ABSTRACT

This survey-correlational study was conducted using researcher-made instruments to determine the levels of proficiency of 79 randomly selected Grade 10 Science, Technology, and Engineering students on procedural knowledge, proving skills, and problem solving skills in geometry and the relationships that exists among these skills. Findings of the study revealed that the students extent of abilities in each of procedural knowledge, proving skills, and problem solving skills was at the approaching proficiency level implying that the students have developed the fundamental knowledge and skills with little guidance from the teacher and/or with some assistance from peers, can transfer these knowledge and skills through authentic performance. Further analysis of the data showed that a strong, positive and highly significant relationship existed between procedural knowledge and proving skills, indicating that an increase in the procedural knowledge will cause an increase in their proving skills and vice versa; a strong, positive, and highly significant relationship was found between the proving skills and problem solving skills implying that improving the proving skills may be anchored on their problem solving skills and vice versa; and strong, positive, and highly significant relationship was found between the procedural knowledge and problem solving skills of the students indicating that enhancing the respondents procedural knowledge, their problem solving skills will also improve.

Keywords: Procedural Knowledge, Proving Skills, Problem Solving Skills, STE students