

Generation www.Y Effective Professional Development for Technology Infusion

This whitepaper provides an overview of the Generation www.Y professional development program and highlights its impacts on schools. It is the first in a series of papers examining Generation www.Y from a variety of perspectives. Future topics will include implementation strategies, success factors, and an overview of our Web based content, tools, and resources.

Introduction

Schools can realize considerable gains through the use of educational technology. Across the country, educators have cited enhanced student learning and increased connection to community as positive impacts of educational technology programs (SIIA 2000).

However, technology alone is not enough. Professional development is a critical component in enabling schools to obtain full benefits from educational technology. At the second annual Secretary's Conference on Educational Technology, held by the U.S. Department of Education, participants cited the "ongoing need for meaningful professional development among all staff" as one factor in ensuring the effective use of educational technology (U.S. Department of Education, Secretary's Conference on Educational Technology 2000).

Gen www.Y (pronounced Gen Y) facilitates technology integration and helps schools maximize their technology investments through job-embedded professional development. It enables educators to gain technology skills in a meaningful way: working directly with students to create technology-rich lessons that can be immediately applied in the classroom.

Program Overview

Gen www.Y is an integrated model for delivering job-embedded professional development to teachers while providing students with opportunities for engagement and leadership in their schools and communities. The model promotes a collaborative approach to education, in which students and teachers work together to create and deliver technology-enriched lessons, projects, and units.

History

In 1996, the Olympia School District (Olympia, WA) received a five-year

Technology Innovation Challenge Grant from the U.S. Department of Education to launch Gen www.Y. Developed by Dr. Dennis Harper, the district's technology coordinator and an educator with more than 30 years of experience, the program was implemented across six districts and 35 schools—12 elementary schools, 14 middle schools, and nine high schools—with the goal to increase educators' use of technology for improving student learning.

Olympia School District members felt that traditional professional development programs, such as workshops, conferences, and symposiums, were making little headway in helping educators effectively utilize technology in their classrooms. Teachers received little, if any, ongoing support to guide them after they completed a workshop and were back in the classroom. Teachers found that integration of these skills in the daily practice of teaching was time consuming. As a result, few teachers applied what they learned.

In its four-year evaluation of the program, the Northwest Regional Educational Laboratory cited Gen www.Y as "an effective alternative for schools wishing to integrate technology into their regular curriculum" (NWREL Fourth Annual Project Evaluation 2000).

Evaluations by program participants report that Gen www.Y delivers the following benefits:

- Offers an effective professional development model that helps educators, in partnership with students, incorporate technology in learning
- Helps students build advanced skills in areas including leadership, communication, critical thinking, and teamwork
- Provides student-centered mechanisms for enabling the successful and sustained infusion of technology into the classroom.

Gen www.Y was designed to overcome these shortcomings. The program recognizes the expansive technology skills that students possess: Dr. Harper points out that students hold approximately 95 percent of the technology skills within schools and make up 90 percent of the K–12 population. Why not involve students in the learning transformation and engage them as agents of change within their schools, rather than simply as the objects of that change? During the last five years, more than \$7 million has been spent to develop and refine this innovative professional development model that capitalizes on students' affinity for and understanding of technology and involves students in the change process.

"Our high school guidance [counselor] and vice-principal gave rave reviews to a [Microsoft] PowerPoint project by a Gen www.Y student used as part of 9th grade orientation. A middle school Gen www.Y partner-teacher now develops his own PowerPoint presentations for us in his class."

*David Perkins
Teacher
Hudson Falls Middle School
Hudson Falls, NY*

The program has continued to be developed under Generation YES (Youth & Educators Succeeding), a company Dr. Harper has since launched to deliver technology programs that promote student involvement. To date, more than 500 schools nationwide have implemented Gen www.Y.

The program's success has received national praise, including recognition by the U.S. Department of Education's Educational Technology Expert Panel as an "Exemplary Education Technology Program." This honor was given to only two programs out of more than 130 evaluated (U.S. Department of Education, Educational Technology Expert Panel 2000)

How it works

Through Gen www.Y, teachers and students collaborate to develop a technology-enriched lesson or project that is aligned to state, national, or district standards. It is a model of professional development that enables teachers to learn in their own classroom how best to use the technology resources at their disposal. CEU credits can often be granted for participating teachers.¹

The program is delivered in two segments. First, a "**mentor teacher**" (or Gen www.Y teacher) from the school works with students to build the technology, communication, collaboration, and project management skills the students need to create and deliver technology-enriched lessons. Next, each student is paired with a "**partner-teacher**" (a teacher who the student normally—though not necessarily—has during the school day) and together the student and partner-teacher select a future lesson that they can enhance with a technology-based lesson plan.

The student, with the partner-teacher's guidance and assistance, drafts a project description outlining project objectives, materials and equipment, procedures, evaluation indicators, instructional context, and aligned curriculum standards. A Gen www.Y consultant with subject area expertise then reviews the student's proposal online. The consultant, who is provided by Generation YES, offers feedback on project feasibility; soundness of purpose; organization; alignment of project objectives,

"I am so thankful for this experience! I have gained so much! More importantly, this adventure brought excitement back into teaching."

Gen www.Y partner-teacher

Source: NWREL Fourth Annual Project Evaluation 2000

¹ Requires separately arranged, local approvals.

procedures, and assessment; and helps align projects to state, national, or local standards.

Following consultant review, the student works under the guidance of both his/her Gen www.Y teacher and partner-teacher to complete the project. The culmination of this effort is the final delivery of the project to the partner-teacher's class(es).

For example, one recent project used the Internet and e-mail to provide a 12th grade French class with the opportunity to converse with students in France and expand students' daily use of conversational French. Another project used Microsoft PowerPoint to create a multimedia lesson that presented chapter material to a fifth-grade science class. More than 3,000 projects, spanning all subject areas, have been completed and documented, and are available to licensed Gen www.Y schools as guides and ideas for future projects.

The program is extremely flexible: It can be used with students in grades 4–12, as either a semester or a yearlong course. (Due to the less advanced technology skills of elementary students, it is recommended that elementary schools deliver Gen www.Y as a yearlong course of study.) Participating teachers determine the curriculum content of the lesson or project, and how best to deliver it in their classrooms, and students can choose to employ any technology available in their school. In fact, the collaboration and project development components of Gen www.Y can be layered on top of just about any existing "tech skills" curriculum.

Program Evaluation

Several long-term studies of the program have been conducted to date. In November 2001, the NWREL published its fifth annual evaluation of Gen www.Y. In addition, in June 2000, the Olympia School District delivered its annual report and evaluation to the U.S. Department of Education Technology Challenge Grant program office.

These studies show that Gen www.Y delivers the following benefits:

1. Offers an effective professional development model that helps educators, in partnership with students, incorporate technology in learning
2. Helps students build advanced skills in areas including leadership, communication, critical thinking, and teamwork
3. Provides student-centered mechanisms for enabling the successful and sustained infusion of technology into the classroom.

"One of the major changes that I have seen in my school due to our involvement in Generation www.Y is the increased use of technology by most of the teachers. The teachers' comfort level has increased so dramatically in the last four years that we have been running the program that most [teachers] are using some form of technology in their everyday lessons."

*Brian Morris
Teacher
Washington Middle School
Olympia, WA*

Effective Professional Development

The Gen www.Y approach addresses several shortcomings of traditional professional development.

Maximum reach

Teachers who attend traditional professional development classes may or may not ultimately integrate the skills learned into classroom activities.

Teachers have a full schedule every day and, more than likely, do not have the time to share their knowledge and/or success with other educators throughout the district. Traditional methods of professional development are unable to address these issues successfully.

Gen www.Y enables schools to reach a greater number of teachers and ensures integration of newly acquired skills into the development of course materials. Under the Gen www.Y model, typically

over the period of a year, 50 students partner with 50 teachers to design and implement 50 technology-infused projects or lessons. Those lessons are not only used within each teacher's class, but their descriptions are also posted on the Gen www.Y Web site as part of an archive for use by teachers throughout the district and the nationwide network of Gen www.Y schools.

"We have a great program. Our teachers really benefit from their exposure to technology. It is amazing how much they learn and, through their new knowledge, how much their own students learn. We are lucky to have this program."

Gen www.Y partner-teacher

Source: NWREL Fourth Annual Project Evaluation 2000

Job-embedded learning

Gen www.Y enables teacher to see technology applied within their own classes while they teach and ensures that they are able to deliver technology-enriched lessons to their classes. A two-year pilot project conducted by Apple Classrooms of Tomorrow (ACOT)—an initiative of public schools, universities, research agencies, and Apple Computer, Inc.—showed that professional development delivered in the teacher's setting is most effective (Yocam and Wilmore 1994).

Participating Gen www.Y educators have reported that they learned more about technology because of the program and that the program will influence future lessons. According to an NWREL survey of partner-teachers, 86 percent of respondents in yearlong programs and 87 percent of respondents in semester programs indicated that Gen www.Y helped them learn more about technology. In addition, 82 percent of respondents in the yearlong program and 87 respondents in the semester programs indicated that Gen www.Y would change the way they teach (NWREL

Partner-Teacher Follow-up Surveys 2000).

Ongoing support

Teachers receive ongoing and varied support through a number of avenues. Support includes the following:

1. Students, who not only complete real technology-infused lessons and projects with their partner-teachers, but who also become familiar with the lessons created by their Gen www.Y peers. These students help to bring a range of technologies to the partner-teachers' attention. Once Gen www.Y students complete the program, they are referred to as "**Gen Dids**" and continue to act as technology resources in their schools. Today, Gen Dids serve on district technology and curriculum committees, teach their peers during after-school labs, speak at conferences, and help train pre-service teachers through university affiliated programs.
2. The Gen www.Y program provides educators with access to subject area experts and supporting materials via the Gen www.Y Web site. The Web site, which was awarded District Administrator's Diamond Award as one of the nation's top K-12 curriculum-based Web sites in 2000, includes an online collaboration network (OCN) for students and teachers, feedback from Gen www.Y consultants, an archive of final project descriptions from around the country, and Student and Teacher Toolkits containing a wide variety of content and resources.

"I was familiar with the technology and [my teacher] was familiar with music—we've formed a partnership that will last longer than the Gen www.Y class."

*Eighth-grade student
Pioneer Middle School
Shelton, WA*

3. Gen www.Y teachers, who provide onsite technology expertise to both the teachers and students.

Participating teachers have provided positive feedback on the support they received. According to the NWREL survey, 98 percent of respondents in yearlong programs and 99 percent in semester programs indicated that Gen www.Y provided “a good method for providing support and assistance to teachers as they integrate technology into their classes. (NWREL Partner-Teacher Follow-up Surveys 2000).

Advanced Skills for Students

The Secretary’s Commission on Achieving Necessary Skills cites three sets of skills students need to succeed in today’s complex workplace:

1. Basic literacy and computation skills
2. Thinking skills necessary to put knowledge into practice
3. Personal qualities that demonstrate dependability, sociability, self-management, and honesty

(U.S. Department of Education, Secretary’s Conference on Educational Technology 2000).

Gen www.Y helps participating students develop these advanced leadership and technology skills to prepare them for college-level work, the work force, and beyond.

In an NWREL survey of Gen www.Y teachers, an overwhelming majority of respondents participating in yearlong and semester programs highlighted that student learned content, teaching/-mentoring, project management, and communication skills in addition to acquiring technology skills (NWREL Coordinating Teacher Follow-up Surveys 2000).

In an NWREL survey, coordinating [Gen www.Y] teachers said that Gen www.Y students learned the following skills because of their participation in the program:

Skill Area	Yearlong Program	Semester Program
Content	93%	94%
Teaching/Mentoring	90%	97%
Project Management	97%	100%
Communications Skills	100%	97%

Source: NWREL Coordinating Teacher Follow-up Surveys 2000.

A further testament to the program’s success has been students’ positive responses: Many students have said they would like to continue to use the skills gained in Gen www.Y for other school and community activities (Generation www.Y Annual Report 2000).

Infusion of Technology into Curriculum

Educators are learning more about how to use technology and students are gaining advanced skills in the process. But does Gen www.Y deliver long-lasting impact? Can the program help schools ensure that educational technology is actually put to work in the classroom?

As a result of their participation in Gen www.Y, most teachers report having increased the use of technology in their classes and continuing to use and refine the project or lesson plans developed with their Gen www.Y students (Generation www.Y Annual Report 2000).

In the NWREL survey of partner-teachers, 93 percent of respondents participating in yearlong programs and 95 percent participating in semester programs said

that they would use their Gen www.Y project in future classes. And just as many, 92 percent of yearlong respondents and 96 percent of semester program respondents, indicated that they would continue developing their projects. In addition, the survey showed that an overwhelming majority (97 percent of respondents in yearlong programs and 99 percent in semester programs) indicated that they would change current lessons to make more use of educational technology (NWREL Partner-Teacher Follow-up Surveys 2000).

Supports Positive Change within Schools

Teacher, students, and parents also have noted a number of additional benefits. Gen www.Y is enhancing communication between teachers and students, teachers and teachers, and students and students, and expanding the teacher's role as a mentor. Teachers have provided positive feedback on the impact Gen www.Y participation has had on students' self-esteem, poise, and motivation (NWREL Fourth Annual Project Evaluation 2000). Parents report seeing positive changes in their children since their participation in Gen www.Y and even students are reporting that Gen www.y has changed their lives for the better.

"Empowering the students to become active participants in all aspects of their education is critical. The Gen www.Y model has become a key for our small district because it creates real world interactions between staff and students."

*Kate Reece
Building Technology/English Teacher
Pioneer Middle School
Shelton, WA*

incorporate technology into their classrooms.

Gen www.Y enables teachers to learn in partnership with their students and in their own classrooms, where the benefits will be most profoundly felt. The model offers schools an approach to providing teachers with meaningful, results-driven professional development that delivers tremendous benefit to educators and students alike.

"Although Jefferson Middle School has been a part of the Gen www.Y program for five years, the enthusiasm created by teacher/student partnerships makes the program seem forever new and exciting. Many of our teachers have had student partners over the years, yet each student partner brings a fresh new perspective and new talents, which creates 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
Jefferson Middle School
Olympia, WA*

Summary

The question for schools is no longer whether educational technology can help improve student learning. It is how best to arm teachers with the knowledge and support they need to effectively

*More information about Gen www.Y and program evaluation results can be found at **www.genyes.org/genwwwy**. Additional copies of this whitepaper can be obtained by contacting Generation YES at 1-888-941-4369.*

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