

Essay Test as a Predictor of Students' Achievement in Objective Test in Senior Secondary School Certificate Geography

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Abstract This study was designed to find out the relationship between students' achievement in essay and objective tests in senior secondary certificate examination in geography in Enugu education zone of Enugu State. The study identified that the poor enrolment and poor performance of students in geography in school certificate examination affect those who have interest in studying science related courses in the universities. Multi-stage stratified and proportionate random sampling techniques was adopted. A total of 635 students drawn from seventeen schools were used. Method of data collection was documentary information on students' scores on essay and objectives in mock examination in geography. In data analysis, students scores on essay and objectives were correlated using Pearson's 'r'. The significance of the correlation result obtained was tested with T-test at α 5% level of confidence. The result of the study revealed positive relationship between the essay and objective scores obtained. The result showed that even though the relationship was positive, it was not strong and there was no significant relationship. This showed that in most cases, teachers and examination bodies do not use table of specifications in setting essay and objective tests. Some recommendations were therefore made.

Keywords— Essay test, Predictors, Achievement, Geography, Objective test, Correlation, Examination.

1. INTRODUCTION

One of the major duties of the school is to evaluate the students on what they had learnt with the aim of determining how well such students have achieved the goals and objectives of the courses of their studies. Tests remain the only means of mental stock-taking in students. The process of finding out how well such students have achieved the goals and objectives of the course of study with relevant feedback is called evaluation. Ndinechi (1986) noted that evaluation in the context of education is a process of assessing the effectiveness of a programme of study in bringing about desired behaviour change in the learner. The process takes into account all the skill, attitude, abilities, behavioural changes and knowledge in subject acquired by students in a particular programme. Maduabum in Ebowh (2013) summarized the reason for the desirability of the process as "To judge the level of achievement, teachers used to know how successful their students are learning, and in doing so, weaknesses in learning are revealed. This enable students realize their changes and how they improve their efforts. Again this motivate students to learn, that is being interested and desiring to do more.

Finally, to provide data about the success and failure of the school Hoover (1991) mentioned that if evaluation is to be effective, the teacher must use success of his students' learning and feedback from them to enable him to be sensitive to their needs. Such evaluation techniques include tests (essay and objectives) practical works and projects. These different methods of assessment or evaluation are useful in science related subjects in general and geography in particular. Evaluation in the context of geography is a process of assessing the effectiveness of the programme or bring about desirable behavioural changes in the learner.

The importance of tests (essay and objectives) in the evaluation of geography cannot be over emphasized as these methods are known to instill in the students the required skill geography. Essay for instance provides opportunity to promote scientific method of thought. The scientific method entails inculcat-

ing into the learner the habit of drawing conclusions on basis of theory, observation and practical field works. In practical field works, the students develop scientific attitude such as curiosity, thoughtfulness, open-mindedness, objectivity, acceptance generalization. Mama (1996) found out that practical work promote problem solving and self reliance in real life situation. Getting involved in tests can also enable students to learn the inter-relationship between geography and other science subjects Nwana (1981) mentioned that test technique employed in the evaluation are designed ultimately to produce educated individuals some of whom may or may not take any particular subject in their professional pursuits but who may find themselves in any profession that will be useful to them in their future lives.

Tests (essay and objective) involves all the written examination and it evaluates mainly cognitive domain. Tests (essay & objective) have good qualities and limitations. In evaluating geography, examination bodies both internal and external use both of them. The question often asked is whether both the types of tests measures the students' knowledge with the same degree of accuracy and reliability. If they do, one can then in for that one form of examination is as good as the other. But the current fear in the recent time is that one is weaker than the other.

Therefore one may like to find out whether the two types of test or method of evaluation have co-efficient of equivalency or not. That is to say, will students who perform badly in essay do the same in objective tests where the content of study is the same. Investigation into how well each of these types of test can measure geography lesson will be carried out so as to recommend at least to what extent each of them can be used. One of the major objectives of educational research is to seek relationship between different educational and psychological variables. The relationship are generally aimed at either gaining a better understanding of the variables being related or developing techniques for predicting performances on one variable can be the basis of its relationship to other variables.

Consequently upon this, correlation study is highly useful in studying problems in education or in behavioural sci-

ences. This permits one to measure a great number of variables and their interrelationship simultaneously. In behavioural science we are frequently confronted with situations in which a large number of factors are contributory causes of a particular pattern of behaviour. A classical experimental method tends to manipulate one variable and attempt to hold others constant. This introduces a high level of artificiality into research situation encountered in the behavioural sciences. The partial correlation however is often preferable to experimental design in situation where control is necessary as it permits the statistical control of variable that we wish to hold constant and does so without the field situation. The ability of correlational technique to specify the degree to which different variable concerned are related often gives the researcher the understanding of the way in which the variables are operating that cannot be gained through other designs. Correlation does not directly establish a "causal" relationship, it may furnish clue to causes and these clues can be formalized as hypothesis in planning control experimentation.

Correlation can be very useful in determining the comparability or the test-retest reliability of a test. Ibekwe (1985) reported that by determining whether two variables are closely related to each other, the discovery of unexpected correlation may raise further questions for investigation. Many correlational studies in education have involved little more than available scores on a group of students and then correlating them. Correlation coefficient is also useful to determine the validity of a test. Predictive validity is determined by setting up a criterion to be predicted and then computing the co-efficient of correlation between the predicted scores on the criterion. There is poor performance of students in geography as a result of inadequate use of method of evaluating geography. Okafor (1990) found out that the methods of evaluating geography in particular and sciences in general affects students performance. He discovered that most of the teacher made geography tests fall short of the standard they should be. This had equally led to lack of interest among the students in the subject. Consequently, the researcher wishes to investigate into the relationship of using essay test scores as a predictor of students performance in objective test in senior secondary mock geography examinations.

In both internal and external geography examinations, both the essay and objective tests from then what known as the geography theory examinations. This study aimed at finding out the relationship between students achievement in theory tests examinations in senior secondary mock examination in geography. Specifically, the study was to find out the significant relationship between students academic achievement in essay and objective test scores in senior secondary school mock geography examinations. This study is restricted to senior secondary three (III) geography students in Enugu Urban. The study will be useful to the students, teachers and the society. The class teacher is in a better position to study the effect of the method of evaluating his subject. When the students are assessed correctly and graded properly they will be suitable employed and they will then make positive contribution to the society. It is therefore necessary to correlate the students performance in essay and objective test scores to find out whether each and both of them reassure what they suppose to measure.

Hypothesis: There is no significant relationship between student's mean achievement scores in essay and objective tests in senior secondary mock examination in geography.

Methodology: The study was a correlation study, It was aimed at finding out the relationship between students academic achievement in essay and objective test in SSS mock exams in geography.

Area of Study: The study was conducted in Enugu Urban of Enugu State. Enugu Urban area is made up of Enugu North, Enugu South and Enugu East L.G.A.

Population: The population comprised of all the SSS III students who participated in the mock examination in the twenty-five secondary school in Enugu Urban Area in 2012/2013 academic year. The population was 1896 students.

Sampling technique: All the school in the study area were stratified into boys, girls and co-education. Based on the sizes the schools, ten girls, six boys and nine co-education schools were selected. Through random sampling technique, a total of 635 students were selected and used for the study.

Data Collection: The researcher who visited the schools during the mock examination weeks obtained the result students scores from the various geography teachers in the selected school. However the never disclosed the purpose to which the score will be used to the teachers. The purpose was only disclosed to the principals of the selected schools.

Method of Data Analysis: Person Product Moment was used to determine the correlation co-efficient of the students' scores in essay and objective tests. T-test as employed to determine the level of significance of the relationship between the score and to test the hypothesis at 0.05 level of significance.

Result

Hypothesis: There is no significant relationship between students mean achievement scores in essay and objective tests in senior secondary examination in geography.

Table 1: The Overall of the Pearson's 'r' and t-test of Students Achievement in essay and Objective tests; Essay = X Objective = Y

Schools	Pearson's r	Calculated t	Table value t	Remarks
Boys	0.49	1.39	2.52	*
Girls	0.40	1.02	2.0	*
Co-edu	0.45	1.5	2.25	*

* No Significant correlation co-efficient.

The table above showed that there were positive relationship in all the categories of schools under the study. But these relationship were not strong enough. The correlation co-efficient of less than 0.75 cannot be considered a strong relationship (Obikeze, 1986). So 0.49 for boys, 0.40 for girls and 0.45 for co-education is not strong enough.

In all the school categories, the calculated t-value were lower than the table value of t. In boys schools t-calculated was 1.39; for girls school, it was 1.02 and for co-education it was 1.5 while the table value of t were 2.52, 2.00 and 2.25 respectively. A lower calculated ratio suggests the non rejection of the null hypothesis. Therefore the only hypothesis of this study was not rejected. This implied that there was no significant relationship between the essay and objective tests used for mock examination during the 2012/2013 mock examinations in Enugu Urban of Enugu State.

Discussion/Conclusion

Essay tests require an individual to organize and express answer in his own words. In the essay, the student is not restricted to a list of responses from which he is to select his answer. Objective tests on the other hand requires that the individual either supply a brief answer or choose the correct answer from among several alternatives. An essay test consists of fewer question but ones that call for more lengthy answers, while objective tests would have more questions but ones taking less time to answer. The quality of essay tests is dependent largely upon the skill of the reader or person marking it, that of objective test upon the skill of the test constructor. Essay tests are relatively easier to prepare but more difficult to mark and grade. Essay tests afford both the teacher and student the opportunity to be individualistic but objective tests afford this freedom of expression to the test maker. Objective tests are more suscep-

tible to guessing while essay tests are susceptible to bluffing. These are some of the basic information any test maker must acquire in order to construct better test items. But because these ideas are lacking in our test makers, most often we had to misfire. Because of these merits and demerits mention above and from the result of our study above, there is still a need to continue to make use of both essay and objective tests in evaluating our students in both internal and external examinations.

As we can infer from the study, it was clear that not all essay and objective tests measure what they were supposed to measure, otherwise there was supposed to be a significant and strong relationship between the two sets of different questions measuring the same thing. One of the major reasons for low relationship between essay and objective tests set by our tests makers was because they don't follow the table of specifications while setting the tests (Okafor, 1990). The purpose of the table of specifications is to define as clearly as possible the scope and emphasis of the test and to relate the objectives to the content. These should be prepared before the instructional phase is begun. A good rule of thumb to follow in determining how detail the content area should be is to have a sufficient number of submissions to ensure that adequate and detailed coverage of the content of study. Therefore the low positive correlation co-efficient and no significant relationship in this study showed that there were some gaps which needed to be closed among our test developers in internal as well as external examinations

Recommendation

In view of the above findings, the following recommendations were suggested.

1. We must continue to use both the essay and the objective tests in (evaluating) the mental stock-taking of our students since both of them help students in their all round academic development.
2. Our teacher training programmes should take serious the training of teachers on how to develop and use the Table of specifications or table Blue point in teaching and evaluating students in our secondary school. The idea of teachers teaching what they like and evaluating whatever they want to assess our students is counter productive.
3. During the test construction, both those who are setting objective tests and essay tests should be together to ensure that all aspect of the school syllabuses are covered.
4. Lastly our supervision units both in the Ministries of Education and within the school should be well equipped to ensure that teachers teach and follow the syllabuses of the course of study.

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