

### Authentic Inquiry

In February 2004, a team of 16 Manitoba educators was formed to develop the *Developmental Continuum for Literacy with ICT Across the Curriculum*. These educators were Kindergarten to Grade 8 teachers, many of whom came from regional, French, and Aboriginal milieus. They carried out the development of the continuum as an authentic inquiry. In preparation, the team drafted essential questions and an inquiry plan. They also gathered secondary source data to determine how educational jurisdictions within Manitoba, in other provinces, and internationally use ICT to extend learning. The team examined sample developmental continuums representing literacy in reading, writing, and numeracy. Based on these insights, the members of the development team carried out action research in their classrooms to gather primary source data to inform the development of the continuum. Their direct interactions with, and observations of, students have ensured that the continuum meets the needs of students in Manitoba.

### Building the Descriptors

Teachers on the development team observed how students in their classrooms use ICT to learn. In grade groupings, the team analyzed its observations and wrote descriptions of the student behaviours. They viewed these descriptions through multiple lenses and filters, such as different curricular areas and multiple intelligences, to validate content, eliminate overlaps, and identify gaps. Their analysis informed the next set of strategic classroom observations. This was a recursive process that refined and simplified the observations into descriptions. These descriptions became the “descriptors” in the continuum.

### Constructing the Continuum

As the teachers refined the descriptors that formed the building blocks of the continuum, they organized and reorganized, constructed and deconstructed, the framework of the continuum. Ultimately, the team represented the continuum as a two-dimensional matrix that presents the descriptors in three stages of thinking across the horizontal axis. They used the vertical axis to categorize the descriptors into nine Big Ideas: five in the Cognitive Domain and four in the Affective Domain of the continuum (see Figure 3).

## Action Research

In June 2005, each Manitoba school division formed a team comprising a minimum of three educators: one Early Years teacher, one Middle Years teacher, and a school leader. Each team engaged in action research to build capacity for their role as members of their own school division's implementation team, and to explore the following inquiry questions:

1. What are the most meaningful ways ICT can be infused into learning environments to extend critical and creative thinking?
2. How can teachers use the developmental continuum to plan and shape classroom learning experiences that enhance literacy with ICT?
3. How can teachers use the continuum to portray an accurate image of each student's literacy with ICT?
4. How can students self-assess and show evidence of their literacy with ICT?
5. In what ways do parents need/want to be informed of their child's literacy with ICT?
6. In what ways can *Literacy with ICT Across the Curriculum* be implemented by each Manitoba school division?

The 2005-06 year of action research was organized and guided by Manitoba Education, Citizenship and Youth. During this time, the Department

- collected feedback to improve the *Developmental Continuum for Literacy with ICT* and its associated assessment and reporting strategies
- collected classroom-based samples of student work for teachers to examine as they implement *Literacy with ICT Across the Curriculum*
- developed snapshots of how students of all ages are literate with ICT
- designed professional learning strategies and tested them face-to-face and online
- developed an online, interactive representation of the continuum
- set up networks of action research teams throughout the province
- supported all school divisions to build local capacity for the implementation of *Literacy with ICT Across the Curriculum*

Teachers participating in the action research used the *Developmental Continuum for Literacy with ICT* to plan learning experiences that challenge students to develop and extend both their thinking skills and their ICT skills as they progress through the continuum.

These teachers

- participated in six days of face-to-face professional learning
- engaged their students in learning experiences that develop literacy with ICT
- developed and shared their own strategies for developing student literacy with ICT
- participated in the *Literacy with ICT* online learning community
- helped students assemble evidence of their literacy with ICT in a portfolio of learning
- used the *Developmental Continuum for Literacy with ICT* to create profiles that show how individual students demonstrate their literacy with ICT
- assessed and reported on student literacy with ICT
- built capacity as members of their school division's implementation team for *Literacy with ICT*