

# NEOSA's Assistive Technology Project

Tom Steele, Superintendent of Education  
Jim White, Author  
North Eastern Ontario School Authorities

Moosonee District School Area Board served as the lead board for the CODE Special Education Project on behalf of North Eastern Ontario School Authorities (NEOSA):

Airy and Sabine District School Area Board	Whitney, Ontario
Asquith-Garvey District School Area Board	Shining Tree, Ontario
Foley District School Area Board	Foley, Ontario
Gogama District School Area Board	Gogama, Ontario
James Bay Lowlands Secondary School Board	Moosonee, Ontario
Missarenda District School Area Board	Missanabie, Ontario
Moose Factory Island District School Area Board	Moose Factory, Ontario
Moosonee District School Area Board	Moosonee, Ontario
Moosonee Roman Catholic Separate School Board	Moosonee, Ontario
Murchison and Lyell District School Area Board	Madawaska, Ontario
Parry Sound Roman Catholic Separate School Board	Parry Sound, Ontario
Penetanguishene Protestant Separate School Board	Penetanguishene, Ontario

NEOSA is comprised of 12 individual school authorities spread over a large geographic area, from southern Georgian Bay to James Bay and from south of Algonquin Park to the eastern Lake Superior region. Each school authority is responsible for providing education to its students under requirements similar to those governing larger district school boards. Each school authority has a separate board of trustees and operates independently. School authorities are generally "single-school" boards and serve predominantly elementary students. Enrolment can vary from a handful of students in the smallest school to approximately 350 students in the largest school. Schools are usually located in small remote communities; some are accessible by rail or air only. Some schools in the far north serve mostly Aboriginal students, while others schools may have few or no Aboriginal students in attendance. All these factors make it challenging for school authorities to provide the necessary resources and supports required for students to be successful. By choosing to work together through NEOSA, our school authorities strengthen their ability to provide the best possible programs for their students.

## Project Overview

In Year One (2005–2006) of NEOSA's Special Education Project, the focus was on developing awareness of the Education for All expert panel report. In-service was provided to school staff members. Presentations were made to school board trustees and school community stakeholders. Some additional in-service was provided to school staffs on various components of the report in relation to teaching/learning strategies that support inclusionary education for our students with special needs.

In Year Two (2006–2007), through a consultation process with school staffs and system administrators, it was determined that a specific focus would be better than a general approach. Based on a needs assessment, a decision was made to focus the project specifically on the implementation of computer-based assistive technology. Previous to this project, computer-based assistive technology did not exist in most of NEOSA's schools and only minimally in the few schools where it did.

Four demonstration site schools were selected to participate in this focus. Moosonee Public School (Moosonee District School Area Board) served as the demonstration site serving the northern region of NEOSA. Gogama Public School (Gogama District School Area Board) served as the demonstration site for the central region of NEOSA. St. Peter's School (Parry Sound Roman Catholic Separate School Board) and Burkevale School (Penetanguishene Protestant Separate School Board) served as demonstration sites in NEOSA's southern region. The purpose of establishing demonstration sites within NEOSA was to develop internal expertise that could be shared with all schools, all staff, and all students throughout NEOSA.



In each demonstration site, a teacher-coach was chosen to take the lead in using Kurzweil print-to-voice software as well as other assistive technologies such as Dragon Naturally Speaking, Co:writer, Write:Outloud, and Inspiration with specific students. Teacher-coaches were provided with in-service on how to use these assistive technologies with their students. Schools were provided with the Kurzweil software, hardware, and peripherals.

Each teacher-coach focused on three to five students in each demonstration site. Students were selected on the basis that they were achieving below the provincial standard in reading and/or writing. Students were not necessarily deemed exceptional by an Identification, Placement and Review Committee. Students were given instruction on how to use assistive technology and had access to assistive technology as a learning tool.

In Year Three (2007–2008), the project expanded beyond the demonstration site schools. This allowed all 12 schools in NEOSA to become involved in the project. Resources were provided to ensure each school had Kurzweil software and the necessary hardware and peripherals. A contact teacher was identified in each school. The contact teacher was provided with in-service on the use of Kurzweil and other assistive technologies. Teacher contacts were required to select at least one student to participate in the project. Student growth was measured through a data collection process. Demonstration sites were provided with additional funding to further develop their expertise in computer-based assistive technology.

## Data Collection

Growth in student achievement was measured by the CASI assessment instrument as well as a locally developed student observation survey. This data collection occurred at

regular intervals during the project. A locally developed survey was used to measure teacher-coach growth. Teachers self-evaluated their beliefs about the usefulness of assistive technology as well as their knowledge and skill in using it with students.

School program growth was measured also by survey data. Principals indicated how they perceived their schools were performing in areas such as universal design for learning, differentiated instruction, and use of assistive technology.

## Key Strategies

In order to build capacity, NEOSA focussed its resources to develop teacher knowledge and skills. School administrators encouraged and supported the sharing of knowledge and expertise among all staff members. Initially, much in-service was based on the 'train-the-trainer' model, but shifted to classroom-based learning for staff and students.

NEOSA formed a partnership with provincial demonstration schools. NEOSA demonstration site teacher coaches visited Robarts/Amethyst School to observe assistive technology in use with students at that school. Provincial school staff members from Trillium School visited demonstration site schools in NEOSA to provide on-site training to school staffs.



The project leader for the CODE Special Education Project met regularly with the project leaders for Literacy/Numeracy, Managing Information for Student Achievement, Student Success and School Effectiveness to ensure alignment, to provide support to each other, and to avoid duplication of valuable time and resources.

Principals ensured that assistive technology software/hardware was available in their schools. Many principals now budget to purchase assistive technology software/hardware with school funds. Some principals have reconfigured their computer labs so that more workstations are now available in the classroom, to improve students' access to assistive technology.

Principals and supervisory officers for the various NEOSA schools regularly updated educational stakeholder groups on the progress of NEOSA's assistive technology project and the positive impact assistive technology could have for many students. Parents were made aware of how assistive technology benefits their children so that they could provide support at home where needed. Trustees were informed about the value of assistive technology and provided support for assistive technology so that assistive technology was considered when making decisions about budget.

## Project Results

Growth in student achievement varied. Some students made significant gains through the use of assistive technology, while others made fewer gains. Students who were highly motivated to use this technology demonstrated the most growth. Data indicates that generally, students using assistive technology showed improvement in reading, work habits, and test-taking. Teachers noted that students who used Kurzweil during EQAO testing were more successful and less frustrated. Teachers commented that for students who have learned to use assistive technology independently appear to be more motivated and less frustrated when completing daily assignments and tests.

Teacher-coaches indicated that students now have improved access to Kurzweil 3000 and other assistive technologies. Data indicated that teacher-coaches' knowledge and skill in using these technologies with their students had improved. Teacher-coaches expressed a need to receive more training on assistive technologies other than Kurzweil. Teacher-coaches have indicated there is more work to be done to familiarize all teachers on the value of using assistive technology with their students and to provide all teachers with in-service on using assistive technology as a learning tool for students.

Principals were asked to rate their schools' abilities to meet the needs of students using the principles outlined in Education for All. They rated their schools' abilities to use assistive technology, collaboration with other teachers, and assessment scheduling as their strongest areas. They rated their ability to provide a classroom based on principles of universal design for learning, and peer coaching as their weakest areas. Principals indicated improvement in most areas that were surveyed.

## Future Directions

This data suggests that NEOSA's Assistive Technology Project needs to continue to provide in-service to its teacher-coaches who play a leading role in this project. Teacher-coaches have considerably developed their expertise in using assistive technology and need to continue to develop their knowledge of assistive technology to keep up with advances in technology. At the same time, NEOSA must focus on ways the teacher-coaches can share their knowledge with other staff members so that more students will be able to benefit from the use of assistive technology. Also, NEOSA must continue to focus on communication with educational stakeholders to ensure that they understand how assistive technology can benefit all students, especially those with special needs. This understanding is essential to ensure the sustainability of assistive technology.

As a result of the CODE project, in collaboration with other Ministry-supported NEOSA projects, teachers have had the opportunity to receive in-service on differentiated instruction, high-yield strategies for literacy and numeracy, and effective assessment practices. Resources have been provided to support a culture of universal design for learning. Teachers have begun to interact with each other as professional learning teams to discuss and share their instructional practices and to coach each other. Specific to the CODE project, the number of teachers who are able to use assistive technology with their students is increasing. The variety of assistive technologies used in classrooms is growing. Students are now learning how to use assistive technology to independently access the curriculum experience success. ●



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