Student Success: Implementing SharePoint in Higher Education

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Abstract

Research suggests that students perform measurably better when provided an electronic collaboration platform upon which they may interact with instructors and other students. This document will introduce SharePoint and explore how to improve student performance with this industry-leading technology platform. The Microsoft Office SharePoint Server 2007 platform (MOSS 2007), as well as several case studies of MOSS 2007 implementations in higher education, will be presented and discussed.
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Student Success: Implementing SharePoint in Higher Education

1. Introduction

This document will provide a discussion of how institutions of higher learning may enhance student success by deploying and implementing a portal technology. Specifically, the role of MOSS 2007 as an education portal platform will be explored and evaluated through a series of case studies of deployment scenarios in higher education. Finally, MOSS 2007 features and solutions created specifically for the education community will be introduced.

1.1 Scope of Discussion

This discussion will focus on the implementation of MOSS 2007 as an exceptional portal platform solution in higher education environments. An exploration of the various features of MOSS 2007, along with a few additional solutions and add-on packages, will demonstrate how MOSS 2007 supports the functions of collaboration, information sharing and social networking within the campus environment, as well as outside the walls of institutions of higher learning. Four case studies of MOSS 2007 implementations in higher education will be presented and the requirements behind the implementations will be investigated in order to understand actual uses of the product and examine real-world deployments in action.

1.2 Background

Emerging research illustrates that students perform better on several dimensions when provided with online learning, collaboration and support. Jim Farmer, Director of Georgetown University’s Interoperability Center and consultant to the US Department of Education, in his keynote speech at the Portal 2008 conference sponsored by Gettysburg College provided a synthesized report on data measuring the effect of technology on student success. Citing evidence from 12 studies gauging student success in higher education, Farmer presented data demonstrating that the use of technology in education, though requiring investment, increased pass rates, graduation rates, course grades, and overall satisfaction with the college experience among students.

Microsoft Office SharePoint Server 2007 (MOSS 2007) is the latest version of the Microsoft SharePoint portal platform serverware. This version has afforded users and administrators with many additional features and enhancements over previous versions of SharePoint. For example, new to the current version are the social networking features of blogging and wikis. Legacy collaboration and social networking features carried over from previous versions of SharePoint include libraries and lists, discussion boards, surveys, and workspaces.

Additionally, MOSS 2007 affords users with new enterprise search enhancements, out-of-the-box workflow, the ability to glean data from other data sources (Business Data Catalog) as well as the functionality to display the data in intelligent ways by utilizing key performance indicators (KPIs) and other business intelligence features.
2. Challenges for Today's Student of Higher Learning

In Jim Farmer's Portal 2008 Conference Keynote presentation, he cited findings of research examining the challenges college students are facing today. Farmer introduced the following statistics from a study by Thomas Weko of the Higher Education Policy Institute - Oxford, March 2004. These statistics emphasize some of the challenges that college students must overcome in the 21st century.

- Percentage of Full Time Students Employed: 73%
- Average Number of Hours Worked per Week: 21
- 25 Years Old or Older: 27%
- Alternate Part-Time/Full-Time Status: 34%
- Degree Completion: 66%

From this data, we may infer that students have less time to spend on campus, in the library or in class. Students are likely to be dealing with familial and / or parental responsibilities in addition to educational demands. According to the statistics, the majority of students are employed and working a significant number of hours per week. Time is a precious commodity for today's student. Students need to be able to access information as time permits, from whatever location is convenient for them.

Additionally, in a feasibility study of student accessibility, one university found that approximately 10.7% of their students categorize themselves as disabled. Enabling accessibility for disabled students is not only greatly encouraged for all institutions, but is mandated by law for state-run agencies and schools. (Section 508 of the Rehabilitation Act of 1973, as amended - 29 U.S.C. 794d).

Portals provide ready access to information when users are ready to use the information. The MOSS 2007 portal provides Section 508 compliant content and prompts enforcement and compliance to accessibility standards during content creation.

Portals connect people and information from disparate locations and enable collaboration across time and space.


3.1 What is SharePoint 2007?

Microsoft Office SharePoint Server 2007 (MOSS 2007) is a popular portal technology that is part of the 2007 Microsoft Office system. An educational organization may use Office SharePoint Server 2007 to facilitate collaboration, provide content management features, implement workflow processes, and supply access to information that is essential to organizational goals and processes.
SharePoint sites may be quickly created that support specific content publishing, content management, records management, or business intelligence needs. One can also conduct effective searches for people, documents, and data, participate in forms-driven business processes, and access and analyze large amounts of organizational data.

Microsoft Office SharePoint Server 2007 provides a single, integrated location where teachers, students, administrators, and parents can efficiently collaborate, find organizational resources, search for experts and information, manage content and workflow, and leverage information to perform better and more efficiently.

Features include:

- **Collaboration** - Allow teams to work together effectively, collaborate on and publish documents, maintain task lists, implement workflows, and share information through the use of wikis and blogs.
- **Portals** - Create a personal My Site portal to share information with others and personalize the user experience and content of an institutions’ Web site based on the user’s profile.
- **Enterprise Search** - Quickly and easily find people, expertise, and content.
- **Enterprise Content Management** - Create and manage documents, records, and Web content.
- **Business Process and Forms** - Create workflows and electronic forms to automate and streamline your business processes.
- **Business Intelligence** - Easily access critical information, analyze and view data, and publish reports to make information more available.

Amongst a crowded field of portal technology options, MOSS 2007 has quickly become a leading alternative for a wide range of organizations seeking to streamline access, consolidate information, and enable formal and informal interaction.

### 3.2 MOSS 2007 Case Studies

The Microsoft Case Studies catalog lists several examples of MOSS 2007 deployments in higher learning scenarios. To demonstrate how SharePoint may be implemented in higher education, a review of four recent deployments of the MOSS 2007 platform in US colleges and universities will examine the business requirements behind the deployments, as well as the implementation outcomes.

Reasons for implementation of MOSS 2007 vary greatly depending on the needs of the institution. In some case studies, the requirements focused on measuring learning outcomes and providing instructors and administrators with quick access to assessment and measurement data. Three institutions endeavored to provide intranet / extranet access for students to be able to interact remotely with systems. Two institutions sought to expand their course listings to include online course offerings. One school implemented a workflow process for professors to track their tenure review processes.

#### 3.2.1 Case Study 1: Washington State University

*University Uses Web-Based Collaboration Platform for Student-Centered Learning*

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Washington State University is the state’s largest land-grant university and offers in excess of 200 fields of study. In 2006, WSU’s Center for Teaching, Learning and Technology (CTLT) researched “collaboration technologies to integrate into university curriculum so that students could take more control of their learning experience and reach beyond the boundaries of the classroom” (MS Case Study, Washington State University). MOSS 2007, deployed with the My Site functionality enabled, met the stakeholder requirements for the portal platform. The My Site feature enables students to create their own workspaces, reflect on learning and share information with others inside and outside the university. MOSS 2007 functionality, including the My Site feature, allows students and faculty to move beyond traditional classroom learning, better preparing graduates for using collaborative digital technologies in the workplace.

Objective: To create a personalized, collaborative online experience for students, staff and faculty.

Solution: Deploy MOSS 2007 with My Site capabilities for authenticated users.

MOSS 2007 makes available to the user the enhanced features of My Site that better enable social networking. For example, the My Sites in MOSS 2007 may now contain webparts, RSS feeds to internal or external content, page links to personal and public blogs, wikis, lists, and document libraries. These features encourage information discovery for My Site visitors and facilitate social networking through sharing common interests and feedback on content. WSU was able to capitalize on these features and provide users with a personalized, collaborative experience with the MOSS 2007 portal and My Site.

3.2.2 Case Study 2: Queens University of Charlotte

University Launches Online Courses, Measures Learning Outcomes with Education Portal

Queens University of Charlotte is a private Presbyterian university located in Charlotte, North Carolina. Queens sought to implement online classes to meet the needs of the community and expand enrollment. A major requirement of the project was to rebuild the existing network infrastructure to accommodate a new online learning model. “Professors envisioned a campus-wide learning management system (LMS) for posting assignments and communicating with students. In turn, students wanted a central, easy-to-use Web-based resource for communicating with professors and fellow students.” (MS Case Study: Queens University of Charlotte.)

Objective: To expand into online learning and to provide professors with a standard learning management system (LMS) to enhance classroom-based teaching and communication with students.

Solution: Create a university learning portal by implementing MOSS 2007, the Microsoft Learning Gateway (MLG), and the SharePoint Learning Kit (SLK) creating an intranet, an LMS and an extranet, as well as a public facing site.

Prior to the deployment of the MOSS 2007 portal, professors used various tools to provide online content to their students. Some instructors used Moodle, an open source LMS package. Others used a mix of software packages to provide their students with web-based support. By deploying MOSS 2007 with the SharePoint Learning Kit and Microsoft Learning Gateway, Queens University was able to add online courses for adult learners which boosted revenue. In addition, the new system provided instructors and administrators with enhanced ability to measure learning outcomes. Finally, the university noted that the deployment improved administrative efficiencies and enabled the institution to establish a competitive advantage.
3.2.3 Case Study 3: Tallahassee Community College

College Boosts IT Services, Builds Community, with Information Management Solution

Tallahassee Community College offers high-quality education at low cost to students in Florida’s capitol. The school sought to implement an information management system that would enable collaboration and provide ready access to college data for students, faculty and staff. By deploying MOSS 2007, along with the Microsoft Office Professional Plus 2007 suite of desktop products, the college was able to provide users with a data-rich, interactive online experience.

Objective: To deploy an infrastructure that would achieve a more productive, collaborative environment and would improve the faculty, student, and staff user experience.

Solution: Deploy an integrated server and desktop-based information management solution that utilizes MOSS 2007 and the Microsoft Office 2007 suite of products as the foundation for enhanced campus collaboration.

The Microsoft Case Study of TCC notes that the school has greatly benefited from its integrated Microsoft solution to improve access to information, increase personal and team productivity, make better use of college data, and encourage personal connections. “One of the guiding principles of our college is that we must help students get to class in the best condition for learning,” comments TCC President, Dr. Bill Law. “Having these tools available to faculty, staff, and students is fundamental to being able to meet this goal.”

3.2.4 Case Study 4: St. John’s University

University Streamlines Faculty Tenure Process Using Microsoft SharePoint

St. John’s is one of the nation’s leading Catholic universities, recognized for its superb academic programs and diverse student life. Faculty members at St. John’s identified the need for an automated process to better facilitate the existing, paper-based procedure of tenure review. The expense and time involved in creating multiple documents each year, coupled with the university’s recognition of the opportunity to “Go Green”, created the need for an automated system to track tenure applications and approvals.

Objective: To provide an automated system replacing the manual tenure review process.

Solution: Deploy MOSS 2007 and implement out-of-the-box workflow, calendar and agenda.

The Microsoft Case Study of St. John’s University lists the benefits noted by faculty and staff after the launch of the MOSS 2007 tenure review application.

- Faculty applying for tenure now can submit a single electronic application rather than 45 hard copies requiring mountains of duplicate paperwork.
- The new system saves the university and faculty an estimated 225,000 sheets of paper each year.
• Approval committees now review electronic submissions rather than paperwork, allowing reviewers to come to approval meetings better prepared and without copying redundant paper.

• The preparation time required for the University Personnel Committee meetings has dropped from two or three hours down to about 15 minutes.

• Review time is shorter, and committee members have more business insight into the application status.

• Workflow functionality in the SharePoint solution helped to facilitate applications efficiently through every level of the approval process.

• Staff now has a comprehensive and easily accessible database of faculty expertise within the SharePoint site, which is helpful when the university is applying for a federal grant.

Though this particular SharePoint implementation was not student-centric, it was part of a broader initiative for St. John’s University that streamlined many processes across campus and earned the university a CIO 100 Award nomination by CIO Magazine. The application went to production in five weeks.

To summarize the case studies, four very different MOSS 2007 implementations in various US colleges and universities have been examined. Three of the four deployments involved producing and presenting student-centric content within MOSS portals. One of the schools deployed the SharePoint Learning Kit and Microsoft Learning Gateway to provide an infrastructure for online course offerings. One school deployed out-of-the-box workflow functionality and utilized the calendar and agenda features to simplify and automate the tenure review process. One school capitalized on the highly integrated user experience of the MS Office suite of products with MOSS 2007. All schools reported that MOSS 2007 empowered them to meet and exceed their institution’s portal goals.

4. MOSS 2007 for Higher Education

4.1 MOSS 2007 Functionality

4.1.1 Out-of-the-box Features

MOSS 2007 offers many collaboration and information management tools with the out-of-the-box deployment. The following list summarizes the standard portal features that are automatically deployed with MOSS.

• Shared Document and Form Libraries
• Lists (Announcements, Contacts, Tasks, Issues)
• Calendars
• Blogs
• Wikis
• Discussion Boards
• Surveys
• Workflow
4.1.2 Add-On Features and Solutions

Microsoft distributes and supports add-on features and solution packages specific to the needs of the education community. The SharePoint Learning Kit and the Microsoft Learning Gateway add customizable tools to the portal for educators to present course content to students and track student progress.

4.1.2.1 The SharePoint Learning Kit

The SharePoint Learning Kit is a SCORM 2004\(^1\) certified e-learning delivery and tracking application built as a MOSS 2007 solution. The solution offers the following core features:

- Supports SCORM 1.2, SCORM 2004, and Class Server content, allowing users to store and manage this content in SharePoint document libraries.
- Supports learner-centric and instructor-led (assigned) workflows.
- Allows assignment, tracking and grading of both e-learning and non-e-learning content.

The SharePoint Learning Kit is available at no cost to the institution and may be deployed to a MOSS 2007 portal with a minimal amount of effort by the farm administrator.

4.1.2.2 The Microsoft Learning Gateway

The Microsoft Learning Gateway (MLG) is a powerful, extensible suite of features designed to assist schools in meeting their priorities using a scalable, cost-effective framework. By deploying a Learning Gateway solution, students are offered personalized learning portals that bring to their fingertips everything they need to support their classes.

Password-protected access may be extended to parents, providing up-to-the-minute information on students’ attendance, grades, assignments, timetables, and upcoming events. Administrators are given a secure, personalized interface from which they may improve planning and follow-through, while making effective decisions. Senior IT decision makers are better equipped to analyze usage data and report key information to governors, regulators, and other key agencies.

Microsoft provides a demonstration of the MLG from all perspectives of access: student, parent, instructor and administrator. To download the demo application, please see the link in the appendix. For installation of this suite of features, contact your SHI account representative.

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\(^1\) **Sharable Content Object Reference Model (SCORM)** is a collection of standards and specifications for web-based e-learning. It defines communications between client side content and a host system called the run-time environment (commonly a function of a learning management system). SCORM 2004 introduces a complex idea called sequencing, which is a set of rules that specify the order in which a learner may experience content objects. In simple terms, they constrain a learner to a fixed set of paths through the training material, permit the learner to “bookmark” their progress when taking breaks, and assure the acceptability of test scores achieved by the learner. The standard uses XML, and it is based on the results of work done by AICC, IMS Global, IEEE, and Ariadne. – Wikipedia, March 2009.
4.2 Microsoft Higher Education Consortium
Microsoft encourages and invites participation and insight from the higher education community via the Microsoft Higher Education Consortium. A link to the consortium site is provided in the appendix.

4.3 Student Success with MOSS 2007
According to Microsoft, MOSS 2007 offers features necessary to help educators and administrators design and manage an online educational environment where:

- students are engaged
- parents are connected
- administrators are empowered
- instructors are inspired

Moreover, by direct, hands-on experience with the MOSS 2007 platform and integrated MS Office products, students are trained to work and interact more productively in today's business environment.

5. Conclusion
Student success in higher education is dependent upon many factors. Today's student faces challenges of juggling work, school and family obligations - making time a valuable commodity. Priceless to the student is the gift of time; portals provide the ready access to information that today's student needs when he/she needs it. MOSS 2007 maximizes the potential of portal technology by providing out-of-the-box collaboration and social networking functionality, along with information management strategies and tools. Add-on packages offer additional functionality specific to the education community, making MOSS 2007 the complete portal solution for the unique requirements of education.

Jim Farmer noted at the Portal 2008 conference that effective assessment for learning and growth involves using assessment as a tool for constant, incremental, and sustained improvement. MOSS 2007, deployed with the Microsoft Learning Gateway and the SharePoint Learning Kit provide a complete solution for effective and ongoing student assessment enabling constant and continuous student improvement.

In a presentation evaluating the Blackboard application, Jim Farmer stated, “Technology utilized well enhances and expands opportunities for learning at all grade levels. However, with regards to students of higher education, the mastery of technology that is currently utilized in the business community is imperative in preparing them for future success.” MOSS 2007 provides multiple avenues for collaboration and information sharing. Additionally, MOSS 2007 integrates with the widely accepted Microsoft Office suite of products (Outlook, MS Word, Excel, etc.) - preparing and training students in the software packages they will most likely encounter in the business world.

6. References


7. Appendix

Microsoft Higher Education Consortium

Microsoft Learning Gateway Demo Application Download

Queens University of Charlotte Case Study

Regis University Case Study

St. John's University Case Study

Tallahassee Community College Case Study

Washington State University Case Study

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