



Science Teacher Candidates' Epistemological Beliefs and Critical Thinking Disposition*

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ABSTRACT

Purpose: The purpose of the study is to find out the effect of gender and class level on science teacher candidates' epistemological beliefs and critical thinking disposition, and also examine the relationship between these two dependent variables. **Research Methods:** This study was designed as a descriptive survey. Participants were 447 students majoring in science education. The data for the epistemological beliefs was collected with the Scale of Epistemological Beliefs (SEB), and for critical thinking

disposition was collected with the California Critical Thinking Disposition Inventory (CCTDI). The data was evaluated in SPSS with an Mann Whitney U, Kolmogorov-Smirnov, and two variables correlation. **Findings** The study found that female students had more developed epistemological beliefs than their male counterparts. Students' SEB and CCTDI scores also exhibit a moderate positive correlation. The students' epistemological beliefs and critical thinking dispositions did not vary regularly by class level.

Implications for Research and Practice: Applications developing male students' epistemological beliefs and critical thinking skills can be done so as to reduce negative effects of gender on learning-teaching process. Additionally, activities should be included in applied courses (such as lab and student presentations) in the science teaching programme to develop such skills of students.

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