WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

DEVELOPMENT OF MOBILE LEARNING APPLICATION IN NEWTON'S THREE LAWS OF MOTION FOR JUNIOR HIGH SCHOOL LEARNERS

A Thesis Presented to

The Faculty of the Graduate School

College of Education

West Visayas State University

La Paz, Iloilo City

in partial fulfillment

of the requirements for the degree

Master of Arts in Education

(Physics)

by

Melissa D. Jardeleza

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WEST VISAYAS STATE UNIVERSITY
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GRADUATE SCHOOL
Iloilo City

APPROVAL SHEET

A Thesis for the Degree

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Melissa D. Jardeleza

Approved by the Research Committee:

LARRY D. BUBAN, PhD, Chair

ELIZABETH A. MAGALLANES, PhD, Member

ELVIRA L. ARELLANO, PhD, Outside Expert

CHIVE G. GABASA, PhD, Adviser

RICKY M. MAGNO, PhD, LPT
Dean

December 2022

WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
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Abstract

This research and development (R&D) study was done to improve students' prior knowledge and understanding of physics by designing and developing an android-based mobile application and to validate the said developed instructional material by the experts. The development of the application was carried out by adopting the 4-D model—define, design, develop and disseminate developed by Thiagarajan, Semmel & Semmel (1974). The instruments used were the 35-item questionnaires which were utilized to measure the students' prior knowledge and understanding of Grade 10 Physics, the expert validation checklist adopted from the Department of Education, and physics teachers' and students' adopted application evaluation rubric and intrinsic motivation inventory (IMI). A pre-assessment was given to the Grade 10 learners, wherein the results were the basis for designing and developing an android-based mobile application as instructional material in Physics. Results revealed that N3LM is a 'moderately acceptable' offline mobile application as rated by the four experts. It means that experts strongly agreed that the developed learning resource material is suitable, applicable as instructional material, and may improve the learner's prior knowledge and understanding of Physics. The developed product installed and explored by ten teachers and ten students considered the mobile learning application as applicable, easy to use,

supports learning, engaging, and innovative. It is therefore recommended that developed android-based instructional material be utilized by learners and teachers in learning the Physics subject.

WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

TABLE OF CONTENTS

LIST OF TABLES

WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

LIST OF FIGURES

WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

LIST OF APPENDICES

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