Instructor Perceptions of Web Technology Feature and Instructional Task Fit

Troy J. Strader, College of Business and Public Administration, Drake University, Des Moines, IA, USA
Diana Reed, College of Business and Public Administration, Drake University, Des Moines, IA, USA
Inchul Suh, College of Business and Public Administration, Drake University, Des Moines, IA, USA
Joyce W. Njoroge, College of Business and Public Administration, Drake University, Des Moines, IA, USA

ABSTRACT

In this exploratory study, university faculty (instructor) perceptions of the extent to which eight unique features of Web technology are useful for various instructional tasks are identified. Task-technology fit propositions are developed and tested using data collected from a survey of instructors in business, pharmacy, and arts/humanities. It is proposed that the Web technology features can be classified into three groups. Ubiquity and universal standards are primary features that are useful for supporting all of the teaching tasks. Richness, interactivity, information density, and personalization are contextual features which are each useful for specific tasks. Global reach is of secondary importance for supporting traditional classroom instructional tasks. Support is found for each proposition except universal standards and social technology is not perceived to be as important as anticipated. Implications and conclusions are discussed for learning management system designers, instructors, and educational technology researchers.

Keywords: Attributes of Effective Classrooms, Educational Technology, Information Density, Interactivity, Personalization, Richness, Social Technology, Task-Technology Fit, Ubiquity, Universal Standards

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INTRODUCTION

New educational technologies are continually being developed and each year instructors must consider whether to adopt some of the new technologies to enhance their teaching effectiveness. Technology spending is a significant part of overall education budgets so identifying the right technologies is an important issue. It is expected that, in 2014, US public schools, colleges and universities will spend $20.4 billion on technology (Dunlap-Hahren, 2014). One example technology that has had far reaching implications is the World Wide Web (Web) and its associated information technologies.

In this study we address instructor perceptions of the fit between Web technology features and tasks that are associated with effective classrooms (instructional tasks). This study addresses issues of interest to learning management system designers, instructors, and educational technology researchers. The primary issue addressed is to identify instructor perceptions of the match between Web technology features and the instructional tasks they may support. The Web has been available for educational purposes for twenty years which is sufficient time for instructors to consider using the technologies and develop their perceptions regarding the best uses of Web technology in an educational context.

The findings from this study will help learning management system developers identify the most critical elements they must incorporate into their systems. Also, these findings will assist instructors and their educational institutions in determining which technologies are most critical in an environment where technology spending is limited and only the most effective systems may be acquired.

This study is unique because it matches the general features of Web technologies with a wide range of critical teaching tasks. Past studies have only addressed the usefulness of specific educational technology systems (for example, learning management systems). It also addresses the issues based on individual instructor perceptions rather than attitudes or adoption and usage behaviors.

The study background, propositions, methodology, and findings are discussed in the following sections. First, five instructional tasks associated with effective classrooms are discussed along with eight unique Web technology capabilities. This is followed by a discussion of the proposed fit between the technology and the tasks. Next, the study’s survey methodology and findings are discussed. The final section includes overall conclusions and discussion of managerial/research implications.

LEARNING MANAGEMENT SYSTEM TASK-TECHNOLOGY FIT STUDIES

Past studies have attempted to identify the relationship between educational technologies and their impact on instructor and student attitudes, usage, and resulting performance. These
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