

# research snapshot

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## ***Epidemic* Keeps Students Playing – And Learning**

### **What is this research about?**

In the past, educators have frequently tried to incorporate computer games into their teaching. Often these games are little more than motivational devices – rewards for work well done. They also have been used to try to make learning more palatable. But the very structure of these games can be too rigid, defeating the whole point of ‘play.’ In fact, one school of thought suggests that ‘play’, like learning, is less effective when forced. Digital learning technologies that involve some kind of ‘play’ should be compelling enough to keep students willingly engaged.

At present, there is a lack of educational tools that promote a health-conscious lifestyle. This is a problem since many contagious diseases have been on the rise. In recent years, SARS, Avian Flu, H1N1, and other viruses have threatened to become global pandemics. Lesson plans in Ontario schools, however, have not adapted to address the need for prevention and self-care. But digital learning technologies that are both informative and fun could provide students with a valuable way of learning about how to take care of themselves.

### **What did the researchers do?**

Researchers at York University and Simon Fraser University developed *Epidemic: Self-care for Crisis*, an online educational resource that aims to fill a gap in Ontario elementary and secondary school

### **What you need to know:**

*Epidemic* is an effective digital learning technology. It keeps students engaged and is a valuable resource for information about viruses and health. It promotes a more health-conscious life.

curricula. *Epidemic* helps users to learn to protect themselves from viruses like HIV, Chicken pox, and Ebola, among others. For each of the 30 viruses it features, *Epidemic* not only includes practical information for self-care but also scientific facts.

### **What did the researchers find?**

Researchers found that *Epidemic* is an effective tool for helping to teach children about viruses and other health issues. In terms of its programming platform, *Epidemic* uses Flash technology, which is a cost-effective way of developing digital learning tools. Flash enables educators to make use of applications without installing new software on computers – a major barrier to digital learning. New content can be updated and edited without the need for a trained programmer. *Epidemic* is also among a small number of online, Flash-based applications that embrace Web 2.0 capabilities. In other words, it enables users to do more than just passively read or watch material; *Epidemic* lets users produce and modify their own Web-based content. Users who are not programmers are empowered by this technology.

*Epidemic*, although not a ‘game’ in the traditional sense, has game-based features that keep learners engaged and involved, including:

- a scoring system;
- a playful user interface that enables users to befriend one another, as in a social networking site;
- a character creation tool that allows users to create alternate identities.

Based on the responses of 50 students at a York summer camp, FluTube and Propaganda Maker, two features of *Epidemic* are not only invaluable resources; they are also highly engaging play-based technologies. Students seem to want to play *Epidemic* – and they learn while doing so.

### How can you use this research?

This research will be of interest to educators, researchers, and decision-makers who are interested in digital learning technologies like *Epidemic*. It also suggests alternative ways to think about learning. Although tools like blogs and wikis have the potential to transform students from passive learners into active producers, traditional views of learning still persist. These views hold that learning only ‘counts’ when students produce work within rigid, prescribed boundaries. Learning, however, like play, needs to free students to pursue their own creative impulses. The ‘evidence’ for this kind of learning might consist of more than just the work a student has produced. It might consist of smiles, laughter, chatter, excitement, and the desire to keep playing.

### About the Researchers

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### Keywords

E-Learning, Educational gaming, User-testing, Games for health, Virus, Digital

### Knowledge Mobilization at York

York’s Knowledge Mobilization Unit provides services for faculty, graduate students, community and government seeking to maximize the impact of academic research and expertise on public policy, social programming, and professional practice. This summary has been supported by the Office of the Vice-President Research and Innovation at York and project funding from SSHRC and CIHR.

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