Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.6, No.26, 2015

Grading Practice as Valid Measures of Academic Achievement of Secondary Schools Students for National Development

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Abstract
Assigning grades is probably the most important measurement decision that classroom teachers makes. When teachers are provided with some measurement instruction, they still use subjective value judgments when assigning grades to students. This paper therefore, examines the grading practice as valid measures of academic achievement in secondary schools student for national development. Three hundred teachers (300) were sampled by means of stratified random sampling techniques from the three senatorial districts in Delta State. A validated questionnaire was used for data collection. Mean and standard deviation was used to answer the research questions while t-test statistic was used to test the stated hypotheses at 0.05 level of significance. The results of the study revealed that there was no significant difference between male and female teachers grading of students in secondary schools; there was significant difference between urban and rural teachers assigning of grades to students work accurately in secondary schools in Delta State.
Keywords; Grading and Assessment

Introduction

Grading policies have a direct effect on the grades that students receive, it is extremely important that schools carefully consider what practices best measures students performance (Reeves, 2008). Grading practices have long be a controversial issue among educators and academics. Through grades are accepts as a standard and inherent part of education system, there is some disagreement as to what exactly is the function of grades. There has been much debate over whether grades should be designed to communicate a student's performance in variety of areas, including behaviour and participation or whether they should just represent a student's proficiency in a given subject. Some educators have even questioned the value of using grades at all, claiming that using extrinsic rewards to reinforce learning teaches students to care more about their performance on assessment than on what they learn (Edwards, 1999).

The grading practices used by many teachers are designed to communicate student's performance in a number of areas, including both academic achievement and behavioral factors such as student effort, conduct and attitude (Allen, 2005). When teachers assign grades, especially final grades, they are communicating a number of messages to students with single mark. According to Zoeckler (2007), teachers often attempt to communicate message that include; level of expectations, level of academic achievement, encouragement and disappointment. Educators often use grades as both a punishment for bad behaviour and a motivational tool for good behaviour (Wormeli, 2006).

However. Some educators now recommend that grades should not be based on behaviour and other non-academic factor, but only on student's mastery of the material in a given subject. Grading students on what they know and can do, and not on other factors, will help teachers provide students and parents with specific feedback on what learning areas need improvement (Andy, 2011). Grading only on achievement is a key elements of standards-based grading, a practice that is gaining in popularity that focuses solely on student's proficiency on well-defined course objectives (Scriffiny, 2008).

Scriffiny (2008), summarized seven common characteristics of a standards-base grading which include;

i. Student's are graded either entirely or almost entirely on how well they progress towards learning objectives.
ii. Standards based grading system measures only a student's most recent level of mastery over the course materials.
iii. In order to avoid distorting student's grades away from their actual level of proficiency, standards-based grading only incorporates summative assessments such as tests or essay, not assessments like homework.
iv. Information from formative assessments can be used to provide valuable feedback to both the student and their parents
v. Students can redo summative assessment until they have demonstrated proficiency.
vi. Many standards-based grading system uses rubrics. Rubric define the specific learning criteria against which teachers will compare a students proficiency level.
vii. Standards-based grading systems often use a scale different from A, B, C, D and F to record student's grades on report cards. One common scale is 4,3,2 and 1. The score provided in a standards-based system correspond to performance standards.

The most fundamental measurement principle related to meaningful assessment and grading is the principle of validity (Linn & Gronlund, 2000; Stiggins, 2001). Validity is important because the sole purpose of grades is to accurately communicate to others the level of academic achievement that a student has obtained (Snowman & Biehler, 2003). If the grades are not accurate measures of the student's academic achievement, then they do not communicate the truth about the level of the students academic achievement. Unfortunately, as stated by Cizek (1996), grades continue to be relied upon to communicate important information about academic performance and progress.

The major reason for assigning grades is to create a public record of a student's academic achievement that can accurately and effectively communicate to others the level of mastery of a subject a student has demonstrated (Airasian, 2001; Linn and Gronlund, 2000; Oosterhof, 2001; Stiggins, 2001). Nitko (2001), points out that grade are used by students, parents, other teachers, guidance counselors, school officials, post secondary educational institutions and employers. Therefore teachers must assign grades with utmost care and maintain their validity.

A study by Baron (2000), shows that there is lack of coherence in the beliefs about grades held by parents and students and those held by education community. Even in the same schools, teachers often hold very different views about the purposes of grades and fail to communicate with their colleagues about their grading practice. Friedman & Frisbie (1995), make a particularly strong argument for making sure that report card grades accurately report information to parents about a student's academic progress and that teachers and administrators shares a common understanding of what information a grade should communicate. They suggested that since grades becomes part of a students permanent record, the purpose of these grades must be to communicate a valid summary of a student's academic achievement in the subjects. Grading systems used by teachers vary widely and unpredictably and often have low levels of validity due to the inclusion of non-academic criteria used in the giving of grades (Allen & Lambating, 2001; Brookhart, 2004; Frary, Cross & Weber, 1993; Olson, 1989). Teachers have been found to make decisions about grades related to student efforts in attempts to be fair in their grading practices (Barnes, 1985). It has been shown that grades are used as a motivational tool as well as to develop good study habits and desirable classroom management behaviour (Oosterhof, 2001).

Nevertheless, non-academic factors are often used as criteria for assigning grades because some teachers consider the consequences of grades more important than the value of clear communication of information and the interpretability of the grades (Brookhart, 1993). It follows then that instead of the grade being a function of what a student has learned, it has become a function of many variables. Since, important decisions are often based on a student's grade. Grades can open up or close down important learning opportunities for students (Jasmine, 1999). With high grades students get admitted to colleges and universities of their choice and receive scholarships and tution assistance, since grades are a major selection criterion in the college and university admission process. Moreso, it is very difficulty for students to get admitted to some schools, if their grades are not sufficiently high. Therefore, invalid grades that understate the students knowledge may prevent a student with ability to pursue certain educational or career opportunities. Based on principles of attribution and social cognitive theories, when students receive grades lower than ones that accurately show their true level of academic knowledge, it may lead students to believe they lack the ability to succeed academically and lower their sense of self-efficacy as well as their motivation to learn (Pintrich & Schunk, 2002). Hence, this study investigate the grading practice as valid measures of academic achievement in secondary schools for national development.

Statement of the Problems

Student's academic achievement in terms of grade or score occupies the largest area in the result sheet/report card. Preparation of grade in the result sheet/report card is the work of the teachers. Do teachers have a clear understanding of the grading policy of the students' scores? Do teachers grade student's work appropriately?

Research Questions

(1) Is there any difference between male and female teachers grading of students in secondary schools in Delta State?

(2) Does assignment of grades by urban and rural teachers accurately reflect the academic achievement of students work in secondary schools in Delta State?

Research Hypotheses

1. There is no significant difference between male and female teachers grading of students in secondary schools in Delta State.
2. There is no significant difference between urban and rural teachers assignment of grades to students work accurately in secondary schools in Delta State.

Method and Procedures
The design employed for the study was a descriptive survey method that reveals their behaviour, attitude and opinions towards the grading of student's scores in the secondary schools in Delta State.

Population
The population of the study consisted of all the teachers teaching in secondary schools in Delta State.

Sample
The sample of this study was three hundred (300) teachers randomly selected from the three senatorial districts in Delta State in thirty schools each by means of stratified random sampling techniques. One hundred (100) teachers each from the senatorial district was taken; Delta North, Delta Central and Delta South.

Research Instruments
The instrument for the study was developed and validated by the researchers and three educational evaluators in the Faculty of Education, Delta State University, Abraka. The instrument contained two sections. Section A is on the Bio-data of the respondents. Section B is on the grading practice as valid measures of academic achievement of secondary schools students in Delta State. In section B, a four scale of strongly agree 4 (SA), Agree 3(A), Disagree 2(D) and strongly Disagree 1(SD).

Data Collection
The researcher visited the selected schools to administer questionnaire developed for the study. The 300 copies of the questionnaire were administered to the respondents and retrieve back.

Methods of Data Analysis
Mean and standard deviation were used in answering the research questions. The mean of 2.50 was taken as criteria value for decision such that a mean of 2.50 and above was referred as agreed while a mean response that falls below 2.50 was regarded as disagree, while t-test statistic was used to test the hypotheses at 0.05 level of significance.

Results
Data collections were analyzed and presented in the tables below:

Research Question I
Is there any difference between male and female teachers grading of students in secondary schools in Delta State?
Table 1: Mean and standard deviation of Male and Female Teachers Grading of students scores in secondary schools in Delta State.

		N = 130 Male Teachers			N = 170 Female Teachers		
S/N	**Statement**	**Mean**	**SD**	**Decision**	**Mean**	**SD**	**Decision**
1	Teachers incorporate their expectations of individual students into the grade they award.	2.67	0.51	Agree	3.01	0.96	Agree
2	Award grades to students which does not reflect their true academic ability.	2.89	1.38	Agree	2.58	1.22	Agree
3	Use non-academic factors, such as attendance, homework completion in assigning grades to students	2.74	0.64	Agree	3.21	0.97	Agree
4	Use subjective value judgment when assigning grade to students.	2.96	0.45	Agree	2.88	0.70	Agree

Research Question 2
Does assignment of grades by urban and rural teachers accurately reflect the academic achievement of students works in secondary schools in Delta State?

Table 2: Mean and standard deviation of Urban and Rural Teachers accurately Assignment of Grades to students works in secondary schools in Delta State.

		N = 214 Urban Teachers			N = 86 Rural Teachers		
S/N	**Statement**	**Mean**	**SD**	**Decision**	**Mean**	**SD**	**Decision**
5	Assigned grades to students in subject they did not offered.	1.51	0.64	Disagree	3.12	1.06	Agree
6	Assigned grades that are invalid and not built on solid principle of measurement.	2.12	0.74	Disagree	3.25	0.66	Agree
7	Most teachers fail to give grades to students that are as valid as they should.	2.35	0.86	Disagree	3.18	0.93	Agree
8	Grade students test scripts and examination scripts without reading through.	2.41	0.60	Disagree	2.75	0.75	Agree

Hypothesis I

There is no significant difference between male and female teachers grading of students in secondary schools in Delta State.

Table 3: t-test analysis of Male and Female Teachers Grading of Students in Secondary Schools in Delta State.

Respondents	N	$\bar{X}$	SD	Df	t-cal	t-crit	Level of sign	Decision
Male Teachers	130	15.35	5.68	298	1.463	1.96	0.05	Not significant (Accepted)
Female Teacher	170	14.93						

Table 3, shows that the t-calculated value of 1.463 was less than the t-critical value of 1.96. Therefore the null hypothesis was accepted. This implies that there was no significant difference between male and female teachers grading of students in secondary schools in Delta State.

Hypothesis 2

There is no significant difference between urban and rural teachers assignment of grades to students work accurately in secondary schools in Delta State.

Table 4: t-test analysis of Urban and Rural Teachers assignment of grade to students work accurately in secondary schools in Delta State.

Respondents	N	$\bar{X}$	SD	Df	t-cal	t-crit	Level of sign	Decision
Urban Teachers	214	15.11	7.21	298	3.713	1.96	0.05	Significant (Rejected)
Rural Teacher	86	12.08	6.82					

In table 4, the t-calculated value of 3.713 was greater than the t-critical value of 1.96, Hence, the null hypothesis was rejected. This shows that there was a significant difference between urban and rural teachers assignment of grades to students work accurately in secondary schools in Delta State.

Discussion

Table 1, shows that there is no difference between male and female teachers grading of students in secondary schools in Delta State. The respondents agreed to items I,2,3 and 4 that teachers incorporate their expectations of individual students into the grade they award, award grades to students which doe not reflect their true academic ability, use non-academic factors such as attendance, homework completion in assigning grades to students and use subjective values grades to students. This findings are in support of Brookhart (1993) that non-academic factors are used as criteria for assigning grades because some teachers consider the consequences of grades more important than the value of clear communication of information and the interpretability of the grades.

Table 2 indicates that urban teachers disagreed to items 5, 6, 7 and 8 while rural teachers agreed to item 5, 6, 7, and 8. That is; assigned grades to students in a subject they did not offered, assigned grades that are invalid and not built on solid principle of measurement, most teachers fail to give grades to students that are as valid as they should be and grade student's test-scripts and examination scripts without reading through. This finding is in support of Jamine (1999) that, since important decisions are often based on a student's grade, invalid grades may result in dire consequences for the students. Grades can open up or close down important learning opportunities for students.

Table 3, shows that there was no significant difference between male and female teachers grading of students in secondary schools in Delta State. This finding is line with Barnes (1985), that teachers have been found to make decisions about grades related to student effort in attempts to be fair in their grading practices.

Table 4 indicates that there was a significant difference between urban and rural teachers assignment of grades to students in secondary, schools in Delta State. This findings supports, the views of (Allen & Lambating 2001; Brookhart, 2004, Frary, Cross & Weber, 1993 and Olson, 1989). Grading systems used by teachers vary widely and unpredictably and often have low levels of validity due to the inclusion of nonacademic criteria used in the calculation of grade. Wormeli (2006), stated that grade supposed to provide an accurate, undiluted indicator of a student's mastery of learning standards.

Conclusion

Grading practices have long been a controversial issue among educators and academic. The grading practices used by many teachers are designed to communicate student performance in a number of areas, including both academic achievement and behavioral factors such as student's effort conduct, and attitude.

Some educators now recommend that grades should not be based on behaviour and other non-academic factors, but only on students' mastery of the material in a given subject. Grading students on what they know, will help teachers provide students and parents with specific feedback on what learning areas need improvement.

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