Eğitim ve Öğretim Araştırmaları Dergisi
Journal of Research in Education and Teaching
Şubat 2016 Cilt:5 Sayı:1 Makale No: 21 ISSN: 2146-9199

THE EFFECTS OF ACTIVE LEARNING TECHNIQUES IMPLEMENTED IN A FULL STUDIO CLASS ON PRE-SERVICE TEACHERS' PHYSICS ACHIEVEMENT

Arş. Gör. V. Nilay Kırtak Ad
Balıkesir Üniversitesi
Necatibey Eğitim Fakültesi
nilaykirtak@gmail.com

Doç. Dr. M. Sabri Kocakülah
Balıkesir Üniversitesi
Necatibey Eğitim Fakültesi
sabriko@hotmail.com

Abstract

This study aims to determine effects of active learning techniques implemented in a full studio class on pre-service teachers' physics achievement in Fluid Mechanics. The sample of the study consists of 51 first year pre-service primary science teachers of one education faculty in Turkey. The course schedule, which involves active learning techniques, was implemented for four weeks. Single group pre test-post test weak experimental design, in which the same data collection instruments were applied to the same students before and after teaching, was used in this study. Data were collected by means of a conceptual understanding test. The pre-service teachers' answers to the test which consists of 24 open-ended questions were first divided into categories in accordance with the rubrics designed beforehand and then were scored and evaluated. Pre-service teachers' pre and post test scores were compared by using SPSS14 program. The results of the data obtained from conceptual learning test showed that pre-service teachers' achievement were improved and there was a statistically significant difference between the scores of pre and post scales ($t=18,04$; $p<0.05$). Additionally, semi-structured interviews were conducted with five students to reveal their ideas about teaching process and classroom atmosphere after instruction. In the interviews conducted by the researcher, pre-service teachers reported that they enjoyed the classroom environment and that they believed that they learned more easily when they were active.

Keywords: Full studio, active learning, fluid mechanics.