Conference Announcement:
Promoting Success in College for Students of All Abilities at The College of New Jersey 1

Features:
Dare to Dream 7

Program Profile:
Middlesex County College's Adaptive Technology Lab 3

User Profiles:
Voice Recognition Provides Independence for College Grad 4
Utilizing Blindness Skills in College 6

New Products:
Thinking Reader 8
SOLO 10
Write:OutLoud To Go 10
FASTT Math 11
Virtual Pencil 11

Resources:
Edutopia 12
New Regulations for Accessibility of Instructional Materials 12
NJ Regional Centers for College Students with Disabilities 13

THE EDITOR’S DESK
Contributors 2
Editorial 2
Conference Information 14
Reader's Response Form 15

http://adaptivetech.tcnj.edu
Computers and other assistive technology tools can be incredibly empowering for students with disabilities. Computers have been called “electronic curb cuts,” meaning that they provide access to what non-disabled students take for granted – typical classroom activities and the general education curriculum. This access to the curriculum can contribute to the successful inclusion of students with disabilities in their neighborhood schools. It can contribute to the successful participation of students with disabilities in colleges and universities. Computers can enable students with disabilities to demonstrate their understanding of academic subjects even if they cannot write legibly or speak intelligibly. Technology can decrease students’ reliance on other people by increasing their independent completion of academic tasks. The list goes on. But . . .

But what? Our 18 years of exploring new assistive technology products and teaching teachers, parents, and students how to use them has taught us one very important lesson. Technology alone is not enough. The technology is exciting (and fun), no question about it, but a computer alone will not increase a student’s success in school. Buying an expensive site license for a software program will not result in student gains. Providing students who have disabilities with the latest, most dazzling devices in the world will not make a difference in their lives – unless the equation includes:

- **Training**
- **Support**
- **Practice**
- **Persistence**

The first two necessities – training and technical support – need to be provided by schools and colleges consistently and in a timely manner. Imagine being asked to give a concert after only one piano lesson or being told to ride a two-wheeler without training wheels after one lesson. This is what students are often asked to do with new technology tools – become successful and independent users after only one quick training session and no technical support. And what happens? Many don’t use the new tool; they give up.

The second two necessities – practice and persistence – fall into the realm of student responsibility. It is the student him/herself who must make a point of practicing a new technology tool until s/he is comfortable with using it, and who must persist through technical problems and the typical frustrations of learning a new skill.

The three feature articles in this issue of TECH-NJ highlight the experiences of students with disabilities who succeeded in making assistive technology tools work for them. The profile of the Adaptive Technology Lab at Middlesex County College describes an exemplary program that provides quality training and support. The profiles of Serena Cucco, a sophomore at Manhattanville College who is blind, and Megan McTigue, a graduate of Ramapo College who cannot use her arms, demonstrate the critical roles practice and personal persistence play in getting technology to live up to its potential. Megan explains that it took her three to five months to feel comfortable using speech recognition technology and an entire year before she completely mastered it. LeDerick Horne’s poem on page 7 captures this essential mind-set:

and ain't NOTHING, and I mean NOTHING
standing in my way

A.G.D.
PROGRAM PROFILE

Supporting Student Success at Middlesex County College: An Exemplary Adaptive Technology Lab

by Ellen C. Farr

Students with disabilities at Middlesex County College are hearing voices, and because of it, they are succeeding in college far beyond their expectations. These students frequent the Adaptive Technology Lab of Project Connections, and the voices are computer-generated, reading aloud their textbooks and assignments to improve their comprehension and writing. The lab, funded by the New Jersey Commission on Higher Education Special Needs Grant Program, provides students with disabilities enrolled at the college with the technology tools they need to succeed in their academic work. Equipped with a myriad of specialized programs, the lab is designed to assist reading and writing.

The strength of the lab, however, does not rest solely on its technology; rather, its unique strength is that it is staffed full-time with an expert in assistive technology.

Staff Provide Support to Students

Managed daily for the last five years by Seham Mohamed, the lab offers students the benefit of one-to-one support. Having earned a master’s degree in Electrical Engineering from Alexandria University and a degree in Computer Science from Middlesex County College, Seham can relate to the demands college students encounter. She is especially sensitive to the unique needs of students with learning disabilities and stresses that she understands adaptive technology.

Seham early to guarantee that they will be able to borrow a device for the semester. Seham has noticed an increase in student attendance at the lab, estimating that 150 students have visited the lab so far this year. This represents substantial growth from just a few years ago. She attributes this to technology that is easier to use and improved outreach efforts.

Technological Advances and Outreach Increase Lab Use

Having managed the lab for the last five years, Seham can attest to the rapid change and advancements in adaptive technologies. A decade ago, the Galileo Reading System was the choice for scanning text. While it provided auditory feedback, it was cumbersome and slow. The device could only scan and read one page at a time, leaving the reader with a disjointed narration. Compared to today’s options, this system was primitive. Now, the lab owns a high speed scanner to convert printed text to electronic text or audio files at the rate of approximately 15 pages per minute. Students can then listen to their texts on a regular CD player or use the files in one of the lab’s read/write programs. Upgrades in software parallel this progress. Seham is constantly reviewing new products and software to ensure that her lab is appropriately equipped for student success.

Having exceptional technology available is only half of the battle. The challenge still remains to encourage students to use the proffered tools.

Workshops are presented to increase faculty awareness of the lab in hopes that they will better understand adaptive technology and advise their students with disabilities to visit the lab for assistance.

Seham teaches students to use the programs during their initial lab visit and supplies a self-authored handbook detailing tutorials for each program. She then monitors student progress by tracking time spent in the lab and the type of software/hardware used. She is able to make recommendations for improvement based on this data.

Additionally, Seham operates a lending program from which students may borrow an AlphaSmart or Dana (AlphaSmart, Inc.) portable notetaker, books-on-tape from the Recording for the Blind & Dyslexic, four-track and mini tape recorders, and Franklin Spellers. This is a popular feature of the lab; students visit Seham early to guarantee that they will be able to borrow a device for the semester.

(continued on page 13)
by Christina J. Schindler

"MouseGrid, 7, 7, 8, click" rapidly fires from Megan’s mouth as the mouse speeds across her computer screen. Within seconds, she has navigated to Microsoft Word, opened a new document and begun to type. Yet, she has never touched a mouse or a keyboard. Instead, Megan completely controls the computer using her voice.

Megan’s Computer Access

Before learning Dragon, Megan’s computer access was very limited and she was dependent on other people to write for her. Typing “just became too troublesome and time-consuming, so I would end up dictating in the end. Dictation was my method of ‘typing’ for years.” Megan typically relied on “my student aides or brother or sister, or whoever was around, to do the physical typing while I dictated. It was extremely time-consuming, not only for me, but for the people helping me as well.”

At the age of 18 Megan worked with an assistive technology specialist to find a better solution for her computer access. “The technician evaluating me thought I would be a great candidate for using Dragon because I had fine speech and the cognitive ability to handle the training.” Megan began using the program consistently at Ramapo College where she received technical support from Jean Balutanski, Director of the Office of Specialized Services. Jean initially guided Megan through a program tutorial, but it was through use over time, and much trial- and-error, that Megan fully grasped the program’s capabilities.

“As time went on and I began mastering Dragon, I began doing my own work completely independently. I started out with small papers and assignments, then I started surfing the internet for research and whatnot, and before I knew it I was doing a 22-page senior seminar paper, research and all.”

Today, Megan utilizes Dragon at home for all aspects of her life. She independently uses e-mail and instant messaging, participates in online auctions, manages her checking account, communicates with people by using text messages, and plays music (one of her passions) while getting her work done. (Megan attests that the music does not interfere with the accuracy of the speech recognition.) In Megan’s own words, “It has really changed my life drastically.”

The Pieces Needed to Make It Work

Megan currently uses Dragon Naturally Speaking Professional with a Compaq PC. Within the Dragon program, she speaks keyboard equivalents for typing, tabbing, entering, and deleting text, as well as for opening and closing programs and files. For example, when capitalizing a letter, instead of hitting the shift-key with the corresponding letter, Megan says “shift-key” and then the corresponding
alpha character to capitalize. Essentially any key on the keyboard can be spoken and understood by Dragon as a keyboard function.

Most people are familiar with this dictation ability of voice recognition technology, but many are unaware of the power voice recognition holds for navigating around the computer screen by emulating mouse commands. Megan controls her mouse using a function within Dragon called MouseGrid. MouseGrid enables her to separate the screen into nine quadrants. As each quadrant is selected, it becomes a smaller quadrant, making the movement of the mouse extremely precise. As Megan fires out numbers with lightning speed, she is essentially breaking down the computer screen into mini quadrants so she can target her mouse click accurately.

**Microphone Considerations**

An important part of Megan’s speech recognition setup is the microphone she has chosen to use. It is called an array microphone (by GN Netcom), and it offers two important advantages. It has a noise canceling feature that allows background noise to not interfere with the dictation. Megan finds this feature essential since she constantly listens to music through her computer while working. Another benefit of an array microphone is its position. Instead of requiring a headset, an array microphone sits below the computer monitor and sends a listening beam. This enables Megan to work on her computer at any time without having to rely on an assistant to place the headset on her head. With this combination of assistive technology – speech recognition and an array microphone – the only assistance Megan needs is someone to turn her computer on at the beginning of the day.

**Assistive Technology Opens Doors**

Megan graduated from Ramapo College of New Jersey in May of 2003 with a 3.7 GPA in Music Business. She is currently involved with training individuals on voice recognition software and working at her local supermarket, running the self check-out machines and assisting managers and customers. She also works part-time as the stage manager for a dance studio in Midland Park called Meaningful Movements Inc., a nonprofit organization serving individuals with different abilities and strengths through dance, art, and adapted physical education. Like most 20-somethings, Megan enjoys being with friends, catching a good movie, getting a drink and seeing some great live music. In the future, she hopes to obtain a Ph.D. in ethnomusicology from CUNY or NYU, so she can teach a subject she loves – music.

Megan has manipulated multiple parts of the assistive technology puzzle into a working dynamic for her computer access. The power this assistive technology affords is perfectly summarized in Megan’s own words. “Assistive technology helps me communicate and function independently through several different mediums: instant messaging, text messaging, writing, e-mail, live chatting, etc. It has given me control in many areas of my life. Ultimately, voice recognition software will contribute greatly towards my obtaining a successful career in the future. This technology enables me to accomplish things that would be virtually impossible to accomplish on my own. There is no way I would have all the success I’ve had, and will continue to have, without this technology.”

**Dragon’s voice commands for mouse motion.**

<table>
<thead>
<tr>
<th>SAY</th>
<th>THEN A DIRECTION</th>
<th>THEN A SPEED (OPTIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move Mouse</td>
<td>Up</td>
<td>Fast</td>
</tr>
<tr>
<td>Mouse Move</td>
<td>Down</td>
<td>Faster</td>
</tr>
<tr>
<td>Drag Mouse</td>
<td>Right</td>
<td>Much Faster</td>
</tr>
<tr>
<td>Mouse Drag</td>
<td>Left</td>
<td>Very Fast</td>
</tr>
<tr>
<td></td>
<td>Upper Left</td>
<td>Slow</td>
</tr>
<tr>
<td></td>
<td>Lower Left</td>
<td>Slower</td>
</tr>
<tr>
<td></td>
<td>Upper Right</td>
<td>Much Slower</td>
</tr>
<tr>
<td></td>
<td>Lower Right</td>
<td>Very Slow</td>
</tr>
</tbody>
</table>

Christina J. Schindler is an alumna of The College of New Jersey (M.S. in Educational Technology) and an assistive technology specialist for the Adaptive Technology Center for NJ Colleges.
UTILIZING BLINDNESS SKILLS IN COLLEGE

by Serena Cucco

Wow! I’m on the Quad! Where’s the classroom building? Where’s the Dining Hall? Where’s the Library? My first week at Manhattanville College was quite a learning experience. I had to orient to the campus, meet lots of new people, find ways to get my reading done, manage my time, make sure all my clothes matched, get to all my classes, and get to know my professors. And I had to do it all independently!

I oriented by using a tactile map, taking notes on my various routes and asking questions when necessary. I found the students very helpful. However, my friends often asked me if I needed help to get to places I already knew how to get to, and I always politely and proudly declined their offers. I have to say that the snow made life a bit difficult for a few weeks! That’s when I learned to appreciate the smokers, who were always outside and willing to direct me when my landmarks and paths were all covered.

Assimilating into College Life

I made friends the first week of school. The first two were the girls in the room next door. The guys on the other side were computer geniuses happy to help me with computer glitches. I often made plans with my friends for dinner in the dining hall or the pub. The few times I went to dinner alone, I almost never ended up eating alone. My friends often saw me and invited me to sit with them. A couple of times, some friends and I made music videos. One time, we sang and danced to “Surfin’ USA,” one of my favorite Beach Boys songs.

In order to handle matching my clothing, I’ve got braille labels in my shirts and sweaters that say what colors they are and what pants they go with. This way I can make sure that my clothes match. I have done my own laundry. I find doing laundry very annoying, just like everybody else does!

Tackling Academic Challenges

Getting all my reading done was a challenge. The ADA Coordinator at the college gave me a list of upperclassmen who were interested in reading for me. Also, during the first week of classes, my professors announced that they needed readers. A couple of students from each class expressed interest in reading for me for the class we had together. This helped at the beginning, so that I didn’t fall behind right away. It also gave me some time to try out different readers from the list I had been given. Some of the students from my classes ended up being great readers and became my permanent readers. As the year progressed, many of them also became my friends.

My professors have been friendly, interesting, and very accepting of my blindness. When we have a test, they either e-mail the test out to be brailled or give it to me in print and have it read to me. I take the test on my BrailleNote, then I print it out and hand it in.

I think it was very important that I chose the readers I used myself. If a potential reader wasn’t very accessible or didn’t read well, I didn’t use him or her. Using readers also made it easier for me to manage my time, since I knew that when a reader came I would be guaranteed a good two hours of work time. I had five regular readers who each came a couple of days a week.

My professors have been friendly, interesting, and very accepting of my blindness. When we have a test, they either e-mail the test out to be brailled or give it to me in print and have it read to me. I take the test on my BrailleNote (Pulse Data), print it out and hand it in.

I purchase all my books in print from the bookstore and I try to get them in accessible format as well. Some of them are available from Recording for the Blind and Dyslexic and others I get as electronic files directly from the publishers. I don’t usually get all of them in accessible form. That’s where readers come in handy. Sometimes my readers scan the material for me. Then I can either listen to the book on my computer using JAWS, a screen reading program from Freedom Scientific and Kurzweil 1000, a scan/read program from Kurzweil Education Systems, or I can download it into my BrailleNote where I can read it in braille. I access some of the material online, again using JAWS.

Beyond the Campus

I became involved in a mentoring program on campus in which children from a nearby homeless shelter come to Manhattanville once a week. We help them with their homework, talk to them, and play games when they don’t have homework to do. Our favorite game is “Who Wants to Be a Millionaire.” After this, we all eat dinner together in the Dining Hall. The kids love the Dining Hall because they’ve never had this much food, especially junk food!

During the spring semester, I took my first off-campus trip— to New York City! We went to see a Rangers game at Madison Square Garden and the Rangers won! The college president went with us to the game and bought popcorn for us. I believe the keys to a successful college experience for a blind student are using good blindness skills, like getting oriented, using readers well, and managing time effectively. Make friends, educate your friends and professors about blindness when necessary, and immerse yourself in your new college life.

Serena Cucco is a guest contributor. She was first profiled in TECH-NJ in 1997 when she was in sixth grade. This update originally appeared in The Sounding Board (Fall/Winter 2004), the publication of the National Federation of the Blind of New Jersey.
Dare to Dream
by LeDerick Horne

Dedicated to all the LD students at the New Jersey Department of Education’s Dare to Dream Conferences who led workshops and gave inspiring presentations about their struggles and triumphs.

We are gathered here today to bear witness, to bear witness to the union of two beautiful people. Yes, today is the day that we merge who you are with who you want to be, making the vision and the reality – one. An integration born of communication and made tangible by your commitment to yourself.

Now, I know some of you might be afraid but don’t let cold feet stop you from jumping the broom, from taking the first step, from beginning a journey that will transform your life.

Yes, I know some of you might be afraid, but see, it’s my job - to show you that better days are coming. Yes, it’s my job - to be Harriet Tubman like with my movements and verse. So if I have to steal a way just for us to make a way, then Star I’ll be the first one with his hand in the cookie-jar of self-advocacy, I’ll use these sticky fingers to pick-pocket the pocket of self-determination, And if I got to grand-theft-auto the Mercedes-Benz of a quality-education, then they might as well leave the doors unlocked and the keys in the ignition ‘cause I’m gone in 60 seconds and ain’t NOTHING, and I mean NOTHING standing in my way. You see, it’s my job to unlock doors unshackle minds break through glass ceilings motivate, inspire, and challenge you - I’m here to challenge you.

And so I dare you, - I dare you to sit in your seat and not feel moved by the testimonies of these brave souls, who come before you as examples of excellence.

I dare you, - I dare you to look in the mirror without imagining, see yourself as yourself. A diamond, that might need a little polishing, but whose beauty has always existed.

I dare you, - I dare you to step bounce and move to your own rhythm excite minds in time we’ll redefine the system I write lines designed to embrace and kiss, plus supercharge like imports strapped with nitrous, this is a revolution a fight for inclusion segregation is no solution Brown vs. Ed is how I’m provin’ we deserve the best nothin’ more and nothin’ less every child gets left behind when all we focus on are tests.

And so I dare you, - To judge yourselves by a different standard, to lift as you climb, to fight like gladiators to become master and commander of your own beautiful minds. And above all else, I dare you to dream – dare to dream y’all.

LeDerick Horne is a guest contributor. He is a graduate of Middlesex County College and New Jersey City University.
Thinking Reader by Tom Snyder Productions

Poor readers tend to spend a lot of time and mental energy trying to decode words in text. This often prevents them from developing the comprehension skills necessary for understanding word meaning and content. As students enter middle school, if they have not sufficiently developed the skills needed to grasp the subject matter and themes of grade-level reading material, they risk falling further behind.

Thinking Reader from Tom Snyder Productions is a software series of electronic books developed to provide support to these struggling readers. The program trains students to read strategically in order to increase their comprehension. Specifically designed for Grades 5-8, the Thinking Reader series presents unabridged, grade-level literature via the computer screen combined with human voice narration.

The following books in the series were chosen because they represent core, grade-level literature, they present multicultural perspectives, and they tell engaging and meaningful stories.

Roll of Thunder, Hear My Cry by Mildred D. Taylor
Bridge to Terabithia by Katherine Paterson
Tuck Everlasting by Natalie Babbitt
Bud, Not Buddy by Christopher Paul Curtis
Dragonwings by Laurence Yep
My Brother Sam is Dead by James Collier and Christopher Collier
Esperanza Rising by Pam Munoz Ryan
A Wrinkle in Time by Madeleine L'Engle
The Giver by Lois Lowry

How Does the Program Work?

Students begin a book by logging onto the computer. They click the "Play" button, and the program reads the book while the text is highlighted on the monitor. Difficult vocabulary words are underlined, and a click of the mouse brings up a secondary window that speaks aloud the word and its definition. To hear the word and definition in Spanish, students simply click a box. Having instant access to definitions while reading helps students understand the text.

At various points throughout the story, a message appears on the screen that indicates “This is a good place to stop and think about the story.” Clicking on the message takes students to a set of directions asking them to use a reading comprehension strategy to respond to what was just read. Strategies used include summarize, question, clarify, predict, visualize, feeling, and reflect.

If they are unsure of how to respond, students are not left to flounder. They can get help by pointing to buttons on a pop-up window. Clicking the “Hint” icon brings up a helper who gives them an idea about how to answer the prompt. (See Figure 1). For additional assistance, two student buttons, “Justin” and “Destiny,” bring up characters who share with students how they might respond. This is called the Think-Aloud section. (See Figure 2). When students are ready they can either type or record their responses into the program. Clicking the “Send” button enters the response into the the students’ Work Log, which automatically gets sent to the teacher.

The Work Log and Reading Levels

Over the course of each book, students’ strategy responses are captured in a Response Journal. Teachers can use the Work Log for student-teacher conferences and to help them determine appropriate reading levels for students. (See Figure 3).

Thinking Reader offers five levels of support. The levels can be adjusted as students’ comprehension skills improve. Level 1 has the most supports, and Level 5 has the least. Lower level supports focus on content, while higher level supports are more general and focus more on strategies. Strategy prompts also vary based on reading levels. Lower level prompts tend more toward multiple-choice and sentence starters, while higher level prompts are more open-ended.
Using Thinking Reader in Different Settings

The materials that accompany each book in the Thinking Reader series provide teachers with invaluable ideas for using the program. The Teacher’s Guide offers suggestions for implementing Thinking Reader in supported reading environments such as pull-out programs and resource rooms, classrooms with students of varying reading abilities, computer labs and with English language learners.

The Teacher’s Guide also outlines a five step plan for using Thinking Reader:

Step 1:  Modeling Strategic Reading.  An excerpt from Tom Sawyer is used off-computer to walk students through the strategic reading process.

Step 2:  Building Reading Comprehension Skills.  Teachers complete the first passage with their students on the computer. Students then move through the program on their own.

Step 3:  Assessing and Evaluating Student Progress. Teachers review the Work Log to view students’ responses and comprehension quiz results. Teachers can evaluate students’ progress by clicking the Recent Progress button on the Student Progress Screen. This will present the last five Work Log responses and the students’ most recent reflection responses. More formal assessment rubrics and comprehension quizzes are included.

Step 4:  Engaging Students in a Discussion of the Literature and Strategies. Classroom discussions help students gain additional meaning. The Teacher’s Guide contains six graphic organizer templates for furthering discussions: character web, Venn diagram, relationship diagram, story map, incident summary and cause and effect.

A separate Discussion Guide booklet is included and contains questions, activities and extension ideas for highlighting themes and ideas.

Step 5: Extending the Strategies. The Strategy Response Journal can be copied and assembled into a booklet for students, enabling them to use the Thinking Reader approach with any book. The Thinking Reader Strategy bookmarks that come with the package also provide a quick reminder of reading strategies for students.

Figure 3

Teachers can track specific student performance and general class progress.

Research, Validation, and Accessibility

Thinking Reader was designed by David Rose and Bridget Dalton at the Center for Applied Special Technology (CAST). The program incorporates research on proven approaches to reading, universal design for learning, brain-based behavior, and the benefits of technology-based materials for reading instruction. It was designed using Section 508 guidelines for universal accessibility, including adjustable font size, keyboard navigation, text captioning, screen reader compatibility, and text-to-speech.

Thinking Reader is aligned to state and national standards and supports the principles of No Child Left Behind (NCLB).

Ordering Information and Pricing

Thinking Reader is compatible with Windows and Mac OSX (10.2 or higher) systems. Single title pricing is $500 for a 10 student license. Included with each title:

- Installation CD for stand alone and network use
- Teacher’s Guide which includes step-by-step instructions, graphic organizers and worksheets, teacher-student conference guidelines, and an assessment rubric
- Title-specific discussion guide
- Reading strategies poster and bookmarks
- Paperback copies of the novel

For more information or to request an evaluation version or a research report call Tom Snyder Productions at (800)342-0236 or log on to www.tomsnyder.com
SOLO by Don Johnston
Supports Reading and Writing for Struggling Students

Don Johnston Incorporated has combined its existing programs, Co:Writer (word prediction), Draft:Builder (graphic organizer) and Write:OutLoud (talking word processor) with a new addition, Read:OutLoud (text reader), into a new software solution, SOLO.

SOLO provides an integrated solution to help students build skills and utilize strategies as they use guided supports for reading comprehension and structured models for writing.

Educators can use SOLO to differentiate instruction and oversee their students’ reading and writing development. SOLO enables teachers to take any content and adjust their presentation of information to meet the needs of diverse classrooms. They can create customized assignments for individual students or groups of students. Qualitative and quantitative data can be collected from student work and displayed in graph, chart and preview form.

For more information about SOLO and other products, go to www.donjohnston.com

Write:OutLoud To Go
Portable Talking Word Processor Fosters Writing Independence

Speech Output Added to Portable Notetaker

A new product for the Dana (AlphaSmart) that will help students with writing difficulties has just been made available. Write OutLoud To Go adds a text-to-speech feature to this popular portable notetaker. With the installation of a small voice card in the back of the Dana, the device is able to read aloud anything a user types. This kind of auditory support helps students recognize their mistakes and revise their written work. In addition, the talking Franklin Spell Checker provides support for poor spellers.

For more information about WriteOutLoud To Go visit www.donjohnston.com. For more information about the Dana and other portable notetakers go to www.alphasmart.com.
Using FASTT Math (Fluency and Automaticity through Systematic Teaching with Technology), struggling students, grades 2 – up, develop fluency with basic math facts in addition, subtraction, multiplication, and division. The software moves beyond traditional drill and practice to assess each student's level and to provide a continuously adaptive program that increases fluency in customized, 10-minute daily sessions. FASTT Math also includes prescribed print activities for those students who need additional instruction in the conceptual foundation of numbers and operations.

Product Features
- Research-based and validated
- Authored by Ted Hasselbring and Laura Goin
- Students practice basic facts in addition, subtraction, multiplication, or division
- Customized course of study for each student, based on individual assessments
- Frequent, short practice sessions
- Choice of two fact ranges: 0-9 or 0-12
- Generates customized worksheets for additional practice
- 12 detailed performance and usage reports at the student, class, grade, and school levels for teachers and administrators
- Teacher's Guide with assessments and lesson plans
- Fact Fluency Foundations Guide with age-appropriate activities for counting, number concepts, and computation strategies
- Bilingual — switch easily between English and Spanish
- Meets guidelines for universal accessibility

Meets State and National Standards
Students will:
- Learn basic facts in addition, subtraction, multiplication, and division;
- Be able to recall facts from memory;
- Develop fluency with multi-digit problems in each operation;
- Gain the foundation necessary for success in higher-order problem solving.

For more information or to request an evaluation version or a research report call Tom Snyder Productions at (800)342-0236 or log on to www.tomsnyder.com

Virtual Pencil by Henter Math

Virtual Pencil Algebra and Virtual Pencil Arithmetic are two computer software programs that provide interactive access to math for students for whom using a traditional pencil is a problem. This might include someone who is blind or visually impaired, motor impaired, or learning disabled. A pencil plays a key part in learning math and other equation-solving disciplines. Typically a student uses a pencil to “work through” a math problem, writing down the intermediate answers and using them to get the final answer. But if a student cannot operate a pencil then the student cannot write down the intermediate answers. This makes it very difficult to use those intermediate answers in acquiring the final answer, and does not leave anything on the paper to show that the student actually worked through the problem and knew how to solve it.

Virtual Pencil is not a tutorial. It is a tool that can be used to interactively solve a math problem. The software does the job of the pencil. It moves to the right spot on the “paper,” guided by the user, and inputs the answers that the user selects. It can edit numbers and variables, insert fractions or square roots or other structures, and copy whole equations or expressions. When used with a screen reader, the numbers and actions are read out loud. The user must navigate the screen and provide the input.

Virtual Pencil Arithmetic handles addition, subtraction, multiplication, and division, with fractions and decimals; Virtual Pencil Algebra handles quantities, radicals, exponents, subscripts, Greek letters, absolute values, matrices, fractions, and many editing features.

For more information about Virtual Pencil go to www.hentermath.com
The George Lucas Educational Foundation (GLEF) is a nonprofit operating foundation that documents and disseminates information about exemplary programs in K-12 schools to help spread these practices nationwide. The foundation serves this mission through the creation of media: films, books, the magazine **Edutopia**, e-newsletters, CD-ROMs and DVDs.

**What is “Edutopia”?**

The word conjures up an ideal educational landscape, where students are motivated to learn and teachers are energized by the excitement of teaching. In these schools, parents and other professionals from the community — architects, artists, physicians, and writers, among others — contribute their expertise and resources. Technology is readily available and enables students, teachers, and administrators to seek knowledge and expertise beyond the school building. “Edutopia” is a vision of powerful teaching and learning.

The foundation uses the magazine **Edutopia**, its website and documentaries to celebrate the unsung heroes across our nation who are making “Edutopia” a reality. They have shown what can be done, often with the same number of resources as other schools and sometimes with fewer. The foundation recognizes that for these innovations to spread, educators and parents, as well as business and community leaders, must first see and understand them. The Documentary Gallery is a robust archive of short documentaries and expert interviews that allows visitors to visualize what these innovations look like — in the classroom and in the words of teachers and students. Detailed articles, research summaries, and links to hundreds of relevant websites, books, organizations, and publications are available to help schools and communities build on successes in education.

**Edutopia** highlights the following 13 topics which the foundation believes are critical elements in public education:

- Assessment
- Business Partnerships
- Community Partnerships
- Digital Divide
- Emotional Intelligence
- Mentoring
- Ongoing Professional Development
- Parent Involvement
- Project-Based Learning
- School-To-Career
- Teacher Preparation
- Technology Integration
- Technology Professional Development

To subscribe to the free **Edutopia** magazine, go to www.edutopia.org

---

**New Regulations for Accessibility of Instructional Materials**

Students who are blind, visually impaired or have print disabilities experience a barrier to learning - inaccessible materials - when core curriculum textbooks presented in print are the primary learning resource. Students who cannot see the words on a page, cannot hold a book or turn its pages, cannot decode the text or cannot comprehend the syntax that supports the written word may each experience different challenges, and they may each require different supports to extract meaning from information that is “book bound” - but the barrier for each is the same.

In July 2004 a National Instructional Materials Accessibility Standard (NIMAS) for students with sensory and other print disabilities was endorsed by the U.S. Department of Education. In July 2005, when the reauthorization of IDEA takes effect, a National Instructional Materials Access Center will be established at the American Printing House for the Blind. Publishers will be required to provide electronic files of instructional materials, such as textbooks, so they can be more easily converted to Braille, text-to-speech, and other accessible formats. It is expected that this mandate will solve the problem experienced by many students with disabilities of obtaining textbooks in electronic format.

The National Instructional Materials Accessibility Standard Report is available at the CAST website, www.cast.org/ncac/
is involved with the Faculty Ambassador Grant, funded by the U.S. Department of Education. Through this grant, Seham conducts workshops to increase faculty awareness of the lab in hopes that they will better understand adaptive technology and advise their students with disabilities to visit the lab for assistance.

Reaching Out to High School Staff and Students

New this year, to supplement the annual open house Project Connections hosts for high school staff involved in transition, Seham will conduct training workshops on Kurzweil 3000, AlphaSmart, Inspiration and Dragon Naturally Speaking. Her intention is to increase awareness of assistive technology at the high school level so that students will begin college more knowledgeable about the programs available to assist them. She hopes the outcome of the training will be two-fold: that students will have access to much needed assistive technology while still in high school, and that as a result, students will be better prepared for their transition to college.

Combining a knowledgeable, dedicated coordinator with state-of-the-art technology, the Adaptive Technology Lab at Middlesex County College stands as an excellent model for improving student success.

For additional information on Project Connections:
http://www.middlesex.cc.nj.us/admin/connec/projcon.htm

Ellen Farr is an alumna of The College of New Jersey (M.S. in Educational Technology) and a member of the staff of CATIES (Center for Assistive Technology and Inclusive Education Studies).
NJ Commission on Higher Education Special Needs Grant Program

presents

Promoting Success in College for Students of All Abilities

a one-day conference at The College of New Jersey

April 1, 2005

8:30 am - 4:00 pm

Conference Overview
Students with disabilities are successfully graduating from institutions of higher education nationwide. As a growing population, their attendance draws attention to the need for improved access and accommodations. What are these students’ rights? How can high schools better prepare students for the transition to college? What technology tools are available to assist students with disabilities succeed in a competitive setting?

Keynote Address: Salome Heyward, J.D.
New Challenges and Opportunities: Providing Access and Accommodations for Students with Disabilities

Dr. Heyward has 20 years of civil rights law practice in the field of federal statutes addressing disability, race, national origin and sex-based discrimination. Her vast experience concerning legal issues in the postsecondary arena include Director of Affirmative Action for a large research institution and senior staff attorney for the U.S. Department of Education. Additionally, she is recognized nationally as an expert in the field of disability discrimination law, and is the author of several texts, articles and publications, including Graduate Schools and the ADA and Disability and Higher Education.

Conference Program
There will be 3 time slots for breakout sessions with a variety of presentations, panel discussions, hands-on workshops and a featured session for students conducted by Richard Wanderman. A showcase of new technology products, state agencies and other helpful resources will be on display throughout the day.

Who Should Attend?
Disability support staff in higher education
   College faculty
   ADA compliance officers
   High school staff involved in transition
   Guidance counselors
   High school and college students
High school and college administrators
   Child study teams
   Teachers
   Parents
   High school and college IT staff

How Much Does It Cost?
The NJ Commission on Higher Education is underwriting the conference so the registration fee is only $25, which includes a continental breakfast & lunch buffet.

How Do I Register?
A complete conference program and registration form are available at http://caties.tcnj.edu.

The College of New Jersey is a Registered New Jersey Professional Development Provider
I recommend the following program/product for consideration for inclusion in a future issue of TECH-NJ:

Name of Program/Product: ______________________________
Brief Description: ____________________________________
Contact Person: ______________________________________
School/Company: _____________________________________
Street: _____________________________________________
City: _________________ State: _______________ Zip Code: ______
Phone Number: ______________________________________
E-Mail Address: ______________________________________
My Name/Phone Number/E-mail Address: __________________

TECH-NJ
The Department of Special Education, Language and Literacy
The College of New Jersey
P. O. Box 7718
Ewing, New Jersey 08628-0718

If you know anyone who would be interested in receiving a copy of TECH-NJ, please fill in below.

Name: ________________________________________________
Street: ______________________________________________
City: _________________ State: _______________ Zip Code: ______

Name: ________________________________________________
Street: ______________________________________________
City: _________________ State: _______________ Zip Code: ______
NJ Regional Centers
for College Students With Disabilities

The Special Needs Grant Program of the New Jersey Commission on Higher Education supports a system of regional centers to provide support services for students with special needs. There are eight centers located throughout the State of New Jersey.

The Adaptive Technology Center is located at The College of New Jersey. The Center works with service providers at the institutions to provide opportunities for college students who have learning disabilities, or who are visually impaired or deaf or hard of hearing, to meet the academic demands of college. The Center provides technical assistance and training workshops for college and university staff.

Five Regional Centers serve students with learning disabilities, providing comprehensive support programs for students attending their colleges. To increase knowledge and understanding of learning disabilities, the Regional Centers also provide training, assistance, and community awareness activities for faculty and staff at other postsecondary institutions, and conduct diagnostic evaluations.

Two Regional Centers provide comprehensive support programs on their campuses for students who are deaf or hard of hearing. A full range of services are available to assist students in certificate and degree programs. For staff at other colleges and universities, the Regional Centers provide technical guidance and support.

For contact information for all the Regional Centers, please see page 13.

THE COLLEGE OF NEW JERSEY
Department of Special Education, Language and Literacy
P. O. Box 7718
Ewing, New Jersey 08628-0718

CHANGE SERVICE REQUESTED