

WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

DIGITAL LITERACY SKILLS AND INSTRUCTIONAL COMPETENCE OF MATHEMATICS
TEACHERS

A Thesis Presented to the
Faculty of the Graduate School
College of Education
West Visayas State University
La Paz, Iloilo City

In Partial Fulfilment
of the Requirements for the Degree
Master of Arts in Education
(Mathematics)

by

Angel Frenz E. Encanto

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Abstract

This study analyzed the digital literacy skills and instructional competence of mathematics teachers, determined if there is an existing relationship between the two construct, and identified the challenges and coping of the mathematics teachers in acquiring digital literacy skills and instructional competence. Participants of this study were the junior high school mathematics teachers in the seven big public high schools in the first district of Iloilo. Two adapted research questionnaires were used to measure the teachers' digital literacy skill and instructional competence, and an interview was conducted with the help of the interview guide to identify their challenges and coping mechanism in acquiring digital literacy skills and exhibiting instructional competence. This study utilized the mixed method, particularly the sequential explanatory design. The statistical tools employed to analyze the quantitative data are mean, standard deviation and Spearman rho. On the other hand, thematic analysis was used to analyze qualitative data. The quantitative findings of the study revealed that the mathematics teachers' digital literacy skills was intermediate and in terms of understanding digital practice, using information and creating information, yielded intermediate as well. Moreover, the instructional competence of mathematics teachers was very satisfactory and likewise in terms of content knowledge and pedagogy and diversity of learners while curriculum

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and planning is outstanding. However, there exist no significant relationship between the two constructs. In addition, the qualitative findings reveal that the challenges of mathematics teachers in acquiring digital literacy skills are unreliable internet connection and inequitable internet access, inadequate technological devices, insufficient technological knowledge and skills, unconfident technological disposition and limited time. In addressing these challenges, the coping mechanisms of mathematics teachers are applying personal initiatives, seeking external aid and fostering a positive attitude. On the other hand, the challenges experienced by mathematics teachers in exhibiting instructional competence were inadequate availability of teaching and learning resources, keeping students' interest towards learning, difficult management and control over the students, uncertain assessment results and complex content delivery. While, the coping mechanisms of mathematics teachers were peer mentoring, collaboration with stakeholders, resourcefulness and creativity, and compassionate disposition. Further, this study recommends that future in-depth research on the DLS and IC of teachers be conducted considering a different locale and context to validate the research results.

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