

HIGHLIGHTS OF THE MAIN RESULTS

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Benefits and challenges of using laptops in primary and secondary school: An investigation at the Eastern Township School Board

RESEARCH OBJECTIVE

The overall objective of this research project was to gain a deeper understanding of the benefits and challenges of using laptops in primary and secondary school at the Eastern Townships School Board.

METHODOLOGY

In all, 2,432 students (grades 3 to 11), 272 teachers, 14 education support staff and three school principals participated in the data collection, which was conducted from April 2010 to January 2011. Three main data collection instruments were used: survey questionnaires, individual semi-directed interviews, and group interviews. As the study is still ongoing, the results presented here are preliminary.

MAIN RESULTS

Access and equipment

Of the students surveyed, 92% had a computer at home, 63.3% had a cell phone and 67.7% used a portable digital reader such as an MP3 device or iPod. On the other hand, 11% of the students did not have an Internet connection at home, whence the importance of the school, which provides their only opportunity for full Internet access.

Pedagogical uses

Out-of-class use (i.e., outside the classroom) by teachers: (1) communicate with each other and with students and their parents; (2) renew and develop new teaching practices; and (3) uncover possible student plagiarism.

Pedagogical uses of laptops in the classroom: (1) perform efficient searches for information; (2) develop students' writing skills; (3) exercise their creativity through multimedia projects; (4) make oral presentations with software such as PowerPoint; and (5) generally speaking, improve day-to-day teaching and learning. Note that the various classroom uses are transdisciplinary. In addition, the students generally appeared to use their laptops more for educational than recreational or social purposes.

12 main benefits of laptops

1. Facilitation of work for both teachers and students;
2. Greater access to current, high-quality information;
3. Greater student motivation;
4. Greater student attentiveness;
5. Development of student autonomy;
6. Increased interaction among students, teachers and parents;
7. Individualized, differentiated learning;
8. Engaging, interactive and meaningful learning using multimedia support;
9. Development of ICT skills;
10. Universal access;
11. The breakdown of barriers between the school and society;
12. More opportunities for students in the future.



Main challenges in 'one laptop per child' classrooms

The first challenge identified is technical (computer breakdowns and malfunctions). This shows the importance of providing sustainable funding for the 'one laptop per child' strategy in classrooms to ensure positive teaching and learning outcomes. The second main challenge is pedagogical, and refers to the less than optimal uses of laptops in class, i.e., when they are used for recreational or social instead of educational purposes. Note that this second challenge was reported by teachers and students alike, and that the vast majority of the students felt that using their laptops at school for purposes other than education was a waste of time. We may conclude that the students surveyed, as well as their teachers, appear to have adopted a strongly educational attitude toward laptop use in the classroom, which is most probably attributable to the frequent use of ICT at the schools. In other words, these findings suggest that the more that students use ICT for learning, the more they come to appreciate their educational value, and the more they use them for educational rather than recreational or social purposes.

CONCLUSION

The preliminary results of this study indicate that the 'one laptop per child' strategy fully contributes to students' academic success at the Eastern Townships School Board. This helps explain why the school board jumped from 66th to 23rd position provincially (out of 70 boards) in five years, and why the student dropout rate plunged from 39.4% in 2004–2005 to 22.7% in 2008–2009. The lesson retained is that, despite the technical and pedagogical challenges, this innovative initiative to provide 'one laptop per child' has produced incontestable gains in both teaching and learning, and for the future social and professional lives of the students involved.

RECOMMENDATION

1. Enable the Eastern Townships School Board to continue its innovative 'one laptop per child' program;
2. Continue assessing the impact of the program through rigorous studies;
3. Assess the impact of the 'one laptop per child' strategy through longitudinal studies, for instance, on graduates from the Eastern Townships School Board;
4. Extend the provision of laptops to all students at the Eastern Townships School Board;
5. Set up an online site for video teaching resources for the benefit of newly hired teachers;
6. Better identify teachers' needs for ongoing training in technopedagogy;
7. Include students in ongoing training given to teachers;
8. Raise awareness among students, teachers, other education stakeholders and parents of the benefits of the 'one laptop per child' strategy;
9. Seek ways to provide all students with computers and Internet access at home;
10. Extend the laptop initiative at the Eastern Townships School Board to other school boards.

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