

A comparative analysis of interactive arithmetic learning in the classroom and computer lab

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Abstract

One of the main benefits of using technology in education is the opportunity it provides for student interactivity. The best place to implement interactive learning technology in schools has been a topic of debate, with the classroom and computer lab the most common choices. This paper joins the debate by studying whether there is any difference in learning when comparing individual interactive work in the classroom using a Shared Display Interpersonal Computer with individual work in a computer lab using personal computers. Comparisons were made between (1) classroom work using a Shared Display Interpersonal Computer with an individual mouse for each student, (2) work in a computer lab using a personal computer, and (3) a mixed model using a combination of the two. Both systems used the same unit-based arithmetic software, with the same functionality and interface. In the Shared Display Interpersonal Computer group, the children shared a single screen, while in the computer lab group each child had their own PC and monitor. The results of the study favor classroom groups working with a Shared Display Interpersonal Computer. Possible explanations for this include greater interaction between peers and increased teacher support for students in the classroom. However, this is beyond the scope of this paper and must therefore be validated by future work.