WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

RESEARCH COMPETENCIES OF SENIOR HIGH SCHOOL STEM LEARNERS

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

(Biology)

by

Mary Ann A. Ca-alim

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Abstract

The Department of Education in the Philippines centers on the learning of the students to meaningfully realize their full potential through contextualization and contribute in the nation building through research that plays a vital role in acquiring knowledge and indispensable 21st century skills. This study aimed at determining the level of research competencies and experiences of the Senior High School STEM learners in one of the private schools in Iloilo City that offers Catholic Education and strongly believes in academic excellence for service, character formation, and growth in social responsibility, during the school year 2020-2021. The quantitative and qualitative methods were employed in the study. For the quantitative part of the study, a researcher-made questionnaire named "The Research Competency Test" was utilized and a table of specification was provided to describe the topics to be covered by the test. The instrument underwent content and construct validation by experts who are also science education specialists. Thirty first year college students who were graduates of the same school served as the pilot testing participants with reliability index of .822. The implementation of the Research Competency Test to seventy-two Grade 12 senior high school STEM learners was done on June 03, 2021, and the Google Form link was sent to the Gmail accounts of the students. For the qualitative

part of the study, five research groups were scheduled for the interview via Google Meet, and the link was sent to their respective Gmail accounts and their responses were consolidated. The results of the study revealed that the level of knowledge in identified research competencies among the Grade 12 senior high school STEM learners are proficient in identifying variables and research methodology while they exhibit approaching proficiency in the remaining research competencies. The qualitative analysis of the students' research experiences revealed the themes. Both positive and negative experiences were noted. Experiences were considered positive because of positive reinforcement, insightful learning experience, goal oriented initiatives, and strengthen virtual collaboration. There were negative experiences in terms of technically exhausting research, unpreparedness to remote methods of teaching, and academically complicated policies. Furthermore, the bottom five identified research competencies need to be enhanced based on the knowledge in research among the senior high school STEM students were constructing research instruments, formulating research questions, identifying research topic, formulating hypothesis, and illustrating conceptual framework. Moreover, the experiences of learners and their concepts together with the attitude towards research vary. This would also mean that group work could be best in doing research because each member can contribute his or her knowledge and skills that can make the endeavor a more complimentary approach. The roles of research teachers and advisers have a great impact on establishing positive attitude towards doing research. The guidance and the mentorship that these learners need must create a rapport between

their research advisers. It is therefore recommended that learners must develop a positive mental attitude towards their requirements, and research teachers need to cultivate their research-based techniques and develop their practice strategically and effectively that will greatly help the students' develop their research competence.

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