



Classics

In the Growing Information Mall, Some Things Never Change

A Review of:

Fidel, R., Davies, R. K., Douglass, M. H., Holder, J. K., Hopkins, C. J., Kushner, E. J.,.... Toney, C. D. (1999). A visit to the information mall: Web searching behavior of high school students. *Journal of the American Society for Information Science*, 50(1), 24-37. [http://dx.doi.org/10.1002/\(SICI\)1097-4571\(1999\)50:1<24::AID-ASI5>3.0.CO;2-W](http://dx.doi.org/10.1002/(SICI)1097-4571(1999)50:1<24::AID-ASI5>3.0.CO;2-W)

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Abstract

Objective – The research study aimed to discover high school students’ information searching behaviour on the Web and suggest Web changes that would benefit student learning. This study was conducted in 1999, seven years after the Internet was publicly available and on the cusp of Web 2.0.

Design – Field study with class observations, students thinking aloud at their terminals, and interviews with the students after their

searching. The study’s duration was three class searching sessions.

Setting – West Seattle High School in Seattle, Washington. This school had a diverse population of students, with 50% students of color and many of these students first generation to finish high school. Due to a grant from Microsoft, West Seattle had operational four computer labs.

Subjects – Eleventh and twelfth graders in a horticulture class. There were eight student participants, six males and two females. Five of

these students were in 12th grade and three were in 11th grade. The teacher for this class, the school librarian, and the principal of West Seattle High School were also interviewed for this project.

Methods – Qualitative, case-study method was used with controlled comparison. Team members observed the students while they searched and wrote down descriptions of the students’ searching methods. After the three observation sessions and interviews with the students, team members wrote up a case study for each student. The students’ think-aloud audio, along with all the interviews conducted, were recorded. This type of method can be considered an early version of usability testing and user experience studies, a field that has grown tremendously since 1999.

Main Results – While each student observed had a different relationship with the Web and training on how to use it, similar searching strategies emerged from all participants. These strategies included focused searching, swift and flexible searching when results were not immediately found, using a webpage as a landmark to return to while searching, starting a new search, and asking for help when needed. It should be noted that focused searching along with the swift, flexible searching were strategies influenced by student motivation to complete their homework assignment as quickly as possible. The team noted exploration of the Web was kept to a minimum and this was due to the parameters of the assignment. Team members also identified similar frustrations and joys from the students when searching the Web. The study identified three steps that should be taken to help students more effectively navigate the Web. The steps included an increase in formal teaching on Web searching, embedded support in the Web to help students search, and relying on graphics to strengthen a Web experience.

Conclusion – Authors noted the possibilities the World Wide Web has to offer, especially in a school context. However, in order to fully

maximize those possibilities, the Web needs to take into account user experiences and information seeking behaviour, along with an increase in training on how to use the Web.

Commentary

Although nearing twenty years old, reading “A Visit to the Information Mall” feels like a conversation that librarians and teachers could be having right now. Fidel et al.’s work is a classic because it captured a snapshot of teens’ information seeking behaviours, behaviours which are still relevant and being researched by scholars today. While the Internet has improved on some of the weaknesses the authors identified, the authors’ discussion still resonates with readers.

Today, this article has been cited hundreds of times in a variety of disciplines and publications. We, as researchers, are still curious in the Web searching behaviours of elementary, middle, and high school students along with undergraduate students and adults. Fidel et al.’s article serves as a touchpoint in many literature reviews and to confirm findings related to desire for immediate results without broken links (Ho, Lin, & Chen, 2012), flexible searching techniques (Borlund, 2016), and relying on the use of graphical images (Chow, Smith, & Sun, 2012). The case study, interviews, and think-aloud method used in this study remain a popular way to observe and record information searching behaviours to make conclusions. Today, we see this method employed in user experience and web usability testing to help inform the creation and functionality of websites and web design.

This article also captured an important time in the growth of the Internet. Fidel et al. are writing on the cusp of some changes that have impacted the way we use the Web and find information. We can see this edge of change in this article through the suggestions Fidel et al. make for improving the user’s experience. One suggestion is the need for support in searching

the Internet. They suggest including a way to have “easy and immediate access to an encyclopedia” (Fidel et al., 1999, p. 34). Two years after this article was published, Wikipedia was created. As “a multilingual, web-based, free-content encyclopedia project...based on the model of openly editable content” (Wikipedia, 2017) Wikipedia serves the purpose suggested by Fidel et al. Today, Internet users are familiar with this website and use it for gathering background information. Additionally, beyond Wikipedia, we also have more traditional, online encyclopedias like Gale Virtual Reference Library, Credo Reference, or Britannica Student Encyclopedia for users to quickly access background content on a topic or idea.

During the time that Fidel et al. were working on this study, Google was just beginning to gain traction. Founders Larry Page and Sergey Brin received their first investor check in August 1998 (Google, n.d.). With the rise of Google, some of the frustrations with Internet searching identified in this article were alleviated. As a search engine, Google can help automatically correct spelling errors, uses several algorithms to rank results according to relevancy and popularity, provides alternate search suggestions, and employs graphical images to provide context and visual confirmation on a topic. Fidel et al.’s article captures the way the Internet was before these powerhouses entered the game and serve as a good reminder of the progress and growth of the Internet.

One of the biggest reasons this article should be considered a classic is the way it justifies the need to provide adequate training to teachers and students on how to use the Web because the authors believe it is “necessary for optimal learning of new topics” (Fidel et al., 1999, p. 34). Without some sort of formal Web training, the students are left to their own devices, coming up with strategies that might be inefficient and frustrating. This creates further tension between the user and the Internet when speed declines or the user becomes impatient with poor search results.

Even though today some of us might consider that *digital natives* intuitively know how to use the Internet, this article makes a strong case for why training is needed. The authors identify that the students are switching between learning how to use the Web and finding the information they need for their class assignment; they are unable to do both tasks well. Without any training, students gravitate toward finding the information as quickly as possible to get a good grade. This is then compounded by the fact the students are motivated to find information for their assignment; due to the parameters of the assignment, students then create searches and strategies all based around the ability to find what they need as quickly as possible. With this strategy, they are missing the process of seeking new information, developing search strategies, and making conclusions based on their findings. Articles published after Fidel et al.’s often point to this article as one where they recognized that students are not efficient in coming up with search strategies or the ability to evaluate information on the Web. Fidel et al. (1999) capture this best when they say, “With training, teachers could think of ways to use the possibilities of the Internet to challenge students to learn, not just to retrieve bits of information for assignments” (p. 34). This reframing really seeks to highlight a transformation in using the Internet in a school setting, and is something that current researchers continue to explore. Furthermore, as librarians who teach information and digital literacy, we know the benefits of providing a framework for students seeking information or wishing to use technology. When students are equipped with those baseline skills, it provides an opportunity to really dig into more abstract concepts on finding, using, and creating new information.

The World Wide Web has probably surpassed the size of “a shopping mall the size of Seattle” (Fidel et al., 1999, p. 24). However, no matter how large the Internet has grown, we can see similarities between the eight Seattle high school students and the way we use the Internet today. Fidel et al.’s article is a good reminder of the

changes the Internet has undergone to improve searching while also pointing to training that still needs to be done with users.

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