Abstract

Background: The reason for this study was the low interest that high school students, particularly females, show for the subject of mechanical engineering (ME). We assumed that this problem was partly due to: (a) lack of understanding of the tasks involved in ME, and (b) a distorted and negative perception of the professional environment and working conditions. Method: To assess these two assumptions, two measurement instruments (tasks and perceptions) were developed and administered in a sample of 496 high school students. A multiple-group design was used and data was analyzed by using an extended item response theory model. Results: In general terms, the results agreed with our expectations. However, no significant gender differences were found. Discussion: The implications of the results for future improvements are discussed.

Keywords

Mechanical engineering and gender differences, attitude measurement, multigroup factor analysis, item response theory.