

Secondary school students' energy literacy: effect of gender and school location

Abstract

Energy is the “underlying currency that governs everything humans do with each other and with the natural environment that supports them.” Our reliance on energy-rich sources of fossil fuels has created the underpinnings of modern society, enabling mobility, industrial growth, domestic comfort, unprecedented lavish food supply, and economic prosperity. As we move into a future with limited fossil fuels resources and worsening environmental conditions, our society is faced with defining new directions with respect to energy consumption, resources, and independence. Energy literacy encompasses three dimensions: Content knowledge (cognitive), sensitivity and attitude (affective); and intentions/behaviours. An informed, energy-literate public is more likely to be engaged in the decision making process, and will be better equipped to make thoughtful, responsible energyrelated decisions, choices, and actions. Unfortunately, a number of studies have shown that people are generally ill-prepared to actively contribute to solving our energy problems, largely because they lack energy-related knowledge and awareness. Hence, the primary purpose of this study is to investigate the effect of gender and school location of secondary school students on their energy literacy. The secondary purpose is to investigate if there is a correlation among the afore-mentioned components of energy literacy. The ultimate goal of this study is to investigate the contribution of students’ energyrelated knowledge and attitudes on their energyrelated behaviors. This was a non-experimental quantitative research. Sample survey method was used to collect data by using ‘Energy Literacy Questionnaire’. Independent samples t-test, Pearson product-moment correlation, and multiple linear regression were used to test the stated null hypotheses at a predetermined significance level, $\alpha = .05$. A broad and efficient measure of energy literacy for secondary school students may prove useful for determining baseline energy literacy levels among groups of students, as well as to assess the effectiveness of energy education programmes for improving energy literacy. Such assessment would provide valuable

programmes feedback, enabling greater strides toward better educational programmes, wider implementation of these programmes in our classrooms, and improved energy literacy.