

Chapter 13

Perceptions of Professors and Students towards Moodle: A Case Study

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ABSTRACT

With the current digital age, academic institutions are responsible for providing the latest technology for professors and students. The open source course management system Moodle, which a great number of organizations worldwide have adopted, is designed to help instructors deliver course materials to their students from a social constructivist perspective. The aim of this research is evaluate the acceptance and use of Moodle as an open source application from the viewpoint of both professors and students at the American University of Beirut. The theoretical framework for this study is drawn from the Unified Theory of Acceptance and Use of Technology (UTAUT) to investigate user intentions toward Moodle. The participants were 189 professors and 1,867 students who completed an online survey, evaluating a set of 30 items on a scale of five that reflected the UTAUT constructs applied to Moodle. An exploratory factor analysis was employed and generated five factors: community influence, satisfaction, service quality, learnability and technical quality. Repeated measures ANOVA showed community influence as the highest rated by participants, followed by satisfaction, service quality, learnability and technical quality. Also, two open-ended questions were included to solicit comments from users about various features that should be integrated into this free open source application.

INTRODUCTION

Free/Open Source Software (F/OSS) is typically free and provides users with source code that is shared via the internet and can be adjusted for users' own needs. F/OSS has its roots from near the beginning of computing where in the 1960's, researchers had to share software code, while using computers for their work, because commercial software was not available (Moon & Sproull, 2002). Later, when commercial software became accessible, F/OSS became a convenient alternative since it allowed users – most of

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whom were programmers – to have access to the source code. Thus, users were able to adapt and improve the program according to their personal needs.

In the 1980s, Stallman (1994) claimed that computer programs should be a public good where he called for Free Software, and established the Free Software Foundation. It is since then that the idea of F/OSS has gained more and more attention from developers and users and the advent of Free Open Source Software has significantly impacted the software ecosystem (Baytiyeh & Pfaffman, 2010a). Contributors offer code, reveal proprietary information, and help others to solve their technical problems. For instance, the SourceForge.net repository of OSS projects, on its own, hosts 86,873 OSS projects with 910,899 registered contributors (Bitzer, Schrettl, & Schröder, 2007).

In *The Cathedral and the Bazaar*, Raymond (1999) distinguished between two different styles of software development. The first is the open source software development which is comparable to a bazaar, where anyone has the right to join and contribute. The other style is the commercial software development, which is similar to a hierarchical cathedral style.

In today's electronic society, using computer applications is no longer a choice, but a necessity. Information technology has become a vital component of professors' and students' lives in academic institutions. However, with the abundance and variety of applications, it is not easy for academic institutions to determine what applications to adopt on campus such as a primary operating system, an Internet browser, or an office suite. Some institutions may decide to implement proprietary software and choose between Windows and Mac as the operating system, Internet Explorer or Safari as the Internet browser and Microsoft Office as the office suite. Other institutions might choose to implement Free Open Source Software (FOSS) such as Unix/Linux, Firefox or OpenOffice.

In addition, other essential applications are expected to be implemented on campus for academic use such as a Course Management System (CMS). In this regard, an academic institution can choose among several competing CMSs from both proprietary manufacturers and open source projects. CMS is a software application that provides specific features to assist professors in delivering learning materials to students while meeting pedagogical goals. The primary competitor is the commercial application Blackboard, especially after its acquisition of WebCT, where more than 20% of higher education institutions in the United States use it as their official CMS (O'Hara, 2005).

Among CMS products, Free Open Source Software (FOSS) are widely used because they can be obtained free of charge. These applications can also be configured to run on most operating systems. Open source software are developed by contributors worldwide, driven mostly by altruistic values (Baytiyeh & Pfaffman, 2010a). FOSS developers' aspirations are to ensure that education is available to everyone, regardless of financial ability, and provide the applications necessary for people to gain the life-long skills they need to succeed (Baytiyeh & Pfaffman, 2010b).

Moodle, the most popular free open source CMS, was developed from a social constructivist perspective by Martin Dougmias in Australia (Dougmias & Taylor, 2003). This free application provides instructors with useful features such as the ability to embed resources, activities that are centred on a topic of study and a variety of modes of operation. As such, in December 2006, the University of California at Los Angeles (UCLA) announced that they would converge on Moodle as the single open source platform for its learning environment (UCLA, 2006).

The main advantage of integrating FOSS such as Moodle on campus is the discharge of license costs. In addition, system administrators have the ability to modify and customize the product. On the other hand, adopting FOSS can be a challenging procedure because no guaranteed maintenance is offered, whereas with proprietary applications the software manufacturers provide support. In the absence of

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