RAISING STUDENT ACHIEVEMENT WITH ILC'S LEARNING OBJECTS

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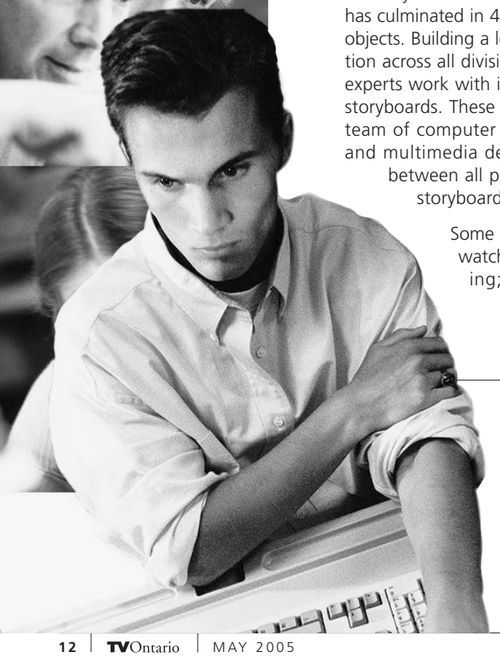

One of the main challenges of distance education is to anticipate and fulfill student needs in a way that keeps them motivated. Learning objects are the leading-edge solution. TVOntario's Independent Learning Centre (ILC) recently launched a series of interactive online learning objects to complement a number of its Grade 11 and 12 science and math courses.

WHAT IS A LEARNING OBJECT?

In simplest terms, a learning object is a mini-lesson available on the web. ILC learning objects address specific academic concepts in the curriculum through dynamic and interactive tutorials that provide instant feedback. In this way, students can gain comprehension in areas that they find challenging.

THE NEWEST PHASE IN ILC'S UNIQUE SUPPORT SERVICES

Learning objects reflect the ILC's increased focus on e-learning. Their primary purpose is to help ILC students grasp concepts presented in our print courses, thus improving our student support services by creating a blended learning environment. "We want to give students the learning opportunities they need when they need them most," explains Sarah Irwin, managing director of the ILC.

Over a year and a half of research and development has culminated in 48 innovative Flash-based learning objects. Building a learning object requires collaboration across all divisions of the ILC. Subject matter experts work with instructional designers to create storyboards. These are developed by an in-house team of computer graphic designers, animators, and multimedia developers. Ongoing dialogue between all parties takes the concept from storyboard to final product.

Some students learn best by seeing and watching; some by hearing and listening; some by doing and feeling.

The learning objects provide students with alternative ways to grasp specific concepts covered in Ontario's curriculum, concepts that tend to require "higher order" learning capabilities, such as thinking, inquiring, and making connections.

ILC learning objects require students to analyze cause-and-effect relationships, make discoveries, and follow visual explanations. For example, in *Photosynthesis*, students can experiment with various factors to achieve a healthy, productive plant. Interactive exercises like this deepen the learning experience: the student can view a short animation and can then manipulate the variables online in an experiment, observing cause and effect. Other learning objects cover such varied topics as how to calculate mortgage interest and how to predict heredity. The ILC hopes to have another 50 learning objects in a broader range of subjects completed by this time next year.

How does a relatively small new media team manage to create so many effective learning objects in so little time? Julian Wharton, ILC's creative head of production and technology, achieves it in large part by keeping the look and feel of all the objects similar. Having a consistent model not only streamlines technical development, it also accelerates learning for the students, who don't need to waste time "mousing around" as they figure out how to navigate each object.

WHY DO I NEED TO KNOW CALCULUS?

The development teams are conscious of the need to use real-world examples. Take calculus for example. Most students grudgingly learn the formulas by rote. Students know they need to know calculus, but they don't know why. "If you can show the application of calculus in launching and communicating with a satellite, or how calculus is used in programming and animating blockbuster games such as HALO, it becomes something students can relate to, and that's a big motivating factor," suggests Julian. "If the example is compelling for students, then there is a greater chance that they will take the time to understand the theory behind it."

Humour also plays a part creating effective learning objects. One object in development illustrates variables affecting the speed of sound. It shows sound waves moving across a golf course until they reach a golfer. Manipulating the variables a certain way leads to the golfer being struck by lightning. The persistent (and mischievous) student who allows the golfer to be struck by lightning three times will see him disappear in a puff of smoke!

Interactive learning objects are reusable and marketable. The learning objects on the ILC site are available exclusively to ILC students. However, Ontario teachers can access them for classroom use through TVOntario's Curriculum Resource Bank (CRB) at **www.curriculumresourcebank.com**.

ILC students are not required to use online learning objects, but they are recommended as study aids. "Learning objects allow us to harness the strengths of electronic media to interpret difficult texts," notes Blair Kettle, ILC's Chief Learning Officer. "But for the ILC, paper is still and always will be a valuable medium for instruction."

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HIGHWAY TO HIGHER LEARNING

What is the difference between a degree and a diploma?
How many journalism programs are offered in Ontario?
Which one is closest to home?
Can I get financial assistance?

There's no need to plough through multiple course guides and websites for answers to questions like these. CareerMATTERS' new post-secondary portal at **www.ilc.org** provides key information on every institution and program in Ontario in one location.

Learners of all ages and stages can use *CareerMATTERS'* "Find a Program" tool to retrieve information on over 8,000 college, university, career colleges, apprenticeship, and continuing education programs in the province. Users can narrow their search options based on accreditation level, program type, region, delivery method, and subject. Users then receive information that helps them investigate programs, weigh their pros and cons, and make informed decisions. They can also link back to relevant career descriptions in *CareerMATTERS* and directly to the educational institutions' websites.

Last spring, former premier Bob Rae was appointed by Premier McGuinty to review the higher education system in Ontario. Released in February, his report, *Ontario: A Leader in Learning*, stressed the importance of higher education to students, the economy, and Canadians. The report cited the *CareerMATTERS* website for the way it "helps students chart a path through educational choices in high school and on to successful entry to higher education."

Rae's vision is that government and its partners should "reach out to and expand the opportunities for those capable of participating in higher education." Minister of Training, Colleges and Universities, Mary Anne Chambers, believes *CareerMATTERS'* post-secondary portal supports this vision. "The ease with which students can access information through the *CareerMATTERS* website provides a springboard to post-secondary education," she says. "We appreciate TVOntario's initiative, and are pleased that we can work together in informing Ontarians of the many learning opportunities available in this province."

Visit *CareerMATTERS* at **www.ilc.org**.

THE INDEPENDENT LEARNING CENTRE OFFERS A VARIETY OF DISTANCE EDUCATION RESOURCES TO SERVE LEARNERS OF ALL AGES IN THE PROVINCE.

- **COURSES**
  Ontario Ministry of Education high school credit courses
- **CareerMATTERS**
  A guide to high school, careers, and post-secondary planning
- **ASK A TEACHER**
  Free online tutoring with certified Ontario teachers
- **GED TESTING**
  Earn your Ontario High School Equivalency Certificate
- **APPRENTICESHIPS**
  Learn about the skilled trades and how to become an apprentice in Ontario

For more information, visit www.ilc.org or call 416.484.2704, or 1.800.387.5512.