

**Effects of Case-based Teaching Strategy on Academic Achievement in Mathematics  
Word Problems among Junior Secondary School Students in the Ibadan Metropolis,  
Oyo State, Nigeria**

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### Certification

This is to certify that Olubukola Aderemi OGUNSAJU with matriculation number LCU/PG/002999 carried out this research work titled ‘Effects of Case-based Teaching Strategy on Academic Achievement in Mathematics Word Problems among Junior Secondary School Students in the Ibadan Metropolis, Oyo State, Nigeria’ in the Department of Science Education, Faculty of Education, Lead City University, Ibadan, Oyo State, Nigeria for the award of Master of Science Education (MSc(Ed)) in Mathematics Education and that this has not been previously submitted to any institution for the award of degree of certificate .

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## **Dedication**

This research is dedicated to God Almighty

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Even though the above mentioned institution and person that have assisted in the process of this research work, researcher alone stand responsible for the error if any found in this work.

## Abstract

One of the challenging areas of Mathematics learning is the aspect of word problems especially at the Junior Secondary School in Ibadan which many students do shy away from. This study therefore investigated the effects of case-based teaching strategy on academic achievement in Mathematics word problems among Junior Secondary school students in the Ibadan metropolis, Oyo State Nigeria. This study was grounded on constructivism and behaviourism models of learning and employed a quasi-experimental research design. The study population consisted of 64,841 Junior Secondary School students in Oyo State. A purposive sampling technique was employed using intact classes of (JS2) students. Word Problems in Mathematics Achievement Test (WPMAT) (KR20=0.95) was used as instrument for data collection. The data was analysed using Analysis of covariance at a significance level of 0.05. The findings revealed that, case-based teaching strategy was significant on students' academic achievement ( $F_{(1;68)} = 72.771$ ;  $p < 0.05$ ). There was no significant main effect of gender on students' academic achievement ( $F_{(1;68)} = 3.211$ ;  $p > 0.05$ ) and there was no significant interaction effect of case-based teaching strategy and gender on academic achievement ( $F_{(1;68)} = 3.187$ ;  $p > 0.05$ ), The study concluded that case-based teaching strategy enhanced students' academic achievement in Mathematics word problems. It was recommended that teachers should incorporate case-based teaching strategies to the teaching of Mathematics in Junior secondary schools.

**Keywords:** Case-based teaching strategy, Academic Achievement, Word Problem in Mathematics

**Word count:** 220

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## List of Acronyms

<b>Abbreviation</b>	<b>Meaning</b>
MAT	Mathematics Achievement Test
ZPD	Zone of Proximal Development
PBL	Problem Based Learning
STEM	Science Technology, Engineering and Mathematics
CBTS	Case-based Teaching Method
CTM	Conventional Teaching Method

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