Chapter 15
Examining Web 2.0 E-Learning Tools:
Mixed Method Classroom Pilot

Janet Holland
Emporia State University, USA

Dusti Howell
Emporia State University, USA

ABSTRACT

With so many fields using new technologies in e-learning, we are all challenged with selecting and effectively implementing new Web 2.0 tools. This chapter provides a mixed method research approach to quickly evaluate available Web 2.0 tools and instructional implementation. Class observations and pilot study surveys were used to determine students' levels of satisfaction after using various numbers of Web 2.0 tools and varying student work group sizes. The pilot studies were designed to model initial classroom examinations when integrating emerging Web 2.0 technologies. Use of this type of pilot study approach is necessitated as many individual class sizes are too small for a full research study, and the time needed to conduct a full study using multiple classes could cause the results to quickly be out of date, thus not providing the needed immediate classroom data for just in time learning. Fast emerging technologies pose a unique challenge to traditional research methodology. Where immediate specific classroom data is needed, a needs analysis with a pilot study is the best option. Note, with emerging technologies, it is difficult to find appropriate literature to determine its effectiveness in the classroom. If desired, compiling the results from many small pilot studies offers an additional benefit of fleshing out key issues to be examined later in greater detail using a full research study for extending theory or scientific practices.

INTRODUCTION

Web 2.0 e-learning tools are often referred to as "those interactive Web sites where we, the public, supply the material" (Pogue, 2008, p. 1). Pogue goes on to define Web 2.0 as offering "a direct, more trusted line of communications than anything that came before it" (Pogue, 2008, p. 2). Pogue indicates it is more work to facilitate, but the positive gains are worth it. In essence, Web 2.0 e-learning tools allow for a window to get to know individuals' needs on a much deeper level. When we know more about the learners' needs, instructors can better facilitate knowledge acquisition. The biggest challenge is working to overcome fear from all parties involved. Even though the author is referring to business, the same concepts hold true in the educational arena, as well.

At Emporia State University, in the department of Instructional Design and Technology, our students have a wide range of professional interests, with all looking to us, the faculty, to help them find innovative ways to teach their content areas to others. In addition, our University administration has our IDT faculty training our colleagues, from all discipline areas across campus, to integrate Web 2.0 e-learning technologies, as a way to invigorate their classroom and online teaching. As a result, we have students in our classes expressing their excitement not just about our teaching and our tools, but about the new technologies our colleagues are now using. It is rewarding, especially knowing we have a hand in training them to make this happen.

We are finding Web 2.0 e-learning tools can be used to embrace new digital learning environments by having learners actively research, collaborate, innovate, and share their ideas. Many of the Web 2.0 e-learning collaborative communication tools can be used to increase knowledge acquisition quickly and efficiently while making global connections for broader perspectives. Providing meaningful integration of new technologies through the use of quality instructional practices

can alter how learners and instructors engage with concepts and each other to achieve powerful learning and meet workplace challenges.

With the vast amount of technology used in the modern work environment, it was just a matter of time until educational variants filtered down to the public school systems in an effort to prepare students for eventual workplace realities. One example is reflected in the new United States National Standardized Test on Technology and Engineering Literacy Assessment. Assessment data collection is anticipated in 2014 by the National Assessment of Educational Progress (NAEP) for K-12 public schools. This highlights the increasing need to get up to speed on the knowledge and skills needed to work with new and emerging e-learning technologies for teaching, learning, innovating, and collaborative endeavors.

EVALUATION OF WEB 2.0 E-LEARNING ISSUES

One of the driving objectives of the pilot study is to begin an examination of the overall information systems used for instruction to make wise educational decisions directed towards the effective and efficient integration of Web 2.0 e-learning technologies. The following six questions were the basis for the immediate action research pilots designed to optimize student learning when working with emerging Web 2.0 e-learning tools.

The guiding pilot study research questions included:

1. What Web 2.0 e-learning tools can be found through an extensive online search for instructional purposes?
2. How can the Web 2.0 e-learning tools be implemented into teaching by aligning instructional tools to the curriculum goals and objectives based on classroom observations?
3. What are the optimal number of Web 2.0 e-learning tools to use based on students'

Related Content

Geographic Information System (GIS) Modeling Analysis and the Effects of Spatial Distribution and Environmental Factors on Breast Cancer Incidence
Akram Gasmelseedand Ali H. Alharbi (2018). *Encyclopedia of Information Science and Technology, Fourth Edition (pp. 3448-3459).*
www.irma-international.org/chapter/geographic-information-system-gis-modeling-analysis-and-the-effects-of-spatial-distribution-and-environmental-factors-on-breast-cancer-incidence/184056

Fuzzy Decision Support System for Coronary Artery Disease Diagnosis Based on Rough Set Theory
Noor Akhmad Setiawan (2014). *International Journal of Rough Sets and Data Analysis (pp. 65-80).*
www.irma-international.org/article/fuzzy-decision-support-system-for-coronary-artery-disease-diagnosis-based-on-rough-set-theory/111313

ICT and Knowledge Deficiency
Rosa Iaquinta (2015). *Encyclopedia of Information Science and Technology, Third Edition (pp. 4575-4582).*
www.irma-international.org/chapter/ict-and-knowledge-deficiency/112899

Palmprint Recognition System Based on Multi-Block Local Line Directional Pattern and Feature Selection
Cherif Taouche, Hacene Belhadefand Zakaria Laboudi (2022). *International Journal of Information Technologies and Systems Approach (pp. 1-26).*
www.irma-international.org/article/palmprint-recognition-system-based-on-multi-block-local-line-directional-pattern-and-feature-selection/292042

An Optimal Routing Algorithm for Internet of Things Enabling Technologies
Amol V. Dhumane, Rajesh S. Prasadand Jayashree R. Prasad (2017). *International Journal of Rough Sets and Data Analysis (pp. 1-16).*
www.irma-international.org/article/an-optimal-routing-algorithm-for-internet-of-things-enabling-technologies/182288