

Abstract

The Relationship between Critical Thinking, Beliefs in Superstitions and Scientific Misconceptions among Jordanian College Students

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The purpose of this study was to reveal relationships among critical thinking, superstitions and scientific misconceptions held by Jordanian university students, and the role of gender and academic specialization. The study attempted to answer the following questions:

- Are there significant correlations between critical thinking on the one hand and superstition and scientific misconceptions on the other, among Jordanian University students?
- Is there a significant correlation between superstitions and scientific misconceptions among Jordanian University students?

- Are there significant differences with regard to critical thinking, superstitions and scientific misconceptions between males and females, and between science and arts students?

In order to answer these questions, data were collected from (481) students of both sexes during the second semester of (2006-2005) from five randomly selected universities in Amman vicinity.

The measures were used as follows:

- a- Cornell Critical Thinking Test (level Z,) designed to measure critical thinking among university students.
- b- A superstitions scale built by the author. Reliability and Validity of the scale were deemed satisfactory.
- c- A scale to measure scientific misconceptions built by the author and was found to be valid and reliable.

Results were found to be as follows:

- 1-A negative correlation (-0.406) was found between student's scores on the critical thinking test and the superstitions scale.
- 2-A negative correlation (-0.435) was found between student's scores on the critical thinking scale and scientific misconceptions
- A Positive correlation (0.404) between student's scores on the superstitions scores and scientific misconceptions was found.

- a- Statistically significant differences were found between the sexes and specializations on the critical thinking test, in favor of males and science students. . No interaction between gender and specialization was detected.
- b- Statistically significant differences were found between the sexes and specializations on the scientific misconceptions scale in favor of the females and arts students. No interaction between gender and specialization was found.
- c- Statistically significant differences were found between the arts students, but they were not found between the sexes. No interaction between gender and specialization was detected.