A COMPARISON OF PROBLEM-BASED LEARNING AND STRONGLY GUIDED INSTRUCTION IN COMPUTER PROGRAMMING EDUCATION

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Abstract: The effectiveness of various discovery learning methods in public education is a much debated topic [1, 2]. Kirschner and colleagues [1] suggest that teaching through many worked examples is more efficient than minimally guided instructional methods. The aim of this study was to compare the former, strongly guided instruction with a form of problem-based learning in computer programming university education. The measurements included the enjoyment of classes, improvement of knowledge, and engagement in extra tasks besides the actual performance of the students at regular tests. The same topics were taught in two parallel groups using the two different teaching methods for one semester. The performance of the students in the tests at the end of the semester were similar, but the other measurements show some interesting differences, especially regarding the learning experience.

Keywords: computer programming education, discovery learning, strongly guided instruction, comparative study.

References

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