GENERATION YES

Generation YES (Youth and Educators Succeeding) students provide technial support, peer mentoring, leadership and support for technology professional development in thousands of schools across the U.S.

Vision to Action: Adding Student Leadership to Your Technology Plan

Meeting the needs of all stakeholders

By Dennis Harper, Ph.D.

Students make up about 92% of people in attendance in any school. Most technology plans focus on the role of the other 8% (teachers, administrators, adult technical support staff). This is especially unbalanced given the fact that today's students are increasingly savvy about the role technology plays in modern life.

A district or school's technology plan creates a comprehensive set of goals and planned actions aimed at effectively integrating technology into instructional and administrative tasks to improve student achievement. By adding students as key stakeholders in this process - both its creation and implementation, districts can increase chances for success and community support.

Whether you are looking to include your student's voices and talents in a new technology plan or amending an existing plan to include student involvement, this document is meant to help complete your task.

Why Include Students in Your Technology Plan
research and common sense

Most technology plans call for the inclusion of all stakeholder groups as a key factor in creating a sense of ownership and community support that will lead to long-term acceptance and success. Stakeholders from the community, business leaders, board members, parents, school administrators and staff are polled for their input, asked to attend meetings, help refine language, create drafts, and finally to implement the plan. However, one group, the largest stakeholder group of all, is typically not represented in any way -- students.

Common sense tells us that stakeholders who are left out of the planning and implementation process are less likely to understand and contribute to the plan's success. Research supports that this omission is a serious one.

There is evidence from a broad range of school settings that students can participate meaningfully as agents of positive change at both the classroom and school levels. Calvert[1] maintains that this fits the current trend in educational research that focuses on school climate, social conditions, and school culture. These are important factors for positive student learning environments and good working conditions for teachers. These trends also support research from educational psychology[2] that increasing student autonomy, membership, and agency leads to higher engagement and academic achievement.

Cook-Sather[3] argues based on their research that students not only have the knowledge and position to shape what counts in education, but they can help change power dynamics and create new forums for learning how to speak out on their own behalf in a variety of arenas and on a range of issues.

Regained Opportunities
When students are included in technology planning and implementation, many opportunities are regained:
- Capture youthful idealism, enthusiasm and energy
- Create new communication pathways to parents and community
- Create a deeper understanding by students of school policy regarding technology
- Increase relevance of education to students
- Offer students additional leadership opportunities
- Improve technology integration school-wide
- Teach students 21st century skills
- Build trust among all groups

Students are the Net Generation
Students are part of a digital generation -- they have grown up with computers and technology in their lives and need to be prepared for a digital world. However, schools are not meeting students needs when it comes to use of technology. Students are asking their schools to provide more opportunities to use technology to learn, and their voices need to be heard. In turn, adults need to teach appropriate use of these new tools.

By engaging students in meaningful dialog about technology use, Internet safety, online learning, filtering, and 21st century skills, we not only gain their insight and experience, but we show students how their education is relevant for the world today.

"Students report that there is a substantial disconnect between how they use the Internet for school and how they use the Internet during the school day and under teacher direction. For the most part, students' educational use of the Internet occurs outside of the school day, outside of the school building, outside the direction of their teachers."[4]

21st Century Skills

Students in today's schools enter a different world than that of their parents. "21st century skills" have come to mean the skills beyond traditional core subject areas including:

- learning and thinking skills such as problem solving, creativity, and collaboration
- civic, cultural and global awareness
- life skills such as ethics and leadership
- technology, information and media literacy

Technology integration is a way that all students can explore this new world in their classes, and reach beyond the walls of their classroom to the world beyond. Authentic experiences in technology support 21st century skill development. In addition, students involved in technology planning and implementation have the opportunity to collaborate with adults to solve real world problems -- true 21st century skills.

Supporting Technology Integration

One issue in technology integration is the continuous need for professional development for all teachers. In many schools, there is simply not enough time or money to provide the training and in-classroom support necessary. In 1996, a U.S. Department of Education Technology Innovation Challenge Grant called Generation www.Y was funded to study how students could help with this problem.

Now called GenYES, this model teaches students how technology is used in education, and then partners students and teachers together. These teams produce standards-aligned, technology-infused lessons for the teacher's classroom. Ten years of data collected by the Northwest Regional Educational Laboratory (NWREL) show that the program is an "effective alternative for schools wishing to integrate technology into their regular curriculum and increase their use of project-based, student-centered learning practices."

More than 50,000 teachers have received technology integration support from GenYES students. Surveys of these thousands of teachers reveal that they had overwhelmingly positive responses to collaborating with students and believed it had a real impact on the way they would use technology to teach their classes.

- 89% agree that as a consequence of GenYES, their students learned content better.
- 98% report that they will continue adding technology to their lessons as a result of what they learned from their GenYES student partner.
- 82% report that the GenYES experience will change the way they teach in the future.

Rated "exemplary" by the U.S. Department of Education's Expert Panel on Educational Technology, GenYES has been implemented in thousands of schools across the United States and around the world. GenYES is a prime example of a research-based approach to student involvement supporting technology integration.

> **"Over the past 5 years we have implemented a variety of staff development models and found that GenYES students were the defining factor that moved all our training efforts to success."**
>
> **Greg Partch, Director of Educational Technology of the Hudson Falls Central School District, NY**

[1] Calvert, M. (2002, April). Raising voices in school: The impact of young decision-makers on schools and youth organizations. Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

[2] Larson, R. W. (2000). Toward a psychology of positive youth development. American Psychologist, 55(1), 170-183.

McCombs, B. L. (2001). Self regulated learning and academic achievement: A phenomenological view. In B. J. Zimmerman & D. H. Schunk (Eds.), Self-Regulated learning and academic achievement: Theory, research, and practice (2nd. Ed.) (pp. 67-123). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

[3] Cook-Sather, A. (2002). Authorizing students' perspectives: Toward trust, dialogue, and change in education. Educational Researcher, 31(4), 3-14.

[4] Pew Internet & American Life Project (2002). The Digital Disconnect: The widening gap between Internet-savvy students and their schools. American Institutes for Research

"Without the students, we couldn't possibly afford the level of technical support our teachers have come to rely on."

Jeff Waddington, Technology Coordinator, Olympia WA

The Technology Plan
modifying a plan to support student involvement

From Vision to Plan

Most technology plans have an overall vision, broken down into discrete goals, along with a set of action plans aimed at accomplishing these goals. Student involvement can be added to these goals and action plans in a number of ways. We recommend a comprehensive, plan-wide approach to underscore the significance of student involvement:

1. Write one goal that specifically addresses the role of students in accomplishing the technology plan's overall vision.

2. Under every other goal in the plan, include at least one specific action that addresses the role that students will play in achieving the goal.

"Many of our teachers have had student partners over the years, yet each student partner brings a fresh new perspective and new talents, which create a new synergy. As a result, our teachers increasingly take advantage of the technology available in our school to help students learn in new and different ways."

Ann Marie Ratliff, Librarian

To be effective, student involvement must be integrated into the entire technology plan from top to bottom. If it only appears once as a separate goal, it is less likely to appear in the individual objectives and will be forgotten when it comes time to implement your plan.
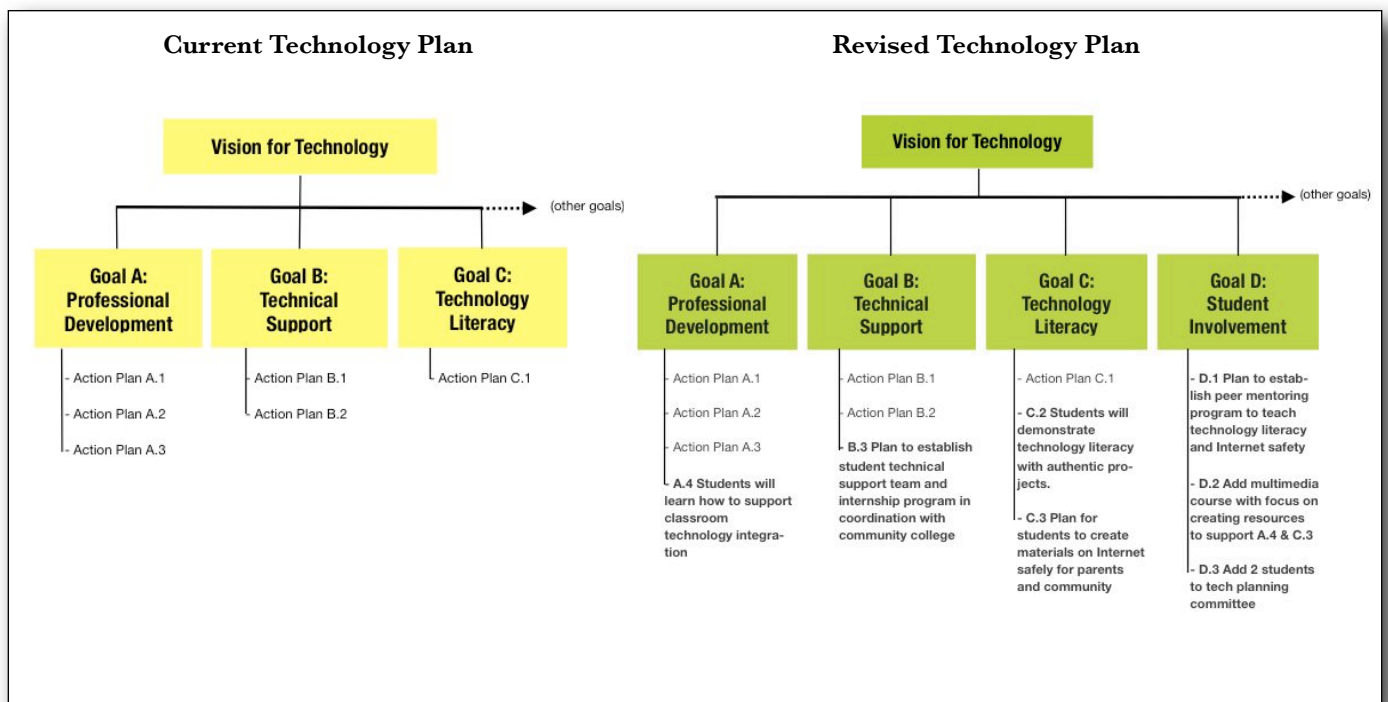
By modifying the sample goals and objectives in this white paper, districts can merge these research-based and time-tested models into their own vision. All of the student involvement in these sample goals and action plans have succeeded in real schools. Some may sound crazy or impossible--some may be just what you need.

Of course, districts may want to phase in some of these options over time, giving students a chance to prepare for successful involvement and adult educators time to learn to respect students for what they bring to the technology integration process.

Current Technology Plan

Vision for Technology

......▶ (other goals)

Goal A: Professional Development
- Action Plan A.1
- Action Plan A.2
- Action Plan A.3

Goal B: Technical Support
- Action Plan B.1
- Action Plan B.2

Goal C: Technology Literacy
- Action Plan C.1

Revised Technology Plan

Vision for Technology

......▶ (other goals)

Goal A: Professional Development
- Action Plan A.1
- Action Plan A.2
- Action Plan A.3
- A.4 Students will learn how to support classroom technology integration

Goal B: Technical Support
- Action Plan B.1
- Action Plan B.2
- B.3 Plan to establish student technical support team and internship program in coordination with community college

Goal C: Technology Literacy
- Action Plan C.1
- C.2 Students will demonstrate technology literacy with authentic projects.
- C.3 Plan for students to create materials on Internet safely for parents and community

Goal D: Student Involvement
- D.1 Plan to establish peer mentoring program to teach technology literacy and Internet safety
- D.2 Add multimedia course with focus on creating resources to support A.4 & C.3
- D.3 Add 2 students to tech planning committee

Writing Your Goals
six models of student involvement

Step 1 - Adding a Stand-alone Student Involvement Goal

By adding a single stand-alone goal to your technology plan that supports student involvement, you emphasize the importance of students as key stakeholders and participants in the process of improving education with technology.

Your new goal should addresses this need by involving students in the area they are arguably most competent and mature -- technology. Students tend to be the first to utilize new technologies and there is a need for educators to tap into this expertise and energy.

Start by looking through your district's overall strategic plan. You may find language to include students in the decision-making process, the value of student leadership, and the need to empower students to own their own learning process. These goals can be connected to the technology plan to support student involvement. Even if students are not specifically mentioned, it is highly likely that there is a goal to include all stakeholders in the decision-making process.

Sample Student Involvement Goal
"Increase the involvement of all district students in the integration of technology into schools' academic environments based on research and best practices."

Connecting Student Involvement to the Whole Plan

One stand-alone goal will do little to change the way a district actually operates. It is crucial to spend time to add student involvement action plans to other goal statements throughout the entire plan. Often, technology plans are created by committees that span many departments, but are implemented separately by departments that only "own" one or two of the goals. If student involvement is only added as a separate goal, it is likely to be orphaned since no organization owns it. However, if it is integrated throughout the plan, it cannot be forgotten. The following models and tools will help you brainstorm ways that students could participate more fully in every aspect of the way schools use technology.

The Models - Six Time-tested Ways to Involve Students

1. **Students serving on committees** - Students can serve on planning and implementation committees. They must have a real say and a vote that counts. Make sure that meeting times allow student participation.
2. **Students as trainers and support systems for staff and teachers** - Students can be excellent trainers for instructional technology, and are often patient and supportive with teachers who need in-class support. Students can be sent to vendor training sessions, give trainings, or be available for one-on-one support.
3. **Students as technical support agents** - Students can be taught troubleshooting, hardware and software basics, networking, and how to do inventory. Focus on classroom teacher support to minimize security issues and maximize impact on technology integration in the classroom.
4. **Students as resource developers** - Students can produce resources for themselves, teachers and staff. These could be print, multimedia or online applications. Students can create curriculum resources, help guides, documents, presentations, video how-tos, and websites for class, school, or community use.
5. **Students as communicators** - Students can use new communications technologies such as instant messaging, podcasting, blogs, online communities, and email in ways that enhance their learning and lives. Students should be involved in monitoring safe and ethical use of these tools, along with planing and implementing their use in classroom instruction and communication with parents and the community.
6. **Students as peer-mentors, peer-reviewers and peer-leaders** - Students can teach and mentor other students, can sit on panels that debate and assign consequences for violations of school policy, and participate in leadership opportunities tied to technology.

Sample Goals and Actions
supporting student involvement in technology

Step 2 - Adding Actions to Existing Goals

Now that you have an overall vision in your technology plan that includes students, the next step is to create specific action plans that support this vision. Each goal in your technology plan can be analyzed to find ways to involve and empower students to help meet that goal.

Your technology plan may group goals differently, or be larger or smaller in scope, but typically they include items such as:

- Technology policies - including acceptable use, purchasing, maintenance, support, etc.
- Administrator, teacher and staff training
- Safety, ethics and security
- Student technology literacy
- Technology integration in support of student achievement in core curriculum
- Communication with parents and community
- Technology supporting special needs students
- Life-long and adult learning

Brainstorming Exercise

Each of your technology plan goals should be evaluated for potential student involvement, using the 6 models on the previous page. Try to find at least one way that each of these models supports each goal. Use the brainstorming worksheet on the last page of this document.

This brainstorming exercise will result in many more ideas than can ever fit in one technology plan, but will serve to expand the conversation about what students can do. Like any brainstorming exercise, collect inputs without criticism, combine similar ideas together, and pare down the list to the items that have the chance to have the biggest impact on your highest priority goals.

Tips

- Include students early in the process to gain input and buy-in for the final result.
- Students will be evangelists for a plan that they help create.
- Don't ask students for input if there is no way that they will be listened to. Lost student trust will take a long time to regain.
- Don't over-plan. Plan only enough to make sure that logistics and support for student participation will be in place. Allow students to participate in creating the details.
- Put adequate time in the plan for feedback and adjustments. Give students the responsibility to modify elements and make changes.

Example: Adding Action Plans

For the goal *Technology policies - including acceptable use, maintenance, support, etc. -* Each of the six models can be applied to this goal.

1. **Students serving on committees -** Students will be represented on all school and district technology committees. Student input on all technology policies that affect them will be sought.
2. **Trainers and support -** Students will attend all vendor training sessions when appropriate and assist in supporting staff and teachers using new hardware and software using the GenYES model.
3. **Tech Support -** A student tech support team will be created with the priority of improving technical support for teachers in the classroom.
4. **Resource developers -** Students from the tech support team will create a new inventory system, and students will maintain school inventory. Students will create "how-to" guides for students and teachers for new hardware and software acquired by the district.
5. **Communications -** Students will provide input on ways schools can communicate more effectively with students, parents, and community on issues related to technology and the Internet.
6. **Students as peer-mentors, peer-reviewers and peer-leaders -** Students on the tech team will be responsible for teaching incoming students about technology policy and acceptable use. Students will form a peer-review committee to decide on consequences for violating school policy.

Connecting the Dots

In many cases, this exercise will start to generate ideas that support multiple goals. For example, peer mentors can help teach technology literacy skills to peers and also be the core leadership group that creates communications and resource materials.

These common actions can be collected under your separate student involvement goal. Creating synergy and support systems that cross departments can be very powerful. Be sure that new student organization, clubs, or classes are properly resourced and funded, just like any other part of the technology plan.

Finally, align your action plans to other non-technology related goals in your district, for example: service-learning initiatives, parental involvement, internship opportunities, or community outreach.

From Plan to Action
walking the talk

Necessary Conditions for Success
Writing a technology plan that includes students in real roles and authentic tasks is just the first step. Monitoring this process and tracking the results is crucial.
- The new roles, classes, organizations or clubs will need support and supervision to start up. Write concrete goals in the plan with dates, funding and implementation plans.
- Provide access for students to training, hardware and software as needed to support the plan.
- Allow time for the plan to come together. Students will not automatically know how to participate in these opportunities, there must be time and attention given to helping them grow into these roles.
- Don't forget your younger students. It's never too early for authentic learning opportunities, and these student can be surprisingly helpful with concrete, personally meaningful tasks at their schools.
- Constantly recruit and train new students. Allow veteran student leaders to mentor new recruits.

Student Incentives
In each of these models, student involvement can be structured as part of a credit-bearing class, qualify for graduation or service-learning credit, a T.A. or work study position, an internship, an after school club. There is no "right" way to do this, and it will vary from school to school, district to district and student grade level.

Prepare Students, Staff and Administration
- Students participating in adult committees will need some explanation of what is going on, and how they can participate. Role-play before events and debrief students afterwards to build skills and confidence.
- Student peer groups will need an advisor who monitors participation, helps to recruit and train new members, and facilitates the group.

- If classes are created that address goals in the technology plan (for example student tech support), be sure to include school administration and staff in planning. Counselors need to know that these classes will have high expectations for students to participate, collaborate, and be independent thinkers and leaders. Create a plan to recruit students, and persevere, even if the classes are small to begin with.
- Don't mistake the ease with which youth today use technology in their everyday life for knowing how it can be used in educational settings. Teach them appropriate use of technology and how it can be used to enhance learning.

Rely on Existing Models and Proven Resources
Generation YES provides training, resources, materials and online tools that support authentic student involvement in all areas of technology. 10 years of research results show school-wide increases in technology integration as a result of these student leadership programs.

GenYES - Student-Supported Professional Development. Students in grades 4-12 partner with classroom teachers to build technology-infused lessons.

TechYES - Student Technology Literacy Certification. Students in grades 6-9 take on the major responsibility for becoming technology literate by creating projects that meet NCLB requirements for 8th grade tech literacy. Peer mentors are trained to assist students and assess projects.

Generation TECH - Student-Led Technology Support. Students in grades 8-12 learn troubleshooting, communication and documentation skills as they help schools keep their technology up and running.

Model	GenYES	TechYES	Generation TECH
Serve on committees			
Trainers and support	x		
Tech support			x
Resource developers	x	x	x
Communications	x	x	x
Peer-mentors, peer-reviewers and peer-leaders	x	x	x

Student Technology Planning Worksheet

Print these worksheets out for brainstorming student involvement in your technology plan. Use one for each goal.

Goal: _____	Action Plan how, when, where, getting started, who will be in charge, timeline, outcomes, etc.
1. **Students serving on committees** - Students can serve on planning and implementation committees. They must have a real say and a vote that counts. Make sure that meeting times allow student participation.	
2. **Students as trainers and support systems for staff and teachers** - Students can be sent to vendor training sessions, give trainings, or be available for one-on-one support for teachers.	
3. **Students as technical support agents** - Students can be taught troubleshooting, hardware and software basics, networking, and do inventory.	
4. **Students as resource developers** - Students can produce resources for themselves, teachers and staff. Students can create curriculum resources, help guides, documents, presentations, video how-tos, and websites for class, school, or community use.	
5. **Students as communicators** - Students can use new communications technologies in ways that enhance their learning and lives. Students should be involved in monitoring safe and ethical use of these tools, along with planing and implementing their use in classroom instruction and communication with parents and the community.	
6. **Students as peer-mentors, peer-reviewers and peer-leaders** - Students can teach and mentor other students, can sit on panels that debate and assign consequences for violations of school policy, and participate in leadership opportunities tied to technology.	