Universal Design, continued

while others might choose to listen to audio, while still other might choose to play an interactive game or watch a video. Of course, some learners may choose to experience content in more than one way as well. The role of the professional developer of an online course is to provide learners with as many options as possible to experience the content and express what they have learned. When an online course is developed and executed using the principles of Universal Design for Learning, the result becomes something that transcends the traditional learning experience. Participants leave the course with a sense that the experience was customized to their unique styles of learning, which ultimately results in a more internalized synthesis of the content.

Chris Bugaj is an author for The International Society for Technology in Education (ISTE) and also facilitates an online course in Assistive Technology. ISTE is the premier membership association for educators and education leaders engaged in improving learning and teaching by advancing the effective use of technology in PK–12 and teacher education. ISTE represents more than 100,000 education leaders and emerging leaders throughout the world and informs its members regarding educational issues of national and global scope. ISTE is home to the NETS, the leading digital age education standards in the U.S. and many countries. ●

Chris Bugaj

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Digital Student Profiles

Deb Heslinga, Co-ordinator of Special Education
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Peterborough Victoria Northumberland Clarington Catholic District School Board

The Team
- CODE Special Education Team – John Fauteux and Michelle Forge
- HP (Hewlett-Packard) – Joan Rocha and Kim Hammond
- ISTE (International Society of Technology Education) – Janice Krause and Susan Brooks Young
- PVNC CDSB (Peterborough Victoria Northumberland Clarington Catholic District School Board) – Deb Heslinga, Nicole Simpson, and Gerard Winn

This dynamic partnership worked on a variety of projects that examined the Special Education Leader's role in relation to technology. It included research-based strategies, online training, and methods of integrating technology to improve teaching and learning. One successful project from this initiative was the development of a Digital Student Profile. HP and ISTE provided support through consultation, online conferencing, and the CD resource titled The Digital Briefcase for Administrators. This support assisted us in acquiring the necessary skills to develop and design templates to meet our needs. This student profile was originally developed for consultants to use at School Resource Team meetings but has grown into an effective tool for all administrators.

Education for All (2005) initiated the importance of student profiles, and *Learning for All (2009)* reinforced this practice to provide more personalization and precision.

> *"Developing class profiles and student profiles can help teachers plan daily instruction that enables every student to learn and achieve success—instruction that is* **necessary for some and good for all"**
>
> Learning for All

What is a student profile?
- Provides one-page summary of critical student information
- Provides outline of formal and informal student assessment data
- Provides overview of background information including strengths, needs, and learning style
- Provides information gathering prior to and throughout IEP development
- Summarizes accommodations, DI strategies, and services provided
- Provides information about health services and agency support and assessments
- Provides synopsis of report card data and additional academic information

Who develops and uses a student profile?
- Classroom teachers
- Special Education Resource Teachers
- Administrators
- Special Education Consultants
- Specialized Assessment Staff (SLP, Psychology)

How to use student profile?
- Created from a teacher OSR search
- To track differentiated instruction and assessment
- To share information at a School Resource Team Meeting
- To develop programs based on student strengths and needs
- To assist teachers in developing student groupings by ability, learning style, and interest
- To provide a gap analysis for targeted instruction

A student profile will:
- Identify gaps in learning
- Help drive further programming
- Determine if additional assessments are required
- Investigate outside services or agency involvement

Benefits of digital student profile application:
- Pull-down menus (for school names, strengths and needs, exceptionalities, etc.)
- Date picker
- Expandable boxes
- Checkboxes
- Easy storage and retrieval

Student Profile Example:

The Digital Student Profile created summarizes student data on one page. This information can be recorded once, while allowing updates. The digital format saves staff time and provides a visual representation of a student that can be stored centrally for administrative access. Thanks are due to CODE, ISTE, and HP, who assisted our team in developing a Digital Student Profile that can be used by our consultants and administrative staff to record data in a streamlined professional manner and that will assist us in providing and recording interventions in an effective and timely manner. ●

✉ Comments about this article? Email dheslinga@pvnccdsb.on.ca

HP-ISTE Professional Development Program

Michelle Forge, Co-Chair, CODE Special Education Project
John Fauteux, Co-Chair, CODE Special Education Project

The Council of Ontario Directors of Education (CODE) has supported the 72 district school boards in projects focused on transforming the delivery of special education programs and services throughout the province. Much of our work was to develop processes for knowledge transfer and mobilization of key lessons learned from these projects.

CODE dialogued with HP and discussed endeavours that might support the transfer of knowledge and professional development of staff in matters related to assistive technology. Together we agreed to pilot a program in two district school boards focusing on the individual needs of the boards and their leaders in special education. The outcome of this agreement was that Hewlett-Packard Development Company (HP) partnered with International Society for Technology in Education (ISTE) to provide professional services for 12 consultants and/or coordinators. CODE asked two district school boards—the Bluewater DSB, and the Peterborough, Victoria, Northumberland and Clarington Catholic DSB (PVNCC)—to pilot the activity

As stated in the HP-ISTE Professional Development Program Evaluation Report 2011, "The objective of this joint partnership was to coach the consultant/coordinators who focus on special education and curriculum and provide pedagogical and instructional support to classroom teachers on their mentoring of the teachers they support, on the integration of technology in their classrooms. The program is not about adding technology; it's about transforming teacher practice and increasing student achievement, with the aid of technology tools such as assistive technology. ... With this project, HP will partner with CODE to explore broadening the use of assistive technology for all learners in the classroom. In addition, the scalability of the program could mean positive ramifications for all of the 72 English school boards in Ontario." (HP-ISTE Professional Development Program Evaluation, 3/24/2011)

In this edition of Chronicles, you will find details of both the Bluewater DSB and the Peterborough, Victoria, Northumberland and Clarington Catholic DSB (PVNCC) projects and a response regarding the success of this practice. We invite you to read the details of their projects and contact the board leads to uncover more strategies that work and that could be helpful to your board as you plan for future learning opportunities for staff.

« **HP-ISTE Program**, continued

CODE agreed to coordinate this activity because we felt that there was a need to strengthen our strategies for professional development targeted for system leaders. After completing this limited study, we believe there are some good lessons to be learned and a valid reason to identify more opportunities for online professional development programs, especially those designed for system and school leaders. This is the digital age and educators must connect and collaborate using the technologies that are available to them, especially if they are going to be leaders for 21st-century learners.

We would encourage readers of Chronicles to visit the CODE web site at www.ontario-odirectors.org to view the entire HP-ISTE Professional Development Program Evaluation Report 2011. The Final Report shares next steps that could be considered as we move forward:

1. build on informal or formalized sharing centres (Professional Learning Network)
2. enlist a new group of educators to take part in the same training but led by our former participants
3. consider developing courses on topics such as cyber-bulling, Web 2.0 or social networking (a request to HP and ISTE would be required).

Participants from the Bluewater and PVNCC District School Boards expressed their satisfaction and gratitude for the opportunity to share in this new learning approach. They enjoyed the interactions with the facilitators and liked the structure of the program. We believe there is an opportunity to build on this successful experience. CODE would like to thank HP, ISTE, and the participants from Bluewater and PVNCC District School Boards for their efforts in this project. ●

Comments about this article? Email michelleforge@yahoo.ca or tjfauteux@gmail.com

Accessibility Via All Modalities of Learning Is Critical for Success

Karen Stefanishyn, Director of Business Development
FrontRow Canada

> *"Technology is a lot like freedom ... Once it's uncorked, there's no putting it back. Its fruits are there for everyone's enjoyment and benefit. It is often said that assistive technology is liberating [for the individual with a disability] and that is certainly the case. But it is time to be clear that assistive technology is liberating not just for the individual with a disability but indeed for America as a whole.*
>
> Williams, 1991

The ability to hear, listen and process auditory information effectively is crucial to learning for all students. If a child cannot hear speech sounds clearly (hearing problem), does not have the skills to listen (processing or behaviour issues), is learning in a second language (French immersion, ELL or ESL), has a high incidence of ear infections (First Nations or Aboriginal), or if the learning environment does not allow instruction to be heard clearly (seating position, distance from person speaking, or high noise), then any teaching, testing or intervention that uses speech as the vehicle for interaction is most likely to fall short of the academic goal.

Many classrooms of today are committed to including visual aids (computers with projectors, interactive white boards and internet/video clips). While visually stimulating and engaging, these strategies fall short if not coupled with sound amplification dispersion systems, often called 'sound field.' Sound field systems take any auditory signal and project it evenly throughout the classroom, allowing every student access to auditory content which is critical for language development, literacy development and optimal classroom participation.

Teachers too may be adversely affected by compromising learning environments where they must constantly project their voices during instruction, which may lead to vocal strain.

Implementing initiatives based on the principles of universal design (UD) and sound field amplification, then, can help make classrooms more conducive to hearing and listening for all. Universal design is an approach to designing environments, products and communications that are "usable by all people to the greatest extent possible, without the need for adaptation or specialized design" (Bluestone 2004). It is based on the principle that changes made to physical spaces to accommodate persons with disabilities will benefit everyone. For example, entrance ramps to buildings allow easier access not only for people using wheelchairs but also for parents with strollers, and those who find it difficult to climb stairs. In the classroom, UD addresses the need for learning environments that work for all students and meet a wide variety of learning needs (Millett 2009).

With the current revolution introducing more and more technology in the classroom to assist in the learning process, it makes sense to ensure that the implemented technology supports the greatest number of students and provides the best return on investment. Considerations for value include, but are not limited to: equipment investment, ease of use, student engagement, hours of use during the day, teacher training and acceptance as well as research documented results for academic outcomes.

Debbie Tschirgi (2010) describes six characteristics of sustainable technology solutions:

1. Broad in scope: They can be used in classrooms, professional development, school board meetings, PTA meetings and community presentations.
2. Applicable to all classrooms: Primary and secondary, math, science, language arts, social studies, health, art, etc.
3. Easy to use: Easy to connect, easy to control, easy to zoom/focus/reposition, and gets high-end results.
4. Easy to integrate: Can be used for whole group and small group instruction, teacher demonstrations, sharing of student work.
5. Minimal training and support: Takes less than one hour to set up, less than one hour to train, less than one hour of annual support, and teachers can troubleshoot easily.
6. Stands the test of time: In 5+ years it will still be doing what it was intended to do and can be updated with free software downloads.

The above characteristics of sustainable technology are all about the ease of adoption, support, and using the technology. Also considered in the formula for success is:

What Technology Should Do to Accelerate Learning

1. Technology should help to create optimal learning environments.
2. Technology should help engage all students in the learning process.
3. Technology should support research-based instructional strategies.

Sound field systems require minimal training, work as the audio hub of the classroom to integrate anything and everything with an auditory signal, and have documented, peer-reviewed and published study results demonstrating positive academic results— many right here in school boards across Ontario. Being included in the McKay inclusive strategy report for New Brunswick and then further in the NB3-21C technology integration platform for the province has catapulted usage of this technology. This simple piece of technology has truly evolved into one of the universal design strategies that is providing accessibility for many students across Canadian classrooms. ●

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For more information, visit www.gofrontrow.com.

Comments about this article? Email karen@gofrontrow.com

Learning About the Life Cycle of Electronics

Jane Kelly, Education Segment Market Manager
HP Canada

Whether we're aware of it or not, electronics are integral to our daily lives. How we choose, use and dispose of electronics can have tremendous impacts on the environment, and it's important to help children become aware of these impacts.

As a responsible corporate citizen, HP has risen to the challenge of helping Canadian school teachers address these issues by co-developing a learning resource on these impacts and how to minimize them, called **Discover the Technology Loop** (www.techloop.ca)!

HP has a long history of giving back to the community, and this commitment is reflected in HP's partnership with Learning for a Sustainable Future (LSF). LSF is a non-profit organization established to integrate sustainability education into the Canadian education system. HP partnered with LSF to help build **Resources for Rethinking** (www.resources-4rethinking.ca), a database of peer-reviewed, classroom-ready learning resources that explores the environmental, social and economic aspects of sustainable development issues. There are over 700 high-calibre learning resources that teachers can access for free.

Besides helping to create this database, HP and LSF also jointly produced Discover the Technology Loop!, which can be accessed from the database. This learning resource will help students explore the life cycle of electronic equipment, from design to manufacturing, use, and finally end-of-life, as well as all the stages in between.

Discover the Technology Loop! will help students analyze the life cycle of electronics in their lives. This learning resource uses action-oriented learning to help students understand that the actions of people can greatly impact other living things and the natural environment.

For more information and direct access to the database of learning resources, visit www.r4r.ca. ●

Comments about this article? Email janek@hp.com

> **Watch for the next issue of CODE Chronicles coming Fall 2011.**