

Gen Y Goes to College: Perceptions of High School Students and the Graduate Students They Mentored

Alice Christie, Ph.D.
Arizona State University, USA
alice.christie@asu.edu

Valerie Naish, M.Ed.
Peoria Unified School District, USA
vnaish@peoriaud.k12.az.us

Jayme Kelter
Cactus High School, Peoria Unified School District, USA
frogzilla_ts@hotmail.com

Joey Wycoff
Cactus High School, Peoria Unified School District, USA
original_pop@msn.com

Cory Pearman
Cactus High School, Peoria Unified School District, USA
cepearman@yahoo.com

Jason Gender
Cactus High School, Peoria Unified School District, USA
jdawg@safeaccess.com

Abstract: This paper describes the perceptions and attitudes of high school students and the graduate students they assisted during a university multimedia class. Gen Y focuses on today's youth, enabling them to become contributing partners – and often leaders – in bringing technology into classrooms and communities. This project encouraged authentic participation of high school students as collaborative partners with graduate students who were also practicing teachers. Major objectives of this K-12 – university partnership were to break down traditional educational borders and to provide collaborative learning experiences between high school students and university graduate students. Since the high school students were more knowledgeable about the course content than the graduate students, this research focused on reverse mentoring. Using surveys and focus groups, we discovered how high school (Gen Y) students and the graduate students they mentored felt about this reverse mentoring model.

Introduction

The Gen Y model (Martinez & Harper, 2002) in which K-12 students form partnerships with teachers is a collaborative effort that provides students with project-based learning and teachers with sustainable professional development. Students bring technological expertise to the partnership while teachers bring pedagogical knowledge, thus infusing technology throughout the school. We use the scaffold metaphor (Vygotsky, 1978) to describe the support offered to learners to help them achieve learning outcomes. The tacit assumption underlying the scaffold model is that students can become independent, self-regulated learners when instruction is carefully scaffolded. This study extends both the Gen Y model and the scaffold model, and examines the collaborative learning and border crossing that occurs when high school students mentor graduate students.

Literature Review

Martinez and Harper (2002, ¶ 8) summarize the Gen Y model as follows:

Generation Y is an innovative curriculum and resource solution for grades 3-12 that promotes school wide technology infusion. Gen Y students develop technological fluency while learning how to share their knowledge with others. Each student is paired with a classroom teacher who needs help integrating technology into his or her practice. Each student/teacher team decides on a curriculum component or lesson to enhance with technology. Students learn about pedagogy and lesson plan design while developing their communication, planning and project management skills. The partner teacher receives support for their technology projects when and where they need it - in their classrooms.

The concept of scaffolded instruction has grown out of research on how individuals learn (Vygotsky, 1978). The Zone of Proximal Development (ZPD) is "the distance between the actual developmental level ... and the level of potential development ... under adult guidance or in collaboration with more able peers" (Vygotsky, 1978, p. 86). Such collaboration or scaffolding enables learners to participate in complex tasks that they cannot perform adequately without assistance (Moll, 1990). Herber and Herber (1993) compare the temporary structures that physically support workers while they complete jobs to instructional strategies that support student learning that would be too difficult for them to complete on their own. Hogan and Pressley (1997) have found there are five different instructional scaffolding techniques: modeling of desired behaviors, offering explanations, inviting student participation, verifying and clarifying student understandings, and inviting students to contribute clues.

McKenzie (1999) describe eight characteristics of scaffolding. The first six are relevant within the context of the reverse mentoring described in this paper. McKenzie describes scaffolding as:

1. Providing clear direction and reducing students' confusion
2. Clarifying purpose
3. Keeping students on task by providing structure through scaffolded lessons or projects
4. Clarifying expectations and incorporating assessment and feedback
5. Directing students to worthy sources to reduce confusion and frustration.
6. Reducing uncertainty and disappointment

This project assumes that learning is facilitated by scaffolded instruction, and that scaffolding and mentoring may be provided by younger - but more knowledgeable – peers, using a modified version of the Gen Y model.

Description of the Study

This reverse mentoring project facilitated learning for graduate students (who were practicing teachers) enrolled in a graduate program at a metropolitan university in the southwest. The course goals included learning to effectively use a number of multimedia tools in K-12 classrooms. The final project was the creation of an electronic portfolio that showcased graduate students' skills and abilities to integrate multimedia into the teaching and learning that occurred in their classrooms. Since the enrollment was high, the university professor enlisted the help of graduate student interns, who had completed the course earlier in their programs, and high school interns with extensive multimedia skills. Using a variation on Dennis Harper's Gen Y Model, the university professor harnessed high school students' multimedia expertise to assist graduate students during their intensive and demanding course on using multimedia to enhance teaching and learning in K-12 classrooms.

Gen Y students needed training in two key areas before they were comfortable serving as mentors to practicing teachers. First, they needed training and extensive and varied experiences using technology and multimedia tools. This technology training needed to include both formal instruction and time to experiment with the tools, use the tools to complete assignments, make mistakes, and problem solve. They also needed training in ways to mentor and scaffold learning for graduate students. Gen Y students received their technology training through a two-year K-12 and university partnership in which students spent one day per month at a university computer lab as part of their

language arts curriculum. During the first year, they learned to create web pages, and during the second year they learned to use a number of multimedia tools to create monthly newsmagazines, and short digital essays that fulfilled their eighth grade language arts requirements (Christie, et al, 2004). The university professor invited approximately eight of these middle school students to assist her in her multimedia course for graduate students. Four chose to become part of the project; they have participated for the last four summers and are co-authors of this paper. These four students received their mentoring training through informal workshops with their language arts teacher and the university professor. Equipped with the multimedia skills learned and honed during their seventh and eighth grade language arts class, these high school students, referred to as Gen Y students, became mentors to graduate students learning to use multimedia in their teaching and learning.

Classes were held in a computer lab for four hours per day for twelve days during the summer session. In addition to large enrollment, the skills and confidence levels of graduate students varied considerably. Therefore, the university professor wished to facilitate teaching and learning at a variety of levels and for a variety of learning styles. Having a number of interns available to graduate students made this goal attainable.

Methodology and Findings

This four-year qualitative study used observations, surveys, and focus groups to get at perceptions and attitudes of both groups of participants Gen Y students and graduate students. It also examined the documented changes in these areas over time. A social-constructivist stance formed the theoretical framework for this study. We conducted two focus groups in which we asked specific questions on the use of the modified Gen Y Model in a graduate course. Gen Y students formed the first focus group and graduate students the second. Both sessions were audio- and video-taped, and then transcribed. Graduate students also responded to a survey on the ways Gen Y students facilitated their learning and the likelihood of them using a similar model in their K-12 classrooms. We intend to repeat these focus groups and surveys at the conclusion of our fifth and final year of this project.

Using the constant comparative method of Glaser and Strauss (1967), all data were analyzed by recursively comparing incidents applicable to each emerging category. Analysis continued, expanding or collapsing categories, until all data were accounted for. This analysis enabled us to propose eight themed assertions that we discuss below.

Assertion 1: Gen Y students were capable of mentoring practicing teachers, and most practicing teachers responded positively to such mentoring. Although hesitant at first to offer help to graduate students significantly older than themselves, Gen Y students soon realized they had the skills to help and that most graduate students often needed and wanted help. K-12 teachers acknowledged that kids often know more about using technology than they do

Assertion 2: Gen Y students felt that using technology comes naturally to them, and practicing teachers generally felt either intimidated by technology or that learning to use technology was a long and difficult process. Since the Gen Y students had been using technology both at home and school for most of their lives, they not only considered using technology an integral part of their lives, they often experimented with how to use technology tools in novel and creative ways. Most K-12 teachers, on the other hand, felt the need for direct instruction and support when learning to use technology

Assertion 3: Gen Y students learned by exploring and playing and making mistakes, and K-12 teachers generally preferred to learn using concrete, step-by-step directions. Gen Y students preferred “messing around” and learning by doing. They believed mistakes helped them learn and were excited when a mistake resulted in a new discovery. K-12 teachers, however, tried to avoid making mistakes and were often terrified their mistakes would have dire consequences. Generally, they preferred step-by-step instruction and had little interest in learning the multiple ways to perform any specific computer operation. The following Gen Y student comments support and illustrate this assertion:

- [Practicing teachers] think that things with iMovie™ can be done in only **one** way.
- The grad students think differently than we do. They don't like to make mistakes. They want it perfect the first time. They should see the cool stuff we've done that started as a mistake.

Assertion 4: *Gen Y students and practicing teachers were respectful of each other, individually and collectively.* Gen Y students and practicing teachers were initially polite to each other, but soon came to respect each other because of the expertise that each group brought to the learning situation. The following focus group comments support and illustrate this assertion:

- Graduate Student: I didn't think for a moment that [the high school students] would treat me like I didn't know anything, although I didn't really know much. They were truly there to help out and be supportive.
- Gen Y Student: I basically helped [a graduate student] make her iMovie™ exactly how she wanted it.

Assertion 5: *Gen Y students learned to give help in meaningful ways, and practicing teachers learned to ask for the specific type of help they needed.* Practicing teachers often didn't know how to ask for the specific kind of help they needed. Many would just cry *Help* or say something like *I'm stuck, you fix it!* Over time, Gen Y students learned to interpret non-specific cries for help, and practicing teachers learned to provide context and identify more specifically what the problem was and the type of help they sought. The following Gen Y student comments support and illustrate this assertion:

- I got to know which teachers really needed a helping hand and which ones just had technical questions.
- After a while I learned how the teachers thought, and I could sense when they needed help.

Assertion 6: *The K-12 teachers grew appreciative of and valued the Gen Y students and the scaffolding they were able to provide.* K-12 teachers commented that the "kids" were patient, accessible, friendly, refreshing to work with, positive, receptive, and enjoyable. The following graduate student comments support and illustrate this assertion:

- They felt very valued and worthwhile because they could help us; I definitely valued them.
- I was impressed with how much of their knowledge they were willing to share. Nothing was protected; they were just there for us.
- We grew to trust them.
- We learned that the kids could help us even though they're younger, much younger, than we are.
- I loved the one-on-one instruction and problem-solving strategies I learned from [a Gen Y student].

Assertion 7: *Gen Y kids gained self-confidence.* Gen Y students were, at first, shy and reticent to approach a teacher unless asked. Over time, they became more confident in their abilities to help with the wide variety of questions graduate students asked. Even more importantly, they soon learned to provide unsolicited guidance and help to those graduate students who needed scaffolding. The following Gen Y student comments illustrate this assertion:

- I learned adults were willing to listen to what I had to say.
- My attitude toward adults is now more open, more confident.
- My self-confidence is better because of this experience.

Assertion 8: *Scaffolding graduate students' learning through collaboration with Gen Y students benefits all participants.* The modified Gen Y model used within the graduate multimedia class provided a win-win-win situation. The Gen Y students, the graduate students who were practicing teachers, and the university professor all benefited from this project. Gen Y students increased their self-confidence, felt valued for their expertise, felt valued for their willingness to help, became more comfortable around teachers, are now more willing to offer help to their high school teachers, are much more familiar with university life, and have had a four-year experience interning in a university classroom. They characterize this experience as "a chance in a lifetime." Graduate students enrolled in an intensive multimedia class felt their individual needs were met despite the large class size, received help when and as they considered necessary, experienced the Gen Y Model, are now using the Gen Y Model in their classrooms, and experience the ZPD and the joy of learning from a "more experience *junior* peer." Finally, the university professor received assistance with a popular, over-enrolled graduate class, could accommodate a variety of learning styles, offered an improved quality of learning and classroom environment, offered a constructivist classroom featuring personalized and contextualized learning, and had the opportunity to use and study a modified Gen Y or reverse mentoring model at the graduate level.

Conclusion

This model encourages authentic participation of students as collaborative partners with teachers. After crossing long-established educational borders, Gen Y students: increased their self-confidence, felt valued for their expertise and willingness to help, became more comfortable around teachers, and consequently were more likely to offer help to their own high school teachers. Graduate students felt their individual needs were met – despite the large class size, received help when and as they considered necessary, experienced the Gen Y model, experienced the ZPD and the joy of learning from a “more experienced junior peer,” and are now using the Gen Y model in their classrooms. Finally, a university professor received assistance with a popular, over-enrolled graduate course. Because of this assistance, she accommodated a variety of learning styles, offered an improved quality of learning and classroom environment, and provided a constructivist classroom featuring personalized and contextualized learning. In addition, she had the opportunity to study reverse mentoring as Gen Y students ventured into a graduate level university course to assist practicing teachers.

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