

A Study on the Results of Pre-Service Teachers' Group Performances Using History of Science as Learning Material

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Abstract

In natural science education, the traditional teaching method often involves imparting a large amount of relevant teaching materials first, followed by descriptive narration to cramming. While this may seem effective, yet from an educational perspective, it is more reasonable to first spark students' interest before teaching. Therefore, this study attempted to allow students to read **by themselves first and then** perform in groups to observe their thoughts and attitudes towards science. Using the textbook "Introduction to Natural Sciences" edited by Lou Zhaowen et al., six Chinese and foreign history of science articles from chapter 10, "Extra-curricular reading materials," were assigned for students to read independently and then perform in groups. This study involved 95 students from two classes of the Preschool Education Department to explore the learning outcomes. The results found that students conscientiously and autonomously consulted relevant materials, arranged the plots well, provided profound interpretations of scientific figures, and enjoyed this group activity, considering it fostered teamwork and mutual appreciation and evaluation. Overall, their understanding of the Nature of Science also improved, although further explanation is needed for comprehending the related scientific knowledge.

Keywords: Natural sciences, Lou Zhaowen, Introduction to Natural Sciences, Group performance, Learning outcomes, Nature of science

1. Introduction

Currently, kindergarten teachers in China adopt a "bāo bān zhì" - homeroom teacher system, where kindergarten teachers are responsible for activities and integrated activities across the five major domains: health, language, society, science, and art[1]. Consequently, the education of pre-service teachers in preschool education also focuses on generalist training. The curriculum broadly covers basic knowledge and skills across various domains, including language, literature, art, dance, society, health conservation, and natural sciences[2].

Typically, preschool education departments provide more training in

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