



NORTHWESTERN UNIVERSITY

Fall 2005

The Center for Talent Development

Resources and ideas for parents and educators of gifted children

Talent



SUMMER AT CTD

Who ARE those kids?

The size of the students populating the Northwestern University campus shrinks each summer. Six footers and students over 18 are few and far between. Instead you're likely to see kids as short as three feet and as young as 4th grade—all with purple lanyards around their necks, keys and Center for Talent Development/Northwestern IDs bouncing on their chests.

During most of July and August more than 1,600 students came to Evanston to participate in CTD's summer academic programs. At the same time, we had almost 154 students enrolled in our Civic Education Programs held in both Baltimore and Chicago. Nearly 90 students attended three weeks of classes at our program located at Case University in Cleveland. And close to 1,000 preK-3rd graders signed into the Leapfrog Program to take CTD classes at elementary schools in both Evanston and Glen Ellyn. The chairs are the right height!

But those are numbers. What's it like to be one of the students? We asked Lara Kubilius, a rising junior who decided to learn one year of Latin in three very intense weeks (whew!), to describe a "typical" day in the Equinox Program (for grades 8-12).

At **6:01** each morning my alarm clock blasts the latest hit on 103.5 Kiss FM in my ear. Rather than fumbling to turn it off, I just lie there. I glance over at the clock again. When the red light blinks 6:05, I realize that if I lie here one second longer, there's a pretty good possibility that I will not have time to take a shower. So I throw on my soft, white robe and run down the hall, taking care not to slip on the often soaking-wet floor.

7:15 am: "Good morning!" The cafeteria ladies greet me happily every day. My ideal breakfast consists of a fluffy blueberry

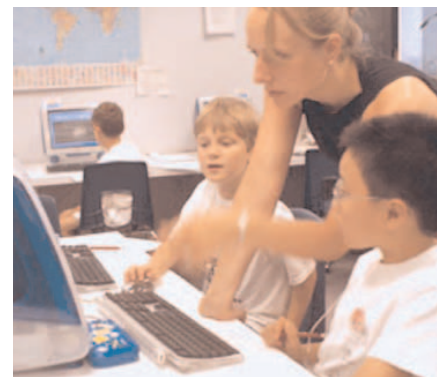
muffin and some juicy, chilled fruit, but there are tons of options available: eggs, pancakes, French toast, bagels, apples, cantaloupe, banana bread, yogurt, cereal, and an assortment of muffins.

8:15 am: I head to class early because Latin I is located on the south end of campus in Fisk, the furthest possible distance from the dorm I'm living in. I complete this 20-minute hike to and from class everyday. Even though other kids only have to walk three minutes because their dorms and classes are adjacent to each other, I don't mind this walk down the edge of Lake Michigan. On clear days the lake glistens and there are endless amounts of flowers of all different kinds and in many different shades of blue, pink and green.

8:30 am: By this time everyone should be in class no matter what course they've signed up for. Each class operates differently but my class, Latin, is self-paced. This means that we work at our own pace and if there is something we don't understand we ask the teacher for help.

We usually start the day with a vocabulary game. In the game a player shows a vocabulary card to the other players who are organ-

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INTERVIEW

Gifted Students & Technology

An Interview with Del Siegle

Why are so many gifted and talented students attracted to technology?

First, many gifted and talented students enjoy learning through exploration and experimentation. Technology enables them to hypothesize and inductively pursue solutions to problems they are investigating. Technology allows the freedom to investigate various paths to multiple solutions. Technology transforms students from receptacles of knowledge to active producers who direct their own learning.

Second, technology increases the sophistication of products that gifted and talented students can create by allowing them to function in roles similar to practicing professionals. Technology allows students to produce products in a real-world fashion. For example, students can write, edit, and produce books or publications—with a desktop publishing program—that rival in appearance those produced by publishing houses. Today, students can access software that enables them to compose music, design buildings, and collect data with laboratory probes in ways similar to practicing professionals in each of these fields. Thus technology permits students to develop their talents at a higher

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Equinox students are allowed to eat lunch anywhere on campus, not just at the Northwestern University residence hall cafeterias. So for a change of pace, my class ate lunch at Norris Student Center once a week. Norris is open to the public and not part of the CTD Summer program dining plan so when we ate there, we had to pay for our meals.



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Tell us what you think! Please put this url onto your computer screen and help us make our newsletter even better. page 8

Gifted Students & Technology

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more matter we must attend to: a class meeting with our RTA (residential teaching assistant) to discuss the activities for the coming weekend. Sarah, Amy, John, Kevin, Lisa and I—the entire Latin class—decide to go to the classical music concert on Friday night and to Michigan Avenue to shop on Saturday. Other classes want to go to the more trendy Belmont area where you're more likely to find one-of-a-kind clothes including some serious Goth choices. Tomato and Pink Frog, on the other hand, sell vintage apparel.

3:10 pm: I head back to the dorm and sign in. A million people pile into my room. We stand around in the cramped, un-air-conditioned room figuring out what we'd like to do this afternoon. We opt for Jamba Juice. It's a long walk to downtown Evanston—about 20 minutes—but at least we'll have cold drinks to sip on the way back through the 90 degree heat.

5:00 pm: We stop by the front desk for our 5:00-6:00 check in, and then head into the cafeteria for dinner. The choices are identical to those at lunch. After my friends and I finish and put away our trays, we head upstairs for our study session.

6:30 pm: Since my class decided to have a study session tonight, we gather in my room. We play the vocabulary game and then start on another translation. The dorm rooms are hot and loud so it's hard to concentrate.

8:30 pm: We decide to take a study break and walk around the halls to see what everyone else is up to. We end up sitting around and chatting in one room. Usually our conversation is accompanied by music from the shared network on iTunes. Occasionally we also watch a DVD on someone's computer.

10:30 pm: I head back to my room, change into my yellow pajama shorts and my navy blue t-shirt, slip on my fluffy white slippers, grab my toothbrush and face wash and start off to the often crowded bathroom. I wash my face, brush my teeth, and take one last bathroom break and walk back to my room.

11:00 pm: My RTA stops by to make sure my roommates and I are in our room. Sometimes I stay up studying, but tonight I go right to bed. Every moment of sleep is precious, so I quickly turn on my fan to full power and settle into my bed, pulling the bright, strawberry pink sheets up over me. Then I close my eyes. I know if I just practice a couple of Latin declensions, I'll fall asleep. *Amo amas amat.* I'm done for the day. ●

level of professional sophistication at an earlier age.

At what age should gifted students begin to use computers and other technology?

One might ask at what age children should begin using crayons, pencils, paint, and paper? Computers and other technologies can be considered similar forms of expression, and children can begin to use them as soon as their physical coordination allows. Most early childhood educators recommend children begin experimenting with computers around age three, although it may be appropriate at an earlier age for gifted and talented students.

Children need variety in their lives. Just as parents would not allow their children to spend every waking hour sitting in a chair watching television or reading a book, parents should not accept such behavior with children who are continually fixated to a computer. Children need opportunities for a variety of physical, social, and intellectual pursuits. While the time for each does not need to be evenly divided, balancing these activities based on the children's interests and personalities is important. Research indicates that children who use the Internet spend less time watching television and more time with friends and family. Children who spend time on computers at home spend no less time reading or playing with other children. There are also modest benefits associated with home computing on cognitive skills and self-esteem. Unfortunately, young children who use computers at home for more than eight hours per week tend to be heavier than those who do not use home computers.

How is technology being used to enhance gifted students' education? Can you share an example of what today's technology enables students to do that would not have been possible 10 years ago?

Technology can be used to accelerate or enrich student learning. Ten years ago, online classes did not exist. A myriad of classes are now available that enable parents and educators to accelerate their student's learning. Online courses may be necessary when classes that students wish to complete conflict with their school schedule, when more advanced classes are needed to meet students' instructional levels, and when the pace of traditional classes is too slow for students. While the online option is not suitable for all students,

gifted and talented students who are self-motivated, comfortable using technology, and possess excellent reading and writing skills are excellent candidates. CTD not only offers an extensive number of distance-learning classes (www.ctd.northwestern.edu/learning) but also provides other information on distance learning that you can access through the resources section of the main website.

Another use of technology is specialized software. The price of these programs has dropped dramatically over the last few years. As mentioned earlier, these products allow gifted and talented students to function as practicing professionals. This not only accelerates the development of students' talents, it also enriches their learning experiences. For example, students can now edit and create professional looking movies. Ten years ago the cost of software and equipment to produce a film was prohibitive.

Today, the software is packed free on many computers, and digital video cameras are commonplace.

I began experimenting with photography when I was nine years old. The interest and passion I have today for photography was already developed at that point. My learning experience with photography would have been enhanced and accelerated if I had had access to today's digital photography technology.

Gaming is also showing promise for student learning. Research in this arena is just beginning, but educators are beginning to explore how to capture the popularity of video games to enhance student learning.

Why is the Internet such a significant learning resource for gifted students?

The Internet creates a level playing field. It does this in three ways.

First, it provides universal access to information. Students who are interested in med-



Specialized software allows gifted and talented students to function as practicing professionals.

Gifted Students and Technology

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ical developments can access the latest medical news as quickly as the medical researchers produce it. The Internet is the most extensive and accessible collection of information available to gifted and talented students. It provides a breadth and depth that far exceeds the holdings of their school library, their community library, or even a nearby university library. A simple Google search can satisfy even the most insatiable and inquisitive minds.

Second, the Internet provides a common platform for gifted and talented children to share their ideas. With the Internet, a 10-year-old student has the same publishing power as *The New York Times*. Students can create web pages or blogs and share their ideas with the world. Distribution of knowledge is no longer restricted to those who own a printing press.

Finally, the Internet allows gifted and talented students to connect with each other and with electronic mentors. Gifted and talented students who have felt isolated in the past due to their unique abilities and interests can now interact through email and chat with other individuals with similar abilities and interests. The satisfaction that many gifted and talented students feel when attending special summer programs such as those offered at the Center for Talent Development can now be experienced throughout the year thanks to online classes, email, chat, and online mentors.

How can parents help students use the Internet as a tool for learning, rather than simply a place to surf, browse, and chat?

Parents can use children's interests to enhance their use of the Internet. Based on conversations that parents have with their children, they can help their children explore topics related to special areas of interest. A child who is interested in baseball may wish to learn more about Shoeless Joe Jackson or may be interested in developing a database of statistics related to his or her favorite teams. Such information is available on the Internet. By jointly exploring their children's interests on the Internet, parents can assist their children in two areas. First they can help them become critical consumers of information. From an early age, children must be trained to develop a healthy skepticism of the validity of the information they find. This can involve comparing information from a variety of sources on the web.

Second, parents can also help children surf more effectively and efficiently. This includes

modeling the best selection of keywords within a search. Many children quickly become discouraged because they cannot immediately find the information they are seeking. With some guided practice, children learn to locate the information they desire quickly. Blindly following links in not an efficient way to locate information on the Internet and is not only a waste of time, it is often unproductive. Parents can help children develop purposes and strategies for using the Internet.

What are telementoring programs, and how can gifted students benefit from them?

In Francois Gagné's gifted and talented model, he discusses turning gifts into talents. He views giftedness as untrained natural abilities and talent as the mastery of those abilities through development. Benjamin Bloom found that the process of developing talent requires a concerted effort of a variety of individuals. The nature and diversity of gifted and talented students' interests and abilities demand resources beyond the confines of the home, school, and sometimes beyond the boundaries of the community. At some point, students need contact with more knowledgeable others who share their expertise and guide them. Ideally this process takes place in person. Unfortunately, time and distance constraints often prevent this from occurring.

Telementoring is one way to provide gifted students with opportunities to interact with others who are very knowledgeable. It is particularly valuable for students in isolated areas, for students with esoteric interests, or for students whose academic needs exceed the local educational system's capacity. In these cases, it may be difficult to find a mentor in the community who is willing to spend time with the young talent. Telementoring is a viable solution. During the experience, the student and the telementor work toward a student goal that the two have jointly set.

They usually communicate through monitored email or bulletin board postings. While parents and educators can set up such relationships if they know appropriate mentors, a number of organizations provide this service on a large scale. One of the more prominent ones is the International Telementor Program (www.telementor.org).

Mentoring is not for every student and telementoring is even more restrictive. Just because students are disenfranchised with their educational program does not mean they need a mentor. An authentic mentorship is more than students receiving supplemental information. It can provide students with opportunities for real-world application of their passions, self-confidence, an increased knowledge base, deepened enthusiasm for a subject, a role model, and growth in their area of giftedness.

You've written about technology giftedness. How do you define this term, and how can parents help a technology gifted student develop his or her talents?

My thinking about technology giftedness has been influenced by Reva Friedman-Nimz. Technology giftedness appears to manifest itself in three distinct ways.

1. The talent to write computer code appears to be one type of technology giftedness. I have known gifted students who, as early as first grade, have begun exploring how to write computer code. While this is unusual, all of the fourth-grade students with whom I have worked were able to create simple computer programs. Some of those students had a special talent with programming. They were able to conceptually breakdown programming tasks and see the relationships between them. This certainly is a special kind of thinking. For many of them, it appeared to be a natural way of thinking and looking at the world. Such gifts need to be



developed. Elementary students should be exposed to some simple programming. The early Apple computers with Apple BASIC were a wonderful medium to introduce programming. Seymour Papert's LOGO is still a great program to introduce very young children to programming. Those who show an interest and talent for programming can advance to more advanced programming such as Visual BASIC, C++, or JAVA. Student who enjoy creating web pages with HTML script also fall into the programming category.

2. A second area of giftedness involves the application of technology. These students are adept at using the technology to produce products. They can apply technology in effective and creative ways. Students in this category can exhibit the following behaviors:

- They demonstrate a wide-range of technology skills. They are attracted to a variety of different types of technology.
- They often learn new software without formal training. This is often because they are able to apply what they learned with one piece of software to another piece.
- They spend their free time developing their technology skills. There is nothing they enjoy more than "playing with technology."
- They often assist others with technology problems. Because of this trait, students can easily identify who among them has this type of technology giftedness.
- They are able to incorporate a variety of technologies into the products they produce. For example, at an early age their PowerPoint™ presentations may include unique graphic images or custom sounds that they have created or edited.
- They eagerly pursue opportunities to use technology. When a new piece of technology appears, they cannot wait to experience it.
- Finally, they demonstrate more advanced technology skills than others their age. This reveals itself in the sophistication of the products they produce.

Parents can expose these students to the technologies related to their interests. A student who is interested in photography will enjoy working with a digital camera and a photo editing program. Students who are interested in music may enjoy a music composition program.

3. The third area of technology giftedness involves those who enjoy working with technology equipment. While the first two types involve creating products with technology,

these students enjoy maintaining, or even creating the technology for others to use. They may enjoy creating a computer from spare parts, fixing a broken calculator, maintaining a classroom server, or installing a car stereo. ●

Del Siegle, <http://www.delsiegle.info>, is an associate professor of educational psychology in the Neag School of Education at the University of Connecticut, where he is a teaching fellow. Prior to earning his PhD, Siegle worked as a gifted and talented coordinator in Montana. He is president-elect of the National Association of Gifted Children (NAGC) and serves on the board of directors of the Association for the Gifted. In 2001 he



was named NAGC Early Leader. He writes a technology column for Gifted Child Today. Siegle's research interests include web-based instruction, motivation of gifted students, and

teacher bias in the identification of students for gifted programs.

Siegle and Dr. D. Betsy McCoach will be speaking about Gifted Children and Underachievement at CTD on Saturday, October 15 (for more information see UPCOMING CTD PROGRAMS on page 8 or check out the Resources/Outreach section on the CTD website).

INTERVIEW

Gifted Homeschoolers

An Interview with Kathi Kearney

If parents have a gifted child, should they look at homeschooling as an option?

Not every parent should consider homeschooling for a gifted child and not every gifted child should be homeschooled. That said, homeschooling is an excellent alternative for many gifted children at some point in their development. Homeschooling is an especially important option in situations where a child's school can't—or won't—provide appropriate services and, as a result, the child's social-emotional development, behavior or school achievement starts to deteriorate.

Homeschooling works well for many gifted children because the very same strategies and curricular approaches that more than 100 years of research show work well with the gifted—acceleration, self-pacing, deep investigation in areas of personal interest, the project method and integrated curricula—are all present in general homeschooling curriculum (although often under different names).

How many students today are being homeschooled?

No one knows for sure how many homeschoolers are in the United States. Estimates range from 800,000 (the U.S. Department of Education) to more than 2 million (independent researchers). It's difficult to calculate an exact number because each state has its own definition of a homeschooler. In some states, such as Kansas and Texas, homeschools are considered private schools so homeschoolers in those states are lumped in with private school students.

Is the number growing?

Yes. The number seems to be growing the fastest among gifted students, students with disabilities and African-American students.

Do parents need to know about gifted education to be successful home schoolers?

It helps but it isn't absolutely necessary. Most parents notice pretty quickly if one of their children is moving at a particularly quick pace.

Parents who do want to know more about giftedness can participate in a listserv or read articles on the Davidson Institute's (www.ditd.org) or Hoagie's web sites (www.hoagiesgifted.org) to learn both about characteristics of gifted kids and also various teaching approaches, such as acceleration.

I find it interesting that a lot of the teaching methods that work well for homeschooling are similar—or identical—to the best practices for gifted children that have been promoted over the past 20 years. The big difference is in terminology. What the field of gifted called "integrated" or "interdisciplinary study," for example, is called "unit study" in homeschooling. What gifted names "independent study" isn't called that in homeschooling because all of the learning is fairly independent already. Acceleration is "moving at your own pace" in homeschooling. If parents read gifted listservs, they'll know the appropriate words to use when looking for the best curriculum for their homeschoolers.

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