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Johan van Niekerk, Paul Webb

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The effectiveness of brain-compatible blended learning material in the teaching of programming logic

Johan van Niekerk[a], Paul Webb[b]

[a]School of ICT NMMU [b]Faculty of Education, NMMU

Abstract

Blended learning is an educational approach which integrates seemingly distinct educational approaches, such as face-to-face and online experiences. In a blended learning environment the classroom lectures can, for example, be augmented with learning material offered in a variety of technologically delivered formats. There exist extensive evidence that a blended learning approach which mixes face-to-face and online learning materials is substantially more effective than using only face-to-face educational methods. However, in order to be effective, blended learning course material should still be designed and presented according to sound pedagogical principles. This article presents the results of an experiment to augment the teaching of fundamental programming logic based on the pedagogical principles underpinning brain-compatible learning materials via e-learning delivery mechanisms. The research uses both qualitative and quantitative methods. Results show promise for this use of brain-compatible material in a blended learning context.

Keywords: interactive learning environments; programming and programming languages; pedagogical issues; teaching/learning strategies