Assessing the Correlation between Continuous Assessment and Examination Scores of Education Courses

Ado Abdu Bichi & Aliyu Musa

Department of Arts and Social Sciences, Faculty of Education, Northwest University, Kano, NIGERIA

Abstract: The application of assessment methods for the overall evaluation of educational programmes is indispensable and one of the interesting and positive features of assessment is its ability to predict future performance and provides bases for comparison and decision as to the level of learners’ progress. The aim of this paper was to investigate the relationship between continuous assessments and examination scores of education courses, ex-post-facto research design was employed using a random sampling of two hundreds (200) students from the faculty of education, Northwest University, Kano-Nigeria and their scores from Introduction to psychology (EDU1201), Sociology of education (EDU1202), History of education (EDU1203) of 2012/2013 academic session were used. The data was analysed using Pearson’s Product Moment Correlation Coefficient (r) and the null hypotheses were tested at the 0.05 level of significance. The findings revealed a significant relationship between continuous assessment scores and examination scores of undergraduate students in the three education courses. The study recommended that continuous assessment should be given serious consideration by teachers and school administrators to improve the quality of the assessment methods and ensure transparency in continuous assessment since it explain and predict the future academic performances of undergraduate students.

Keywords: Continuous Assessment, Examinations, Education Courses, Undergraduate Students, Correlation

I. Introduction

Assessment plays prominent role in educational process and it is considered as a vital measurement tool in evaluating students’ performance. [9] defines assessment as “a process for obtaining information that is used for making decisions about student, curricula and programmes, and educational policy”. It can therefore be a process of collecting information about student learning and performance to improve education. It helps in measuring student’s ability in acquiring certain behaviour or a specific knowledge for a particular subject, and provides the basis of ascertaining the quality of education at all levels. Learner assessment is best conceived as a form of two-way communication in which feedback on the educational process or product is provided to its key stakeholders [7]. According to [1] “assessment enables the school to achieve an overall objective of having as complete a record of the growth and progress of each pupil as possible in order to make unbiased judgments in the cognitive, affective, and psychomotor evaluation in the classroom”. Assessment results are used by stakeholders and practitioners in the evaluation of the entire educational system, motivating students to perform better, improving instructional planning and content, as well as certifying students as having attained specific levels of achievements. Continuous assessment (CA) is an important part of the evaluation of students’ achievement in Nigeria. Assessment of students learning outcomes in formally is completed through continuous assessment and final examinations levels of education in Nigeria. The Universities offering education courses in Nigeria uses two levels of assessment for both formative and summative evaluation. The continuous assessment is an essential formative evaluation technique with 40% weight in the total examination scores of a course in education. The final examination results determine students’ level of achievement and provide basis for decision on the level of students’ progress and provides feedback to students on their performance during the semester, CA is likely to influence their examination preparation and effort. [3] observed that examination and assessment in the schools system today have been misinterpreted in the sense that parents and students have the impression that what is important in schooling is to obtain a certificate (either through fair or foul means) at the end of the course. The National Policy on Education [6] states that “Educational assessment and evaluation shall liberalized by being Based in whole or in part on continuous assessment of the progress of the Individual” (Section 1 No. 9 (g)). It is based on the assumption and expectation that the system will ensure a more justifiable and truthful classification of students based on their abilities. For proper alignment of each end of course test scores and the
preceding continuous assessment scores from the teacher made tests, serious attention needs to be given to ensure the validity of the tests and that of the process of conducting the tests [11]

**Continuous Assessment (CA)**

Continuous assessment is an education policy of evaluating the students’ progress and achievement in schools, according to [8] continuous assessment is an on-going process of gathering and interpreting information about student learning that is used in making decisions about what to teach and how well students have learned. [15] stated that, continuous assessment is a process that is intended to achieve two major purposes: to improve the validity and reliability of students’ results in a particular tests and exercises, and secondly to help learner to develop effective learning and work habits. From the foregoing it can be concluded that Continuous Assessment is a form of evaluations or assessment process that take place over a period of time. In other words the learners are assessed right through their learning process and not only after the learning process. By conducting continuous assessment the learners’ improvement can simply be track, and the school would be able to give more support and guidance to the learners and the learner will have more opportunities to improve. CA can be conducted in several ways that includes; Daily class work, course related project, term papers, Homework, practical works etc it is also systematic, Formative, guidance oriented, and diagnostic in nature. [8] highlighted some merits of continuous assessment to include: Promotion of frequent interaction between learners and teachers which enable the teachers to know the strengths and weaknesses of learners. Secondly, learners receive feedback from teachers based on their performance which allows them to focus on their deficient areas [14] in their study conducted to assess the impact and correlation between continuous assessments scores and final examinations’ scores of Computer Science modules at the University of Mauritius, using the scores of 727 students. Their findings revealed that there is generally a high correlation between the scores obtained by students in their continuous assessment and examination scores. It has also confirmed that students relied a lot on the scores obtained in their continuous assessments in order to inflate their examination scores.

[16] conducted a study to investigated the relationship between web-based continuous assessment and pen and paper examination scores of students in open and distance education systems using a correlation research design with a sample of 131 of undergraduate and graduate students, the finding of the study revealed no significant correlation between the web-based continuous assessment and pen and paper examination scores of undergraduate and graduate students, and only a weak positive correlation between the two variables was found among the Postgraduate Diploma in Education students. Which he attributed to the irregularities that usually accompany web-based continuous assessment in open and distance education [11] in reporting the findings of the study conducted to investigate the relationship between students’ continuous assessment scores and Junior School Certificate Examination Mathematics Scores in Ekiti State using a sample of 80 students. Showed that there was a significant relationship between the junior secondary school continuous assessment scores (JSSCAS) and the overall performance in junior secondary school certificate examination in mathematics (JSSOT).

The evaluation of the method of learning and the assessment of the advancement rate of students are the significant elements of an educational system. The application of evaluation methods make it possible to assess the success and failure of students continuously and to give advice and make comments for the improvement of educational planning. CA is said to be an effective method of ensuring the quality of students is maintained throughout the semester. However the present continuous assessment system in our schools is essentially based on frequent tests taking and does not really serve the two critical purposes of continuous assessment. The alarming rate of students’ failure and poor performance in both internal and external examinations calls for the need to devise a means of improving the practice of Continuous Assessment in our institutions. Assessment of learning at all levels of Education in Nigeria is mostly school based. Every Institution spelt out the ratio of the Continuous Assessment (CA) as guided by its governing body. CA is usually either thirty percent (30%) or forty percent (40%) of each semester’s total examination score of a hundred percent (100%) taken in each subject, every semester. The scores derived cumulatively from all semester examination results add up to the final grade for the certification of students [12].

In every institution in Nigeria, there are peculiarities in the exercise of CA although; to some extent and in some aspects teachers are guided. Ordinarily, neither CA question nor scripts are moderated. This situation leaves much to be desired certainly and may not be helping to ensure fairness and equity in the assessment of learners at all levels of education because the current way CA is implemented allows room for malpractice in many ways

### II. Purpose of the Study

The main purpose of this paper is to assess the relationship between students' performance in the continuous assessment scores (CA) and the final examination scores in education courses at the Northwest University, Kano-Nigeria.

### III. Research Hypothesis

The following hypotheses were generated for the study:
H0₁: There is no significant correlation between continuous assessment scores and examination scores of undergraduate students in EDU1201.
H0₂: There is no significant correlation between continuous assessment scores and examination scores of undergraduate students in EDU1202.
H0₃: There is no significant correlation between continuous assessment and examination scores of undergraduate students in EDU1203.

IV. Research Methodology

Research Design
In conducting this study, the researcher employed Ex-post-facto research design to assess the relationship between continuous assessment scores and examination scores. Since the data was collected from the examination office of the faculty of education, Northwest University, Kano no manipulation of any kind took place.

Participants
The study comprises all the undergraduate students enrolled in the faculty of Education, Northwest University, Kano, in all 10 undergraduate programmes of the faculty who completed their continuous assessment and participated in the 2012/2013 academic session, first semester examinations. A total of 200 students (120 Female and 80 Male) were randomly selected for the study. While the scores from sociology of education (EDU1202), History of education (EDU1203), Introduction to psychology (EDU1201) were used.

Data Collection
The data for this study was obtained from the faculty of education examination unit of Northwest University, Kano. The continuous assessment and examination scores of EDU1201, EDU1202 and EDU1203 in 2012/2013 academic session first semester examinations were chosen for the study.

Data Analysis
The data obtained were analysed using a descriptive research method that used Pearson’s Product Moment Correlation Coefficient (r) to establish the relationship between continuous assessment and examination scores of undergraduate students in education courses by testing the null hypotheses at the 0.05 level.

V. Results

Hypothesis 1: There is no significant relationship between continuous assessment and examination scores of undergraduate students in EDU120.

To test the above hypothesis, continue assessment scores and examination scores of undergraduate students in EDU1201 were correlated to obtain the Product Moment Correlation Coefficient (r), and the result is presented in table 1 below.

Table 1: Correlation between continuous assessment scores and examination scores (n=200)

<table>
<thead>
<tr>
<th>Assessment Mode</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>r-cal</th>
<th>df</th>
<th>sig. (2-tailed)</th>
<th>H₀₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Assessment</td>
<td>200</td>
<td>25.78</td>
<td>5.249</td>
<td>0.494*</td>
<td>198</td>
<td>0.00</td>
<td>Rejected</td>
</tr>
<tr>
<td>Examination scores</td>
<td>200</td>
<td>24.93</td>
<td>11.223</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result from the Table 1 above reveals that there is a positive relationship r(198)=0.496, P=0.00 between Continuous assessment and examination scores of undergraduate students in EDU1201. The analysis shows that the students on average obtained 25.78 out of 40% on their continuous assessment, and 24.93 out of 60% on their end of semester examination. Therefore from the analysis above the result (r) is significant (P<.05), the null hypothesis is therefore rejected and concluded that there is a significant relationship between continuous assessment scores and final examination scores of undergraduate students in EDU1201.

Hypothesis 2: There is no significant relationship between continuous assessment and examination scores of undergraduate students in EDU1202.

To test the above hypothesis, continue assessment scores and examination scores of undergraduate students in EDU1202 were correlated to obtain the Product Moment Correlation Coefficient (r), and the result is presented in table 2 below.

Table 2: Correlation between continuous assessment scores and examination scores (n=200)

<table>
<thead>
<tr>
<th>Assessment Mode</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>r-cal</th>
<th>df</th>
<th>sig. (2-tailed)</th>
<th>H₀₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Assessment</td>
<td>200</td>
<td>27.48</td>
<td>4.723</td>
<td>0.539*</td>
<td>198</td>
<td>0.00</td>
<td>Rejected</td>
</tr>
<tr>
<td>Examination scores</td>
<td>200</td>
<td>24.37</td>
<td>9.569</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information from the Table 2 indicates a positive relationship r(198)=0.539, P=0.00 between Continuous assessment and examination scores of undergraduate students in EDU1202. The analysis shows that the students on average obtained 27.48 out of 40% on their continuous assessment, and 24.37 out of 60% on their end of semester examination. Therefore from the analysis above the result (r) is significant (P<.05), the null hypothesis is therefore rejected and concluded that there is a significant relationship between continuous assessment scores and final examination scores of undergraduate students in EDU1202.
Hypothesis 3: There is no significant relationship between continuous assessment and examination scores of undergraduate students in EDU1203.

To test the above hypothesis, continuous assessment scores and examination scores of undergraduate students in EDU1203 were correlated to obtain the Product Moment Correlation Coefficient (r), and the result is presented in Table 3 below.

Table 3: Correlation between continuous assessment scores and examination scores (n=200)

<table>
<thead>
<tr>
<th>Assessment Mode</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>r-cal</th>
<th>df</th>
<th>sig. (2-tailed)</th>
<th>H00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Assessment</td>
<td>200</td>
<td>24.00</td>
<td>4.843</td>
<td>0.496*</td>
<td>198</td>
<td>0.00</td>
<td>Rejected</td>
</tr>
<tr>
<td>Examination scores</td>
<td>200</td>
<td>24.02</td>
<td>10.023</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data from the Table 3 above indicates a positive relationship r(198)=0.496, P=0.00 between Continuous assessment and examination scores of undergraduate students in EDU1203. The analysis shows that the students on average obtained 24.00 out of 40% on their continuous assessment, and 24.02 out of 60% on their end of semester examination. Therefore from the analysis above the result (r) is significant (P<.05), the null hypothesis is therefore rejected and concluded that there is a significant relationship between continuous assessment scores and final examination scores of undergraduate students in EDU1203.

VI. Discussion of findings

This study tries to establish and assess the correlation between continuous assessment and examinations scores of undergraduate in education courses. Hypothesis 1 which states that there is no significant relationship between continuous assessment and examination scores of undergraduate students’ in EDU1201 was rejected which implies that there is a significant positive relationship between continuous assessment scores and examination scores of undergraduate students in EDU1201. Hypothesis 2 which state that there is no significant relationship was also rejected this implies a significant relationship between continuous assessment scores and examination scores of undergraduate in EDU1202. Similarly hypothesis 3 which states that there is no relationship between continuous assessment scores and examination scores of undergraduate students in EDU1203 was also rejected from this, it could be inferred that there is significant relationship between undergraduate students’ score in continuous assessment and final examination scores in education courses. The overall result is in agreement of [11] results that there is a significant relationship between Junior Secondary School Continuous Assessment Scores (JSSSCAS) and the overall performance of the students in the Junior Secondary School Certificate Examination and that of [2] whose findings revealed a significant relationship between students’ score in continuous assessment and final grade in electromagnetism physics. The results of the three hypotheses further agrees with the earlier submission of [4] that continuous assessment played the role of feedback to both students and teachers in teaching and learning process. Similarly it also confirmed the assertion of [13] that continuous assessment is used to find out what the students have gained from learning activities.

VII. Conclusion and Recommendations

In conclusion, one of the interesting features of assessment in education is its predictability, this study attempted to establish relationship between continuous assessment and examination scores as one of the basis of predicting students’ performances. From the outcome of this research, interpreted correlation coefficients show the extent to which continuous assessment scores and examinations scores are related for the EDU1201, EDU1201 and EDU1203 respectively, as all the coefficients for this study lie between 0 and 1, implying that all the coefficient are positive and all of them are found to be significant at 0.05 level of significance. It is therefore concluded that continuous assessment is very important in teaching and learning of education courses in colleges of education and universities because it influenced students’ performance in the final examinations. The result further revealed that the continuous assessment practices in education courses at the university is guided and well prepared in line with the best practices.

As being establish by this study that the continuous assessment has a significant influence on the overall performance of undergraduate students in education courses. It is recommended that,

1. Continuous assessment should be given serious consideration by teachers and the university administrators and be improved by using different form together i.e exercises, tests, assignment and project, in order to improve the quality of the assessment methods.
2. There should also be unconditional transparency in continuous assessment since it explain and predict the future academic performances of undergraduate students.
3. Continuous assessment should be made compulsory for all undergraduate students and it should cover all the three domains of learning.
4. In view of its place in students success students should be allow to have access to their scores in continuous assessment; this will help the students to know their weakness and strength in the course and make adequate preparation needed for examination.
5. The students also need to be counselled and prepared adequately enough to answer examination questions for improve academic achievement

References


