Supportive hints in a digital learning environment: Effects on students' motivation

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Introduction

Students' motivation has an important influence on reading achievement. However, students need to recognize the task value or decrease the perceived difficulty of a task in order to be motivated to read a text.[1] Reading motivation is a problem many content area teachers face when instructing their secondary students.

Incorporating cognitive, metacognitive and motivational support during instruction increases students' motivation towards learning from text.[2] Students were offered these three types of support using hints in a digital learning environment (DLE) while they read informative texts for geography and history classes.

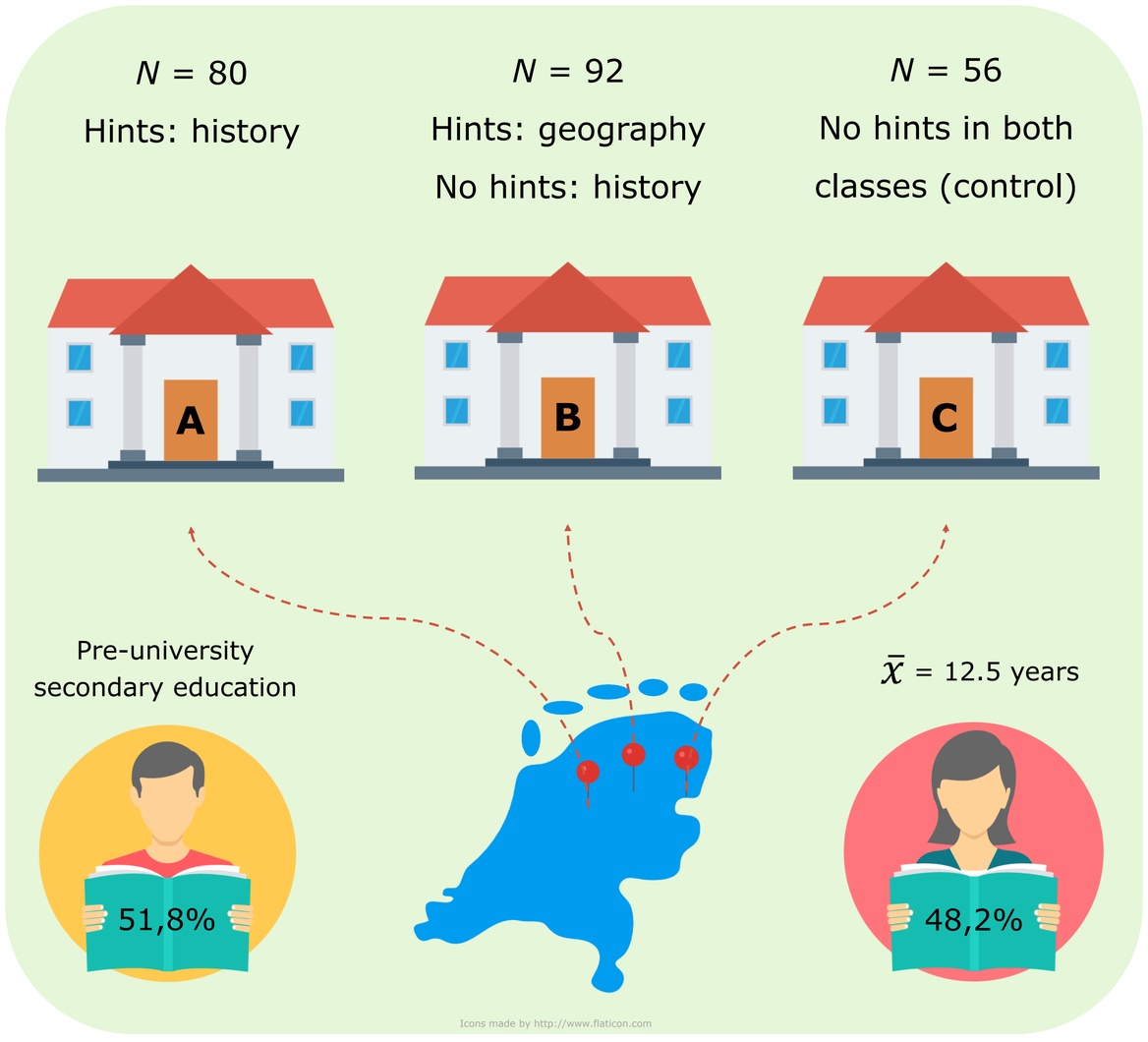
Research question

What is the effect of supportive hints in a digital learning environment on secondary students' motivation in geography and history classes?

Method

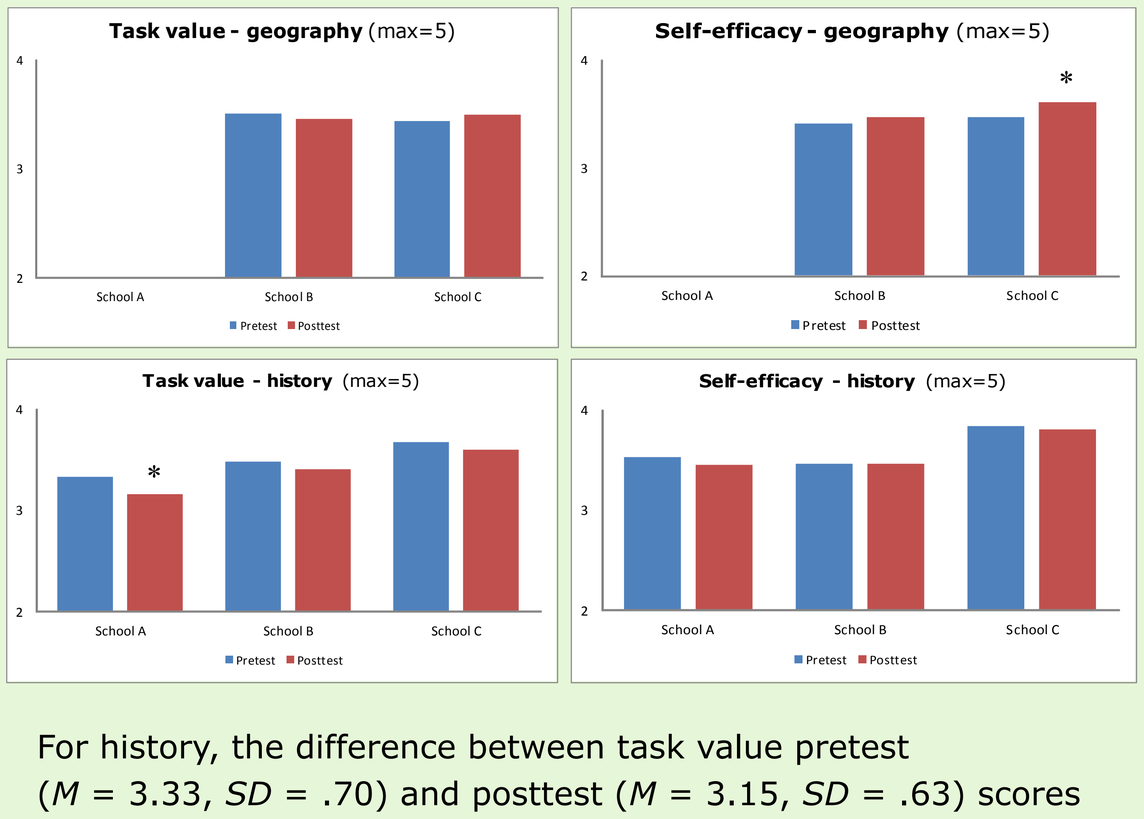
Four geography teachers and six history teachers implemented the use of the DLE in their first grade secondary school classes. During a six-week intervention period, students (N = 228, M_{age} = 12,5 years) weekly read one text for each class in the DLE. Both experimental groups (A & B) were able to use hints in either geography or history texts. The control group (C) was unable to use hints.

This research uses a pretest-posttest design. Two components of motivation are measured with the MSLQ: task value (e.g., *Is this course useful to me?*) and self-efficacy (e.g., *Am I good at this?*)[3] Student data was analyzed using ANOVA, GLM and paired samples t-tests.



Results

For geography, the difference between self-efficacy pretest (M = 3.47, SD = .46) and posttest (M = 3.61, SD = .48) scores of school C is significant; $t(38) = -2.08$, $p = .044$.



For history, the difference between task value pretest (M = 3.33, SD = .70) and posttest (M = 3.15, SD = .63) scores of school A is significant; $t(77) = 2.83$, $p = .006$.

Conclusion & discussion

The results presented here are not in line with previous research on the effects of reading strategy instruction on students' motivation:

* Self-efficacy *increased* significantly in the control group (geography; no hints available).

* Task value *decreased* significantly in the experimental group (history; hints available).

Currently no motivational hints were offered. Adding motivational hints to the DLE may elicit positive effects on students' motivation.

Recommendations for practice

Student evaluations revealed that students enjoyed working with the DLE. However, in order to keep students motivated to learn, a DLE with supportive hints should be used in addition to regular classes, not as a continuous replacement hereof.

References

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