

Social Networking

and the Educational Needs
of Northern High School
Students about Infectious
Diseases: A Mixed Methods
Research Project

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- Public health professionals, infection control experts, and other health professionals worked extremely hard to advise the public about H1N1 and to implement a massive vaccination program
 - television and radio blitzes
 - pod casts
 - web sites with regular updates

Impetus

- Important work to be done if Ontario wants to be prepare its upcoming leaders, now in high school, for the complex world of infectious disease
- While television and web sites may reach mothers and fathers, these tools are not the tools of today's youth

- Internet of today's millennial or digital native "is not his [her] father's Internet" (Tapscott, 2009, p.15)
- Neither learners nor learning has fundamentally changed. Rather, the tools of learning have and these tools can enable learners to interact with each other and ideas in novel ways (Bullen & Janes, 2007)

Further research evidence is required so educators understand and use Web 2.0 technologies in ways that support learning that is meaningful and effective (Schrum & Levin, 2009).

Question

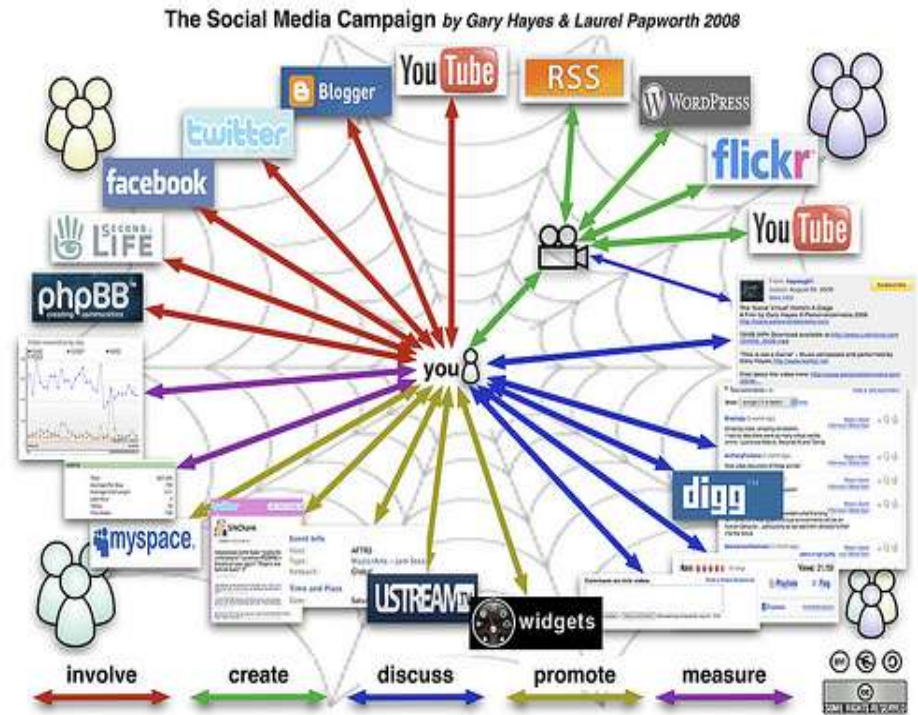
- **Research question:** Can social networking be used to facilitate a quality learning experience about infection control by high school students?
- **Focus:** Participants' learning and their perceptions of the effectiveness of social networking tools for learning



Design

- Mixed methods including an intervention of collaboratively designed educational unit with infection control focus (piercing & tattooing, allergies, vaccines, etc.) complemented by use of Web 2.0 technologies to reinforce learning

- Study was performed with students enrolled in a Grade 12 Biology class from the Rainbow District School Board in Sudbury, Ontario.



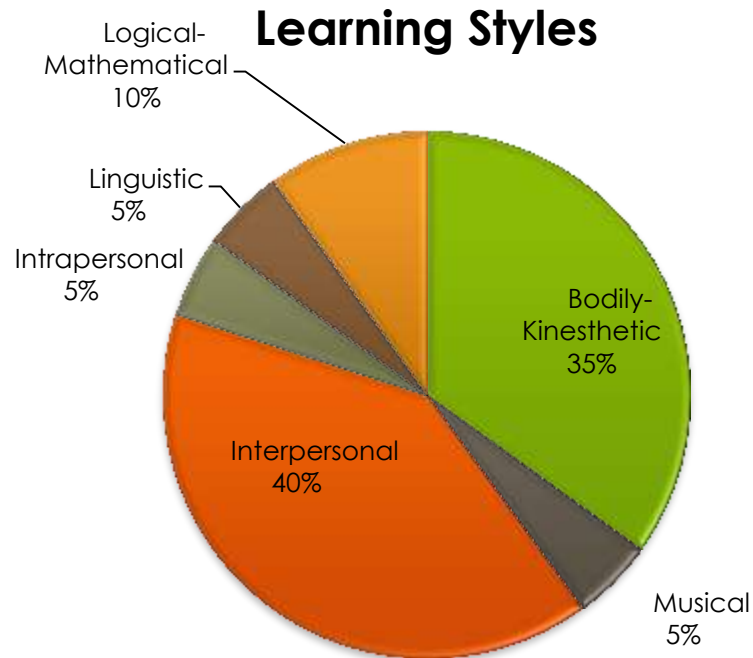
Phases

- Information gathering focus group with students conducted at health unit
- Pre-intervention test
- Group-based learning activity using Facebook
- Post-intervention test
- REB work



Demographics

- 21 pre-surveys and 18 post-surveys
- Gender: 62% Female, 38% Male
- Age: 15-18 years ($\mu = 15.9$, $\sigma = 0.63$)



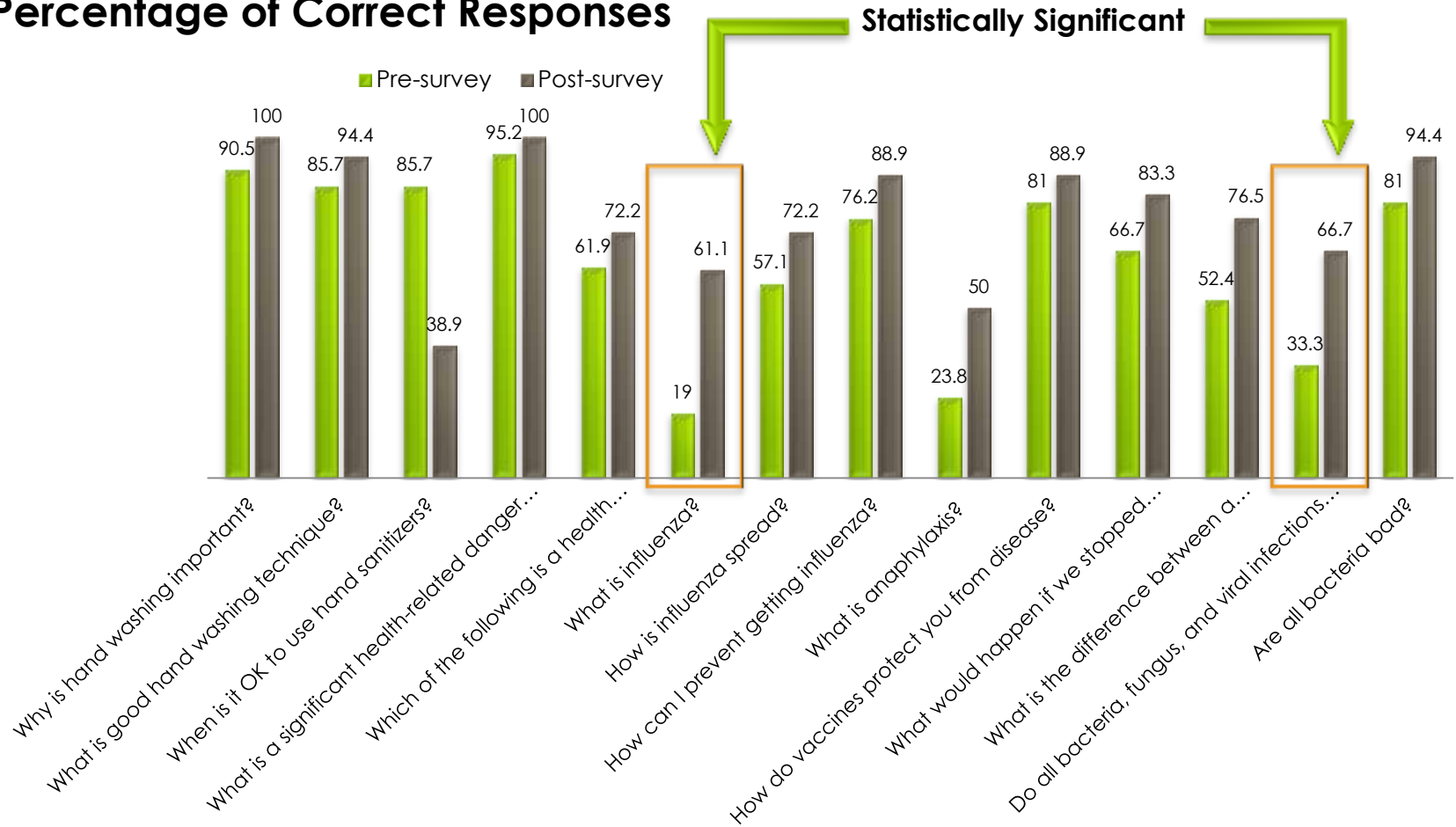
Measurement of Student Knowledge

- 14 dichotomous questions
- Questions covered six topic areas
- Same questions asked in pre- and post-tests
- 18 participants completed both pre- and post-test
 - pre-test: mean score of 8.44 (60%)
 - post-test: mean score of 10.78 (77%)
 - statistically significant improvement ($t = -4.88, p < .001$)

This increase in knowledge suggests that the use of Facebook did, indeed, facilitate and support learning.

Results

Percentage of Correct Responses



Results

Accessibility

- **Materials were accessible anywhere/anytime on a variety of devices** (e.g., laptop, tablet, smartphone)
- **Supported “just in time” learning**; students were able to access materials where and when appropriate

Improved Communication

- Communication was **quick and easy** (e.g., students received instant notifications when posts were made)
- **Platform choice increased student interest** in the content and interactions with content and classmates

Ubiquity of Platform

- Since the tool was familiar to the students, there were **no additional challenges to navigating the learning space**
- Participants mentioned that they **continued to use the platform outside of the study to communicate about other course-related tasks**

Limitations...

Representativeness

- The sample was confined to one classroom in northeastern Ontario. Results cannot be generalized beyond this setting.

Small Sample Size

- The sample size itself was small, and, thus, there may insufficient power to measure student knowledge about infection.
- Statistics have varying sensitivity based on sample size which affects generalizability.

Comments

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