

**Effects of Cooperative Learning and WhatsApp Use on Pre-Service Teachers' Basic General Mathematics Learning Outcomes in Colleges of Education, Oyo**

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Education**

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### Certification

This is to certify that Florence Abidemi ODELEYE with Matriculation Number LCU/PG/002711 carried out this research work titled “Effect of Cooperative Learning and WhatsApp Usage on Pre-Service Teachers’ Basic General Mathematics Learning Outcome in Colleges of Education, Oyo, Oyo State” in the Department of Science Education, Faculty Education, Lead City University, Ibadan, Nigeria for the award of Masters of Education Degree MSc(Ed) in Mathematics Education and that this has not been previously submitted.

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## **Dedication**

This work is dedicated to the Almighty God, Alpha and Omega, the Author and the Finisher of my faith, and to my Sweetheart, Dn. Odeleye O.D.

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## List of Acronyms

<b>Abbreviation</b>	<b>Meaning</b>
CIRC	Cooperative Integrated Reading and Composition
EACOED	Emmanuel Alayande College of Education
LT	Learning Together
GSE	General Studies Education
NCE	Nigerian Certificate in Education
BGMAT	Basic General Mathematics Achievement Test
PTAQ	Pre-service Teachers' Attitude Questionnaire

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