

The Effects of Professors' Pedagogical Content Knowledge on Elementary Teacher Candidates' Attitude and Achievement Regarding Biology

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ABSTRACT The focus of this study was to investigate whether professors' pedagogical content knowledge has an impact on Elementary Education [ELE] teacher candidates' achievement and attitude regarding Biology course. The subjects of the present study consisted of 60 first grade ELE teacher candidates in two classes and two professors (2 males) teaching Biology in these classes. ELE teacher candidates were required to draw human body and complete the scale of attitude toward life science. On the other hand, individual interview was conducted with two professors. The results showed that ELE teacher candidates who enrolled in professor-A's (who has a student-centered approach) class had or at least tended to have more positive attitudes toward Biology than those who enrolled in professor-B's (who has a teacher-centered approach) class. ELE teacher candidates who attend professor-A class had higher achievement in the Biology course than those who attend professor-B class. The study also examined whether attitudes are associated with achievement measured by participants' drawing of human bodily function by utilizing multiple linear regression, but showed no significant effect of attitude toward life science on achievement regarding Biology.