

# Engagement to Online Learning, Self-Regulated Learning, Mental Well-Being, and Academic Performance: A Path Analysis

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## Abstract

This research aims to determine the causal relationship of interconnected variables; engagement to online learning, self-regulated learning, mental well-being, and academic performance in science subjects utilizing quantitative research that employed descriptive-correlational design with path analysis in the treatment of data. One hundred sixty-four online, Grade 12 STEM students were randomly selected from among four schools in Davao del Norte as respondents of this study using stratified random sampling technique. This research utilized Student' Sustainable Engagement in e-Learning Instrument, Online Self-Regulated Learning Questionnaire, Short Warwick–Edinburgh Mental Wellbeing Scale, and Academic Performance Test to measure the different variables. Mean, Pearson-r, Multiple Regression Analysis, and Structural Equation Modelling were applied to treat the data. Study results showed that; engagement to online learning is moderately evident among the students, students' self-regulated learning is moderately manifested among the students, students have an average mental well-being, and students have performed fairly satisfactory in their science subjects. Only self-regulated learning appears to be a statistically significant predictor of academic performance in science. The best fit model indicates that both self-regulated learning and mental well-being have direct effect whereas, engagement to online learning has a significant indirect effect on academic performance through self-regulated learning and mental well-being. This study implied that students should practice more self-regulation in their learning to achieve better results in the science subjects. Teachers and educators must prioritize the self-regulated learning skills of the students specially in these pandemic times where online learning is the new normal.

**Keywords:** descriptive-correlational design, Grade 12 STEM, SEM, Philippines