Overview

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Background

The Verizon Innovative Learning Schools (VILS) program is an ambitious initiative aimed at supporting middle schools’ efforts to integrate digital technologies to enhance teaching and learning.

- Through a partnership with Digital Promise, Verizon supports using digital technologies to personalize teaching and learning to create self-guided learners.
- The program provides tablets to all teachers and students in participating middle schools, as well as 24/7 internet access and professional learning from Digital Promise.

Initiated in 2014, the initiative has funded 58 districts and 264 middle schools across 7 cohorts (with an 8th cohort beginning in 2021).
Study Purpose and Design

The purpose of the evaluation is to examine the impact of VILS on teaching and learning in middle schools.

The evaluation uses a mixed-method approach.

• Teacher and student surveys administered at multiple points in time.
• Telephone interviews at the end of year 1 and year 3.
• Site visits at the end of year 2 that involve interviews and classroom observations.
• Analyses of administrative data such as student attendance, disciplinary action, and test performance.
Study Questions – Teachers

Teachers’ use of technology

• To what extent is participating in the program associated with changes in teachers’ confidence in their ability to use technology? Tablets? Other types of technology? In their motivation to use technology?

• To what extent is participating in the program associated with changes in teachers’ understanding of how technology can be incorporated into and support learning?
Study Questions – Teachers

Integration of technology into instruction and instructional change

• To what extent is participating in the program associated with changes in teachers’ instructional practices with regards to the actual integration of technology into instruction, and in what specific ways?

• To what extent do teachers see technology as being a valuable part of instruction, and how does this change over time?

• To what extent is participating in the program associated with changes in other aspects of teachers’ instructional practices?
Study Questions – Students

Student engagement

• To what extent is participating in the program associated with changes in student engagement in learning in the classroom? Outside of the classroom? To what extent do teachers and other staff see the VILS program as contributing to students’ engagement in learning?
Study Questions – Students

Academic learning

• To what extent is participating in the program associated with changes in enjoying academic subjects, especially STEM subjects?
• To what extent is participating in the program associated with changes in academic performance? As perceived by students?
• To what extent do teachers and other staff see the VILS program as contributing to students’ academic accomplishments?
Study Questions – Students

Postsecondary education and careers

• To what extent is participating in the program associated with changes in students’ expectations for postsecondary enrollment?

• To what extent is participating in the program associated with changes in students’ career aspirations, especially related to the STEM fields?
This document presents cross-sectional teacher survey findings for Cohort 4. Students were not surveyed in Spring 2020.

- Cohort 4 began participating in the VILS program during the 2017–18 academic year.
- The presurvey occurred in Fall 2017 and the most recent postsurvey in Spring 2020.
- Only teacher survey data were collected in Spring 2020 because of COVID-19.
- Data are from 21 schools in 7 districts after 3 years of participation in VILS.
Overall Spring 2020 response rate for teachers was **86%**.

- Teacher response rates ranged from 35% to 84% across the schools.
Changes are called out as being “meaningful” when (1) the difference is both statistically significant and the effect size is moderate ($p \leq .05$, Cohen’s $D \geq 0.5$) or (2) there is a change of 10 percentage points or more.

Data show progress of schools participating in the program.

No comparison data from nonparticipating schools are available. Without a comparison sample, any changes found cannot necessarily be attributed to the VILS program.
Teachers’ Use of Technology

In Fall 2017, slightly less than half of the teachers rated themselves as skilled or expert in most aspects of using technology. By Spring 2020, this percentage increased significantly in every area examined, with over 70% of teachers rating themselves as skilled or expert in:

• Using tablets and other digital technologies to prepare and deliver instruction;
• Using tablets and other digital technologies for formative assessment;
• Using tablets and other digital technologies to find and use digital information on the web; and
• Using collaborative software.
Significant and meaningful increases in expertise in helping students use technology in their learning were also reported by teachers. Examples include:

- Creating reports and presentations that integrate images, video, audio and/or music
- Collaborating with other students during or after class
- Finding and using credible information on the internet

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<th>Fall 2017</th>
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<td></td>
<td>41%</td>
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Effects of technology on teachers’ overall approach to instruction were mixed, with a little over half of teachers using the tablets to make substantial changes in how instruction is delivered.

By Spring 2020:

77% of teachers reported using technology as a substitute for traditional teaching. 59% of teachers used digital technology in a manner that allows for significant task redesign. 55% of teachers reported using technology in a way that allows for new tasks that were previously impossible.
Teachers’ Use of Technology (cont.)

Teachers’ expectations of the effects of technology on specific aspects of their teaching were largely met. In Spring 2020, over 80% of teachers agreed that participation in the VILS program:

• Enhanced their ability to differentiate instruction;
• Helped them realize goals set for individual students;
• Helped them explore new ways of thinking; and
• Helped them extend instruction outside of the classroom.
Teachers were extremely positive about the professional development they received and praised the ability of Digital Promise to teach and answer questions.

When asked to compare pre-VILS professional development (PD) with the PD received through the program, VILS was assessed to be significantly better in many areas, including:

• Operating digital devices;
• Enhancing teachers’ ability to support critical thinking and problem-solving skills;
• Providing useful new ways to provide content in teachers’ areas of instruction; and
• Creating collaborative opportunities.
Integration of Technology into Instruction

Teachers’ expectations for impacts on specific areas of instruction were largely met, with 88% of teachers agreeing that VILS:

• Enhanced their ability to provide more individualized instruction; and

• Enhanced the curriculum and connected it to real-life situations.
Teachers have significantly increased their use of tablets, apps and other software tools.

In Fall 2017:

24% of teachers reported using a tablet to deliver instruction on at least a weekly basis; by Spring 2020 this percentage increased to 81%.

28% of teachers reported using apps on at least a weekly basis; by Spring 2020 this percentage increased to 77%.
Integration of Technology into Instruction (cont.)

Significant and meaningful changes were found in weekly use of self-paced activities such as asking students to:

- Work at their own speed to complete an assignment
  - Fall 2017: 65%
  - Spring 2020: 87%
- Select their own way of completing an assignment
  - Fall 2017: 61%
  - Spring 2020: 80%
- Reflect on and critique their own work
  - Fall 2017: 60%
  - Spring 2020: 75%
Integration of Technology into Instruction (cont.)

Homework assignments have increased in frequency. There were significant and meaningful increases in the frequency of asking students to do the following, at least weekly:

- Learn new information about a topic that will be covered in class
  - Fall 2017: 24%
  - Spring 2020: 48%

- Review material to prepare for a quiz or test
  - Fall 2017: 26%
  - Spring 2020: 54%

- Collaborate with other students
  - Fall 2017: 20%
  - Spring 2020: 45%
Student Engagement

Teachers’ expectations for impacts of tablets across various aspects of student engagement were largely met, with some indicators showing larger benefits than others.

Spring 2020 data show:

- **53%** of teachers reported that the tablets enhanced student attendance.
- **60%** of teachers reported that the tablets enhanced students’ on-time completion of homework.
- **87%** of teachers reported that the tablets enhanced student engagement.
- **77%** of teachers reported that the tablets enhanced student interactions in the classroom.
Academic Learning

Teachers’ high expectations for the impacts of tablets on various aspects of student academic learning were also largely met in the areas of:

- Engaging students in challenging tasks.
  - Spring 2020: 86% agree
- Improving students’ ability to search for and communicate information.
  - Spring 2020: 87% agree
- Enhancing students’ critical and creative thinking skills.
  - Spring 2020: 78% agree
- Promoting self-motivated learning and a sense of exploration.
  - Spring 2020: 82% agree
Cohort 4 Teachers Report Positive Impacts on Their Teaching and Students

- Teachers are making greater use of technology for instruction, although technology is still frequently substituted for non-technology with little change in overall teaching approach.
- Teachers reported increased use of strategies associated with personalized learning.
- Opportunities for home learning have been expanded.
- Teachers reported increased communication with students through the tablet.
- Expectations for positive impacts on student engagement and academic learning are being confirmed.
While in most cases overall cohort performance is mirrored at the district and school levels, there is some variation that may be useful to explore.