in the preparation of test that reflect what students have learned and also the limit the amount of time spent on each unit.

Okpala, Onocha and Oyedeji (2003) noted that table of specification enables the test developers to complete the cells in the table and decide the percentage of the total number of items that will go to each of the cell. Ughamadu (2000) stated that a table of specification or test blue print is a device that enables the teacher to arrive at a representative sample of the instructional objectives and the subject matter treated in the class. Thus, once the instructional objectives and the subject matter have been clearly identified, a table of specification is then prepared to link both and also indicate the number of test items to be written for each level of the objective and each subject matter area. He concluded by instructing us how to prepare a table of specifications.

The classroom teacher will decide first on the number of test items or questions he intends to write. Once a decision has been taken on this, the teacher will proceed to preparing the table of specifications by listing the instructional objectives across the top of the table. Then a list of the major subject matter (topics) is written down the left side of the table with the list written, the teacher then indicates number of test items that would be set for each level of objective and each subject matter area. At the bottom and right end of the table, the total number of questions for each subject matter and objective are indicated. But cautioned that, the teacher should note that the relative emphasis that the objectives and subject matter will receive depend on the emphasis given to each of the objectives and each of the subject matter during the period of teaching and learning.

A sample table of specification is shown in Table 1 below.

Table1: Table of specification for a (30) items Economics test for SS2.

	Objectives Remembering	Under standing	Thinking	Total
Consumers behavior & price determination	2	4	3	9
Population	2	2	2	6
Money Inflation	1	3	2	6
Economics Systems	1	2	2	5
Principle of Economics	1	2	1	4
Total	7	13	10	30

From the table, it would be seen that of the five subject matter area, consumer behavior / price determination attracted the highest number of items (that is 9) and the principle of Economics, the least (that is 4). And for objectives the understanding level had (13) items as the highest. The remembering level had the least. The distribution of number of items in each cell (that is for each objective level and subject matter) is a reflection of the emphasis and the importance the teacher attached to these areas. With a table of specification of this nature designed the teacher then proceeds to construct the test items or questions. This must be in line with what has been specified in the table specification.

Table of specification to Kibler (1998) is to ensure that the subject matter content and the course objectives are adequately sampled by the test items; We need to develop a table of specification that will provide a guide to the item construction which takes into account the relative importance of each component of the syllabus and each level of cognitive domain. TOs should be prepared before testing. The teacher should develop the table of specification in order to have content sampling and item validity. These specifications may help the teacher to be more effective. In other words, it will help the teacher in organizing teaching and learning, assessment and evaluation as well as all the resources he plans to achieve during the teaching and learning.

Mehrens and Lehmann (2009) identify that the “specs” can help to provide for optimal learning on the part of students and optimal teaching efficiency on the part of the teacher.

Table of specification helps to improve validity of teacher’s evaluation based on a given assessment: Validity is seen here as the degree to which the evaluations or judgments we take as teachers about our students can be trusted based on the quality of evidence we gathered (Wolring & Wilkstron 2010). It is important to understand that validity is not a property of the test constructed, but of the inference we make based on the information gathered from a test. When we consider whether or not the grades we assign to students are accurate, we are questioning the validity of our judgment. When we ask these questions we can look to the kind of evidence endorsed by researchers and theorists in educational measurement to support the claim we make about our students (APA AERA NCME, 1999).

Table of specification can help teachers map the amount of class time spent on each objective with the cognitive level at which each objective was taught thereby helping teachers to identify

the type of items they used to include in their tests. However, TOS consider how you can adapt the underlying strategy to your own instructional needs. (Five & Didonal) Table of specification serves to clearly define the scope and the focus of the test. It ensures that teachers include test items that tap different levels of cognitive complexity when measuring students assessment.(Kubiszn & Borich 2003).

### **Statement of the Problem**

Students experience problems in testing about teacher made test as characterized by not valid, over testing, time spent for administration was too short, the test items do not cover the course content and among others. All these show that the test lacked content validity.

Constructing fair tests that give accurate information about students learning is an important skill for teachers. The table of specification is often useful to organize the planning process of designing a test which allows the teacher to determine the content of the test. Using TOs to organize a teacher made test help to alleviate content validity problem because it helps the teacher to create good balance in several areas. (Nunnaly, 2007).

Content validity is ensured by the Process through which the measure is constructed. A content valid test should have at least moderate to high levels of internal consistency. This suggest that the items measure a common element; primarily rest upon logical argument and expert judgment, and frequently empirical research.

The degree of content validity is largely a function of the content to which test items are true representative sample of the content and skills to be learned. (Nunnaly and Berbstein, 2004).

Standardized test scores are frequently difference among students GPA and scores on a standardized test, sometimes very large differences from the literature. We know standardized tests are valid. The question needs to be asked if GPAS are valid measures of student achievement. GPAS:- are based in large measure on teacher made tests. If teacher made test are note valid, how can a student GPA be valid? The use of table of specification can provide teacher made test validity.

As a student have you ever felt that the test you studied for was frequently or partially unrelated to the class activities you experienced? Or as a teacher have you experienced these complaints from student? This is not an uncommon experience in most classrooms. Frequently there is both a real and perceived mismatch between the examined in class and material assessed at the end of the term / unit test. This lack of coherence leads to a test that fails to provide evidence from which teachers can make valid judgment about students progress (Brookharl, 2001).One strategy teachers can use to militate this problem is to develop a table of specification to ensure good psychometric tests.

Psychometrics – Reliability and validity; every classroom assessment measure must be appropriately reliable and valid, be it the classic classroom achievement test, attitudinal measure, or performance assessment.

A measure must first be reliable before it can be valid. Classical test reliability and validity must relate to consistent (reliable) and accurate (valid) measurement. Reliability is an indicator of consistency is an indicator of how stable a test score or data is across applications or time. A

measure should produce similar or the same results consistently if it measures the same thing. A measure can be reliable without being valid. A measure cannot be valid without being reliable. However, threats to and techniques for improving reliability indices in the statement of Crocker and Algina (1996) constitute a threat to development of table of specification. They emphasized that threats to reliability include group homogeneity; when test is given a very similar homogenous group, the resulting score are closely clustered and the reliability coefficient, will be low. The more heterogeneous the examined group, the higher the correlation; the time limits; the rate at which an examinee work will systematically influence performance, as some will finish the test and some will not. Test or measure length; if a test is too short, then the reliability coefficient will be low and then scoring errors. All these are threats to reliability of test items constructed which the teachers must take into consideration.

Evidence based on test content underscores the degree to which a test measures what it is designed to measure (Wolring & Wilkstron, 2010) If an Economics teacher gave population theory in the examination on the proof of theory of Consumers behavior and based his population theory grade on his students' response to the examination, most of us would argue that the examination and the grades were unjustified. In assessment we would say that his judgment lacked evidence of test content agreement, because the evidence used (data from population theory test) to make judgment did not reflect students' understanding of targeted content (Theory of Consumer Behavior). Your classroom test must be aligned to the content taught in order for any of your judgments about the student understanding and learning be meaningful.

The bulk of research studies had concentrated on the Table of Specification as one aspect of setting items for students but not much has been done on the relevance of table of specification in Educational Assessment. The study was therefore designed to investigate table of specification and its Relevance in Educational Assessment.

The study addressed the following research questions

1. Is there significant difference between Table of Specification and its relevance in Educational Assessment?
2. Is there significant relationship between problems of table of specification and its relevance in Educational Assessment?
3. Is there significant relationship between general format of preparing table of specification and its relevance in Educational Assessment?

#### **Research Hypotheses**

1. There is no significant difference between table of specification and its relevance in Educational Assessment.
2. There is no significant relationship between Problems of table of specification and its relevance in Educational Assessment.
3. There is no significant relationship between the general format of preparing table of specification and its relevance in Educational Assessment.

**LITERATURE REVIEW**

Carey (1998) enumerates six major elements that should be intended to developing table of specifications for a comprehensive end of unit examination. They include:-

- (i) Balance among goals selected for examination.
- (II) Balance among levels of learning;
- (III) The test format;
- (IV) The total number of items;
- (V) The number of test items for each goal and level of learning.
- (VI) The enabling skills to be selected from each goal framework.

There are many approaches, format to developing and using a table of specification as advocated by measurement experts like (Anderson, Krawohl, Airasian, Cruikshank, major; Rath and withrock 2001, Grolund 2006), Raymond, Livingston and Wilson, 2006). Table of specification for practical classroom application is intended to help classroom teachers develop summative assessments that are well aligned to the subject matter studied and the cognitive process used during instruction.

However, for this strategy to be helpful in your teaching practice, you need to make it your own and practical assessment.

**General format of table of specification Table II**

Content	Knowledge No and or percentage	Understanding No and or percentage	Application No and or percentage	Total
Topic 1				
2				
3				
4				
5				
Total				

In each cell, the number and / percentage of item. To be constructed are indicated. These depend on the relative emphasis on topics and behaviors as might be indicated by the instructional objective. This was however, demonstrated previously by Ughamadu. For example, if teacher wants to develop an end of term test in Economics, he may have to consider the following instructional objectives;

At the end of the lesson students should be able to:

1. Define the term consumer's behavior i.e. demand and supply.
2. State the law of demand and supply.
3. Identify the forces of demand and supply as determinant of price of goods and services.

Table III Table of specification for an objective test

No	Content	Recall Knowledge	Beh under standing	Application	Total
1	Consumer behavior	17 ½% 7items	20 1/2% 8items	7 1/2% 3items	45%(18)
2	Price determination	12 ½% 5items	17 1/2% 7item	5 1/2% 2items	35%(14)
3	Public finance	0% No items	12 1/2% 5items	7 1/2% 3items	20%(8)
4	Total	30% 12items	50 1/2% 20items	20% 8items	100% 40items

One should recall that different test constructors will come up with different numbers and percentages in cell. You should note also that an item may overlap behaviors. For example, an item may test knowledge and understanding the constructor of the test should then determine which cell is most appropriate to include it.

In an essay test the weighting can be achieved by assigning the amount of time to be spent on each test item to show the relative importance of the topics. For instance, if five essay items are to be designed to test three subject topics, the weighting can assigned in the same proportions of time divisions as can be seen in table 4.

Topic	Importance	Item	Time
Black smiting	35%	Question 1	9 minutes
Missionary journey	25%	Question 2	11 minutes
Photographer	40%	Question 3	16 minutes
		Question 4	14 minutes
		Question 5	10 minutes

A table of specification has been developed, the test constructor will have the direction required to build a test that has a high degree of content validity. It is advisable that in selecting the test type to be included in the test, both objective and essay items should be used depending on the course objective and the behavior outcomes to be measured

Essay items – Classroom teachers are familiar with the essay test item or question. This is the item type commonly used by the teacher's because of ease of construction among other considerations. The essay items allow a student to select, organize, integrate and synthesize and present his answer or response in his own style in his own words (Ughamadu, 2000). The questions could be extended or restricted, depending on the amount of freedom given to a student to organize his ideas or facts.

Example of essay question (Extended type) Explain the effects of over- population in Nigerian Economics. (Restricted Question Essay):- list (5) qualities of money. However, because of the nature of essay questions or items marking of papers are subjective. Also ease of construction, make some people set essay items that are not good. These can affect the validity and reliability of essay questions. To increase the validity and reliability of essay test items much care and attention should be given to the construction and marking or scoring of essay tests.

**Guidelines for Constructing Essay Item**

- (1) Formulate questions that are very clear such that they will elicit the type of behavior that is intended to be assessed.
- (2) Students should not have many or too lengthy questions to answer within a given time.
- (3) Breakup long essay questions into shorter items that will require shorter items.
- (4) Ask student to answer all the questions.
- (5) Make sure that the objectives and subject matter indicated in the table of specifications are covered.
- (6) Show the mark or point value for each question and also the time limit.

**Objective test items**

These are required as the highly structured test items to which the students are expected to supply one word or two symbol or formulae or numbers or select the correct answer from a limited number of alternatives or choices. There are:- (1) supply types and (11) selection types. Each of these types can be further subdivided.

**Supply types:-** There are two forms:-

(1) Short answer item and (11) completion item.

Short answer item, the item is presented as a direct question. Example

- (1) Who gave the widely acclaimed definition of Economics? (Prof Lionel Robbins.)
- (2) What is the other name of the World Bank? (IBRD).
- (3) Which bank is referred to as the Apex Bank? (CBN)

In completion item – An incomplete statement is written out and student is expected to fill the blank (s)

- (1) An Economic Community of West African State was established in 1975.
- (2) Another name for wants is ends.
- (3) The selection you make from many alternatives is known as choice

**Selection types**

The common types of items under this category are:-

- (1) Alternative response item example, true – false item
- (2) Matching item
- (3) Multiple choice item

**Multiple Choice Items**

This is most commonly used form of objective test item types. It consists of two parts. These are the problem part and a list of suggested solutions or answer. The problem part which is stated either in the form of a direct question or an incomplete statement is referred to as stem of the item. But the list of suggested answers is referred to as the alternative or options. While the correct alternative or option is referred to as the answer or key the incorrect alternatives are referred to as distracters since they are to distract the uninformed students. Usually four or five alternatives are used for multiple choice items.

Example – Direct question form.

- (1) The quantity of goods and services a consumer is willing to buy at each given price at a particular period of time is known as? -
  - (a) Demand (b) opportunity cost (c) scale of preference (d) supply.
- (2) ECOWAS was established in the year –
  - (a) 1960
  - (b) 1964



(c) 1970

(d) 1975

Multiple choice items are considered to be the most flexible and useful type of objective test item. It can be used to measure different types of learning outcomes – from simple to complex.

### **Guidelines for Writing Multiple Choice Items**

- (1) Formulate the stem of the item in very clear terms so that it will be meaningful and present a definite problem.
- (2) The stem should be written as brief as possible.
- (3) The stem of the item should include as much of the item as possible and the alternative should be as short as possible.
- (4) The test should assess only one central idea.
- (5) Care should be taken in writing the distracters so that they are plausible.
- (6) Write each item such that all the alternatives are grammatically consistent with the stem.
- (7) In writing the items, the reading difficulty and vocabulary level should be as simple as possible.
- (8) The correct alternatives of the items should appear at different positions (A, B, C, D) an approximate number of times.
- (9) There should be one and only one correct alternative or answer.

### **Preparing the two- way chart**

The last step in constructing a table of specification is to prepare a suitable two – way chart that relates the instructional objective to the instructional content as illustrated by Ughamadu (2000) and thus, specifies the nature of the test sample. A chart in Economics lessons in Senior Secondary School one (1) presented on the table 5 below. This indicates both the total number of test items and the percentage of the test items allotted to each objective and each area of content.

In SS1. Mr. Adetunji taught 5 topics in Economics in twenty (20) lessons as:

1 Definition and meaning of Economics. (2 lessons).

2 Basic concepts for Economics. (4 lessons).

3 Consumers Behavior i.e demand & ss. (4 lessons).

4 Production and factors of prodn. (5 lessons).

5 Business organization . (5 lessons).

Construct evaluation test blue print (table of specification) showing the distribution of fifty (50) objectives test items in the following weighted behavioral objectives: knowledge (50%), Understanding (30%) and Thinking (20%).

The working process showing the number of questions are shown below

Step1: Knowledge 50% =  $\frac{50}{100} \times \frac{50}{1} = 25$  items.

Understanding 30% =  $\frac{30}{100} \times \frac{50}{1} = 15$  items.

Thinking 20% =  $\frac{20}{100} \times \frac{50}{1} = 10$  items.

Total 50 items.

## Step II Knowledge 25% items

I Definitions and meaning of Economics	$\frac{2}{20} \times \frac{25}{1} = 2.5$	
II Basic concepts of Economics	$\frac{4}{20} \times \frac{25}{1} = 5$	
III Consumers Behavior (dd & ss)	$\frac{4}{20} \times \frac{25}{1} = 5$	
IV Production and factors of prodn	$\frac{5}{20} \times \frac{25}{1} = 6.25$	
V Business organization	$\frac{5}{20} \times \frac{25}{1} = 6.25$	
Total		25 items

## Step III Knowledge 25% questions

I Definitions and meaning of Economics	$\frac{2}{20} \times \frac{15}{1} = 1.5$	
II Basic concepts in Economics	$\frac{4}{20} \times \frac{15}{1} = 3$	
III Consumers behavior (dd & ss)	$\frac{4}{20} \times \frac{15}{1} = 3$	
IV Production and factors of production.	$\frac{5}{20} \times \frac{15}{1} = 3.75$	
Business organization	$\frac{5}{20} \times \frac{15}{1} = 3.75$	
Total		15 items

## Step IV Knowledge 25% questions

I Definitions and meaning of Economics	$\frac{2}{20} \times \frac{10}{1} = 1$	
II Basic concepts in Economics	$\frac{4}{20} \times \frac{10}{1} = 2$	
III Consumers and behavior (dd & ss)	$\frac{4}{20} \times \frac{10}{1} = 2$	
IV Production and factors of prodn	$\frac{5}{20} \times \frac{10}{1} = 2.5$	
V. Business organization	$\frac{5}{20} \times \frac{10}{1} = 2.5$	

The numbers of items computed are inserted in the cells. But for topics calculated that ended in decimal points, the teacher uses his/her discretion and round off as the fraction or decimal point so that the total number of items will still remain accurate.

Table of Specification on 50 objectives test in Economics.

<b><u>Objective</u></b>	<b><u>Knowledge</u></b>	<b><u>Understanding</u></b>	<b><u>Thinking</u></b>	<b><u>Total items</u></b>
Learn the Basic term, Recall basic Formula, Memorize, recite, identify	put ideas together, Classify, describe, Apply learnt materials, discuss ,explain	discriminate, employ, create, compose, design, assess, judge, contras ,test, compare, etc.		

Content Definition/mean	3	1	1	5
Basic concepts	5	3	2	10
Consumers/beh	5	3	2	10
Prodn& factors	6	4	2	12
Bus organs	6	4	3	13
Total	25	15	10	50

### **Relevance of Table of Specification(TOS) in Educational Development Assessment.**

A table of specification (TOS) is a chart that professional developers of achievement and ability test often use in item writing. According to Gregory (2006). The chart helps the item writer to ensure that the instrument taps a desired mixture of cognitive processes and content domains.

TOS provides a two –way chart to help teachers relate their instructional objectives, the cognitive level of instruction and the amount of the test that should assess each objective. ( Nortar et al, 2004).The table serves to clearly define the scope and focus of the test. It ensures that the teachers include items that tap different levels of cognitive complexity when measuring students' achievement. Kubiszn and Borich (2003, Suggested that teachers should use a table of specification so that they won't forget the details.

Teachers can be assured that they are measuring students learning across a wide range of content and reading as well as cognitive processes requiring higher order thinking.

By providing a table of specification prior to the items writing stage, the test developer can guarantee that the resulting instrument contains a proper balance of topical coverage and taps a desired range of cognitive skills. The use of test blue print or table of specification according to Akem and Agbe (2003), Mehrens and Lehmann (2001) will help to ensure that:

1. Teachers are able to determine what topic is being stressed and also assist in the preparation of tests that reflect what students have learnt and also limit the amount of time spent on each unit.
2. That no important objective or content area will be advertently omitted.
3. The table of specifications can assist immensely in the preparation of test items, production of valid and well robust test, in the classification of objectives to both teacher and students, and in assisting the teacher to select the most appropriate teaching strategy.
4. Only those aims and objectives actually involved in the instructional process will be assessed. That each objective will receive a proportional emphasis on the test in relation to the emphasis placed on that objective by the teacher.

## **METHOD**

### **Population and Sample**

The target population comprised a total of one hundred and twenty (120) students randomly selected from four departments which are full time undergraduate students from Faculty of Education University of Lagos Akoka. The departments include: Adult Education, Educational Foundations, Business Administration and Art & Science Technology departments. Thirty students (30) each from the four department studied with fifteen (15) males and fifteen (15) female each. The age range between 18-35 years.

### **Instrumentation**

The major instrument used for collection of primary data was validated questionnaire tagged “Table of Specification and its Relevance in Educational Assessment” (TSREA). Previously tested to have reliability coefficient of 0.75. This instrument was divided into two sections. Section A: dealt with the bio data of the respondents, information such as age, sex, name of school, department, level, religion were sourced.

Section B: was further divided into sub-section has 15 items meant to collect information on the variables: Relevance of Table of Specification in Educational Assessment, problems associating with the of Table of Specification and general format of preparing Table of Specification. The instrument was adopted based on 4- points Likert format which ranging from strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD).

### **Procedure**

The instruments were personally administered by the researcher with assistance of the course representatives of the selected departments at the Faculty of Education to ensure a hitch free administration. The instructions were spelt out uniformly. There was no time limit. Five questionnaires were discarded for improper completion.

### **Method of Data Analysis**

Independence t- test of difference Statistical method was used to test

first hypothesis while Pearson Product Moment Correlation was used to measure hypotheses 2 and 3 respectively.

## **DISCUSSION OF THE RESULTS**

### **Hypotheses Testing:**

Hypothesis 1:

There is no significant difference between Table of Specification and its Relevance in Educational Assessment.

Table 1: Difference between Table of Specification and its Relevance in Educational Assessment.

VARIABLE	NO	MEAN	S.D	DF	tCal	tCrit	Rmk
Table of Specification.	120	3.65	0.48	238	9.28	1.96	Significant
TOS its relevance in Educational Assessment.	120	3.00	0.64				

The result showed that computed Mean and Standard Deviation score of both variables Table of Specification and its Relevance in Educational Assessment of (3.65, 0.48 and 3.00, 0.64) respectively. Calculated table value of 9.28 is greater than the Critical table value of 1.96 with 238 Degree of Freedom (df) given at 0.05 level of significance. It therefore means that the formulated null hypothesis is rejected while the alternative hypothesis is obtained. There is significant difference between Table of Specification and its Relevance in Educational Assessment.

Hypothesis 2:

There is no significant relationship between problems of Table of Specification and its Relevance in Educational Assessment.

Table 2:

Relationship between problems of Table of Specification and its relevance in educational assessment.

VARIABLE	NO	MEAN	S.D	DF	rCal	rCrit	Rmk
Problems of TOS.	120	13.67	3.27	118	0.61	0.19	Significant
TOS its relevance in educational assessment.	120	10.33	6.72				

Calculated table value of 0.61 is greater than critical table value of 0.19 with 118 Degree of Freedom given at 0.05 level of probability. It therefore means that posited null hypothesis is rejected while the alternative hypothesis is upheld. It implies that positive relationship exist between problems of table of specification and its relevance in educational assessment.

Hypothesis 3:

There is no significant relationship between general format of preparing table of specification and its relevance in educational assessment.

Table3: Relationship between general format of preparing TOS and its relevance in educational assessment.

Variable	NO	MEAN	S.D	DF	rCal	rCrit	Rmk
General format of preparing TOS.	120	9.48	6.74	118	0.94	0.19	Significant
TOS its relevance in educational assessment.	120	13.67	3.29				

Computed Mean and Standard Deviation score for both variables of (9.48, 6.74) and (13.67, 3.29) respectively. Calculated table value of 0.94 is far greater than Critical table value of 0.19 given at 0.05 level of significance.

It means that the formulated null hypothesis which states that there is no significant relationship between general format of preparing table of specification and its relevance in educational assessment is rejected while the alternative hypothesis is retained.

## DISCUSSION OF FINDINGS

The overall results of this study showed that the three hypotheses generated and tested were rejected due to the findings of this study.

**Hypothesis One:** Which states that there is no significant difference between Table of Specification and its Relevance in Educational Assessment was rejected. This implies that there is significant difference between Table of Specification and its Relevance in Educational Assessment, which include the chart helps the item writer to taps a desired mixture of cognitive processes and content domains, helping the teachers to relate instructional objectives, cognitive level of instruction and the amount of test that should be stressed in each of the objective, it is important for the teachers no to forget details, shows that students have learnt and limit the amount of time on each unit, helps in the preparation of test items and selecting the most appropriate teaching strategy. This finding is in line with Mehrens and Lehmann (2009), identify that “Specs” can help to provide for optimal learning on the part of the students and optimal teaching efficiency on the part of the teacher. In the view of Wolnring & Wikstron see TOS to help improve validity of teacher’s evaluation based on a given assessment. Nunnaly and Berbstein (2004), opined that constructing fair test that give accurate information about students learning is an important skill for teachers.

**Hypothesis Two:** Which states that there is no significant relationship between problems Table of Specification and its Relevance in Educational Assessment was rejected. It then means that positive significant relationship exists between problems Table of Specification and its Relevance in Educational Assessment. This study confirmed that frequently there is both a real and perceived mismatch between content examined in class and the material assessed at the end of the unit test and lack of coherence leads to a test that fails to provide evidence which teachers can make valid judgment. This result agrees with the statement of Nunnaly & Beibstein (2004), asserted that inappropriate construction of Table of Specification would lend hand to in balance in several areas and encourages content validity problems. However, they explained that the degree of content validity is largely a function of the content to which test items are true representation sample of the content and skills to be learned.

**Hypothesis Three:** There is no significant relationship between general format of preparing Table of Specification and its Relevance in Educational Assessment was rejected while the alternative hypothesis was obtained. This therefore means that there is positive relationship between general format in preparing TOS and its Relevance in Educational Assessment. Confirmed format revealed that decide on the total number of test items you want to set, ensure that you list the instructional objectives across the top of the table, the subject matter is written

down the left side of the table. Indicates the number of items that would be set for each level of objective and subject matter. This finding was supported by Carey (1998). Enumerated six major elements that should be intended to developing table of specification for a comprehensive end of unit examination. They include:

- 1 Balance among goals selected for exam.
- 2 Balance among level of learning.
- 3 The test format.
- 4 The total number of items.
- 5 Number of test items for each goal and level of learning.
- 6 The enabling skills to be selected from each goal framework.

In collaboration to this statement Ughamadu (2000). Stated that the classroom teacher will decide first on the number of test items or questions he intends to write, and then proceed in preparing the TOS, then list the objectives at the top of the table and the subject matter written down the left side of the table.

## **CONCLUSION AND RECOMMENDATION**

From the findings of this study, it could concluded that there is significant difference between Table of Specification and its Relevance in Educational Assessment. Also, this study reveals that positive significant relationship exists between problems of Table of Specification and its Relevance in Educational Assessment and general patterns of preparing Table of Specification is significantly related to its Relevance in Educational Assessment.

A well constructed test blue print or table of specification will help to improve the validity of teacher evaluations based on a given assessment. Thus, validity is the degree to which the evaluations or judgment we make as teachers about our students can be trusted based on the quality of evidence we gathered. (Wolming and Wilkstron, 2010).

However, when constructing a test, teachers need to be concerned that the test measures an adequate sampling of the class content at the cognitive level that the material was taught. This can go a long way in making teacher made tests much more relevant to decision teachers must make everyday about their students. The table of specification can aid immensely in the construction of test items, in the production of valid and well balanced test, in the classification of objectives to both teachers and students and finally, in assisting the teacher to choose the most appropriate teaching strategy.

Table of Specification helps teachers to relate instructional objectives, cognitive level of instruction and the amount of test that should be stressed in each of the objective; teachers would not forget details; also, helps in preparing test items and selecting most appropriate teaching strategy. Some problems envisaged in preparing TOS include lack of coherence in TOS leads to test that fails to provide evidence which teachers can make valid judgment; construction of the table of specification if not properly done encourages content validity problems to mention but few. Format for preparing Table of Specification include decide on the numbers of test items to set or to write then proceed to the construction of the test blue print, be rest assured that the instructional objective should be written on the top of the table while the

subjects matter written down left side of the table. Total numbers of the test items are written at the bottom for the objectives while the total numbers of content or subject matter clearly stated at the right side of the table.

However, it has been established from the above that test items irrespective of traits or attribute that it wants to measure, has to undergo some basic procedures, guidelines or steps before it can be standardized. It is the ability of the test developer and test writer to pass through these stages that makes it standardized.

In view of the foregoing findings and conclusion, it is imperative to make the following recommendations, which could help to the test developers, teachers and the students to develop a good test blue print.

1. Teachers should endeavour to construct a well test blue print that will help improve the validity of teacher evaluation based on given assessment.
2. Teachers must ensure that the test is measure an adequate sampling of the class content at the cognitive level that was taught.

Teachers and the students must comply with the laid down roles when preparing table of specification in schools. E.t.c

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