

# **Vermont's Ed-Tech Program: Interim Evaluation Report**

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# Contents

**Page**

Introduction.....	1
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4b. Impact on Student Skills and Mastery of Grade-Level Expectations .....	36
Summary .....	37
Question 5: To What Extent Are Changes in Teaching and Learning Adopted and Sustained? .....	38
5a. Ongoing and Expanded Use of Ed-Tech Grant Program Practices by Teachers and School Leaders .....	38
5b. Plans for Sustained Funding .....	39
Summary .....	40
References .....	41
Appendix A. Frequency Table of Responses on Opportunities to Learn From Colleagues .....	42

## Introduction

The Enhancing Education Through Technology (Ed-Tech) program is a funding source authorized under Title II, Part D, of the No Child Left Behind Act (NCLB, 2002). Ed-Tech is administered by the U.S. Department of Education through its Office of School Support and Technology Programs. According to a review conducted by the State Educational Technology Directors Association (SETDA; 2010), funding available under the Ed-Tech program support NCLB goals in the following ways:

- By closing the achievement gap by providing access to smart computing devices, digital content, and open education resources for all students via 21st century learning environments that enhance teaching and learning with technology integration
- By supporting the development of highly qualified teachers with online courses, communities of practice, instructional technology coaches, and virtual communication to ensure flexibility and access
- By using data for school improvement and individualizing instruction for all students

Under these broad parameters, each state education agency (SEA) has the latitude to set its own priorities. Each SEA receives its allotment of Ed-Tech funding on the basis of their share of Title I, Part A, funding (i.e., NCLB funding for economically disadvantaged students). Program guidelines stipulate that at least 50 percent, and up to 100 percent, of the available funds must be allocated to local education agencies (LEAs) through a competitive grant process.

In Vermont, half the Ed-Tech funds are allocated by formula, which means that districts receive funding on the basis of their proportional share of Title I funding. The other half of Ed-Tech funds are allocated through competitive grants. These grant programs are designed to support the specific goals of the Vermont Ed-Tech program, which are to

- Lead to changes in classroom practice as teachers participate in professional development to learn how to integrate technology into their classroom instruction.
- Increase the ability of principals and other school leaders to support and evaluate teacher practices in technology integration through the professional development program provided as part of specific programs.
- Expand student access to flexible learning environments.
- Increase students' mastery of the 21st century skills required for success in meeting the Vermont grade-level expectations for each subject area or discipline through providing electronic learning resources for students that is supported by the teacher and school leaders' professional development programs.
- Be sustainable and expandable beyond the grant years and beyond the grant participants as a result of the professional learning networks that are created during the grant program.

To address these goals, Vermont's Ed-Tech program launched five grant-funded programs:

- **Content-based grants** were awarded to 53 grantees within 39 schools with the goal of providing modest financial assistance to schools with high poverty and the greatest need for technology support, including schools identified for improvement under NCLB. Through the grant, schools developed programs to integrate technology and equipment into schools based on specific content areas, such as reading, English/language arts, science, and health. Grant awards ranged from \$2,000 to \$10,000 per site. Under the grant, the nature of the technology may vary by individual site and may include equipment, hardware, software, books, materials, or other technology maintenance supplies needed to fulfill the goal of the grant. Examples from specific sites are software, such as Adobe Photoshop and Rosetta Stone; equipment such as digital cameras, heart rate monitors, and interactive whiteboards; and accessories such as equipment carts and hardware protection plans.
- The **Impacting Tobacco Prevention With Technology (ITPT)** program combines Ed-Tech funds with State of Vermont Tobacco Use Prevention Program funds in order to enhance existing tobacco-use prevention education by integrating technology into health curricula and teaching methodologies. In addition, the ITPT program assists schools in developing collaborative instruction across subject areas (such as health, science, language arts) and provides individual schools with the technology to facilitate active and kinesthetic instruction for tobacco prevention efforts. Grants were awarded to four grantees in the amount of \$12,500, and one lead grantee in the amount of \$37,500, for a total of five grants awarded. Through the grants, ITPT sites were able to purchase SMART Boards and supporting equipment, such as projectors, software, computers, cameras, and SMART Response Systems for teaching the tobacco prevention curriculum.
- The **Vermont Virtual Learning Cooperative (VTVLC)** provides K-12 programs and courses in a wide variety of subject areas by partnering with schools across the state to offer online classes to students around the state. Schools receive seats for their students in other courses being offered through the cooperative in exchange for providing a teacher to teach an online course in the cooperative. In addition, VTVLC offers professional development for teachers, guidance counselors, and administrators on topics that involve online education and learning. Seven career and technical education re2 Tf27oscs that involve

create a website of resources and information, develop an online scheduling and meeting control system, and offer a minigrant program to participating sites offering cameras.

- The **eLearning Project** is based on six demonstration sites that will serve as a model for other schools in making the transition to 21st century learning in Vermont, as well as community engagement with 21st century schools. The purpose of the program is to assist teachers and school leaders, through research-based professional development, to become more proficient in effective student-centered, technology-rich teaching and learning. Through the eLearning Project, participants also have access to an interactive network of resources that supports their ongoing work, with the ultimate goal of establishing a statewide communication network to support educators in their work. Technology was not distributed at the school level as part of this grant program, except that each site received a FlipCam for use in documenting and reflecting upon their work throughout the year.

Funding in support of these programs were first disbursed in January 2010. Thus, this interim evaluation reflects the experiences of grantees during the second half of the 2009–10 school year.

## **Vermont Ed-Tech Program—Evaluation Overview**

The evaluation of the Vermont Ed-Tech program is intended to provide formative and

- 2b. What are opinions of these participants of the quality and effectiveness of professional development?
- 2c. To what extent are teachers provided opportunities to collaborate on implementing program objectives for technology integration?
- 2d. To what extent do administrators support, advocate, and encourage technology integration?
- 2e. To what extent, and from what sources, do teachers receive technology support?
- 3. Do the Ed-Tech-funded competitive grant programs promote technology integration in support of student-centered learning?
  - 3a. As a result of the program, to what extent did teachers gain knowledge and skill in inspiring student creativity, developing digital-age learning experiences and assessments, and working with digital-age technology?
  - 3b. What impact did the program have on the quantity and quality of technology-integrated learning opportunities for students?
- 4. What are learning outcomes of the program in terms of student engagement and motivation and mastery of Vermont grade-level expectations?
- 5. To what extent are changes in teaching and learning adopted and sustained, as indicated by continued and expanded use of such practices by teachers and school leaders who took part in the program and plans for sustaining funding (if necessary) once grant ends?

### **Purpose and Organization of Report**

The purpose of this interim report is to provide formative feedback about the stage of implementation of each program, including detail on expenditures of funds to date. The report addresses all five evaluation questions to the extent appropriate to the early stages of these programs.

### **Data Collection**

To this end, we administered surveys to two types of participants:

- **Grant managers**—individuals who manage the grant awarded through a competitive process to a specific school or district site.
- **Teachers** the intended participants in and targets of the grant.

Two programs, ITPT and content-based grants, were singled out for closer examination through interviews. These programs tended to be at a more advanced stage of implementation than the other programs. In particular, the ITPT program was nearly complete by the end of the 2009–10 school year. Findings from the surveys and interviews are presented together to answer the five evaluation questions.

## Survey Data Collection

**Survey design and validation.** Surveys of teachers and grant managers were designed to address the evaluation questions that each respondent type was able to address. For example, only the grant manager survey included items about the use of grant funds, and only the teacher survey included items eliciting ratings of the quality of professional development. The surveys were designed to address the constructs that are the subject of the evaluation questions. A construct is a core idea, often measured by a series of survey items. Examples of constructs are quality of professional development and change in teacher knowledge and skill. Three of these constructs were developed from the International Society for Technology in Education's (ISTE) *National Educational Technology Standards for Teachers* (NETS-T). These three constructs aligned with Question 3a, which refers to the impact of participation on teacher



**Respondents.** Sixty-seven of 87 grant managers responded to the survey (77 percent response rate). The majority of grant manager respondents (54 percent) indicated that they worked with content-based grants, and none of the respondents reported being a grant manager for the Learning Network of Vermont (this reflects a transition in the leadership of this program that occurred at the time of the survey). Nine survey respondents did not indicate the grant program with which they were affiliated; therefore, their responses are not included in the tables where the responses are disaggregated by program type.

Ninety-seven of 206 teachers responded to the survey (47 percent response rate). The majority of teacher respondents (60 percent) indicated that he or she works with content-based grants. One teacher respondent indicated that he or she works with more than one grant program, the eLearning program and a content-based grant; therefore, some tables may total more than 100 percent when disaggregated by program type.

**Table 1. Grant Manager Survey Respondents**

Vermont Ed-Tech Grant Program	Invitations	Responses	Response Rate	Percentage of Respondents
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## **Interview Data Collection**

## Question 1: To what extent and with what fidelity are the grantees making progress toward their objectives?

This section summarizes findings aligned to the overall evaluation question, as well as the following subquestions:

- 1a. To what extent have grant funds been spent so far, and on what?
- 1b. What trainings and other program activities are being offered?
- 1c. What technology resources have been, and will be, purchased, distributed, and supported?

This section opens with a summary of responses to general questions about progress toward program implementation and fidelity to the original plans. Grant managers described their overall progress with implementation in both surveys and interviews. The grant manager survey asked respondents to select the stage of program implementation that best describes their grant project; these different descriptions and response frequencies are summarized in Table 4. Two thirds of grant managers selected either program installation (14 percent) or early implementation (51 percent), indicating that most grants are in the early stages.

**Table 4. Frequency of Program Stages, as Indicated by Grant Managers**

<b>Program Stage</b>	<b>Overall N = 57</b>	<b>Content- Based n = 35</b>	<b>eLearning n = 10</b>	<b>ITPT n = 7</b>	<b>VLC n = 5</b>
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*Program Installation* Structural

development and equipment and are using them with students. Some teachers noted that they are piloting use of the technology with a few students, and others use technology in the classroom daily with all students.

Grant manager were also asked to describe changes or modifications to their program during the interviews. The nine grant managers interviewed reported no changes (two respondents) or minimal (seven respondents) changes or modifications to the program from what they originally proposed. Four of the nine commented that their timeline for completing work was slightly behind their original timeline. They reported, however, that the fidelity of grant operations and activities has not been affected. The delayed timeline was most often due to a delay in acquiring the technology. Others commented simply that their grant program was moving slower than they hoped because of the time it takes for self-styled digital immigrants to learn, implement, and teach new skills in their classroom.

Two coordinators noted a slight modification to the equipment that they purchased with grant funds, which freed up funds for the purchase of other equipment or for teachers to receive additional professional development. For example, one grant manager chose to purchase a less

more expensive Power Sync cart. She was able to buy five additional iPod Touch systems with the money saved. Two coordinators reported a change in a grant teacher or grant partner who would help a teacher with technology integration, but program fidelity is not affected because *all of [this work] is still happening, but not necessarily the person originally identified.*

In summary, about two thirds of respondents to the grant manager survey indicated that the project is in the early stages of implementation. As clarified by interviews with grant managers of two of these five grant programs, this tended to mean that teachers have received professional development and equipment and are starting to use technology in the classroom. Most grant managers interviewed reported only minor changes or modifications to the program.

### **1a. To what extent have grant funds been spent so far, and on what?**

The grant manager survey asked respondents to report the proportion of their grant funds expended to date, and what percentage of the funds allocated to professional development has been spent so far. Two thirds of grant managers indicated that they have spent between 61 and 100 percent of the funds (see Table 5). There was some variation across the Vermont Ed-Tech programs. All grant managers for the ITPT programs reported having spent either 61-80 percent of their grant to date (43 percent) or 81-100 percent of their grant funds (57 percent), and no grant manager respondents for the VTVLC program indicated that they had spent more than 80 percent of their grant funds. Thus, the VTVLC program is at an earlier stage in applying its expenditures.



**Figure 1. Grant Manager Ranking of Professional Development as an Area of Focus for the 2009–10 School Year**

Grant managers indicated which of a variety of professional development formats had been offered as part of their Ed-Tech-funded program. Across all programs, grant manager survey respondents reported that in-school training sessions were the most common type of professional development opportunities made possible by the program to date. As Table 7 shows, the types of professional development events offered vary by Ed-Tech grant program. For example, the majority of grant managers for the VLC program (60 percent) indicated that on-demand, online, or Web-delivered professional development events were offered, although no eLearning grant managers reported that this type of training was made available to participants in their program and only a small percentage of managers of ITPT and content-based grants reported offering this training.

**Table 7. Frequency of Professional Development Formats Offered to Date, as Indicated by Grant Managers**

<b>Professional Development Formats</b>	<i>Overall</i>
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<b>Professional Development Formats</b>	<b><i>Overall N = 67</i></b>	<b><i>Content- Based n = 36</i></b>	<b><i>eLearning n = 10</i></b>	<b><i>ITPT n = 7</i></b>	<b><i>VLC n = 5</i></b>
Workshop	<i>31.3%</i>	27.8%	40.0%	71.4%	40.0%
Off-site conference	<i>13.4%</i>	11.1%	10.0%	28.6%	40.0%

The interviews provided further detail about the content, purpose and format of the professional development sessions. The main purpose of these sessions was to learn how to use operate new devises or software and how to incorporate new technology into classroom instruction.

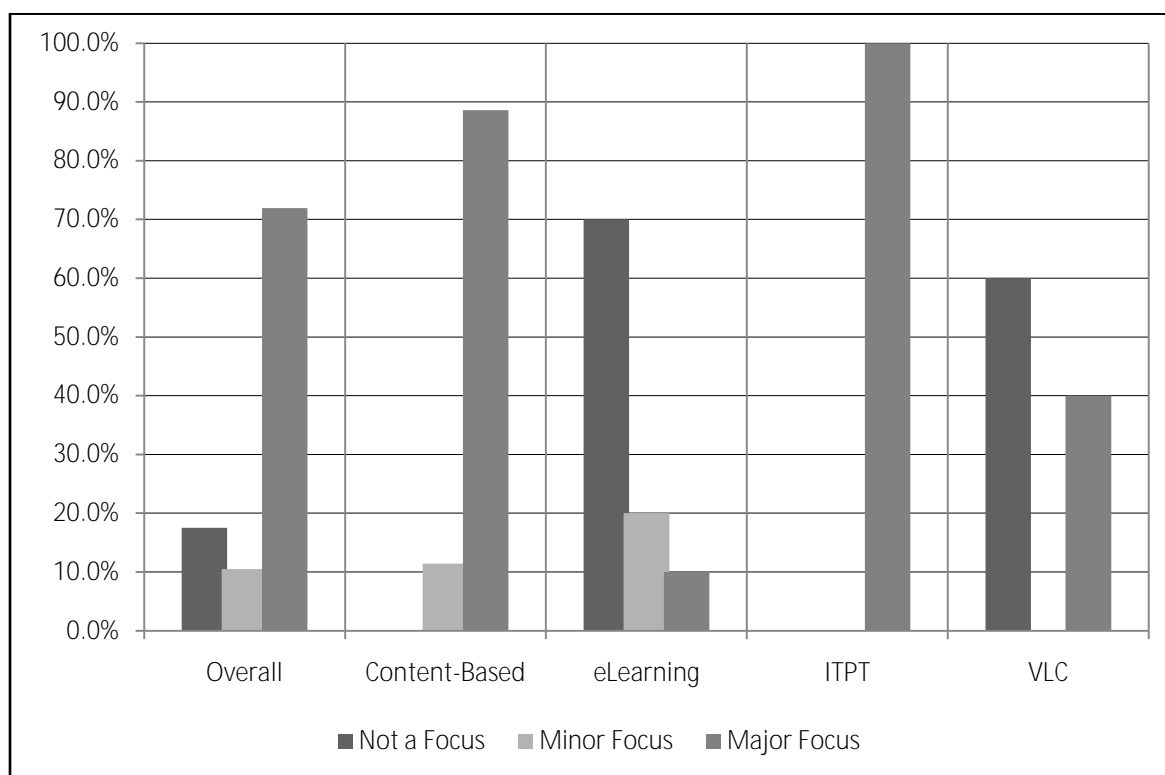
**Consultants.** Seven respondents elaborated on working on-site with a consultant. These consultants included the following types of individuals: an external consultant (i.e., an expert not employed by the school or supervisory union), the supervisory union technology integration specialist, technology support staff, and curriculum development staff (including those with the VTDOE). Outside consultants were from the manufacturer of specific technology, including Smart Technology and Tool Factory, who trained teachers on how to best use their equipment. One grantee worked with the VTDOE s physical education (PE) consultant and the school



### 1c. What technology resources have been, and will be, purchased, distributed, and supported?

There was some variation in the types of technology resources that have been purchased across the Vermont ETT programs. When asked about areas of program focus during the 2009–10 school year, a strong majority of grant managers of content-based grant programs (89 percent) and all ITPT grant managers indicated that the purchase of equipment and software has been a major focus of their program to date. In contrast, as Figure 2 shows, grant manager respondents for the eLearning and VLC program reported that the purchase of equipment or software was most commonly not a current focus of their program.

**Figure 2. Grant Manager Ranking of Purchase of Equipment or Software as an Area of Focus for the 2009–10 School Year**



Interviewees from the content-based and ITPT programs described a variety of equipment purchased with grant funds. These included hand-held electronic devices (e.g., iPods, video recorders), interactive whiteboards, computers, curricular software (e.g., Rosetta Stone), and accessories (e.g., tables or carts). Summaries of these types of equipment are as follows:

- **Portable electronic devices.** All 10 respondents indicated purchasing this type of equipment, including iPods or iTouch, Kindles, digital cameras, video recorders, LCD projectors, document cameras, and student response systems (clickers). The video recorders are typically used by students as a platform for completing a project. Teachers also use this equipment to record students during class work, assignments, or presentations so they may review the footage later as an assessment tool.

- **Accessories.** Most interviewees also purchased accessories for this equipment, such as

## **Question 2: How effectively do schools support the implementation of project goals?**

A critical question for implementation is whether, and to what extent, schools support project implementation. This question is particularly critical given the highly targeted nature of several of these grants, which involve (at least initially) only a handful of teachers per school. Effective support is indicated by high-quality professional development, administrative support for the program, and structures and opportunities for teachers to support one another with efforts to integrate technology into instruction. The following subquestions address this larger evaluation question:

- 2a. What is the extent of teacher (and other staff) participation in program activities?
- 2b. What are the opinions of these participants of the quality and effectiveness of professional development?
- 2c. To what extent are teachers provided opportunities to collaborate on implementing program objectives in terms of technology integration?
- 2d. To what extent do administrators support, advocate, and encourage technology

The extent to which teachers and other program staff participated in professional development activities can be measured by the number of hours spent attending professional development events offered to date. According to both grant managers and teachers, the number of hours spent attending professional development events varied by grant program. As Table 13 shows, the majority of grant managers for content-based grant programs (64 percent) reported that participants in their program have attended between 1 and 10 hours of professional development, and almost 20 percent of content-based grant managers reported that teachers have not attended any professional development. By contrast, the majority of grant managers from other programs indicate that participants have been provided at least 11–20 hours (or considerably more, in the case of the eLearning program).

**Table 10. Frequency of Hours Attended**

In summary, the content-based grants tend to be smaller scale in both number of participants and amount of professional development offered. The extent to which participants in the content-based grant programs have attended professional development events in comparison to the other grant programs highlights the fact that many of these grant programs are in the early stages of implementation and many teachers of content-based grant programs will not receive professional development until the summer.

**2b. What are the opinions of participants of the quality and effectiveness of**

h. Addressed the needs of the students in my classroom.	96	35.4%	41.7%	5.2%	2.1%	15.6%
i. Helped me to understand my role and responsibilities in implementing this program at my school.	95					



year. Teachers engaged in other collaborative activities relatively infrequently. These activities included observing another teacher's classroom (either to offer feedback or get ideas for their own instruction) and reviewing assessment data to make instructional decisions. In several of these items, participants in the eLearning program indicated collaboration more frequently than colleagues participating in other Ed-Tech grant programs (see Table A-1).

**Table 13. Frequency of Opportunities to Learn From Colleagues, as Indicated by Teachers**

<b>As a part of the Ed-Tech grant program your school participated in this year, how often have you</b>	<i>N</i>	<b>Never</b>	<b>Once or Twice</b>	<b>3–5 Times</b>	<b>6 or More Times</b>
Worked with other teachers on how to use new technology.	95	8.4%	16.8%	36.8%	37.9%
Worked on instructional strategies with other teachers.	95	13.7%	21.1%	40.0%	25.3%
Worked with other teachers to develop materials or activities for particular classes.	93	17.2%	22.6%	32.3%	28.0%
Reviewed student assessment data with other teachers to make instructional decisions.	95	33.7%	31.6%	24.2%	10.5%
Observed another teacher's classroom to get ideas for your own instruction.	95	52.6%	18.9%	20.0%	8.4%

Observed another teacher



During interviews, most respondents stated they worked with at least one other teacher within their program, technology support staff, and a school leader to integrate technology into the classroom. There were two modes of this collaboration:

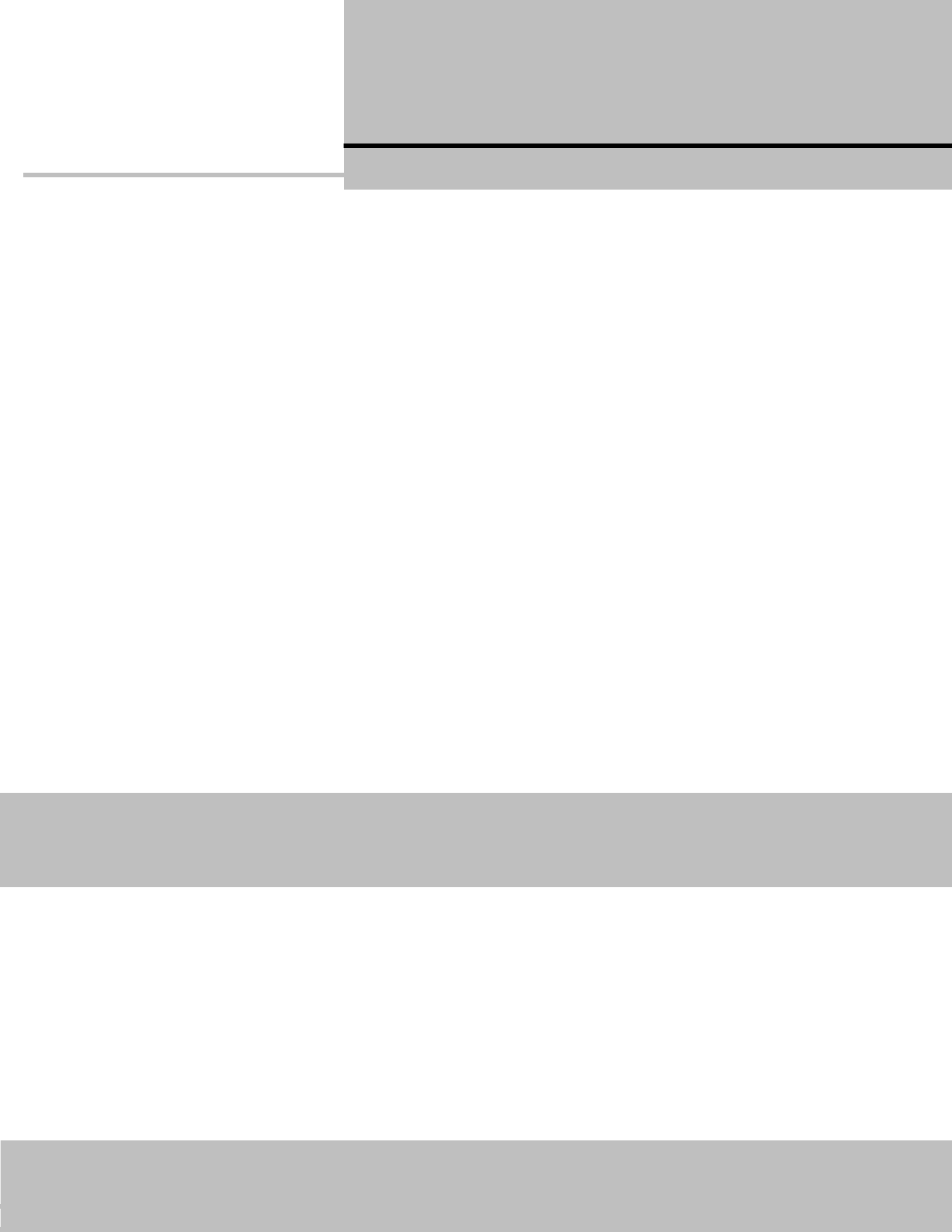
- **Unplanned technical assistance.** Eight of the 10 interviewees said they collaborated with other teachers to learn from each other on how to use the technology and troubleshoot any issues that arose while using it in their classroom. A grant coordinator explained that teachers of the same subject area *Support each other naturally from their Smart Boards and how they use them and how they use their document cameras and share ideas.* This support includes both designated planning times and questions asked on the fly.
- **Planned collaboration.** Five respondents reported participating in scheduled opportunities to collaborate with other teachers. These occurred during designated preparation time, department meetings, and inservice training days. This collaboration time helped teachers to develop materials and activities and review instructional strategies for the grant program. In talking about the importance of shared planning time during school hours, the principal of a small school in a rural part of the state commented, *One of the huge advantages of being a tiny building is we all sit down and have lunch* During these shared planning opportunities, teachers have prepared lesson plans, discussed student progress, and reflected on their progress toward meeting grant goals.

Less common opportunities for teacher learning include observations of experienced teachers (reported by two teachers) and online forums for posting shared documents (a resource noted by one ITPT grant manager).

In summary, it is possible to integrate the interview and survey findings. The types of collaboration that are most frequent (e.g., figuring out new technology, working on instructional strategies, and developing materials), are all of the sort that can be accomplished in either planned or unplanned settings. The types that are uncommon, however, such as classroom observations and data analysis, would seem to require planned or scheduled opportunities to collaborate, and they appear from the interviews to be less prevalent.

## **2d. To what extent do administrators support, advocate, and encourage technology integration?**

Teachers were asked to rate their level of agreement with statements related to administrative support for technology integration. The response frequencies to these items are summarized in Table 15. Overall, the majority of teacher respondents either agreed or strongly agreed that they received the different types of administrative support. There were some differences, however,





**Table 16. Teacher Ratings of Ease of Access to Technology Support**

<b>Please rate how easy it is to get help with the following technology issues:</b>	<i>N</i>	<b>Very Easy</b>	<b>Fairly Easy</b>	<b>Fairly Difficult</b>	<b>Very Difficult</b>
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Developing technology-related lesson plans.

was highly focused not just on learning how to use the technology but on integrating it into lessons. Regarding the level of involvement, 10 or fewer teachers are involved in the program at each school. The content-based grants tend to be smaller-scale in both number of participants and amount of professional development offered.

**Teacher collaboration.** Teachers frequently collaborate on figuring out new technology, working on instructional strategies, and developing materials. This collaboration occurs in both planned and unplanned settings. The types of collaboration that are uncommon, such as classroom observations and data analysis, are the types that can be accomplished only in a planned setting (and they appear to be less common).

**Administrative support.** Most teachers reported that their school leaders provide a moderate level of support that includes professional learning opportunities, technical support, and general promotion of the program. A minority of school leaders provide additional support such as structural changes to support new practices or clear expectations for technology integration.

**Technology support.** In general, teachers report it is easy to get technical support for technology integration, and that they usually contact their school technology coordinator. This suggests that it is the technology coordinator, and not a curriculum expert or school leader, who is most involved with assisting with technology integration. The exceptions to this rule are with the eLearning program, in which teachers typically do contact their school administrators.

### **Question 3. Do the Ed-Tech grant programs promote technology integration in support of student-centered learning?**

This question addresses the impact of the program on teachers' instructional practices and, in turn, on the learning experiences that are available to students. To address this question, we examined the perceived impact of the program on teacher knowledge and skill related to using educational technology, as well as the actual change in instructional practice. We used three standards from the ISTE NETS-T to conceptualize teacher knowledge and skill, as expressed in the first of the two subquestions:

3a. As a result of the program, to what extent did teachers gain knowledge and skill at inspiring student creativity, developing digital-age learning experiences and assessments, and



**Table 20. Teacher Ratings of Extent to Which Participation in an Ed-Tech Program Has Prepared Them to Inspire Student Creativity**





Through interviews, teachers spoke more directly about the perceived impacts of the Ed-Tech grant program on their teaching. Six teachers reported having gained skills and knowledge to integrate technology in ways that provide learning opportunities that are more hands-on, active and kinesthetic, and authentic and relevant. One teacher has learned to *use a lot more current information, new text or whatever, that s readily available. it makes more for authentic learning for the kids.*

## Summary

In summary, teachers reported the following impact on their knowledge and skills:

- Teachers appeared to be most strongly prepared to design and develop digital-age learning experiences and assessments, with teachers in content-based grants particularly strong.
- In regard to inspiring student creativity, teachers have become most prepared to provide opportunities for students to work on extended projects and to explore real-world problems; participants in the eLearning program reported being less prepared to provide the latter. Overall, participants are somewhat less prepared to provide opportunities for collaboration.
- In regard to digital-age work, teachers report becoming more prepared to create materials, communicate using digital tools, and use peripherals. Relatively few teachers report strong preparation for online collaboration.
-

**Table 22. Teacher Rating of the Extent to Which Professional Development Experiences Are Incorporated Into Classroom Activities**

	<i>Overall</i> <i>N</i>
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school is supplementing traditional reading assignments with an audio format. According to the grant manager, this has improved the learning experiences for reluctant readers.



<b>Form of Technology Assigned</b>	<i>N</i>	<b>Not at All</b>	<b>2–3 Times per Semester</b>	<b>Monthly</b>	<b>Weekly</b>	<b>Daily/ Almost Daily</b>	<b>Technology Not Available</b>
Geographic information systems	95	61.1%	26.3%	6.3%	4.2%	2.1%	0.0%
Spreadsheet	95	71.6%	15.8%	8.4%	3.2%	1.1%	0.0%
Concept mapping	95	73.7%	11.6%	11.6%	3.2%	0.0%	0.0%
Video conferencing	95	73.7%	20.0%	4.2%	0.0%	1.1%	1.1%
Content-specific tools	94	75.5%	7.4%	3.2%	5.3%	4.3%	4.3%

## **Question 4. What are learning outcomes of the program in terms of student engagement and motivation and mastery of Vermont grade-level expectations?**

In this section, we highlight findings from the teacher surveys and interviews that indicate participant perceptions of the impact of the program on student learning.

### **4a. Student Motivation and Engagement**

Through the survey, teachers were asked to rate the extent to which their participation in their school's Ed-Tech grant program has improved student motivation engagement. Across programs, most teachers reported a moderate to high impact. About three quarters rated the impact on active engagement in lessons as *moderate* (35 percent) or *very much* (38 percent), and about 85 percent described the impact on student enthusiasm as *moderate* (42 percent) or *very much* (43 percent).<sup>3</sup> These findings are summarized in Table 26.

instructor who used software designed for the interactive whiteboard to demonstrate the physiology of Olympic athletes. She said that the kids were totally fascinated [by learning about] what [the athletes] do to train and how their health is affected.

#### 4b. Impact on Student Skills and Mastery of Grade-Level Expectations

Respondents to the teacher survey rated the extent to which their participation in the Ed-Tech program improved student learning outcomes, including conceptual understanding, collaboration, and safe and ethical use of digital information. These findings are summarized in Table 27. The strongest learning outcome was for understanding of concepts. Across all programs, 71 percent selected *moderately* (46 percent) or *very much so* (26 percent).<sup>4</sup>

**Table 27. Teacher Ratings of the Impact of Ed-Tech Grant Programs on Student Engagement and Motivation**

To what extent has your participation in the Ed-Tech program improved your students'	Not at All	Minimally	Moderately	Very Much So
Understanding of concepts	8.5%			





## Question 5. To what extent are changes in teaching and learning adopted and sustained?

In addition to the impacts and outcomes of participation in the Ed-Tech grant programs, an important question of implementation is the ability of school staff and leadership to sustain the effects of the Ed-Tech grant program at their school in future school years. This is an important question because of the short-term nature of many of the grants. Grant managers were asked through both the surveys and interviews to speak about the sustainability of their program and their plans to continue and expand the use of Ed-Tech grant program practices, as well as plans to maintain or procure funding for the program in the future.

### 5a. Ongoing and Expanded Use of Ed-Tech Grant Program Practices by Teachers and School Leaders

When asked about plans to include additional staff members in their Ed-Tech grant program, the majority of grant manager survey respondents indicated that six or fewer additional staff members are expected to participate in the Ed-Tech grant program at their school in the next year. As Table 28 shows, expectations for more staff member involvement varies across grant programs. Considering the smallness of many of the schools, particularly the schools receiving content-based grants, the variation is not surprising.

**Table 28. Frequency of Additional Staff Members Expected to Participate in Ed-Tech Grant Programs for the 2010–11 School Year, as Indicated by Grant Managers**

Additional Staff Members	<i>Overall</i> <i>N = 55</i>	<b>Content-Based</b> <i>n = 36</i>	<b>eLearning</b> <i>n = 8</i>	<b>ITPT</b> <i>n = 6</i>	<b>VLC</b> <i>n = 5</i>
None	23.6%	30.6%	12.5%	0.0%	20.0%
1 to 3	47.3%	55.6%	12.5%	50.0%	40.0%
4 to 6	14.5%	11.1%	25.0%	16.7%	20.0%
7 to 9	0.0%	0.0%	0.0%	0.0%	0.0%
10 or more	9.1%	2.8%	37.5%	0.0%	20.0%
Unsure	5.5%	0.0%	12.5%	33.3%	0.0%

Interviewees were asked to describe their school's plans for sustaining and expanding their Ed-Tech grant program. There are three approaches for expanding the program:

- **Across schools and grades.** Six of nine interviewees specifically mentioned expanding the program to include teachers in other grades within the school or teachers in other schools within the district. For example, in one ITPT grant school, additional funds have been obtained to purchase interactive white boards and digital cameras/recorders for all the health and guidance departments in the school district.
- **Additional technology integration opportunities.** Four interviewees reported that the skills and knowledge they gained from their Ed-Tech program have motivated them to

an ITPT health teacher decided to incorporate heart-rate monitors into her PE and health classes. Her students worked with an online fitness program to log their daily activity levels, with the goal of achieving 60 minutes of exercise a day. Other teachers learned to use more media sources, such as Kids CNN health and PBS, to enhance students digital-age learning experiences.

- **From pilot test to regular use.** As reported previously, six teachers from the content-based program piloted technology integration with a subset of students. All these teachers plan to expand use to all students within a grade level or beyond to teachers and students across grade levels.

## **5b. Plans for Sustaining Funding**

Because of the costs of the software and equipment, the ability of schools to maintain the current program at their school also depends upon their ability to sustain funding. As Table 29 shows,

Through interviews, five grant managers spoke of their plans to sustain their program with available local funds. The following examples illustrate these plans:

- A grant coordinator who is also a principal from an ITPT grant school described plans for securing additional funds to purchase five interactive white boards and accessories for every classroom in this K-5 school. He revised the school's three- to five-year technology plan to include maintenance of the interactive white boards within the school budget. He also explained that a portion of professional development money for teachers (approximately \$1,000 to \$1,400 per teacher) will be designated for technology integration. He noted, *I've planned three to five years out to maintain what we're using in every classroom.*
- Another grant coordinator who is also a principal commented that she has designated school funds for the next school year to pay for a technology integration specialist at least one day a week in the building to *help us with [technology integration]. I want people to be using [this technology] as often as possible.*
- In addition, three grant managers working with content-based grants mentioned that school or department budget funds have been made available to update and maintain current equipment during the next year.

There were two other approaches to sustainability. One teacher hoped to apply for additional grant funds to procure more equipment. By contrast, three teachers described their plans for sustaining the work started by the grant in terms of the additional professional development in which they planned to participate.

## Summary

Overall, responses to the surveys and interviews indicate that it is too early to determine the extent to which most Ed-Tech grant programs will be sustained or expanded. The majority of grant managers across programs reported in the survey that six or fewer additional staff members are expected to participate in the Ed-Tech grant program at their school in the next year, and interviews with grant managers yielded similar findings. Although most grant managers expect their funds to be fully expended by December 2010, at the time of the survey, the majority reported that they are uncertain of their ability to acquire local funds to sustain their program once the Ed-Tech grant funding runs out. Anecdotal evidence from interviews suggests that schools will look to outside funding sources, such as additional grants, as well as access to available school or department budget funds to continue the programs at their individual schools.

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