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MENTORING, SELF-EFFICACY AND PERFORMANCE IN CONDUCTING INVESTIGATORY PROJECTS: A MIXED-METHOD ANALYSIS

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Abstract

This study investigated the effects of mentoring assistance and students' self-efficacy beliefs on the performance in conducting investigatory projects. Specifically, its aim is to: ascertain the students' level of performance in the conduct of investigatory projects; identify the level of mentoring assistance that prevails in the conduct of investigatory projects in terms of identifying the research problem, formulating the research problem, formulating the hypothesis, writing the review of literature, constructing the research design, gathering of data, data analysis, presentation, and interpretation of results/findings, formulating conclusions and recommendations, and general practices; identify the students' level of self-efficacy beliefs, correlate mentoring assistance, self-efficacy beliefs and students' performance; find out which variable best predicts students' performance; and determine students' experiences in the conduct of investigatory projects.

Mixed-method analysis using descriptive-correlational methods were used to collect data. Data were analyzed using frequency counts, percentage, means, standard deviation, correlation and multiple linear regression analysis. Findings revealed that majority of the grade-10 students have low performance in the science process skills of conducting investigatory projects. Teachers were satisfactory in mentoring students in the following science processes: identifying the research problem; formulating the research problem; formulating the hypothesis; writing the review of literature; constructing the research design; collecting or gathering of data; analysis, presentation, and interpretation of data; formulating conclusions and recommendations; and the general practices in the conduct of science investigatory projects.

Students have moderate self-efficacy beliefs on their ability to conduct science investigatory projects and research tasks. The mentoring assistance in terms of formulating the research problems, formulating the hypothesis, writing the review of related literature, constructing the research design, and analysis of data, presentation and interpretation of results have significant relationship to students' performance. In addition, regression analysis shows that mentoring students in writing literature reviews is a predictor of their performance. The findings of the study indicate that mentoring students in the conduct of investigatory projects has an impact to their performance. Also, students' perceptions and experiences in the conduct of their science research projects are both positive and negative. Teachers are encouraged to promote understanding of science research processes through effective mentoring relationship. Recommendations for future studies and research are provided.

Keywords: Mentoring, Self-Efficacy, Performance and Investigatory Projects.