Validation of Students Attribution Questionnaire (Saq) for Assessing Influence of Attribution on Academic Achievement of Undergraduates of Universities in Kano State, Nigeria.

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Abstract

An instrument for data collection requires validation and reliability to ensure it measures what it intends to measure for efficient administration and collection of quality data. The population of the validation exercise consists of all level 300 students of Skyline University Nigeria out of their total a sample of thirty (30) students comprising 11 male and 19 female students were selected. A simple random sampling technique was used which gave all members equal chances of being included in the sample. The instrument titled Students' Attribution Questionnaire (SAQ) is categorised into three subdivisions: Division A consist of the respondents' personal data, Division B consist of items on Locus of Control and division C constitutes items on students' Attribution. The instrument locus of control and identifying internal and external attribution scale comprised 78 items. The first 8 items are Locus of Control while 70 items generate information from internal, and external factors, perception, attitudes, assertiveness and socioeconomic status. This paper presents a pilot study carried out to validate the construct, content and face validity of the instrument and to test its internal consistency. This paper employed the Cronbach Alpha Test-retest and the findings revealed that the SAQ has good construct validity, that is the items consistently measure what it was designed to measure and it also has adequate psychological properties. The instrument has also proved to be good in internal consistency and stability over time and it can be used to appropriately measure the Influence of attribution on the academic achievement of Undergraduates of the Universities of Kano State, Nigeria.

Keywords: Reliability, Validity, Attitudes, Perception, Assertiveness, Socioeconomic Status

1. INTRODUCTION

This paper aimed at validating the psychometric properties of the instrument for the data collection on the "Influence of Attribution on academic achievement of undergraduates of Universities in Kano state, Nigeria."

The researcher administered them to the sample of the pilot test at a time merging two independent variable scale Loci of control and identifying internal and external attribution (Linder & Janus1997). The objective was to measure its construct validity. Test and retest reliability and internal consistency reliability will be identified. Prior to the administration of the pilot test after some modifications and merging, the researcher gave it to three scholars to give expert judgment. The alpha and test-retest reliability were determined in addition to the scholar inter-scorer reliability. The validation study was made to assess the validity and the reliability of the instrument for data collection of this study titled ''Factors

influencing attributions towards scoring grade points of undergraduate students in some selected universities in Kano state, Nigeria." The validation study was carried out at Skyline University Nigeria level 300 students. The population of the validation exercise consists of all level 300 students. Out of their total, a sample of thirty (30) students comprising 11 male and 19 female students were selected using simple random sampling with a view to give all members equal chances of being included in the sample.

2. ATTRIBUTION (AN OVERVIEW)

Certainly, people are in an endless search for the aspects that cause them or other people to act the way they do. The course of passing on causes to our or other people's behaviour is called attribution. Heider (1958) in Mkumbo and Amani (2012) rightly put that, "people broadly attribute the causes of their behaviour either to internal or external factors" (Laherand and Putnina (2007). "An internal attribution (also called personal or dispositional attribution) refers to causes that are associated with the person's innate characteristics such as personality traits, moods, attitudes, abilities or efforts." External attributions (also termed situational attributions), on the flip side, state the causes that are external to the person, such as the actions of others, environmental situations or luck (Lei 2009). "The attribution theory has been applied in various contexts for example, in understanding people's decisions about health behaviour, in explaining how people attribute their success or failure in a task and in explaining differences in motivation between high and low achievers" (Batool, Arif & Ud Din, 2010; Laherand & Putnina, 2007, Murray & Thomson, 2009). One area that has received considerable attention in an educational psychological study concerning the use of attribution theory is its application in the elucidation of achievement or disappointment in an educational framework.

2.1 Attribution Theory

Attribution theory states that "success or failure in academic tasks is associated with three sets of characteristics"(Weiner, 1985). Firstly, People may do well or be unsuccessful for the reason of internal or external factors, that is, because of factors that initiate from inside themselves or because of factors that originate in their environment. Furthermore, the reasons for accomplishment or disappointment may be either stable or unstable. If people believe that the factors are stable, secondly, they may believe that the outcome of their performance is likely to be the same next time they attempt the same or similar task. If the factors are unstable, it means that they can be changed and therefore the outcome of performance may be different next time behaviour is performed. Thirdly, the causes of achievement or disappointment may be either controllable or uncontrollable. If the causes are controllable, then it means that people believe that they can alter these causes (Brown, Gray & Ferrara 2005). Conversely, if people rely on that the causes are uncontrollable, it means that they cannot be altered simply. The attribution theory assumes that individuals will trait their accomplishments or disappointment to factors that will enable them to impression as good as possible about themselves. "To circumvent undesirable emotional reactions, people have an inclination to attribute success to their own efforts or abilities, but they tend to attribute failure to some external factors that they do not have control of" (Augoustinos, 2005 in Mkumbo & Amani, 2012). "Accordingly, learners tend to attribute their success at examinations to their efforts or abilities, but they will attribute failure to some environmental factors, such as bad teaching, bad luck or lack of teaching and learning facilities. This implies that people's perceptions or attributions for success or failure will determine the amount of effort the person is willing to expand on a particular activity. Impliedly, therefore, people who attribute a cause to external factors are less likely to put more effort on a task than those who attribute internally" (Mkumbo & Amani, 2012). In an educational context, Bernard

Weiner who is the main theorist of attribution theory "Identified four attribution factors that are related to academic success or failure, namely: ability, task difficulty, effort and luck. Probably effort is the most important factor in which learners can exercise a great deal of control. Task difficulty is an external and stable factor, which is clearly beyond the learner's control. Though ability is relatively an internal factor, the learner does not have much control over it because it is a stable factor that cannot be easily changed. Luck is an external and unstable factor and, as such, the learner does have very little control over it." Weiner's attribution theory explains that "individual perception of personal controllability over an outcome should predict a judgment to be responsible that leads to specific emotions and behaviours. For example, when people make themselves responsible for any uneven situation, they assume that the odds could have been easily averted by controlling the circumstances. Therefore, making himself responsible for any event one can experience hope or guilt and may become more persistent in this practice thereafter. Social psychology has explained that the type of attribution selected by individuals may be biased by the incident that has taken place by either them or anyone else." Weiner, B. (1985). Rahimi and Pychyl (2016) posited that "people tend to attribute positive experience to internal factors and negative experience to external factors''.

2.2 Objectives of the Study

1. To examine the internal consistency of Students Attribution Questionnaire to be used to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria.

2. To identify the inter correlation of items of the Students Attribution Questionnaire to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria.

3. To discover the construct validity of the Students Attribution Questionnaire to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria.

4. To examine the face validity of the Students Attribution Questionnaire to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria.

5. To find the content validity of the Students Attribution Questionnaire to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria.

6. To examine the stability of Students Attribution Questionnaire to be used to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria.

2.3 Research Questions

1. What is the internal consistency of the Students Attribution Questionnaire, to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria?

2. What is the inter correlation between internal factors, external factors, perception, assertiveness, Socioeconomic status and attitude in the Students Attribution Questionnaire, to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria?

3. Is there the construct validity in the Students Attribution Questionnaire to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria?

4. What is the face validity of the Students Attribution Questionnaire, to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria?

5. What is the content validity of the Students Attribution Questionnaire, to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria?

6. What is the stability of Students Attribution Questionnaire, to assess the influence of attribution on academic achievement of undergraduates of universities in Kano State, Nigeria?

2.4 Hypothesis

H01 There is no significant correlation between internal factors, external, perception, assertiveness, socioeconomic status and attitude in the Students Attribution Questionnaire.

3. METHODOLOGY

3.1 Population, Sample and Sampling Technique

Population of the students of this study are 175 undergraduates of Skyline University Nigeria (69 male and 106 female) with their age ranged between 20 and 23 years. All participants were in their third year. To enroll participants into the validation study, a simple random sampling technique was adopted. The sample consist of students from various departments with a majority of them coming from the School of Arts, Management and Social Science (SAMSS).

Sample of the validation study consisted of thirty (30) students from Skyline University Kano, Nigeria (10 male and 20 female). The sample was drawn to make part of the study element to ensure a true replica of the expected outcome of the instrument with a view to make some corrections that will yield good results during the data collection.

3.1 Instrument

The instrument Students' Attribution Questionnaire (SAQ) is categorized into three parts. Part A is respondents personal data, Section B is Locus of Control while section C identifies students Attribution. Using the Rotter's Internal-External Locus of Control Scale, students' attribution was used in assessing academic performance along internal-external dimension. The instrument locus of control and identifying internal and external attribution scale comprised 78 items. The first 8 items are Locus of Control while 70 items generate information from internal, external factors, perception, attitudes, assertiveness and socio economic status. The questionnaire is a researcher-developed instrument, which comprises 70 items.

All the items were scored on Likert type of scales; first 8 items are scenario- based with Likert type 2 scales, Agree (2) and Disagree (1). The remaining items of the of the other subscales were based on Likert type 4 vis-a-vis; strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The items will be validated to assess the internal reliability, which is based on the notion that if items are consistent with one another; they are likely to measure the same thing.

3.2 Method of data collection

The complete pilot test and retest exercise was completed within 18 days. On the first day, the researcher gave out the questionnaires to the students to fill. Anastasi (1978) stated that [5] test and retest are expected to be performed over a period of two weeks.

3.3 Techniques for Data Analysis.

Descriptive statistics was adopted to find the mean, standard deviation was used to report the pilot test. Cronbach's alpha coefficient was used to measure the inside consistency of the questionnaire. Test retest reliability was computed to examine the stability of the questionnaire.

Table I: Descriptive Summary of the Raw Scores (N = 30)

Variables	N	Mean (x)	Standard Deviation
External Factor Test	30	29.4666	4.8688
Internal Facstor Test	30	32.4333	3.8388
Perception Test	30	32.7333	3.8050
Attitude Test	30	31.0667	3.9210
Socio Economic Status Test	30	28.2000	5.5485
Level of assertiviness Test	30	30.9667	4.0384
Effect of attribution Test	30	18.7333	3.8679
External Factor Re Test	30	28.9667	4.4758
Internal Factor Re Test	30	31.9000	4.4074

Perception Re Test	30	31.3000	4.8505
Attitude Re Test	30	28.3333	4.6008
Socio Economic Status Re Test	30	28.3333	5.4730
Level of assertiviness Test	30	30.6000	4.9730
Effect of attribution Test	30	18.0000	3.8327

4. DISCUSSION OF THE MAJOR FINDINGS

The table above presents the mean and standard deviation of the variables under study. All the variables were scored and the mean was presented above in respect of External, Internal, Perception, Assertiveness, Attitude and socioeconomic status for both test and retest scores. The highest scores of the test were found at Perception with a mean then standard deviation of 32.7333 and 3.8050 respectively. The highest retest score was made on an internal factor with 31.9000 for mean and standard deviation for 4.4074. The total items for each construct were 8. This means all the scores made per construct were ahead of the mean value.

Inter -Item Correlation

Inter-item correlation was used to provide information about interrelationship among the variables under study; External, Internal, Perception, Attitude, Assertiveness and socioeconomic status and academic achievement. [7]The closer the reliability of the instrument is to 1 the higher the internal consistency, (Nunnally & Bernstein,1994).

Table II: Inter Item Correlation

Variables	EF IF	sig	p-value
External Factor	Test	.741	.05
Internal Factor	Test	.620	.05
Perception	Test	.732	.05
Attitude	Test	.587	.05
Socio Economic Status	Test	.698	.05
Level of assertiviness	Test	.853	.05
Effect of attribution	Test	.706	.05
External Factor	Re Test	.645	.05
Internal Factor	Re Test	.615	.05
Perception	Re Test	.860	.05
Attitude	Re Test	.674	.05
Socio Economic Status	Re Test	.754	.05
Level of assertiviness	Re Test	.757	.05
Effect of attribution	Re Test	.752	.05
CGPA		.849	.05

The table above presents the 5 subscale under study and their inter-correlation with one another and academic achievement. The highest correlation was obtained at level of assertiveness for test scores with r value of .853 and Perception at re test with r value of .860 respectively. The inter-item correlation between test and retest with academic achievement was significantly recorded at .836 respectively.

Table III: Correlation matrix between Test, Re-test and CGPA

Variables of	Cranbach alpha	Cranbach alpha based on standard items	Number Items

Attitude Selection Items	.632	.637	2
Test Re-Test of the Constructs	.765	.756	14
CGPA	.836	.851	3

The table above presents the correlation matrix between the test result and academic achievement. The result showed that test retests of academic achievement were recorded at .661and .461 respectively. While the re-test and academic achievement was recorded at .884. This showed re-validation of the instrument has proven to have generated adequate internal consistency for the use in research. Cronbach stated that the closer the reliability is to 1 the higher the level of internal consistency.

Table IV: Cronbach's Alpha for the Variables

Variables of	Cranbach alpha	Cranbach alpha based on standard items	Number Items
Attitude Selection Items	.632	.637	2
Test Re-Test of the Constructs	.765	.756	14
CGPA	.836	.851	3

5. CONCLUSION

The findings of the validation study which was done through Cronbach alpha has provided a strong support for reliability and validity of the Influence of attribution on academic achievement of undergraduates of Universities of Kano State, Nigeria questionnaire. The validation test has shown that the items possess good internal consistency over a period.

The high inter-correlations between the variables under study and the six sub scales namely; External, Internal, Perception, Assertiveness, Attitude and Socioeconomic Status has proved to be good in internal consistency and stability overtime.

These findings showed SAQ has good construct validity i.e the items consistently measure what it was designed to measure. This SAQ has adequate psychological properties and it can appropriately be used to measure Influence of attribution on academic achievement of Undergraduates of Universities of Kano State, Nigeria.

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