

## **The Effects of Learning Style on Academic Achievement and Attitude through Internet Assisted Chemistry Education**

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Homework is often assigned in Chemistry classes to facilitate students' learning. This study aimed to investigate the effect of web-based homework on academic achievement and science teaching attitude for students with different learning styles and makes a comparison to the use of traditional homework. Sixty five prospective science teachers from undergraduate science teacher education program at Marmara University in Turkey were chosen to participate in this study. The students were split into two groups: web-based (Group1) and traditional (Group2). Group-1 (N=32) developed a teaching website for electrochemistry and Group-2 (N=33) prepared teaching portfolio for the same subject. Data were collected by a Demographic Information Questionnaire, the Turkish version of the 60-item version of Grasha and Riechmann's Student Learning Style Scales, Test of Academic Achievement, and the Turkish version of the Science Teaching Attitude Scale II (STAS-II) revised by Moore and Foy.

Research findings showed that academic achievement of the students differed significantly with respect to their learning styles. Academic achievement of the students who had independent learning styles in Group-1 was significantly higher than collaborative, dependent and avoidant learners ( $F=5.272$ ;  $p<.05$ ). Academic achievement scores of cooperative learners in Group-2 were significantly higher than avoidant ( $F=3.749$ ,  $p<.05$ ) ones. On the other hand, there was no significant difference in terms of attitudes towards science teaching for learners with different learning styles.

It has been concluded that developing a teaching website as homework may help improve independent learners' academic achievement; on the other hand, developing a teaching portfolio may improve cooperative learners' academic achievement. In the light of the findings it can be suggested that, in the effective use of homework as a tool for learning, it is essential to match homework methods to individual difference variables.

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