

## Content Coverage and Students Attitude as Predictors of Senior Secondary School Academic Achievement in Mathematics

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### Abstract

*This study examined Content Coverage and Students Attitude as Predictors of Senior Secondary School Academic Achievement in Mathematics. The study adopted a descriptive survey method using simple random sampling technique to select three hundred (300) students from five (5) selected schools in Ijebu – Ode Local Government Ogun State. Questionnaire on (content coverage and student's attitude) and Mathematics achievement test was used as instrument for collecting data from the respondents. The data was analyzed using Multiple Regression Analysis. Based on the findings, content coverage predicts academic achievement of students in Senior Secondary School Mathematics. Attitude of students predicts academic achievement of Mathematics Students in Senior Secondary School, also content coverage and attitude predict academic achievement of students in senior secondary school Mathematics. On these bases it is recommended that both students, parents, teachers, Government and school management should ensure they all look into the learning process and ensure effective learning.*

**Keywords:** Predictor; Content Coverage; Attitude; Student; Achievement and Mathematics.

### Introduction

Mathematics has been recognized as one of the subjects which is vital in people's life, it may be in science, technology, business or in other walks of life. The main objective of teaching mathematics at secondary school level is to produce persons who will be numerate, orderly, logical, accurate and precise in thought (Amadalo, Shikuku and Wasike (2015)). They emphasized that certain content in the syllabus must be covered, and specific concepts and skills should be mastered by secondary school students. Efforts to improve performance in education are pulled back by woes such as inadequate content coverage, mismanagement and wastage of quality teaching time by teachers, attitude of students towards learning, perception that education no longer guarantees employment and lack of efforts by parents, teachers, leaders and community to create an enabling learning environment (David, 2016).

Onunkwo (2014) defines content coverage as the art of testing all that the students are supposed to have studied i.e. topics and behavioural objectives and not just other things. A test blue print or table of specifications is employed to ensure a systematic coverage of the topics and the instructional objectives in order to produce content valid test. He further asserted that Content coverage is also called curricula, rational or logical validity and it is most suited for achievement tests since achievement tests are designed to measure how well the examinee has mastered a specific course of the study.

Students' academic achievement in mathematics was also found to be influence by their attitude. Imasuen and Omorogbe (2016) opined that students' attitude towards Mathematics are measured based on their academic achievement, that those whose achievement are low lack positive attitude towards the subject. Over the years, there has been a loud cry that the academic achievement of secondary school students as drastically reduced. The number of students that pass at credit level and above in Mathematics is usually less than fifty percent of the total number of students that enroll to take the examinations (Nwaogazie, 2014).

Knowles (2014) sees academic achievement as the demonstrated outcomes of learning as opposed to the potential for learning. He further defines it as knowledge attained or skills developed in school subjects usually designed by test scores or marks assigned by the teacher. The link between rate of content coverage, attitude and its effect on achievement remained scanty in Nigeria studies. This study, therefore

examine content coverage and attitude as a predictor of senior secondary school academic achievement in Mathematics.

**Purpose of the Study**

The following are the purpose of this study:

- i. The extent to which content coverage predicts academic achievement of students in Senior Secondary School in Mathematics.
- ii. The extent to which attitude of students predicts academic achievement of students in Senior Secondary school in Mathematics.
- iii. The extent to which content coverage and attitude predicts academic achievement of students in senior secondary school in Mathematics

**Research Questions**

The following research questions are raised for the purpose of this study:

- i. To what extent does content coverage predict academic achievement of students in senior secondary school in mathematics?
- ii. To what extent does attitude of students predicts academic achievement of students in senior secondary school in mathematics?
- iii. To what extent does content coverage and Attitude predict academic achievement of students in senior secondary school in mathematics?

**Methodology**

Descriptive survey research design was adopted for this study, the sample comprises of three hundred students (300) which were selected from six public senior secondary schools in Ijebu – Ode Local Government, Ogun State, using simple random sampling technique.

**Instrumentation**

Questionnaire on content coverage and attitude towards mathematics and Mathematics Achievement Test was used to elicit information from the students. The questionnaire consists of 30 items, while the MAT consists of 20 items to assess students’ academic achievement in Mathematics. The data were analysis using both ANOVA and Multiple regression analysis.

**Data Analysis**

Research Question 1: To what extent does content coverage predict academic achievement of students’ in Mathematics?

Table: Extent to which content coverage predict academic achievement of students’ in Mathematics

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	9.063	.578		15.679	.000
content coverage	.091	.015	.234	6.140	.000

From Table 1, it implies that content coverage and academic achievement of students’ in Mathematics are positively related. That is, increase in content coverage will bring about .091 increases in academic achievement of students’ in Mathematics. Hence, the researcher concluded that content coverage predicts academic achievement of students’ in Mathematics.

Research Question 2: To what extent does attitude predict academic achievement of students' in Mathematics?

Table 2: Extent to which attitude predict academic achievement of students' in Mathematics

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	19.83	.761		14.19	.020
Attitude	7.13	.263	3.530	5.75	.033

a. Dependent Variable: academic achievement

The first important thing to note in Table 3 is that the sign of the coefficient of attitude is positive. This implies that attitude and academic achievement of students' in Mathematics are directly related. This implies that an increase in student attitude towards Mathematics will bring about 7.13 increases in academic achievement of students' in Mathematics, which is statistically significant. Hence the result shows that attitude predict academic achievement of students' in Mathematics.

Research Question 3: To what extent does content coverage and attitude predict academic achievement of students' in Mathematics?

Table 3:

R = .648 R <sup>2</sup> = .521 Adj R <sup>2</sup> = .518 Std. Error = 10.44480					
ANOVA					
Source of Variation	SS	Df	MS	F-ratio	P
Regression	1693.115	2	846.558	7.760	.000 <sup>b</sup>
Residual	64474.476	296	109.094		
Total	66167.591	298			

Table 3 shows that there was significant contribution of the independent variables (content coverage and attitude) on the dependent variable (academic achievement of students' in Mathematics); R = 0.648, P < .05. The table further reveals {51.8% (Adj. R<sup>2</sup> = 0.518)} that about 52% of the variance in academic achievement of students' in in Mathematics was accounted for by the linear combination of the independent variables (content coverage and attitude).

**Conclusions**

The following conclusions were drawn based on the findings of the study that, Content coverage and academic achievement of students' in Mathematics are positively related. Attitude and academic achievement of students' in Mathematics are directly related. Content coverage and attitude were positively related to academic achievement which implies that an increase or improvement in any of these will increase academic achievement of students' in Mathematics.

### Recommendations

The following recommendations were provided based on the findings of the study:

- i. Teachers should ensure that they adequately cover the subject syllabus and that all their test or examination questions should be drawn from all the content areas the students were taught.
- ii. School administrators should ensure that their teachers teach their students regularly and cover the scheme of work for the academic session.
- iii. Parents should provide their children with the relevant text-books and ensure that their children do their assignments and work hard academically.
- iv. Ministries and all stakeholders should step-up teachers' supervision to curb lousiness, laziness and sluggishness on the part of teachers to ensure proper coverage of academic schemes.
- v. Teachers should give out the scheme to be covered to enable them read on their own content areas that could not be covered in class.

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