The Gifted Kids Network

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2008 Pilot
Gifted Kids Network Model

Overview

The Gifted Kids Network is a Web-based, supplemental, gifted and talented programming model that includes standards-based classes, enrichment clusters, and affective programming. Students are encouraged to think critically and creatively and to question the material that is presented to them in order to meaningfully integrate topics covered into their everyday lives. The use of Socratic-style discussion forums, PowerPoint presentations, group work, and individual response blogs encourage students to express themselves and engage with the content. The Gifted Kids Network has high expectations that require students to deliver sustained effort. These expectations are coupled with a nurturing online environment that is appropriate to supporting both the intellectual as well as the social and emotional development of the students. Using tools of the 21st century, the Gifted Kids Network exposes students to technology tools, which can increase their creativity, organization, and productivity. There are seven main goals for students in the Gifted Kids Network. These goals are adapted from Florida’s Framework for Gifted Learners (Florida Department of Education, 2007):

1. Students will be able to critically examine the complexity of knowledge and information.
2. Students will be able to ask and assess multifaceted questions in a variety of fields and disciplines.
3. Students will be able to conduct thoughtful research.
4. Students will be able to think creatively and critically to identify and suggest possible solutions to real-world problems.
5. Students will be able to assume leadership and participatory roles in group learning situations.
6. Students will be able to produce a variety of authentic projects using 21st-century tools that demonstrate understanding in multiple fields and disciplines.
7. Students will be able to set and achieve reasonable personal and academic goals.

The Gifted Kids Network is based on a framework identified by Ng and Nicholas (2007) suggesting the use of online technologies to engage gifted secondary students. These technologies can include online management systems, e-mail, and Web-based resources. The Gifted Kids Network uses this framework but adapts it for elementary and middle school students, a population for which online programming has not previously been utilized. Academic-based online social networking provides an avenue to connect gifted students in rural communities with intellectual peers and learn the skills of social networking in a safe environment. In addition, software applications and tools including wikis, blogs, podcasting, Voicethread, and video creation software enable teachers and students to create multimedia projects. By combining social networking and multimedia lessons developed around advanced content, the Gifted Kids Network creates a gifted program that teaches meaningful curriculum and 21st-century skills and encourages critical thinking and creativity.

Garrison, Anderson, and Archer (2000) present the Community of Inquiry Model, a conceptual framework of online learning that includes three components: cognitive presence, social presence, and teaching presence. All three of these components are built into the Gifted Kids Network model. Cognitive presence is achieved in the Gifted Kids Network through the students’ interaction with content. Teaching presence is obtained through the students’ interaction with instructors. Social presence is attained through the students’ interaction with intellectual peers. The interaction of these components provides a social network that supports high achievement and the social and emotional needs of gifted students (see Figure 1).
Standards-Based Instruction

“Both middle school advocates and gifted educators encourage the use of interdisciplinary curricula and units that allow students to make relevant connections among the disciplines and to themselves” (Rakow, 2005, p. 120). Rakow notes, “Because of gifted students’ precocious abilities to discover analogies, parallels, contradictions, and contrasts in areas where their typical peers may see just the obvious, an interdisciplinary approach provides them a broader canvas for exploration and integration” (p. 121). The Accelerated Learning Unit—a standards-based unit of instruction centered on high-interest topics—is based on major principles and essential understandings that correlate to state and national standards within the areas of science, social studies, and language arts. Accelerated Learning Units are developed using the Multiple Menu Model (Renzulli, Leppien, & Hays, 2000) and the Parallel Curriculum Model (Tomlinson et al., 2002), curriculum models appropriate for accelerated learning. Accelerated Learning Units include media-rich content, Socratic discussion forums, and constructivist activities that require ascending levels of intellectual demand. Figure 2 shows an example of a series of lessons for an Accelerated Learning Unit on ancient China created using the Multiple Menu Model. Accelerated Learning Units also may be developed using Learning Contracts, providing choice and challenge to students.

In order to accommodate differences in student background knowledge, readiness, and interest, most lessons allow students flexibility in their study. Students move through lessons at their own pace, moving quickly through topics they already know or moving slowly through unfamiliar topics or those that they want to learn more about. Siegle (2006) described the use of hyperlinked PowerPoint presentations as a student product. The Gifted Kids Network utilizes hyperlinked PowerPoint presentations (see Figure 3) to enable students to self-pace and compact out of material that they know, or delve deeper into areas of interest.

Enrichment Clusters

Enrichment 2.0, a Web-based enrichment cluster, is a 21st-century adaptation of the Schoolwide Enrichment Model’s (SEM) Enrichment Clusters developed by Renzulli (1996). Enrichment clusters are organized around major disciplines, interdisciplinary themes, or cross-disciplinary topics. Within clusters, students are grouped across grade levels by interests and focused toward the production of real-world products or services. Enrichment 2.0 takes the enrichment cluster concept and integrates 21st-century tools to enable students who are not physically in the same space to collaborate in an area of interest. Enrichment 2.0 clusters begin in the same way as the SEM enrichment cluster with a list of introductory questions (Renzulli, 1996):

1. What do people with an interest in this area do?
2. What products do they create and/or what services do they provide?
3. How, and with whom, do they communicate the results of their work?
4. What resources and materials are needed to produce high-quality products and services?
5. What steps need to be taken to have an impact on intended audiences?

An online homeroom is established using a wiki, Moodleroom, or social networking site. The teacher then embeds introductory multimedia resources and activities in the online homeroom for students to explore. Students make use of Internet-based graphic organizers such as Gliffy (http://www.gliffy.com) and Bubbl.us
How to Use This PowerPoint

- Each slide will give you some important information on Ancient China.
- Whenever you see green text, click on the text to learn more about the topic and participate in interactive activities.
- You may go through the PowerPoint at your own pace. If you already are familiar with the information, skim it and move on. If this is new to you, read carefully and follow the links for more information on the topic.

Religion and Philosophies

- Three main sets of philosophical and religious beliefs that have shaped Chinese thinking and culture over the centuries and have endured until today include:
  - Confucianism
  - Buddhism
  - Taoism

(ftp://bubbl.us) to work collaboratively on concept maps and to identify the major concepts and topics within their enrichment cluster area of knowledge. Social bookmarking and aggregators enable students to share information with their classmates. Students share resources and develop their research questions through discussion forums, collaborative documents, and the wiki. The goal of each Enrichment 2.0 cluster is to produce a
multimedia product that is appropriate to the field that the students are studying and to present it to a real audience through the Internet. Enrichment 2.0 is part of the Gifted Kids Network model; however, Enrichment 2.0 also can be implemented independently from the rest of the model.

Enrichment 2.0 clusters can be utilized as a stand-alone program allowing classroom teachers to connect their students with students in other communities. The model can be adopted and independently run through a state education department using state gifted education specialists or consultants to facilitate the program. In this implementation, students collaborate with students from a variety of schools within the state. Developing the social network can be as simple as registering for a private social network on Ning (http://www.ning.com) or signing up for a Moodleroom at (http://www.moodlerooms.com).

Alternatively, rather than operate an independent state network, schools or individuals pay tuition for students to enroll in a community network. In this model, students from a variety of educational situations came together to participate in the community network that was facilitated by a private gifted education specialist or consultant. One example of a community network is the Gifted Kids Network at http://www.giftedkidsnetwork.com.

Social and Emotional Needs

Morgan and Tam (1999) showed that creating an online community of learners is critical to engaging students in online learning. Online learning typically has a higher dropout rate than face-to-face courses. Connecting students to each other helps to develop a sense of community and keeps students motivated in their learning (Swan, 2003). The Lounge component of the Gifted Kids Network model is an informal discussion forum and social network that supports the affective needs and growth of gifted and talented students. The Lounge provides students an opportunity to socialize with other gifted students. The socialization includes informal discussions about topics of the student’s choice including music, sports, hobbies, and life in rural communities. In addition, formal discussion groups address common concerns of gifted and talented students including multipotentiality, perfectionism, asynchrony, peer relations, excessive self-criticism, and career planning. The Lounge also provides a forum for discussions on academic honesty, personal integrity, and the use of 21st-century tools and resources. Adult facilitators with training in the social and emotional needs of gifted students direct the discussion groups. The Lounge is an important component to the program as it provides an avenue for gifted students to develop intellectual peer groups, support networks, and friendships. This is particularly crucial for gifted students who often are geographically or physically separated from their peers.

Using the Internet to create social learning communities for students who are isolated geographically from their peers can provide much-needed socialization and advanced academic content for this underserved population.

Pilot Program

Participants and Outcomes

During the 2007–2008 school year, the Accelerated Learning Unit and Lounge components of the model were piloted with 41 gifted and talented students in grades 2–8. Twenty elementary school students (grades 2–5) and 21 middle school students (grades 6–8) from California, Colorado, Kansas, Iowa, Massachusetts, Michigan, New Mexico, and Utah participated. Students were required to meet one or more of the following categories: homeschooled (4 students), living in a rural location (17 students), living in poverty (13 students), or underachieving in their current situation (7 students). The pilot program included students participating in the program as an extracurricular activity and students participating as a school-sponsored and supported activity.

Four outcomes were anticipated:

1. Students would gain increased technological skills and increased confidence using the computer for collaborative and self-directed learning.
2. Students would connect with other gifted students and address many affective concerns of being gifted.
3. Students would master benchmarks related to their specific courses.
4. Students would improve research and writing skills.

2.0 Enrichment

The Gifted Kids Network Web site (http://www.giftedkidsnetwork.com) was developed using the Moodle content management system. Moodle is a free open-source application that allows a teacher to develop online content without significant programming knowledge. Moodle offers teachers the ability to embed lessons, workshops, discussion forums, blogs, wikis, quizzes, and multimedia content into an online class. The Moodle content management system also allows a teacher to restrict access to the course, thereby ensuring student safety and privacy.

Students enrolled in the pilot program received free unlimited access to the program during the pilot period.

Schools provided students with access to a computer with high-speed Internet access. Students and sponsoring teachers needed to be comfortable using the Internet and to be able to troubleshoot technological problems as they occurred. Knowledge of specific programs was not necessary as instruction was provided to students on the applications used in the Gifted Kids Network. In order to enroll in the program, students and a parent or guardian signed an Internet Safety Contract (see Figure 4). The Gifted Kids Network provided the facilitator for the program and was responsible for facilitating, monitoring, and evaluating student performance in the network. Classroom teachers and parents were encouraged to respond to student blogs and participate in discussion forums as time allowed.

Results of the Pilot

**Outcome 1: Increase Technological Skill.** Throughout the pilot program students explored new technologies such as wikis, blogs, and Voicethreads and improved their skill with Microsoft PowerPoint. At the beginning of the pilot, many students had trouble navigating the network and submitting assignments; however, as the program progressed, students were embedding pictures into blogs and discussion forums, using online graphic organizers, and working together on Voicethreads. Classroom teachers and gifted coordinators of enrolled students had the following comments: "Her computer and typing skills have improved" and "He was exposed to new technologies and feels more comfortable using them." In addition, students were able to identify ways to utilize these technologies in their face-to-face courses.

**Outcome 2: Connect With Other Gifted Students.** Middle-school-age students enjoyed the benefits of social networking including connecting with students from different geographic locations as well as sharing stories about friends, music, the arts, sports, and academic competitions. Middle-school-age students have the intellectual and technological maturity to carry

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The Internet Safety Contract is designed to create a working environment that is scholastic, based on protection of personal information, respectful, and creative.

**Rules**
- DO use the computers for research on school projects or to connect with other students in a positive manner.
- DON’T plagiarize or download anything illegally.
- DON’T search for illegal, rude, or inappropriate things.
- DON’T harass other students through blogs or discussion forums.
  1. I will never post any information more personal than my first name.
  2. I will not post pictures of myself or others (family, students, or staff in my school or enrichment program).
  3. I will use language appropriate for school.
  4. I will not plagiarize; instead I will expand on others’ ideas and give credit where it is due.
  5. I will not insult my fellow students or their work.
  6. I will not be afraid to express my ideas, while not making insulting remarks.
  7. I will use constructive criticism, supporting any idea, comment, or critique I have with evidence.
  8. I will take responsibility for anything blogged in my name.
  9. I will try to spell everything correctly, using spell checker and proofreading my writing.
  10. I will not bully or harass in my blog posts or in my comments.
  11. I will not provoke others in my blog posts or comments.
  12. I will never access another student’s account in order to pose as him or her.
  13. I will only post photos that are school appropriate and either in the creative commons or correctly cited.
  14. I will not spam (including, but not limited to meaningless messages, mass messages, and repetitive messages)
  15. If I find an inappropriate site or image I will hit the back key and contact an adult.
  16. I will not enter a chat room other than those specifically set up and monitored by my teacher.

**Infractions of these rules will lead to the following consequences in order of severity and number of offense:**
- Letter of apology to those offended by the infraction (individual students or GKN community), warning by facilitator, and editing or deletion of offending post/comment.
- Dismissal from Gifted Kids Network program.

**Permission**
We are asking for you and your child to discuss and sign the following form.

My student ___________________________ has permission to participate in this online learning project from January 15, 2008–April 30, 2008.

I have read and understood these internet safety rules and policies and I agree to uphold them.

**Figure 4. Internet Safety Contract used by Gifted Kids Network (http://www.giftedkidsnetwork.com).**
on an online classroom discussion, to work on group projects, and to productively engage in an online learning community. One student commented, “It’s so cool to be working with other students who understand what it’s like to be smart in a small town.” Students enjoyed sharing experiences of growing up gifted in rural communities with a peer group who understood their feelings. Another student shared his success in MATHCOUNTS and science fair with his online classmates. He enjoyed feeling supported rather than alone in his achievement. One student shared her experience with having skipped a grade:

I know exactly how you feel. Not only am I smart, but I am only 10 years old, and one of the smallest kids in my grade. Just as I think everybody knows about it and I’ll get no more oh-my-gosh-she’s-the-age-of-a-fourth-grader! looks, someone new comes to the school and BOOM! They find out. And then it just starts all over again. But I dealt with it by acting really proud and making a joke about it. Everyone seems to think that I’m comfortable with my age when I do that, and they seem to shrug it off and except [sic] me for who I am. If anyone starts to tease you about being smart, just laugh it off and act really proud, and people except [sic] it. It’s a neat trick. Try it! 😊

This excerpt is just one example of how students successfully used the Lounge to share experiences and concerns and to support each other.

**Outcome 3: Master Benchmarks Related to Their Specific Courses.** Students demonstrated mastery of benchmarks through student projects, blog posts, quizzes, and exams. One teacher commented, “His expanded knowledge of ancient civilizations has elicited positive comments from his mother and father.” Another commented, “I believe he appreciates learning a topic in depth. I know he appreciates being able to work independently at his own pace.”

**Course Completion Rates and Participation**

According to Watson and Ryan (2007), course completion rate measures the percentage of students who complete an online course. In exploring course completion rates, their survey identified the variables in how course completion rates are calculated: “Does the completion rate take into account a drop period for the course? Do students have to pass a course to be considered a completion?” (Watson & Ryan, 2007, p. 39). In the Gifted Kids Network pilot program, students who dropped the course within the first 2 weeks were not included in the course completion statistics; however, they are reported separately. Successful completion of the course (having passed the course) is required. This study showed that average reported course completion rates of online courses were 65% to 85% (Watson & Ryan, 2007).

The pilot program demonstrated that although younger students in grades 2–4 enjoyed the high-level content, they did not have the required keyboarding and technology skills to fully participate in this program without significant adult support. Thirteen students from one elementary school withdrew from the pilot program after the second week, because it became clear to the classroom teacher that she did not have the time or resources to support all 13 students in this program while attending to the other students in her charge. Of the 7 remaining elementary school students, 2 successfully completed the course. Elementary school students also did not have the maturity to utilize the Lounge to support affective growth. Because the Lounge was the mechanism to engage affective growth, this outcome was not achieved for any of the elementary school students. Younger students who were homeschooled had the advantage of having an adult without other teaching responsibilities available to assist with typing, troubleshooting, and navigating the Network. Three homeschooled second-grade students fully participated in the Accelerated Learning Unit of the program and accomplished outcomes 1, 3, and 4. Two fifth-grade students participated in the pilot program in addition to their regular school workload. Both students accomplished anticipated outcomes 1, 3, and 4; however, during the final weeks of the program, their participation decreased and the quality of their work suffered. Two third-grade students logged into the program sporadically and infrequently participated in discussion forums or submitted assignments. The findings of this pilot program are consistent with the research submitted in the final report by the Colorado Online Education Programs Study Committee (Kalman & Watson, 2003):

Learning for students in grades K through 4 or later requires substantial involvement by a parent or other significant adult, and many of these elementary level
programs are used by parents who were previously home-schooling their children. The actual instruction is typically provided by the students’ parents; the online curricula are really lesson plans for the adults, who transmit the lessons to the children or guide the children through exercises available via the online course. Thus, although supported by an online program, the actual instruction really occurs through the home. (p. 8)

At the middle school level, the model was successful for gifted students in rural communities, students living in poverty, and homeschooled students. Twenty-one middle school students enrolled in the pilot program; one student withdrew during the first 2 weeks. Fourteen middle school students completed their Accelerated Learning Unit, resulting in a 70% course completion rate at the middle school level. Eight students participated in the pilot program in addition to their regular schoolwork. Some of these students felt burdened by the additional work by the end of the course. Four students who participated in the program in addition to their other schoolwork did not successfully complete the program. Two students who participated in the program from school also did not complete the program. Students who completed the program included 1 twice-exceptional student, 3 students who were underachieving, and 10 gifted students from rural communities.

**Discussion**

Researchers have identified important characteristics of students who are successful online learners. Siegle (2005) identified the following characteristics: active engagement, curiosity, focus, flexibility of thought, and motivation. Roper (2007) identified seven skills of successful online students: develop a time management strategy; make the most of online discussions; apply the concepts learned; ask questions; stay motivated; communicate the instruction techniques that work; and make connections with other students. Ng and Nicholas (2007) suggested students need “to be highly motivated, independent learners who have the desire to learn and who extend themselves both academically and socially” (p. 191). Students demonstrating these characteristics were more successful in completing the pilot program and achieved more of the anticipated outcomes than other students in the program (see Table 1).

Successful students in the pilot program did exhibit strong organizational skills, asked questions, actively participated in discussion forums, and communicated problems or concerns to the instructor frequently. In some cases, students who lacked motivation in their face-to-face classroom found the challenges of the online gifted program increased their motivation and these students were successful in the program.

On the other hand, the model was generally less successful with underachieving students. Students who demonstrated poor organizational skills and lack of attention to detail in their face-to-face classroom also exhibited these characteristics in the pilot program. These students were less successful online than in their face-to-face classroom. For example, one student wrote in her blog, “Over the past few months using Gifted Kids Network I have realized that Internet courses aren’t for me as I become easily distracted.” One teacher observed, “I think both the student and his mom saw that this student’s problems with motivation aren’t just because he doesn’t have good teachers. He was pretty unmotivated in this program also.” Students who lacked the self-
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or turn in assignments if they are not logged on. Thus, the online model does not work for students who do not have the commitment to logon to class regularly and respond to teacher messages.

Conclusion

The Gifted Kids Network’s pilot program demonstrated the potential for social networks to be successfully used to engage gifted students from rural communities. Students in the initial pilot program found the hyperlinked PowerPoints a great tool for curriculum compacting and self-pacing through lessons. Additional multimedia lessons, which allow students to move through content at an appropriate pace, enhanced the model. Students enjoyed the simulations, video lessons, podcasts, and other interactive activities. Online learning was more successful with additional opportunities for students to engage with the content through these varied lesson styles.

Further research is needed to determine whether increased multimedia content will increase the successful course completion rate for students enrolled in the program. One challenge of developing this type of model is the cost of purchasing or creating engaging multimedia materials while keeping course fees as low as possible. Students who were most successful in completing the pilot program and those who rated the value of the program most highly were those students who had an adult available to assist with technological difficulties. Having technological support appears to be a key factor in making this model work with elementary and middle school students.

This model has tremendous possibility for underserved gifted students, particularly students from rural populations and homeschooled gifted students. Opportunities for gifted and talented students to collaborate with other gifted students in areas of interest are important to keeping gifted and talented students engaged and motivated in school. In the era of No Child Left Behind, educators need to continue to find ways to challenge our brightest students. Web 2.0 technologies such as social networks, blogs, wikis, discussion forums, podcasts, and other multimedia resources can provide the opportunity to engage gifted students in appropriate content with gifted peers.

References


