




Research

Student Learning Outcomes



About the study	Curriculum	Main Takeaways
		
<ul style="list-style-type: none"> • In 2018, Vidcode partnered with WestEd with funding from the SBIR grant, to conduct two rigorous studies of the Vidcode curriculum's impact on student learning. • GOAL To examine changes to student learning and attitudes towards computer science after using Vidcode in the classroom. 	<ul style="list-style-type: none"> • For the first study, teachers used 10 hours of activities and lesson plans in the JavaScript 101 course. • Four classrooms participated in the study. Two served as the treatment group and implemented Vidcode lessons, while two classrooms served as the control group and did not use Vidcode. 	<ul style="list-style-type: none"> • Students' understanding of CS concepts improved a statistically significant amount • Teachers felt students could apply what they've learned in other programming contexts • Vidcode appealed equally to girls and boys • Vidcode was successful in reaching students who might not otherwise tried coding.

Study Details

✓ Pre and post surveys

The student pre and post surveys were the same, and included ten multiple choice items measuring knowledge of the following coding concepts: variables, sequencing, loops, incrementation and randomness (the ability to make a range of numbers, such as by indexing arrays).

✓ “Business as usual” Activities in Control Classrooms

Interviews and teacher logs gathered from control teachers indicate that teachers utilized coding-related activities during the study. Teachers used Scratch, Codecademy, and Lego NXT as resources. Activities were primarily student-driven, where students were provided most of class time to work independently on their projects.

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“I have kids saying ‘I was afraid of JavaScript at the beginning. I didn’t really want to do that.’ And with Vidcode they’re not afraid of [coding]. And that’s a big deal, for these kids to not be afraid to try another kind of coding.”

TEACHER, MIDDLE SCHOOL



Teachers also felt that through Vidcode, students improved at debugging code. One teacher said:

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“Everything [students] were learning is like, oh wait, I forgot a semicolon, or wait, I forgot to include the parentheses... They could problem solve themselves and figure out why their code wasn’t working.”

TEACHER, MIDDLE SCHOOL

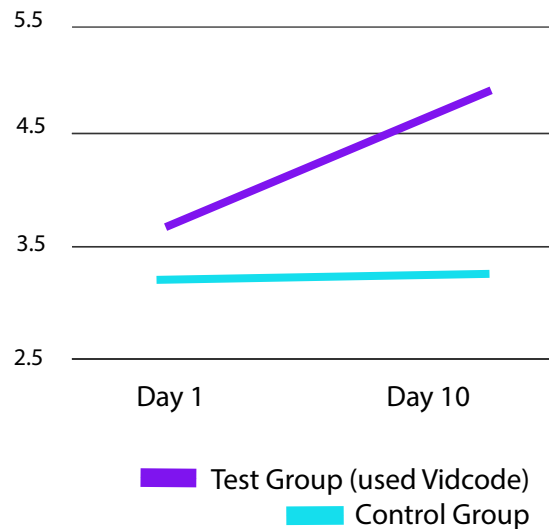


Outcomes

Students who used Vidcode for 10 hours saw a 20% increase in their understanding of coding loops, variables and sequences, based on the pre and post content assessment, compared to the control group.

Qualitative data indicates that students were very engaged using Vidcode and that the platform appealed equally to boys and girls. “The girls were all over it, I was very pleased with the fact that they were equally as interested as the boys seemed to be.”

With the research conducted with Vidcode and WestEd, teachers saw student understanding of computer science and willingness to code improve.



Research + Student success = ❤️