



AN EXPERIMENTAL STUDY OF PRE-SERVICE SCIENCE TEACHERS BASED ON THEIR SUCCESS IN ASTRONOMY

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Abstract

The aim of this study is to test the success of pre-service Science teachers in the basic knowledge related to astronomy and alternative concepts they possess in the graduate program. In order to do this, a study was implemented to 90 final year (fourth year) pre-service Science teachers from education faculty in a university located in the Black Sea region of Turkey. This study had one group (no control group) and pre-, post-test experimental research design was the method used in the study. A 32 question "Astronomy Achievement Test" that validity and reliability studies had been performed on was used as a data collection tool. T-test for the related samples was used for data analysis. The results revealed significant differences in success in astronomy of pre-service Science teachers in favor of the post-test. During the study while there was a decrease in some of the alternative concepts others stayed the same. From results obtained it was proposed to investigate the effectiveness of the elimination of alternative concepts by performing a variety of studies on pre-service Science teachers. In addition, it was thought to be useful to increase the number of hours for the 2-hour long astronomy lesson in the curriculum of Science teaching department.

Keywords: Astronomy, pre-service science teacher, experimental study.