

The effect of self-efficacy and pair programming collaboration in learning results of elementary programming course

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ABSTRACT

UPDATED—December 11, 2017. The purpose of this study was to explore the interactive effect of pair programming and self-efficacy to the final learning results in introductory programming courses. The instrument of measuring self-efficacy was imported from International Personality Item Pool <http://ipip.ori.org/newindexofscalelabels.htm>. Data was collected by distributing questionnaires to students taking elementary computer science courses at UW-Madison (CS 302 or CS 367). Students were asked questions to evaluate their self-efficacy and pair programming levels based on their personal study experience. After that, they were asked to complete a quiz of 11 Java programming problems to examine their learning results. Results indicate that students with a high self-efficacy level tended to act well in pair programming practices and earned a higher score in the Java programming quiz. However, pair-programming shows no significant effects on learning results. Our findings suggest that high self-efficacy level has a positive impact on students programming study, and finally influences their learning results.

ACM Classification Keywords

H.5.m. [Information Interfaces and Presentation (e.g. HCI)]: Miscellaneous; K.3.2. [Computer and Education]: Computer and Information Science Education

Author Keywords

Human-Computer Interaction; Self-efficacy; Pair Programming; Collaborative Learning

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Nass	22.2	16	234,333
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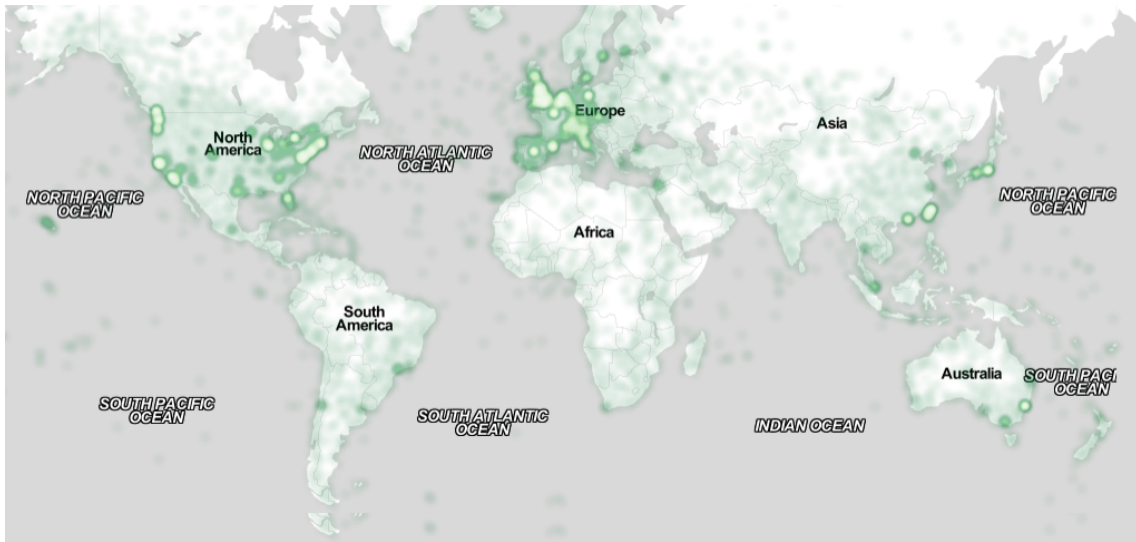


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ACKNOWLEDGMENTS

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