Technology for Personalizing Learning
The 2012-2015 Vermont Educational Technology Plan

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Introduction

As Vermont schools enter the second decade of the 21st century, it is clear that the role of technology in supporting learning for all students is imperative. Since our last state level technology plan released in early 2009, schools have witnessed a rapidly growing and evolving landscape in terms of types and sizes of devices available to access the Internet, innovative applications growing exponentially, and social media taking a prominent role in many aspects of everyday life from politics to marketing. Couple these changes with the increasing personalization that today’s technology offers and we have a situation where the concept of schools and classrooms continues to be challenged. While our former plan crafted a vision that was based on the 2008 Transformation of Education in Vermont work, and our new plan continues to move forward in that vein, we still see schools and communities struggling to implement technology programs that can truly support the learning for all students. Technology can play a vital role in the improvement of the systems we have in place to support that learning and extend opportunities both in and out of the classroom. In 2010-11 The Transformation of Education in Vermont was studied and focused by the Transformation Policy Commission. The direction of their report called for strategizing the ways in which systems could be optimized for the central focus of our transformation work: to become more student-centered in our approach, and directly impact curriculum decisions that are critical for developing college and career-ready students. Technology must play a supporting role by enabling students to engage actively with their learning environment, to access resources beyond school walls, and to communicate globally. This approach has long been embraced by the education-technology community — and The Transformation of Education in Vermont continues to provide all Vermonter with a timely and welcome platform for continuing the discussion about the role technology can play in our schools and communities as we move further into the 21st Century.

With the visionary work of the Transformation of Education having set the stage in 2008, a small group of Vermonters took on the challenge of generating ideas for further integrating technology into Vermont K-12 education. The resulting document, Learning with 21st Century Tools: The Vermont Educational Technology Plan 2009-2012, is what the plan you hold in your hands is based on. This new plan for 2012 continues to build on the important concepts that were put forth in the last plan, but it moves us in some new directions.

As this update is written, in early 2012, the landscape around education technology has evolved in multiple ways:

- 1:1 computing has grown both statewide, regionally and nationally (1:1 computing signifying one computer for each (1) student).
- The continued development of new personal devices for the consumer market as well as for learning, coupled with ever increasing mobility drive new considerations around our concepts of schools, school buildings and the spaces therein.
- The continually developing network of online (“cloud-based”) systems exponentially strengthens the ability of learners to access content that is both timely and infinitely accessible.
- The movement towards online assessment for education, with national consortiums organized to meet this need, and assessment being focused on the Common Core Standards.
- The continuing role technology, often in the form of innovative “apps”, is playing in leveling the learning for students with disabilities and English Language Learners.
With these continually evolving developments, Vermont must continue to position itself with devices for all students, 1:1 across the state should be our new overarching goal, whether this is achieved locally or through state funding. It is through this ubiquitous access that we will change the nature of learning and meet the needs of the diverse range of learners. New devices expand the role of computing in the classroom and new thinking about the overall systems spur us to rethink the infrastructure needs at the local level. Our transition into online assessments holds significant sway in our continuing the conversation about 1:1 computing taking hold across the state. That alone should not be the driver though, the ability for technology to support all learners throughout their academic day is a higher calling in that regard.

An important basis for this new plan is the fact that in virtually all Vermont schools, access to broadband communications has been achieved, and continues to be improved. Now the focus must be to expand the capacity of those broadband connections to meet the continuing need that arises when real applications of this infrastructure begin to take place. These improvements have opened up enormous possibilities for learning. The central focus of this new plan addresses how Vermont learners can make the fullest, wisest, most powerful use of this opportunity.

It is no longer enough to focus on technology skills, as it is clear every day that most students have or are quick to acquire these basic skills. What still holds many Vermont schools back is the continuing separation of technology from the rest of the school curriculum. Technology must become the transparent component that is integrated seamlessly in all areas of the curriculum. As The Transformation of Education describes the vision: “Digital learning tools will largely replace textbooks and teacher lectures as the way students access new information. Technology links students to the world, with teachers as their guides and coaches as they explore and experience.”

This plan continues to provide four basic goal areas that, if achieved and implemented, can meet the needs of schools throughout Vermont for guidance in meaningfully integrating technology in all aspects of teaching and learning. These goals are Student-Centered Learning, Leadership in a Student-Centered Learning Environment, Flexible Learning Environments, Engaged Communities. Also included here are tools for doing local evaluation of plans over the three year cycle.

*Coupled with improved access to technology tools, widespread access to network resources has opened up tremendous possibilities for learning … What still holds many Vermont schools back is the continuing separation of technology from the rest of the school curriculum.*
Vermont’s Vision for Learning Technology

Our workplaces have been transformed by technology, and this change continues alongside the near-constant creation of new knowledge, new careers, and new industries. We can’t know for sure today what job-specific knowledge and skills our young people will need when they join the workforce; but we can be confident in knowing what underlying skills and learning experiences will equip them to succeed, and to contribute as citizens, in this fast-evolving century.

As we reimagine learning, we must think also about the physical spaces in which learning takes place. A remarkable school in Winnetka Illinois* has designed a school with “workable, flexible” learning in mind. All spaces have movable desks and chairs, and community spaces are throughout the building, including spaces for individual learning and common spaces that can serve multiple purposes. Access to technology is woven throughout the design. As we consider our school spaces in Vermont, what can we do to make them more conducive to portable, flexible learning that can take place both in the classroom and in the hallways?

What would learners do in these new spaces to be more successful?

Our young people must learn to communicate, collaborate, work creatively, embrace new technologies, and continue gaining new knowledge to educate themselves throughout their lives. With Vermont’s strong learning-technology infrastructure, our state is positioned to meet this challenge, to give our K-12 learners the chance to thrive in today’s globalized learning environment. But the intensity of this environment, and the competitive challenges our graduates will face, demand that we act boldly and with vision to shape learning that leads to ultimate success in whatever career paths our graduates choose.

Good teaching makes learning possible and powerful for all students — and technology supports and empowers good teaching. Too often, for a variety of reasons, we separate teaching and technology from each other in our schools. Vermont’s vision is for technology to play a much stronger role, to be interwoven within the processes of teaching and learning. When teachers and school leadership engage all students in using technology effectively, not just to do old tasks in speedier ways but to help learners think, create, and communicate in new ways, then educational technology becomes integrative and transforming.

“….Today’s classroom will be wherever the learner is located — a room at a school, on the bus ride home, in the park, at a museum, or on the playground. Traditional tools (e.g., books, pens and paper,) will co-exist with the high-tech tools of the telematic era that is still in its infancy. The teacher’s role in this distributed setting will be quite different from that of content presenter and test giver. A more productive role will be that of co-learner — an expert guide who helps students navigate the subjects being explored, but who is open to new discoveries and pathways along the journey.”
David Thornburg, Technology in K-12 Education: Envisioning a New Future.

Today’s learning engages learners through technology in these key ways:

- Learning is active, with learners engaging in and completing projects about which they have cause to care.
- Learners work together, in pairs and groups, meeting challenges that call on their creativity.

*https://www.nscds.org/podium/default.aspx?t=52562&a=197556&play=1
• Learners interact and communicate with others — peers, educators, and experts within or outside school — and they build the feedback they receive into their work.
• Learners access information and demonstrate learning in multiple ways.
• Learners are not bound by time behind a desk, they use technology freely, day or night to explore and develop knowledge anytime, anywhere. The bounds of the traditional school day are being slowly released as personalized learning inhabits their lives.
• Allowing for a diversification of approaches in assessing student learning.
• Schools continue to embrace technology as a powerful force in students’ lives, and open new doors to accessibility, exploring ways to inspire learning as students walk out the door.
• Adults in schools are open to seeing relevant uses within the classroom for the technology tools that students are using outside school.

When these connections are woven schoolwide among good teaching, thoughtful uses of technology, and appreciation for the relevancy of global access to information and communication, then we will have truly begun to transform our schools to meet the needs of this changing 21st century, and for all our students’ futures.

This is Vermont’s vision. It’s simple and powerful. And its time is now.
### I. The 2012-2015 Vermont Educational Technology Plan

The 2012-2015 Vermont State Technology Education Plan has four goals. Here they are, together with information on how the Vermont Department of Education will work with supervisory unions toward achieving them.

#### Goal 1: Student-Centered learning

<table>
<thead>
<tr>
<th>Goal: Teachers create an environment in which Vermont learners use information and communication technologies to engage in tasks that are personalized providing meaningful, relevant, and authentic ways that engage their interest and foster independent and collaborative learning. Best practices lead to activities not always dependent on direct instruction and teacher-imparted knowledge.</th>
</tr>
</thead>
</table>
| **DOE will:** | - Provide guidance to the schools in the use of the Vermont Grade Expectations in Information Technology, updated in 2010. Continue to support and update as necessary *Transformation and Technology: A New Way of Learning, Classroom Scenarios* document to exemplify best practices in the classroom. Work toward updating the Grade Expectations and matching to the Common Core standards.  
- Continue to define student-centered, personalized learning systems and the ways that schools can approach technology acquisition and utilization to support it.  
- Support state-level policy changes that support the creation of learning environments that align with this plan  
- Provide, as funding becomes available opportunities for student-centered activities that involve the expansion of school-based access to technology (putting technology into the hands of students with one to one, BYOD (bring your own device) computing programs).  
- Provide, as available, support for developing statewide opportunities for one to one computing.  
- Provide, as available funding allows, quality professional development for teachers in the area of student-centered, personalized learning concepts.  
- Continue to develop STEM related strategies that can be fostered within the education technology framework. This includes developing stronger relationships with Career and Technical Education programs and building on their strengths at providing student centered, problem and solution based education.  
- Provide guidance on how technology contributes to continuous school improvement and closing achievement gaps. |
| **The SU will:** | - Provide a robust, cross-curricular, student-centered, personalized learning environment that uses modern technology tools to engage individual learning styles, extend learning opportunities, support individual learning plans, and provide access to resources not typically found in the school environment.  
- Set goals around proficiency-based learning combined with Common Core standards and include these updated standards in planning activities. |
• Develop student-centered learning environments that take advantage of technology-rich applications and develop environments where students develop solutions to problems.

• Work toward student-centered learning practices that take advantage of effective technology use and the ways in which technology can enrich and expand the learning environment.

• Provide professional development opportunities, with the expectation that teachers will learn and use these tools.

• Help teachers build Personal Learning Networks that might include social media tools and collaborations that stretch far beyond the classroom walls.

• Create assessments for all learning content areas that integrate technology skills as a part of the assessed student learning.

• Explore STEM career paths for all students. This may include connecting deeper with local Career and Technical Education centers so that all students might develop the breadth of skills necessary in tomorrow’s work force.

• Integrate the use of assistive technologies and accessible instructional materials into the overall technology planning for the school.
Goal 2: Leadership in a Student-Centered Environment

<table>
<thead>
<tr>
<th>Goal: Vermont school administrators foster the development of teacher and student leaders for student-centered learning through technology.</th>
</tr>
</thead>
</table>
| DOE will: | - With help from other relevant state entities, VSBA, VPA, VSA, etc., provide guidance to leadership in the acquisition of new technologies for learning.  
- Continue to explore ways through federal, state and other sources of funding to impact leadership professional development in technology program development, as well as the use of online tools for communication and collaboration.  
- Provide opportunities for school leadership that move the discussion towards proficiency-based learning that is driven by the personalization of learning and how technology can support it.  
- Continue to update, modernize and highlight the 2010 Classroom Scenarios to create new exemplars and illustrate how it impacts school technology programs. Build skills for leaders in “seeing” integration that truly supports learning. Along with this, continue to develop a connections between the Scenarios and Common Core standards.  
- Work with Supervisory Unions in building readiness for online assessment practices that will formally begin in 2014, but will engage schools and staff in other areas beyond formalized testing structures.  
- Develop, model and support a robust learning collaboration tool called the Vermont Educator Exchange. This tool will take the place of the Riverdeep Learning Village and provide an area for collaborations, assessment tools and exemplary units and lessons to be shared statewide. |
| The SU will: | - Build awareness for learners of opportunities that take advantage of the use of technology beyond school walls, and seek ways to integrate these tools into everyday instruction and student learning plans, thereby creating personalized learning structures for all students.  
- Develop expectations for district professional development activities that require true integration of technology and a focus on student-centered learning in classrooms.  
- Model the use of technology in everyday practice. This may include the effective use of online communication tools for communicating with parents and the community.  
- Strive to devise innovative, meaningful ways to provide technology for teachers as a necessary tool for their daily work. This may include developing teacher contracts and compensation packages that provide laptop or mobile computing devices specifically for teachers, thereby raising an expectation for the use of said device.  
- Strive to provide adequate access 24/7/365 for students to technology tools for learning in student-centered environments.  
- Coordinate with the State Readiness Coordinator to be sure schools in the SU are prepared for online assessments in 2014. |
Goal 3: Flexible Learning Environments AND Pathways

<table>
<thead>
<tr>
<th>Goal: Vermont schools use technology to provide robust educational opportunities to students, including distance learning, and provide resources in ways that promote unlimited access during and beyond the traditional school day. Access to multiple forms of learning resources and the development of more individualized opportunities on a 24/7 basis becomes a common goal for schools.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOE will:</td>
</tr>
<tr>
<td>• Continue to foster and support a robust videoconferencing system that is available to schools statewide. This videoconferencing system will be expanded continually, to bring rewarding curricular materials to all schools.</td>
</tr>
<tr>
<td>• Continue to explore and promote a direction for broadband access that envisions a statewide network that can be utilized to leverage maximum gain for E-rate reimbursement; and provide services that will continue to grow Vermont’s broadband capacity. (These services might include robust videoconference connectivity, services for SIS, spam/email filtering services, etc.)</td>
</tr>
<tr>
<td>• Continue to pursue and develop the expansion of learning opportunities for students beyond the traditional school day. This expansion includes, but is not limited to, online course opportunities, continued pursuit of online and virtual high school programs, and the use of collaborative tools for student communication and collaboration.</td>
</tr>
<tr>
<td>• Support policy initiatives that make it easier and more efficient for Vermont’s schools to meet this goal.</td>
</tr>
<tr>
<td>• Provide mechanisms with which to encourage teachers to become involved in collaborative learning projects with other throughout the state, nation, and world.</td>
</tr>
<tr>
<td>• Provide examples and support in the continued reshaping of physical spaces more conducive to today’s learners. This may include showcasing innovative design practices and providing outreach for schools seeking design innovations.</td>
</tr>
<tr>
<td>The SU will:</td>
</tr>
<tr>
<td>• Develop resources that provide learning opportunities that students can access via technology beyond their school day. This may include online courses, cloud-based resources, and connectivity beyond the school environment for a variety of personal devices.</td>
</tr>
<tr>
<td>• Provide robust broadband access for school campuses, and provide reliable, cost-effective digital devices for student use.</td>
</tr>
<tr>
<td>• Explore scenarios for students to utilize student-owned technology on the school campus. (BYOD=Bring Your Own Device concept, while maintaining an equitable situation for all students.</td>
</tr>
<tr>
<td>• Become aware of the variety of rich opportunities available through distance learning, and encourage its use by teachers and students.</td>
</tr>
<tr>
<td>• Extend learning opportunities by using technology to collaborate with others locally, regionally, statewide, nationally, and internationally to solve problems, create new knowledge, and develop necessary community skills.</td>
</tr>
</tbody>
</table>
While striving to create opportunities for learning throughout a learner's day, school leadership should also explore opportunities for creating and maintaining physical environments conducive to technology-rich collaboration. Examples might include: Wireless access points throughout school buildings, common student areas that allow for collaborative learning, and bright, well-lit common spaces for presentations and larger group gatherings. This may also include opening school spaces and wireless access up to community at large.

**Goal 4: Engaged Community Partners**

<table>
<thead>
<tr>
<th>Goal:</th>
<th>Vermont schools use technology tools to develop all manner of partnerships within the local, regional, state, and global communities. These partnerships are founded with the aim of providing a rich resource to students, building opportunities for learning, and helping foster overall community growth. They also assist learners in sharing relevant information with parents, community members, school partners, and other school sites.</th>
</tr>
</thead>
</table>
| DOE will: |  ● Provide education opportunities and relevant grant resources to build community partnerships with state, national, and global entities.  
   ● Foster and support communication between school communities in a variety of ways.  
   ● Continue to foster connections to other regions, entities, and global partners through the use of the Learning Network of Vermont.  
   ● Continue to provide and support initiatives that draw on local and regional resources through the use of electronic means.  
   ● Provide and showcase examples, when possible, that exemplify best practices in the engagement of community partners.  
   ● Continue to support efforts of Vermont Virtual to expand offerings both within and out of state so that learners may take advantage of a diverse variety of courses and offerings.  
   ● Connect schools with regional and national organizations that assist with providing access to students with disabilities. |
| The SU will: |  ● Provide online resources for fostering parent involvement in school communities. These may involve, for example, day-to-day communication with parents via email, social networking sites, and new modes of electronic communication providing access to student files and individual learning plans and examples of work, and providing regular access to student information system data on their child’s progress.  
   ● Strategize with Vermont Virtual or other distance learning partners to provide connections via coursework with in and out of state entities and experts.  
   ● Become a model of collaborative communication for local communities, with students involved in the creation, development, and maintenance of websites, blogs, apps, and other collaborative tools for local projects and entities. |
Goal 5: Effective Local Technology Plan Evaluation

This goal is presented in a different format, because expectations for how it will be implemented at the local level vary from the previous four goals. Goal 5 has two components:

1. That technology will be employed both as a tool for student assessment and as a mechanism for distributing data that is used for educational decision-making.
2. That local districts will formatively monitor the degree to which local technology plans are implemented. Regular updates to the technology plan should be uploaded to the web, VTDOE site and local web page to highlight changes made on an annual basis.

With regard to the first component, the DOE considers the development of assessments of students’ technology skills, as well as the use of technology to support assessment in all content areas, to be part of achieving Goal 1, Student-Centered Learning. The use of technology to drive and support decision-making is part of achieving Goal 2, Leadership in a Student-Centered Environment. This integration is in keeping with the overall concept that technology tools and systems are simply mechanisms that support the core goals of learning, and leading the development of good pedagogy.

Related to this goal area is the reporting required by schools of the Annual Technology Survey, an instrument used by the Vermont Department of Education to gather information on technology use integration and connectivity. This survey will continue to be given to schools on an annual basis and it is anticipated that federal requirements will continue to be in place to report specific data at the federal level.

The second part of Goal 5 asks that local districts develop measures to monitor their progress in implementing their technology plans. This is a requirement of E-rate as well and needs to be detailed to some extent on the local template. As part of this planning, they are urged to develop performance indicators of each of the four primary goals. The setting of these indicators, and the gauging of local progress toward meeting them, will together reflect the local degree of accomplishment of Goal 5.

More detail on the local evaluation process is included in Appendix C of this document, in the section on Effective Local Technology Plan Evaluation.
Technology For Personalized Learning

Part II: The 2012-2015 Local Technology Plan

A Framework for Local Planning

Guidance, Templates, and Resources
Key Points for Local Plan Creation

- Local planning should be carried out by an S.U.-based technology planning team that is representative of stakeholders in the local educational process. Teachers, administrators, parents, community members, technology staff, and students should be represented appropriately on the committee.

- Where possible, planning should be done in conjunction with other key strategic plans at the SU level. For instance, school improvement plans, strategic plans, action plans and School-wide plans may all have elements that inform the technology plan. **In some cases, so long as your “plan” meets all the requirements for E-rate, and contains appropriate goals matched to the goals laid out here, one of the other aforementioned plans could be submitted as the technology plan as long as an executive summary is developed to address the technology aspect. Call or email to discuss with Peter Drescher if this is a viable option for your plan strategy.**

- Local planning teams should write **at least one goal for each of the four component areas.** More than one goal per area (e.g., one that focuses on teachers and another on students) is possible, but not mandatory. Whenever possible, reflect on goals from your previous plan, and adapt them when appropriate to the four current categories.

- Each goal should have a related action plan that details the action steps necessary to achieve the goal **over the course of the three-year planning period.** Some action steps may last only a portion of the three years, while others may take more years to complete. There is no limit to the number of action steps that can be created for each goal.

- Every action in the plan should include consideration of related **staffing, technology infrastructure, budget, and professional development needs.** Many districts will find it useful to aggregate, for example, the staffing components of each goal into a single staffing plan. This will make it possible to view the comprehensive infrastructure plan for the three years as a single document.

- For each goal in their plan, teams should develop and include one or more **indicators of success.** The data types listed in the “Data Collection” column of each action plan, for each action step, should support these indicators.

- **This local technology plan needs to be submitted to VT DOE by June 15, 2012,** using the template provided here. Should districts wish to use a different format, this will suffice as long as the goal areas can be correlated with the template provided. DOE suggests, but does not require, that each June thereafter through 2015, SUs conduct a review to evaluate their goals and their progress towards meeting them. This review should be used to drive decisions about further program decisions. DOE hopes that this annual summative evaluation, along with more frequent, internal, formative evaluation, will drive the local planning committee to update and revise its action plans. This updating work is considered to be a locally useful process: **It is not necessary for SUs to submit annually updated technology plans to DOE.** Should a review entail significant changes to the current plan on file with the VTDOE, the Department suggests that an updated plan be submitted.
USAC Requirements for Technology Plans

The Universal Service Administration Company, a division of the Federal Communications Commission, has requirements for Technology Plans that are the basis for E-rate reimbursements. These are the stated requirements for technology plans:

- The plan must establish clear goals and a realistic strategy for using telecommunications and information technology to improve education or library services;
- The plan must have a professional development strategy to ensure that staff know how to use these new technologies to improve education or library services;
- The plan must include an assessment of the telecommunication services, hardware, software, and other services that will be needed to improve education or library services; and
- The plan must include an evaluation process that enables the school or library to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities and they arise.
- Suggested budget, though no longer required for E-rate under USAC rules.

The plan you are reading uses goal headings that do match and address these requirements under USAC. The goal headings in this plan are written to be more useful in terms of a visionary technology program that can be improved and built upon over the three year period. It also makes an attempt to align with current vision from the Vermont Department of Education and work going on in the field, specifically from the Vermont Superintendent Association in late 2011 and early 2012.

The crucial piece here for the review and approval process is to be sure that you have addressed these USAC requirements in your overall plan. The approval process with the Vermont Department of Education is bound to uphold the USAC requirements in its role as state plan approval entity. Please be sure these requirements are fairly clear in each of the broader goal areas. It is suggested that plan developers highlight or otherwise make clear the strategies and actions that directly address USAC requirements. It will make the reviewing and approval process go much smoother.

On the following page, there is a table that indicates a “mapping” of USAC requirements to the overall goal areas. These are quite general and represent some areas where they would logically fit. Use the table in any way you see fit. As long as the USAC requirements are within the plan, the approval process will not hinge on your strategies and actions following the table below. It is simply provided as a reference.
Here is a quick reference table that may help in matching where your USAC requirements can fit in the goals laid out in this plan:

<table>
<thead>
<tr>
<th>USAC language</th>
<th>Areas that could be covered under this</th>
<th>Goal Areas that are appropriate</th>
</tr>
</thead>
</table>
| “...strategy for using telecommunications....to improve education or library services.” | • Broadband needs  
• Videoconferencing  
• Cell phone/landline  
• Acquisition of hardware, devices | Student Centered Learning  
Flexible Learning |
| “...must have a professional development strategy...” | Any and all professional development:  
• Inservice days  
• Tech integrationists, Tech Coordinators, any support positions  
• After school workshops  
• Online courses, webinars, etc. | Leadership in Student Centered Environments  
Flexible Learning  
Engaged Community Partners |
| “...assessment of telecommunications services, hardware, software” | • Broadband needs  
• Devices for students/teachers  
• Web services  
• Cloud services  
• Budgeting plans | Student Centered Learning  
Flexible Learning |
| “...must include an evaluation process...to monitor progress toward the specified goals...” | • Evaluating your plan  
• Create actions that evaluate success of each action | Comes under all of the goals. You should have evaluation strategies throughout. |
Format of Technology Plan

The following sections should be in your plan:

Title Page, with entity responsible for creation and a clear name of the Supervisory Union or District it represents.

Executive Summary: This is new from our last plan. It was not required in the ’09-’12 plan. Use the Executive summary to give the reviewer a sense of where your SU has been in its technology program over the past three years. Indicate areas of success, and areas that still need improvement going forward in this new plan. The Executive Summary need not exceed 1-2 pages.

Goals and Action Plan Tables: From the templates provided within this document.

Signature page: (Note new CIPA section)

Any necessary Appendices: You may wish to include documentation to support various actions cited in the overall plan or other relevant information.

Sample Action Plan Template

The following page offers a sample completed local Action Plan template. This sample provides guidance for how to complete the blank template that follows, together with the discussion of each goal, in the next chapter.

This example shows only two completed action steps of what would in reality be a larger number. The example text (exemplary of what the SU would create) is shown in blue text. Explanatory notes are made in red text.
Goal 1: Student-Centered Learning *(This is the state plan goal group. You need at least one-two action steps for each of these goals)*

Local Goal: Our SU will utilize technology to develop more comprehensive personalized learning structures for all learners. *(Your local team creates this goal statement, which articulates your SU’s local intent for this goal group.)*

<table>
<thead>
<tr>
<th>Action Step</th>
<th>Description</th>
<th>Staffing</th>
<th>Infrastructure</th>
<th>Budget</th>
<th>PD</th>
<th>Y1/Y2/Y3</th>
<th>Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Use technology to support instruction in multiple units in lower grade levels.</td>
<td>Tech Integration specialists • Tech skills committee</td>
<td>none</td>
<td>$2000 for subs and course fees</td>
<td>Attend VTFest • UVM Online Tech integration course</td>
<td>Y1</td>
<td>Interview committee members • Review developed unit</td>
</tr>
<tr>
<td>2</td>
<td>Implement technology education unit in lower grades</td>
<td>Tech integration specialists • Classroom teachers • SU curric &amp; inst admin</td>
<td>Elem school labs • Network • Smart Boards</td>
<td>$10,000 per school for hardware • $20,000 for tech integ spec time.</td>
<td>Orientation workshop for all elem teachers • VTFest presentation</td>
<td>Y1 (2nd semester) and On-going (y1 – 3)</td>
<td>Teacher focus group • Teacher/Parent survey • Class observations</td>
</tr>
<tr>
<td>3</td>
<td>STEM module for MS students</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>Develop online research skills curriculum for social sciences</td>
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<td>etc.</td>
<td>Remember, you can have as many action steps as you need to achieve the goal by 2015.</td>
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**Indicators of Success for this Goal:** All students and teachers seamlessly utilize technology effectively to support learning across the curriculum by consistently integrating a variety of technologies and technology-infused techniques into classroom curriculum. Classroom activities exhibit compelling evidence of technological tools and instructional methods that utilize technology. All teachers, and students master real-world applications of technology and 21st century skills by selecting and appropriately using technological tools. Teachers, administrators, and staff utilize technology effectively and inventively throughout their day, to improve productivity across the system in communication, daily tasks, assessments, data analysis, and other routine duties. *(See the Evaluation section for help in creating Indicator statements.)*
Guidance and Templates for Creating Local Goals and Action Plans

The following sections, one for each of the five component goals for local plans, offer guidance for the creation of local goals and action plans. Each section starts with a brief vignette that gives a sense of the types of work, challenges, and images related to the focus area. These vignettes illustrate the sorts of things that local school/SU goal(s) and action plans for each area will address.

Each section then provides a background description of how this component goal from *The Transformation of Education in Vermont* relates to the technology goals created locally for this goal area. An organizing question is provided for local planning teams to consider when writing their goals, along with the essential questions that drive the sorts of action steps that local teams would create (and populate their template with) for each component area.

Guidance for creating the local formative evaluation plan and the indicators of success for each goal follows the goal-by-goal information. A blank template is included with the material on the first goal with the suggestion that it be copied and used for each succeeding goal as well.
Student-Centered Learning

Students at Red River Valley School suspect there is a problem with the school water supply. With support from their science teacher, they decide to investigate. Using their research skills, they team up to find out about and conduct the crucial tests that will test their water. They contact local and state officials and schedule time so they can learn about water quality issues. Using mobile technology, including tablets and hand held devices, the students gather and analyze data in the local water supply. The students decide that the best solution for the school is to bring in bottled water. They organize a presentation and bring it to the school board for consideration in budget plans. Through this work, students are empowered and each member of the various teams begin to make connections between government and civic action that can bring results for all citizens, as long as those citizens act after preparing themselves with the relevant information.

Essential Questions for Creating Local Action Steps

The local plan should include action steps that address and/or create responses to these questions:

- In what ways will schools use technology to promote, support, and manage student-centered learning?
- How will the SU promote teaching methods and strategies that best support the use of technology in student-centered learning?
- How will the SU create technology policies and procedures that support student-centered learning?
- How will technology "specialists" in schools support student-centered learning?
- How will support keep students safe online while still utilizing a variety of online tools including social networking media?
- How will collaborative online tools be used to support student-centered learning?
- How will students take advantage of online tools to create and foster their own learning paths?

Organizing Question for This Goal

What is your SU’s intent for how students, teachers, and administrators will use technology to support the development of personalized learning in all students?
VT DOE’s Background and Rationale for This Goal

In aligning the goals for learning technology with the concept of personalizing learning for learner success, both this state plan and local plans are organized around the central concept of student-centered learning. This concept encompasses much of what lies at the core of education in Vermont.

When learning is student-centered, it is:

- Relevant for students
- Personalized for each students’ learning style and preferred modality.
- Robust and challenging
- Actively engaging (“hands-on/minds-on”)
- Inquiry-based
- Collaborative (locally, regionally, and globally)

When technology is used effectively to support learning in a student-centered environment, it provides a means for engaging students, challenging them, and developing their capacities as learners. Vermont teachers, administrators, students, and parents must become steadily more familiar with the range of possibilities that technology offers for enhancing education — and they must all be provided with opportunities to develop their own skills and capacities.

As Vermont moves forward with the meaningful integration of technology in education, and develops a clearer vision for the role of grade expectations around technology within the content areas, assessment — both of and with technology — will play an increasingly important role in student-centered learning.

Envision classrooms where the concept of the “teacher” shifts to a community of learning and sharing. Through the use of devices connected to the Internet, learners craft products and demonstrations that exhibit mastery while engaging and fostering a life-long desire to learn and explore. The teacher becomes a facilitator of learning and guides students on a learning path that both challenges and continually engages.
Action Plan Template for Goal __

Local Goal: Our SU will:

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<tr>
<th>Action Step</th>
<th>Description</th>
<th>Staffing</th>
<th>Infrastructure</th>
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<th>PD</th>
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<th>Data Collection/Eval.</th>
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Indicators of Success for this Goal:
Leadership in a Student-Centered Learning Environment

Organizing Question for This Goal

When it came time for the Wharton North Supervisory Union to update their strategic plan documents, the assistant superintendent, Mr. Stackpole, engaged a working group of principals, teachers, technology coordinators, school-board members, and parents and community members in the task. Members of the committee were encouraged to work collaboratively using online sharing tools and desktop videoconferencing that allowed for engagement in the various topics at hand over the course of the weeks between face to face meetings. Students were included in some of the strategic planning. In the end, everyone involved felt that they were encouraged to participate in a variety of ways and means.

Essential Questions for Creating Local Action Steps

The local plan should include action steps that address and/or create responses to these questions:

- How will the SU create and implement professional development programs rich in content-based technology integration?
- How will SU leaders model technology use for both staff and students, in a variety of contexts?
- How does the SU insure that school leaders follow guidelines put forth by the ISTE NETS-A (for Administrators)?
- In what ways will school leaders build awareness by highlighting solid examples of student-centered learning?
- How will SU leadership administer the successful transition of the teacher to facilitator in a classroom where technology can provide access to rich teaching and learning resources?
- How will administrators/school leaders address best practices in the use of data, and increase capacity in understanding the role technology plays in creating better efficiencies around this data.
VT DOE’s Background and Rationale for This Goal

The leaders we need embrace the realization that skillful and powerful integration of technology into everyday learning is key to transforming schools into centers for success. They understand that teachers and staff need access to technology for a rich and wide range of learning purposes. They advocate with their school boards and communities to build and develop the resources that these uses require. They support the creative and flexible use of technology within their schools — and they model this in many of their own daily tasks. To communicate within their schools, they use a variety of communication tools, from handheld devices to blogs to email. Many of the same tools are used to connect with parents and the community. Our best school leaders understand the strong connection between effective teaching, powerful learning, and the skillful use of a constantly changing set of tools for teaching, learning and communicating.

What’s more, leadership for learning is not only about administration from the main office: it must be fostered among teachers, students, and parents alike. Teachers need to become educational leaders and facilitators by encouraging, inspiring, challenging, shaping, and guiding technology-rich projects for student-centered learning. Students should be encouraged to become leaders by taking the initiative in their own learning, through collaborative projects in particular. Students can lead one another in making the most of technology, helping each other as they explore the possibilities for all they can now discover, create, investigate, and do. For schools to continue to be relevant to our students, we must embrace the personal aspects of computing, with handheld devices and tablets that provide distinct choices in ways each student learns.

Another component of effective leadership in a student-centered learning environment relates to the strategic use of data for informed decision-making. Done properly, data-driven decisions and planning can improve the effectiveness of nearly all SU, district, or school functions, including instruction, school improvement, student assessment, and evaluation of systemic needs.
Flexible Learning Environments

In Mapleton, a math teacher started a sixth-grade project called Snack Express. Students used online survey tools to query students, asking what snacks they might like, did these need to be prepackaged, etc. Using a free database application, they developed a menu, and created an “app” called “MapleSnack” to collect daily orders from throughout the school. The students used graphic-design software to create ads, and spreadsheet software to analyze sales and calculate profits. Starting their project with a loan from the PTO at 5% interest, the sixth graders repaid that and earned a $1,600 profit. They decided to give half to the local United Way, and with the other half funded food for a special sports event.

Essential Questions for Creating Local Action Steps

The local plan should include action steps that address and/or create responses to these questions:

- In what ways will the SU continue to pursue and grow broadband capacity to support learning opportunities for all schools?
- In what ways will the SU promote use of distance-learning opportunities for the community, parents, school leaders, teachers, and students?
- How will the SU provide professional development for the effective use of distance learning and cloud-based free applications that are accessed via tablets and handheld devices?
- In what ways will the SU require or encourage teachers to become involved in collaborative learning projects with teachers throughout the state, nation, and world?
- In what ways will the SU provide access to learning resources for all students and community members beyond the traditional school day and year?
- In what ways will the SU ensure flexibility in staffing and scheduling student learning opportunities?

Organizing Question for This Goal

What will your SU do to maximize a flexible environment for both student and professional learning?
VT DOE’s Background and Rationale for This Goal

A transforming educational system will be less bound by schedules and facilities, and instead will promote more flexible learning environments. ... Students will be encouraged to develop the kind of complex problem-solving skills that are required in today’s world.

*The Transformation of Education in Vermont*

Technology provides a ready vehicle for students pursuing their own course of learning, and supports the idea that there are multiple pathways and learning opportunities that students can follow to meet graduation requirements. Technology allows access to students with a range of learning characteristics. This is a crucial component of student-centered education.

A flexible learning environment supported by technology is one that opens and encourages connections to resources and expertise beyond the school walls. Network technology allows students ready access to the resources they need to support their learning — any time, from any location with accommodations they may need.

*The Vermont DOE aims to support schools in the development of flexible learning environments that will enable students to communicate, access resources, collaborate, think in new ways, create new knowledge, and manage their work as members of a globally linked community of learners.*
Engaged Community Partners

At Winningham Central School, a grades 7-8 social studies teacher and a local university intern co-created a unit on climate change that called for each student to create a blog on an alternative energy source, then use technology to get advice and feedback from a professional in that field. Earlier in the year, a group of students within the class had created their own blogs, along with an online YouTube presentation on how blogs work, what issues they raise, and how they can benefit learning. Those students now oriented their classmates, who each got parental permission to start a blog.

The students used online tools to calculate their own carbon footprint, and posted those. As each began researching a report on a source of alternative energy, their teacher organized field trips to wind, hydro, and composting sites — and recruited adults who work with wind power, hydropower, solar energy, and biofuels to serve as expert advisors. Students posted report drafts on their blogs, and communicated with their experts on a regular basis — by cell phone, virtual communication tools and on the blog — to get detailed feedback and insightful advice.

Organizing Question for This Goal

How will your SU utilize technology to connect to and engage with local, regional, state, and global communities?

Essential Questions for Creating Local Action Steps

The local plan should include action steps that address and/or create responses to these questions:

- What will the SU do to promote digital citizenship among students and staff?
- How will the SU develop communication resources, and make available to the community existing resources such as the Learning Network of Vermont, thereby solidifying the role of the school building in community participation?
- In what ways will the SU communicate the continuing need for infrastructure that supports personalized learning and enables students to learn in contexts that support lifelong learning? (e.g., through project-based or other applied work)?
- How will the SU create structures that allow for the use of social networks in community-based activities but maintain awareness of digital citizenship and online safety?
VT DOE’s Background and Rationale for This Goal

Learning will not be confined to a classroom, but will extend to immersion in community, workplace, and service environments. Civic and personal responsibility will be as important an outcome as building academic skills.

The Transformation of Education in Vermont

Technology is continually redefining community, providing new settings for connecting common interests — yet in Vermont, many communities are still barely tapped as human resources for student learning. To be active learners, students must have access to community members of all kinds, both locally and worldwide.

In fostering these relationships and collaborations, schools can enable students to build valuable communication and collaboration skills that will serve them well in an increasingly competitive global environment.
Signature/Certification Page

General Information: The signature (below) certifies that this supervisory union or district meets all requirements for Information and Communication Technologies planning as defined by the State of Vermont under the federal “No Child Left Behind” legislation.

Name of supervisory union covered by this Technology Plan:
________________________________________________________

Names of schools/buildings covered by this Technology Plan (include all actual buildings)
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Technology Contact Person: _________________________________   Phone: ______________
Title: _______________________   E-mail address: ___________________________________

☐  Check here if you do NOT wish to be added to the Department of Education’s “Ed Tech” listserv. This listserv is one of the primary means of communication between the DOE and schools.

Contributors to this Educational Technology Plan and their affiliations. We recommend involvement by a breadth of stakeholders — including school administrator, community member, parent, teacher, student, paraprofessional, and other interested parties. An additional section or page can be added.

________________________________________________________________________
________________________________________________________________________
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Certifications: Select one

This Educational Technology Plan was approved by our School Board on: _______________
This Educational Technology Plan will be approved by our School Board on: _______________
Children’s Internet Protection Act (CIPA) certification:
Requirements of CIPA (from USAC web page)
CIPA requirements include the following three items:

Technology Protection Measure
A technology protection measure is a specific technology that blocks or filters Internet access. It must protect against access by adults and minors to visual depictions that are obscene, child pornography, or — with respect to use of computers with Internet access by minors — harmful to minors. It may be disabled for adults engaged in bona fide research or other lawful purposes.

Internet Safety Policy
The Internet safety policy must address all of the following issues:

- Access by minors to inappropriate matter on the Internet and World Wide Web
- The safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications
- Unauthorized access including "hacking" and other unlawful activities by minors online
- Unauthorized disclosure, use, and dissemination of personal information regarding minors
- Measures designed to restrict minors' access to materials harmful to minors

For schools, the policy must also include monitoring the online activities of minors. (Note: Beginning July 1, 2012, when schools certify their compliance with CIPA, they will also be certifying that their Internet safety policies have been updated to provide for educating minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms and cyberbullying awareness and response.)

Public Notice and Hearing or Meeting
The authority with responsibility for administration of the school or library must provide reasonable public notice and hold at least one public hearing or meeting to address a proposed technology protection measure and Internet safety policy. Unless required by local or state rules, an additional public notice and a hearing or meeting is not necessary for amendments to Internet safety policies.

Please check appropriate box below and provide a date where indicated:

☐ The Supervisory Union or District certifies that CIPA compliance is adhered to including changes on Internet Safety policies required by USAC in 2012.
☐ CIPA requirements do not apply because none of the technology available to students accesses the Internet

__________________________________________ Date of latest Internet Safety policy public meeting or hearing

Signature: __________________________________________ Date: ________________
(Superintendent/CEO)

Snail mail (USPS) this signature page document only to: Peter Drescher, Vermont Department of Education, 120 State Street, Montpelier, VT 05620-2501
Appendix A

Successes from Vermont State Technology Plan 2009-12

Our Vermont educational technology plan that covered the time between 2009 and 2012 — a full three-year plan — contained a number of goals that the Vermont educational system has made significant strides towards meeting.

Some of the accomplishments from these past three years include:

Student-Centered Learning

- Significant work accomplished with updates to the Technology Grade Expectations and development of Transformation and Technology: Classroom Scenarios, which illustrated for educators what sound practices around technology integration might look like in today’s classroom.
- Grant funds from Title IId supported a number of classroom based grants that were involved with providing direct access to technology by placing laptops or netbooks in the hands of students. By moving in this direction, schools were signaling their exploration of true student centered learning classrooms. Many of these initiatives jump-started later locally funded initiatives to provide 1:1 computing for entire classrooms or grade levels. In school year 2010-2011 seventy-five situations of this were recorded in the Annual Technology Survey.
- Grant programs further supported what began as the Vermont Commons for Information Technology Educators (VTcite) and carried it into a new program called 21st Century Classrooms, Connecting the DOTS. This program, led by a host of teachers and technology leaders provided comprehensive professional development for over 200 teachers over 3 years. The focus of this work was student-centered learning and targeted core subject teachers. The DOTS program was successful in training teams of technology leaders in many of the 60 Supervisory Unions across Vermont.
- Many things occurred with regards to broadband access over the past three years. A stimulus program from the Federal Government, entitles Broadband Technology Opportunities Program, (BTOP), was granted to the state and two providers within the state were awarded funds to provide connectivity to Schools and Libraries. The Vermont Department of Education participated initially in securing signatures from supervisory unions for connectivity. The Vermont Department of Education put forth an RFP in conjunction with a 2011 E-rate application and through a selection process secured and put in place a state contract under which schools could buy services from Education Networks of America, a company providing a host of broadband solutions focused on the K-12 environment. Broadband access to all of our schools is crucial in being able to allow the environments necessary for student centered learning to take place.

Leadership in Student Centered Environments

- A leadership initiative connected to the DOTS program began in late 2010 to bring more awareness to principals and school leaders about the importance of student centered
learning and the development of flexible learning strategies to meet the needs of all learners through technology.

- The Vermont Department of Education worked closely with the Vermont Principals Association and the Vermont Superintendents Association as well as the Vermont School Boards Association to bring to bear a better awareness of a number of the initiatives and programs being developed at Department of Education. The support of those entities provided much needed awareness to leaders at schools on the local level. The VPA and VSA supported efforts in the initiation of our broadband work and have supported the creation of Vermont Virtual and other statewide activities.

- The E-Learning Grant, provided to UVM, the Vermont Principals Association, and the Tarrant Foundation provided mentor teachers to regions across the state and was tasked with creating the conditions necessary for leading 1:1 programs. This grant, further extended by the Tarrant Foundation led to greater awareness of the tools and training necessary to lead 1:1 in today’s classrooms.

**Flexible Learning Environments**

- The Learning Network of Vermont, our videoconferencing system continued to expand and a full time Department of Education position was created to continue its support and growth.

- Vermont Virtual Learning Cooperative was established through a grant process in 2009. This entity provides online courses for partner and non-partner schools across Vermont and has branched into providing online professional development as well as learning recovery and summer school. Vermont Virtual provides many schools with flexible options for courses not already offered at their local high school or middle school.

- The Department of Education continues to look at ways to bring competency-based graduation to bear. Flexible paths to graduation are a major focus of the work at the Department and many see technology as an integral means to provide some of that flexibility.

- The Department of Education provided a portal space called Riverdeep Learning Village that was a tool used to support assessment items and many of our online projects. Riverdeep Learning Village is being replace in 2012 with a new, more robust tool called the Vermont Educator Exchange.

**Engaged Community Partners**

- Many of the grants from Title IID that made up the Content Based Grant program included components that engaged students with community entities and individuals. From history projects with the local historical society to engaging with regional and local experts via Skype to complete a task or seek advice, students were making connections.

- The Learning Network of Vermont through its Content Bank program allowed students to make connections with other experts across the globe. Many took virtual field trips to museums and entities in other parts of the US as well as abroad.
Other Notable Successes
- The Department of Education partnered with the Vermont School Boards Association to revisit the State Acceptable Use Guidelines that schools use for their students’ computer use. This conversation led to the update on the School Board Association policy pages under Acceptable Use Policies.

As we move forward into our new plan, there are areas that carry over from our past work. Some of the goals that are continual include:

Moving toward aggregation of broadband services for schools.
The DOE is exploring movement towards creating a statewide network opportunity for schools. This effort needs to begin with a consortium that addresses the maximum benefit that Vermont could realize from E-rate. From that beginning, we can build in incentives and cost effective benefits to bring more services to schools and reduce overall costs of telecommunications.

Continuing to work on distance learning opportunities for schools and students, both within and outside school walls.
The DOE must continue to promote and expand the Learning Network of Vermont (LNV), our statewide videoconferencing network. Plans for robust professional development as well as content for students must continue to be developed. A Rural Utility Services grant is being sought as this plan is being written to expand the LNV into many additional schools.

Working to provide a robust online portal for the sharing and dissemination of exemplar units of study, licensure portfolios, teaching and learning resources, and the development of online communities.
The DOE is currently restructuring a portal environment for all educators in Vermont that will replace our Riverdeep Learning Village. The new environment is entitled Vermont Educator Exchange and should be available in Spring of 2012.

Continuing to explore funding opportunities to increase access to technology at the school level.
The DOE must continue providing and exploring other means to assist schools in acquiring hardware for student use. This may include legislative changes that assist schools in their acquisition as well as pursuing opportunities for multi-state consortiums on purchasing hardware in a 1:1 format.

Assisting schools as they prepare to develop readiness for online assessments in SY2014-15.
This work entails communications from the State Readiness Coordinator (SRC) for the Smarter Balance Assessment Consortium (SBAC) implementation that will assess students in Common Core standards.
Appendix B

**Sources: NCLB and The Partnership for 21st Century Skills**

Prior to SY2011-2012, the federal driver for local and state educational-technology planning remained the No Child Left Behind Act of 2001, particularly its Enhancing Education Through Technology (EETT or Title IID) portion. While changes within this legislation may have an impact on future technology plans at both the state and local levels, NCLB continues to hold relevant areas for the planning of technology programs. Some of that legacy is inherent in this document. To learn about the NCLBA areas that were outlined in our past plan cycles, visit [http://www.ed.gov/policy/elsec/leg/esea02/pg34.html#sec2402](http://www.ed.gov/policy/elsec/leg/esea02/pg34.html#sec2402).

To continue our movement forward, this state plan borrows quite heavily from language developed by the Partnership for 21st Century Skills, a prominent advocacy organization that brings together business, education, and policymakers to promote infusing 21st century skills into education. While NCLB provides accountability in utilizing funds for effective impact on student learning with technology, the Partnership makes clear the importance of marketability, employability, and readiness for citizenship among our students. This plan has sought to draw from both resources, and from *The Transformation of Education in Vermont*, to provide a comprehensive vision.

Some of the 21st century skills identified by the Partnership include:

- Thinking critically and making judgments
- Solving complex, multidisciplinary, open-ended problems
- Creativity and entrepreneurial thinking
- Communicating and collaborating
- Making innovative use of knowledge, information, and opportunities
- Taking charge of financial, health, and civic responsibilities.

As Vermont schools consider the challenges posed by the overall Transformation effort, it is possible to begin seeing how technology can be utilized to meet the learning needs of all students. Student needs vary, the speed at which students learn varies, the places and people they learn from are unique to each individual — and the ways in which students demonstrate learning ought to also be unique and personal. When technology is well-blended within a student-centered learning environment, it can provide a rich array of ways for students to take control of these aspects of their learning.

It’s possible to argue that the core mission of educators and schools is to make learning personally relevant and meaningful for each student. Technology provides a powerful set of tools for achieving this goal, for learning core subjects and applying skills in ways that are personally empowering and meaningful.

Some examples of technology in action in a 21st century learning environment include:

- Applied, project-based, and interdisciplinary learning
- Collaborative learning
• Inquiry and investigation
• Personalized learning plans that differentiate instruction
• Authentic real-world, real-time experiences
• Creative approaches to all phases of learning, from research to presentation.

As you consider your local direction for technology planning, student-centered learning should be at the heart of your plan.
Appendix C

Effective Local Technology Plan Evaluation

This section is intended as a suggested template or guideline for local technology plan evaluation. Assessments or evaluations of local technology plans do not need to be submitted to the Vermont Department of Education on an annual basis at this time.

When schools are taking advantage of the E-rate program, regulations of the Universal Service Administrative Company (USAC), the E-rate authority, do require an assessment process. But in all cases, the DOE recommends that each local system develop a plan for formatively assessing the results of its technology plan. This assessment should be based on the Indicators written as part of the action plan for each goal.

Background

In essence, evaluation is the process of:

- gathering data on and from activities,
- using this data to formulate a picture of performance, and
- comparing this to an ideal picture or statement of performance.

When this assessment process is done on an ongoing basis, concurrent with the performance as it occurs over time, this is known as formative assessment or evaluation.

The logic of strategic planning states that activities, actions, are carried out to achieve goals — so data that comes from those activities must drive the evaluation of how well the goals are being achieved. In relation to a strategic plan for educational technology, this means that activities such as implementing curriculum units (teaching), professional development, and changes to infrastructure will all generate data that are then used to fill in the “performance picture” for the goals for which the actions were made.

However, it means little just to note each accomplished action in a sort of checklist and assume that accomplishing an action means achieving a goal. In technology plans, the whole (the goal) is greater than the sum of its parts (the actions). This is why local planning groups are asked to create indicator statements – performance pictures — that describe performance toward each goal.

Creating Indicators

In creating indicators for each goal, the local committee’s basic task is to develop a detailed, highly descriptive account of the conditions you would find in your system when your goal is achieved. Indicators should include visual terms that clearly describe to the reader how your system will look when the goal is fulfilled. Descriptions of these optimal conditions will vary according to local interpretation and circumstances, just as the actions needed to achieve a goal will vary from system to system.

For example, for a local goal relating to Student-Centered Learning, the performance indicator would describe in detail the ways in which students and teachers make optimal use of technology
throughout the day to support mastery of content-area standards. It might account for the uses of various 21st century technologies within student-centered learning environments, and could describe how teachers across the system have mapped the connections of technology to curricular objectives. An indicator for Student-Centered Learning might describe how technology is used to differentiate instruction, manage student data, communicate with parents, or provide students with 21st century skills.

It is essential that the ideal described in each performance indicator for each goal is one that the local planning committee agrees represents full attainment of that goal in your local system. The picture of ideal performance that these indicators paint must be reflective of the action steps that relate to their particular goal in the local plan. Without the support of clear, specific, targeted actions, it’s difficult to turn a performance ideal into reality.

**Questions to Consider When Writing Indicator Statements**

1. **Student-Centered Learning**

   • When this goal is achieved, how and why will students interact with technology? What will they use it for (communication? analysis? presentation? constructing knowledge? reaching content standards?)? Describe the types of use patterns, skills, and attitudes students will display toward technology when your ideal for this goal has been achieved.

   • When this goal is achieved, in what ways will technology impact teachers’ work (admin? planning? instruction? communication? e-learning?)? Describe how classroom instruction, class management, and other teaching tasks will look and be carried out when your ideal for this goal has been achieved.

   • How will professional development be offered/designed/evaluated (times, methods, topics, compensation?)? Describe an ideal PD program that provides teachers with the support they need to acquire new skills and strategies, and to advance the use of technology among staff and students.

2. **Leadership in a Student-Centered Learning Environment**

   • When this goal is achieved, how will local SU leaders demonstrate their leadership on technology issues? How will they support a technology-infused, student-centered learning environment? What sorts of skills, attitudes, and behaviors will technology-using leaders demonstrate in their own work?

   • How will local SU leaders employ technology for collecting, analyzing, and disseminating data for decision-making? What will it look like when their decisions are data-driven?

   • How do you envision professional development being offered/designed/evaluated? Describe an ideal PD program that provides leaders with the support they need to acquire new skills and strategies, and to advance the use of technology among staff and other administrators.
3. Flexible Learning Environments

- When this goal is achieved, how will your SU create and support a learning environment that makes use of 21st century learning technologies?

- What will your infrastructure look like? What will be available, and where? On what cycle will it be replaced or updated? What percentage of the budget is allocated to technology equipment and services? *Describe the conditions that will be present when technology receives optimal support in your district.*

- Leadership: When this goal is achieved, what policies and budgets will be in place for improving use and access of technology in and beyond local schools? *Describe how district leadership will leverage resources and connections to advance the use of technology in the wider community.*

4. Engaged Community Partners

- When this goal is achieved, how will an engaged community support and extend the SU’s learning environment? In what ways will this support show itself, or be measurable? What will the SU be doing to encourage and extend this support?

- When this goal is achieved, how will students have benefited from their connection to this wider learning community?

Collecting Data

Systems should use a variety of data-collection mechanisms to gather data that measures their progress toward meeting each goal’s indicators. Data collection should be systemic and integrated wherever possible with system data-collection procedures. It should therefore occur throughout the school year. Among the various data-collection procedures and tools that may be used are these:

- *Surveys*
- *Interviews* (of teachers, administrators, and others, individually and collectively in focus groups)
- *Observations* (of teachers teaching, working in professional development, etc.)
- *Analyses* of work products (by students and teachers).

Local plans should provide insight into what data will be collected for each action item. Collectively, this data will add up to an assessment of each goal’s progress. The Action Plan Template that follows includes space for addressing data collection for each action.
Pulling It All Together: Creating an Evaluation Report

This section is a guide to creating an evaluation report, as each SU is urged to do for information, guidance, and continuing progress in achieving the local goals of its plan.

An evaluation report should be a brief, reflective summary of progress, firmly rooted in the local plan’s performance indicators for each goal. Essentially, this report asks:

• What progress has the system made toward meeting its indicators?
• How has this progress been documented?
• What adjustments, if any, does the system anticipate making to improve its performance?

What follows is a suggested template for assembling and documenting this evaluation report.
**Evaluation Report Template**

<table>
<thead>
<tr>
<th>Names and Titles of Technology Planning Committee Members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>GOAL __</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>Statement of Goal:</strong></td>
</tr>
<tr>
<td><strong>This Goal’s Performance Indicator:</strong></td>
</tr>
<tr>
<td><strong>Summary of Current Performance (Findings) Relative to this Goal:</strong></td>
</tr>
<tr>
<td><strong>List of Data Sources that Support this Finding:</strong></td>
</tr>
<tr>
<td><strong>Additional Comments (Optional, but can include statements about what your system plans on doing to improve performance in meeting this goal):</strong></td>
</tr>
</tbody>
</table>
Appendix D

Resources: to assist in your local planning

This is a brief list to get you started in researching around local technology program planning. There exists a wikispace to share more resources you may feel are appropriate to this process. That wiki can be found here:  http://tplanresources2012.wikispaces.com/

Vermont’s Transformation of Education


21st Century Learning

Partnership for 21st Century Skills
http://www.21stcenturyskills.org/index.php

21st Century Learning site

21st Century Literacy
http://www.noodletools.com/debbie/literacies/

Maximizing the Impact: Technology in 21st Century Education

Metiri Group on 21st Century Learning
http://www.metiri.com/features.html

Personalized Learning with Technology

Report from Brookings Institute on Using Technology to Personalize Learning

Apple Classrooms of Tomorrow (2)
http://ali.apple.com/acot2/

The Third Teacher, a short video on designing learning spaces
https://www.nscds.org/podium/default.aspx?t=52562&a=197556&play=1

Maximizing the Impact: Technology in 21st Century Education
Metiri Group on 21st Century Learning
http://www.metiri.com/features.html

Related Documents from Partnership for 21st Century Skills

Preparing Americans for the Global Skills Race

21st Century Skills, Education and Competitiveness

ISTE National Education Technology Standards
http://www.iste.org/AM/Template.cfm?Section=NETS

Eschool 21st Century Learning Resources
http://www.eschoolnews.com/resources/measuring-21st-century-skills/

Leadership in a Student-centered Environment

ISTE National Education Technology Standards Administrators

Class of 2020 Action Plan for Education (SETDA)
http://www.setda.org/web/guest/2020

Flexible Learning Environments

International Association for K-12 Online Learning
http://www.inacol.org/

National Center for Educational Statistics

General Resources for articles on best practices, technology integration, and innovative ideas

Technology Standards: National Education Technology Standards NETS-2007
International Society for Technology in Education
http://www.iste.org/

Vita Learn
http://www.vita-learn.org

Edutopia
http://www.edutopia.org

T.H.E. Journal
http://www.thejournal.com/

The Technology in Education Resource Center
http://rtec.org/
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