

The iTeach Laptop Learning Program – Integrating educational technology into teacher education at Nipissing University

Opportunity

As one of 15 Faculties of Education in Ontario, the Schulich School of Education at Nipissing University in North Bay chose to differentiate their program by integrating educational technology (ET) throughout their teacher preparation programs through their iTeach Laptop Learning Program. Educational technology includes both software applications and hardware, such as SMART Boards, that can be used in today's classrooms.

The iTeach Laptop Learning Program was designed to provide pre-service teacher candidates with the skills and knowledge to choose and implement appropriate software and hardware for effective teaching, learning, and student success in their future careers as teachers in JK-12 classrooms. As part of the program, faculty members are also trained in the application of educational technology for teaching pre-service teacher candidates.

Innovation

In the iTeach Laptop Learning Program, teacher candidates learn how educational technology can enhance the learning experience of students in JK-12 classrooms when used effectively. They also learn how to assess and apply high-quality software resources, including open source and commercial software for maths, geography, and other subjects as well tools for productivity, desktop publishing, and text-to-voice translation, and how to integrate hardware such as SMART Boards, Promethean Activboards, digital documents cameras, personal response systems (clickers), and video cameras into the classroom experience.

iTeach is now fully integrated into the Consecutive Education (1 year B.Ed.), the 4th and 5th years of the Concurrent Education program, and the Aboriginal Teacher Certification Program for all pre-service teacher candidates who will be teaching at elementary and secondary levels. Students pay a fee of \$395 for the iTeach Advantage Package (financial aid is available) and must have a Mac computer which they can supply themselves or purchase at discounted prices via the Nipissing – iTeach Apple Online Store. In addition to extensive workshops and support on using the software and hardware, this package includes an iTeach external hard drive containing a wide selection of educational software, Ministry of Education curriculum and policy documents, and a dedicated space for data backup.

The iTeach Program is offered both inside and outside of the regular course structure of the degree programs for the teacher candidates through a collaborative, team-based approach:

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- The recently-established Centre for Flexible Teaching and Learning (CFTL) provides professional learning support for faculty and students on software resources, hardware, and how to integrate them into teaching and learning for enhanced student engagement and success. Workshop topics include adaptive technology, virtual field trips, and iResources. CFTL Technologists and Student Technology Assistants provide one-to-one support and access to the software and hardware most often found in school settings via drop-in support sessions within the iTeach Learning Centre. CFTL staff also develop and deliver interactive and timely sessions that demonstrate the integration of technology in the classroom.
- University Technical Services offers warranty service and support for hardware.
- Faculty members, especially those with a high degree of comfort with educational technology, use technology-based tools in their own teaching as examples for the students. Activities featuring educational technology integration are embedded within B.Ed. courses to enable ongoing skill and capacity development for the teacher candidates.
- Student Technology Assistants encourage and guide their fellow students in the choice and use of educational technology, including issues such as the use of illegal software downloads. One Student Technology Assistant is hired for each section of the teacher education program and educated in this support role; they also act as communication links between the iTeach program staff and the students. The students are responsible to the Schulich School of Education and CFTL.
- Associate Teachers host the teacher candidates during their pre-service practicum and encourage them in appropriate application of educational technology in their initial experiences of classroom teaching.

Through iTeach, students learn about educational technology and how it can be used to engage students and enhance learning, assessment, and planning; they then have an opportunity to apply what they have learned during their practicum placements in JK-12 schools. iTeach also introduces the importance of continuing professional development and the role of educational technology in the transformation of the classroom, the role of the teacher, and student learning possibilities.



Teacher candidates network and collaborate in the iTeach Learning Centre

Outcomes and Benefits

In addition to teaching about the use of educational technology, the iTeach Laptop Learning Program is part of a culture that promotes confidence building and a sense of accomplishment and capability. Lorraine Carter, the Director of the Centre for Flexible Teaching and Learning, characterized this as “competent in how to integrate; confident in a new strategy.” Other benefits of iTeach include:

- Graduates are able to effectively use educational technology throughout their careers as an additional teaching tool for learning, planning, and assessment. They can engage and challenge their future students through educational technology.
- Through learning multiple applications for educational software and hardware, the pre-service teachers become better learners, with improved skills for online learning, independent and critical thinking in choosing resources, and learning thorough exploration.
- An enhanced capacity in educational technology can make the graduates more attractive to potential employers and differentiate them from other candidates.

iTeach has a cascade of benefits for learning – from faculty, to pre-service teacher candidates, to the students that these teachers will ultimately be teaching. The 2010 survey of the teacher candidates after their practicum indicated that more than 90% had integrated educational technology into their practice teaching experience, with over 80% reporting increased student attention, interest, and engagement. The teacher candidates expressed their views on the role of educational technology for student learning. Among the views commonly expressed were:

- “The benefits of using technology in class are endless. I witnessed during my practicum that students are more engaged, attentive, and creativity is inspired in them.”
- “It can promote student interaction with lessons and it can allow teachers to cater to multiple intelligences.”
- “Educational technology is critical in the classroom as it will better prepare my students for life outside of school, providing them with job readiness and life skills.”

Challenges and Enhancements

For the first ten years of operation, the Faculty of Education managed the iTeach Program with their own resources and personnel, including the professional learning support for teacher candidates. With the expansion of the iTeach Program beyond the original Consecutive Education focus, the number of students and faculty being served burgeoned. Delivering a comprehensive program with consistency and quality was becoming potentially unwieldy. With the creation of the Centre for Flexible Teaching and Learning in 2011, the Schulich School of Education and the CFTL team work collaboratively to provide service and support a program that is sustainable and pragmatic.

As often occurs when there is change, there are some challenges in relation to faculty concerns around program transformation, such as changes in resources and personnel, in modalities for teaching and learning, and concerns about program quality.

iTeach demands considerable investment on the part of the institution for staff, technology, and infrastructure. Nipissing University leadership remains committed to the program as they recognize its benefits for faculty, pre-service teachers, and JK-12 students.

There has been some push back from the pre-service teacher candidates, especially those in disciplines, such as physical education, where the benefits of educational technology may not seem as apparent. These students are supported in finding resources that can be used in their disciplines, often through communication with teachers who are active in their fields.

Potential

The potential for extending the iTeach program within the Aboriginal Teacher Certification Program at Nipissing University is being explored. The students in this program are on campus over the summer and were introduced to iTeach in 2011. After the summer session, the teachers in the program return to their often remote communities; appropriate online logistical and pedagogical supports need to be developed so they can receive continuing support.

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The model of the iTeach program and its best practices in terms of teaching and integrated technology can be shared with other programs, both at Nipissing University and at other post-secondary institutions in Ontario. Ken Waller, the iTeach Laptop Learning Program Coordinator, describes it as follows: “It is about shifting the focus from technology to teaching and learning. When the technology is invisible, then it is a best practice. We will continue to encourage our teacher candidates to build a strong inner confidence that they will make a difference in the 21st century classroom by looking for meaningful opportunities to enhance teaching and learning through effective planning and integration of relevant technology resources.”

Further Information

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