

Students Providing Tech Support - the 21st Century A/V Club

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Generation YES

Youth and Educators Succeeding

- ★ Empower students by including them in the process of improving education
- ★ Create project-based experiences that change student's lives
- ★ Increase student leadership in school and community
- ★ Improve the use of technology in the school as a whole
- ★ Research validation of student empowerment and inclusion

Generation TECH – Student technical support

GenYES – Students teach teachers about technology

TechYES - Student technology literacy certification with peer mentoring

Girl's Issues & Technology Curriculum

What is Tech Support?

- ▶ Providing hardware/software/networks that support organizational goals
- ▶ Fixing broken hardware/software/networks

Expand to:

- ▶ Creating a climate conducive to technology adoption and use that supports organizational goals

A Natural Match

Technology + Digital Generation Students

- Success Factors
- Logistics
- Examples

We should not confuse student **facility** with technology for **knowledge** - we miss a huge learning opportunity if we ignore or dismiss it.

What Stops Technology?

1. Not enough educational support for teachers as they integrate technology in the classroom
2. Technical issues overwhelm tech staff and frustrate teachers
3. Students need to learn technology and there's no time

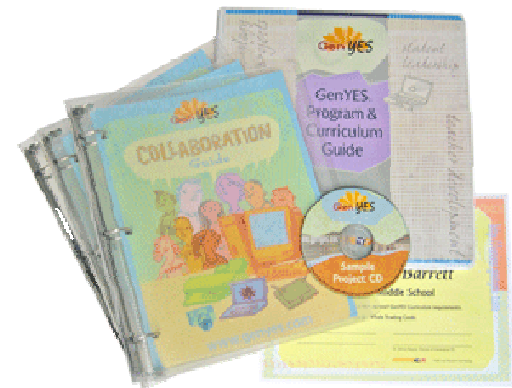
Why Do We Care?

Research shows
technology
integration improves
student achievement
and offers
opportunities for 21st
century skill
development

Technology Integration



- ▶ It's hard!
- ▶ 10 years of research shows:
 - ▶ Schools need more structured, predictable help
 - ▶ Sustainable
 - ▶ Replicable
 - ▶ Not reliant on one person
- ▶ We make it easier with research-based materials, resources and support systems



Student-led Models that Improve Technology Integration

- ▶ **Student Tech Support**
 - ▶ Career and Tech Education
 - ▶ Students provide level I support on campus
- ▶ **Technology Literacy**
 - ▶ Students teach students
 - ▶ Peer review and assessment
- ▶ **Professional Development**
 - ▶ Students teach teachers
 - ▶ Students provide in-class support



Success Factors School Elements

- School culture
- Commitment
- Schedule
- Sustainability
- Funding
- Equipment

Success Factors Student Elements

- Leadership opportunities
- Trust & responsibility
- Student-led culture
- Flexible curriculum
- Open, accepting culture
- Credit
- Fairness




This Needs to be More than Vision

- ▶ Technology plan needs to include student involvement
- ▶ Free white paper
- ▶ Download from www.genyes.com
- ▶ *From Vision to Action: Adding Student Leadership to Your Technology Plan*
- ▶ Research, models, guidelines, planning worksheets

GENERATION YES

Youth and Educators Succeeding



Generation YES (Youth and Educators Succeeding) students provide technical 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.

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Additional Resources on TCEA Virtual Handout

Youth Technology Support Collaborative (YTSC) - on-line Guide for School Decision Makers

www.studenttechsupport.org/

US Department of Education Expert Panel on Educational Technology

www.ed.gov/pubs/edtechprograms/

Technology & Learning Magazine



Shoring Up Your Staff: Timely and Sustained Teacher Support

www.techlearning.com/story/showArticle.jhtml?articleID=52601632



Professional Development: 21st Century Models

www.techlearning.com/story/showArticle.jhtml?articleID=13000492



Great Expectations, Limited Resources: 12 Tips on Doing More with Less
- "Strategy #8 - Relying on Students"

www.techlearning.com/db_area/archives/TL/2003/06/morewithless.html

The Models

Student-led tech support

Student-taught technology literacy

Student-supported professional development

Issues in School Technical Support

- ▶ School tech support levels are 10% of industry standards
- ▶ Complexity increases
- ▶ Systems increase
- ▶ Overflow support falls on “teacher down the hall”
- ▶ Plan B
- ▶ Laptop schools - problems multiply



Survey Says...

- ▶ What percentage of districts report students working in some capacity to maintain infrastructure?

54%

Student Tech Support

- ▶ Students learn technology, troubleshooting, and communication skills
- ▶ They help the school maintain school technology and infrastructure.
- ▶ Highly relevant career and technology education
- ▶ The school benefits by having a core of students trained in technology, familiar with the school infrastructure, and immediately available on the school grounds to help fix computers and solve software problems
- ▶ Laptop schools: reinforces the student-centered culture and ownership of laptops

What Can Students Do?

- ▶ Provide level I hardware support
- ▶ Tech TAs – on call
- ▶ Help desk
- ▶ Teach students how to use new equipment
- ▶ Work with teachers as new hardware is rolled out
- ▶ Provide simple preventative maintenance and software configuration

- ▶ Leadership comes with increasing challenges
- ▶ Student-led culture decreases hacking
- ▶ Student leaders teach newbies
- ▶ Laptop programs - reinforces the student-centered culture and ownership

Student Tech Support Return on Investment (ROI)

Reduce tech support load

- ▶ Assume **10 students** eliminate a single instance of tech support per day.
- ▶ 10 students x 5 days x 15 weeks x 5 min/instance = **62.5 hours** of tech support time recovered per semester class.
- ▶ With tech support resources valued at \$25/hour.

Estimated value of support:

\$3,125 per year per tech team

Case Study

Student Intern Program at
Borrego Springs HS, California

[http://www.sdcoe.net/
techsets/
welcome.asp#borrego](http://www.sdcoe.net/techsets/welcome.asp#borrego)



Generation TECH

Student Tech Support Curriculum

- ▶ Proven model - no need to reinvent wheel
- ▶ Teacher/Advisor training
- ▶ Curriculum - phased
 - ▶ Beginners learn and prove themselves
 - ▶ Advanced teach and provide support
- ▶ Help desk
- ▶ Assessments

Generation TECH

Program Tools

- ▶ Blog - individual, team, teacher management
- ▶ Project tools - calendar, tasks, shared bookmarks (individual or team)
- ▶ Teacher messaging
- ▶ Teacher management page
- ▶ Equal access to curriculum

Calendar Application

[Edit Project](#) | [Dashboard](#)

Sunday, February 01, 2004 - Monday, March 15, 2004

In order to advance my programming skills, specifically using PHP and a mysql database, I will be programming a calendar to help me remember my important dates.

Blog Entries

0 of 0 entries in Project Blogroll shown | [Project BlogRoll](#) | [New Blog Entry](#)

Tasks

3 tasks shown | [New Task](#)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
February 1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	March 1	2	3	4	5	6
7	8	9	10 Finish Coding and Start Stylesheets	11	12	13
14	15	16	17	18	19	20

- 03/15 present project to class [Edit](#)
- 11/01 Club Meeting Rm. D-14 [Edit](#)
- 03/10 Finish Coding and Start Stylesheets [Edit](#)

Related

Members

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Ms. Teacher demo

Jack Student Demo2

Bookmarks

1 of 1 shown | [Show all](#) | [New Bookmark](#)

[Tizag Tutorials](#) tizag.com [edit](#)

Generation TECH Curriculum Units

- ▶ **Communication and Documentation** (technical writing, organization, listening skills and team work)
- ▶ **Hardware** (components, systems, and networks)
- ▶ **Software** (operating systems and applications)
- ▶ **Problem Solving** (interviewing skills, job tickets, troubleshooting and escalation)
- ▶ **Researching Solutions** (offline and online sources)
- ▶ **Preventative Maintenance**
- ▶ **Helping Teachers** (long-term solutions, pro-active tech support, tutorials, and help guides)
- ▶ **Portfolios and Closing Activities** (career and reflection)

Security Best Practices

Work with the System

- ▶ Review AUPs and student access rules
- ▶ Negotiate expectations and policy
- ▶ Negotiate rules for escalation, follow up and documentation
- ▶ Protect students from critical data and systems

Use Standard Security Best Practices

- ▶ Differentiated access
- ▶ Passwords – change regularly
- ▶ Security reviews for ALL staff, teachers, students
- ▶ Who is violating security and why? Cracking down on “that’s how everyone does it.”
- ▶ Responses should be fair, quick and appropriate

From: Generation TECH Program Guide

A Fair Community

Open Channels

- ▶ Openly communicate rules and changes
- ▶ New policies should have educational objectives
- ▶ Open learning community
- ▶ Student-led culture

Contracts

- ▶ Should be “two-way” not just punitive
- ▶ Can have multiple levels for advanced students

Credit and Payment

- ▶ This can't just be free labor
- ▶ Students have to receive academically appropriate instruction and opportunities and credit
- ▶ Transition to paid internships

From: Generation TECH Program Guide

Mistakes, Punishments and Rewards

Preventing Accidents and Mistakes

- ▶ Plan for the worst – mistakes happen
- ▶ Use best practices: virus software, backups, track licenses, inventory
- ▶ Practice makes perfect – “what if” scenarios and guided explorations
- ▶ Police with policy (not technology)
- ▶ Encourage strong student/teacher and peer relationships

When Bad Things Happen

- ▶ One-strike policy, consistently enforced
- ▶ Responses should be fair, quick and appropriate

Structured Freedom

- ▶ The price of freedom is documentation, creating tangible evidence of learning and completing tasks
- ▶ Reward with increased responsibility and less supervision, not necessarily increased access
- ▶ Trust and responsibility

From: Generation TECH Program Guide

**Now Think
About
What These
Kids Can
Do...**

tech
support

peer
mentoring

tech TAs

help desk

teacher
support

preventative
maintenance

evangelists

community
outreach

21st
century
skills

interning

serve on
committees

More Than “Students Helping Out” - A Base to Build On

- ▶ Stakeholders
 - ▶ Students - 92% of school population
- ▶ Evangelists
 - ▶ What did you DO today?
 - ▶ Gateway to parents and those who pay the bills
- ▶ Publicity
 - ▶ Positive messages about kids
 - ▶ Fend off steady diet of media hype, scare tactics and misinformation

Are Your Students...

Aware of your vision for technology transforming education?

If not, they can't be full partners

Share the dream...and put them in your plans

- ▶ Invite your biggest shareholder group to share your vision of technology
 - ▶ “Both/and” not “Either/or”
 - ▶ Vision statements AND AUPs
 - ▶ Security AND responsibility
 - ▶ Facilitate real participation
- ▶ **Vision to Action: Adding Students to Your Technology Plan**
 - download from www.geneyes.com



Contact Information

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Generation YES - Youth and
Educators Succeeding

Booth 1042 - Please fill out
information request form!