

« CODE Project (Kurzweil 3000), continued

Lakehead District School Board is dedicated to implementing strategies and materials to maintain the use of assistive technology as the result of our study.

Sustainability and Lessons Learned

- 1. Selection of Teachers:** Teachers need to fully understand that the purpose of utilizing assistive technology is to help them to offer a differentiated learning strategy to students with a learning disability. **Knowledge Mobilization:** Teachers require more training on using technology to differentiate instruction. The Special Education Resource Teacher is now available to train and support teachers and students with this program.
- 2. Involvement with School Administration:** We recommend that school administrators be exposed to Kurzweil 3000 in order to further enhance their understanding of the significance of this assistive technology. **Knowledge Mobilization:** All administrators were given a presentation on the program and how it can support student learning. Information Systems Technicians (ISTs) were also trained on the use of Kurzweil and troubleshooting strategies.
- 3. Duration of the Program:** Teachers and students needed more time to become proficient with the program; also, it would be best to run a project of this complexity over a number of school years. **Knowledge Mobilization:** Resource teachers will support these students and teachers to enhance their use of Kurzweil.
- 4. Hardware/Software:** Several issues surrounding hardware and software arose at the start of the project. Having a place to set up the equipment and make it accessible in the classroom wasn't possible due to a number of situations (space, power availability, etc.). **Knowledge Mobilization:** ISTs are now tracking all equipment and Resource Teachers are ensuring equipment is set up properly. All schools are receiving networked Kurzweil Programs and high-speed scanners, with training support in place. All students who require scanned text will be registered with the Ross McDonald Library in order to access already-scanned text.
- 5. Time Commitment:** Also of concern was the amount of time required to scan and get set up for a lesson. Time constraints were more of an issue for students involved in a rotary system. **Knowledge Mobilization:** Where possible, it was suggested that Educational Assistants or students scan material before classes start in the morning. The materials from the Ross McDonald Library will alleviate much of this issue.
- 6. Initial Training:** In some cases it was found that instructions for using Kurzweil 3000 had to be repeated several times. **Knowledge Mobilization:** After introductory training, it is essential that both teacher and student complete the practice activities promptly to ensure a satisfactory level of competence. To sustain a level of commitment, the Special Education Resource Teacher is available to support further training.



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Moving Ahead with Special Ed

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Background

Over the past three years, CODE has provided SCDSB with funds to support both teachers and students in an ongoing focus on improved learning. These funds were based upon proposals presented each year by the Sudbury Catholic District School Board Special Education staff.

Wireless Technology

The first year saw the completion of outfitting each elementary school with a bank of wireless laptops. These computers held the assistive technology software Co-Writer and Write Out Loud. The laptop technology also provided options for using a coloured text or background to support students with that specific need. A teacher on special assignment

visited all schools to model the use of these tools for teachers and students. Evidence-based strategies to support students with special education needs, outlined in a new Ministry of Education resource, Education For All, were introduced and became the basis for classroom instruction.



Literacy Coaches

In the second year, a series of implementations were made. Teachers (Literacy Coaches) were provided with release time to participate in school Catholic Professional Learning Communities to focus on student achievement data and to plan, as an accountable group with colleagues, next steps to improve student learning.

Board Experts

Two teachers, one with expertise in literacy numeracy, and the other with expertise in assistive technology, were assigned to guide teachers in implementing research-based teaching and learning strategies to continue the enhancement of student learning. These expert teachers visited classrooms to model lessons and work side-by-side with teachers to ensure that students with special needs received the differentiated instruction they required. The assistive technology teacher worked with students identified as learning disabled. She deepened the students' ability to use Co-Writer and Write Out Loud.

In-Classroom SERT Support

As part of our board's special education support, we began moving to a new model of resource. Resource teachers would begin to provide support for special needs students within the Signposts of Success Along the Way classroom setting. This model would allow students to work with support in the context of the classroom curriculum amongst their peers. Also introduced was the concept of in-school support teams.

In 2007-2008, we continued to use the strategies that over the past two years have proven to be very successful. In addition, we provided bimonthly release of all teachers to participate in Catholic Professional Learning Community sessions; implemented the directives of Education For All; continued training for teachers and students on the use of assistive technology provided through the use of the laptop computers; provided a resource within the classroom setting; held in-school support team meetings; and purchased additional laptop computers, earphones, printers, and scanners.

The system implementation plan had two clear foci:

- enhancing the professional growth of teachers, school administrators, and school support staff; and
- improving learning for all students with a particular concentration on students demonstrating special education needs.

We learned that "The most powerful feature of schools in terms of developing children as successful readers and writers is the quality of classroom instruction" (from Richard Allington, *What Really Matters for Struggling Students*, 2001). As we reflected on the best practices of our CODE 2006-07 project, we discovered that the provision of teacher release time during the school day was truly the best way to enhance teachers' professional learning, which in turn improved teacher efficacy and thus made a difference for students struggling with learning to read and write. The total budget provided through this 2007-08 CODE initiative was dedicated to providing all teachers with bimonthly release for job-embedded professional learning.



Each school principal took on the role of instructional leader in his or her school, developing Catholic Professional Learning Communities (C-PLC) which began the process of improving teaching and learning. Central board staff provided intense support to all schools by. Together, implementing the comprehensive research of Richard Dufour (*Learning by Doing: A Handbook for Professional Learning Communities at Work*, 2006), we began our journey to developing high-quality classroom teaching resulting in success for all

students, recognizing that sustainable school improvement requires a shared language, empowered leadership, and TIME.

Signposts of Success Along the Way

- Principals and vice-principals came together monthly in their own C-PLC groups to carry out a book study using the professional text *Learning Communities at Work* (by Dufour, Dufour, Eaker, and Many). These sessions clarified knowledge of the "what" and "how" of professional learning communities. Facilitation of the book study was shared by the Superintendent of Academic Programs and Education, Literacy and Numeracy SAOs, and board Academic Services staff.
- The Superintendent of Academic Programs and Education arranged through the CODE 2007-08 project to fund a bimonthly half-day release for all elementary school staff and selected secondary school teams.
- Principals used a simple framework to guide the work of the C-PLC team: analyze timely student assessment data, collaboratively develop next steps for classroom intervention, determine evidence of future learning to be the focus of the next C-PLC, and finally, engage in professional development. Principals kept an Evidence Binder of session minutes and evidence of best-practice successes.
- Schools began to enjoy the bimonthly professional learning opportunities provided in the job-embedded format. Schools creatively determined ways to continue the process during the alternate months to ensure sustainability during the next school year.
- An Academic Services (combined curriculum and special education) staff member was assigned to each school and attended the C-PLC sessions as a support and to

« Moving Ahead with Special Ed, continued

provide focused professional development. The same central staff member sat as a member of the school's in-school support team as an out-of-school contact. Special assignment teachers were assigned to schools requiring instruction in the use of assistive technology and literacy coaches were hired to move the best practices to the classroom environment. The Special Education Support Teacher model was changed from one of withdrawal to one of support within the classroom. The board hired a Coordinator of Technology to develop and plan for improved use of assistive technology.

- New assessment tools (CASI 2nd Edition, DRA1 Grades K–3, DRA Grades 4–8 and K-TEA II) were purchased through the Ontario Psychological Association's initiative to support both classroom assessment and central board assessment. Teachers and administrators were trained in their use. As these research-based assessment tools were implemented, data walls grew, tracking student learning in reading and writing.
- Superintendents of Academic Programs and Education visited schools on a regular basis, carrying out school walkabouts with the principal to observe evidence of improved teacher learning and dialogue about student data collected electronically throughout the year by the board.

Demographics

- Participating in this project were:
- 40 secondary teachers, 250 elementary teachers, 22 principals;
- All students in Grades 3 and 6, with a focus on 221 of them; and
- 231 focus students in Grade 9.

Data Demonstrating Success

- Data analyzed to determine success was collected from schools through:
- School Evidence Binders;
- Observation checklists;
- Board Electronic Achievement Data Collection Surveys (including Writing Exemplars, CASI, DRA and Report Card); and
- School quantitative and qualitative surveys.

Top 5 Professional Learning Topics Cited by Principals as Practices Providing the Greatest Improvements

1. Teacher Moderation
2. Collaborative Development of Common Assessments as Intervention Strategies
3. Use of Data from Tracking Boards to Drive Instruction and Intervention
4. Creation of Anchor Charts and Sentence Stems With Students
5. Planning with the End in Mind

Data

Aggregate Secondary School Data:

Grade 3	
Number of students in Grade 3 in September 2007	464
Number of Grade 3 students determined at-risk early in first term	103
Number of Grade 3 students consistently demonstrating improved learning at the end of first term	46

Percentage of Grade 3 students at risk in first term = 22% (103/464)

Percentage of Grade 3 at-risk students showing consistent improvement by the end of first term = 45% (45/103)

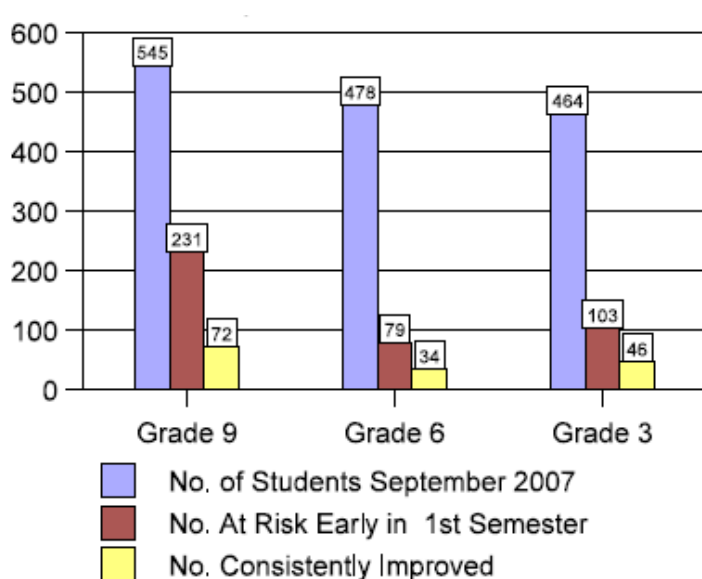
Grade 6	
Number of students in Grade 6 in September 2007	478
Number of Grade 6 students determined at-risk early in first term	79
Number of Grade 6 students consistently demonstrating improved learning at the end of first term	34

Percentage of Grade 6 students at risk in first term = 17% (79/478)

Percentage of Grade 6 at-risk students showing consistent improvement by the end of first term = 43% (34/79)

(Shown in Figure 1)

Figure 1: Aggregate Elementary/Secondary School Data



Immediate Next Steps

1. School principals share methods of internally provided release to allow for ongoing C-PLC sessions during next school year.
2. Review of IEPs to ensure that plans for students are working, contain evidence-based strategies, and provide differentiated instruction.
3. Broaden the effective use of assistive technology with students who demonstrate special education needs.



The Sudbury Catholic District School Board respectfully acknowledges all the staff of St. James School and principals, vice-principals and teachers who made our C-PLCs a living community dedicated to improved student learning.

Ongoing gratitude is expressed to CODE for this tremendous opportunity to improve learning for our students. ●

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CODE III – Special Education Project

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The development and implementation of the GLE–Assistive Technology 201 credit course, to improve student achievement, in a Universally Designed Secondary Classroom.

Introduction

One of the three key components of the Niagara Catholic District School Board's CODE III project during the 2007–2008 school year was the implementation of a Grade 10 GLE Assistive Technology Course in a universally designed classroom. The model of Special Education in the Niagara Catholic District School Board is one of inclusion, where inclusion "means not only the practice of placing students with special needs in the regular classroom, but ensuring that teachers assist every student to prepare for the highest degree of independence possible" (Education for All, 2). In addition, technology, as a tool, facilitates the learning of each student, and in a universally designed classroom, "assistive technology is any technology that allows one to increase, maintain, or improve functional capabilities of an individual with special learning needs" (Edyburn, 2000 in Education for All, 127). Thus, when planning for instruction in a universally designed learning environment, the broad learning principles of "equitable use, appropriately designed space, flexibility, simplicity, safety, and different modes of perception" (Education for All, 9) are applied "to ensure that students will have access to the curriculum and that a flexible curriculum provides him or her with the appropriate pathways for reaching learning goals, as well as fair and accurate assessment" (Education for All, 10).



The development and implementation of a new Grade 10 Assistive Technology course—GLE AT 201—was the result of continuing a focus on the improvement of the literacy skills of secondary students, who are earning credits and preparing for the Ontario Secondary School Literacy Test. The course is designed to allow students to work at their own pace, on their own laptops, to access the curriculum using a variety of different computer software packages. Computers on Wheels (COWs) units were purchased for

each secondary school, and each consisted of eight laptops, one wireless router, and one mobile cart connecting to a centralized file server. The COWs were used in the GLE AT 201 class, not only for the students' learning as per the course curriculum, but also as a resource to enable the students to complete homework and assignments for other courses, such as a Locally Developed English course, an Art class, a Locally Developed Science class, or any other course on their schedules. In addition to Kurzweil software, students made extensive use of Premiere software, especially for summarizing work. The teacher of the GLE AT 201 course discovered through trial and error that although each student required an individualized setting, the range should be fall within the 50%–70% software-generated summarization range to be effective for the learning of each student. Word-Predict software was also useful, but needed to be set for each individual student to meet their individualized learning needs.

The GLE 201 course classroom had eight students with differing identifications and learning needs. The room was set up in a somewhat octagonal shape, with students using the same laptop every day. It was important to have a set of headphones for each computer/participant, since at any moment in time there could be eight different stories playing using text-to-speech in Kurzweil. It was also important to have a separate USB mouse for each computer/participant, as often the students in this class did not have the fine motor skill development required to be proficient with the pad-mouse provided on the laptop. Over the course of the semester, it was noted that having a separate server drive letter for the teacher, for which the teacher had full access rights (read, write, create, etc.) but for which students had only read rights, would enhance students' learning. This would allow the teacher to place assignment outlines and other learning activities on the drive where students can access them; however, the students would need to save their work to their own drives because they would have read-only rights on the teacher's drive.