

THE UTILIZATION OF COURSE MANAGEMENT SYSTEMS IN BUSINESS SCHOOLS: SOME RECENT EVIDENCE

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ABSTRACT

The increasing utilization of course management systems (CMS) to deliver courses via distance education as well as to supplement the delivery of academic content for face-to-face instruction pose significant issues for academic departments. Departments are faced with a number of important decisions and issues relative to course management system utilization including: course design and development; testing and evaluation; student learning outcomes assessment; faculty development; faculty evaluation; and how to oversee the utilization of limited faculty time. This paper discusses the findings of a 2004 national study of academic department chairpersons in Business Schools examining their views on the above issues as well as course site creation and utilization patterns, perception of student learning, teaching quality and effectiveness, and perceived faculty enthusiasm for CMS utilization.

OVERVIEW

The utilization of course management systems (CMS) by both full-time and part-time faculty has increased appreciably in recent years (Finkelstien and Pittinsky, 2003). Unfortunately, budgets for technology, technology training, and faculty development have not kept pace. With the increased use of CMS, the need for an examination of the issues surrounding their use becomes imperative. Among the issues that need to be discussed include: factors shaping CMS use, how CMS are used, and perceived departmental impacts of CMS usage.

The emerging literature implies that initial adoption of course management systems, as with any instructional technology, is driven

primarily by the faculty need to address particular pedagogical needs. However, upon closer scrutiny, it would appear that “need” has less to do with pedagogy, per se, and more to do with classroom management. Morgan (2003) found that faculty members principally rely on course management systems to help communicate with students, provide students access to class materials (notes, syllabi, electronic resources) and for the convenience and transparency of an online grade book. Yet, very little is known about ways in which departments are currently utilizing CMS.

The objectives of this paper are to (1) briefly review the history and evolution of course management systems, (2) discuss the various reasons for which course management systems are being utilized by academic departments (instructional and non-instructional purposes), (3) discuss the findings of a 2004 national study of academic department chairpersons in general and on business department chairpersons specifically relative to their opinions on course management system utilization, their perceived effect on student learning, teaching quality, and educational effectiveness, and (4) discuss implications for departmental leadership.

BRIEF HISTORY OF CMS

According to a recent Campus Computing survey, more than four-fifths of all universities and colleges in the United States utilize one or more CMS (Morgan, 2003). Perhaps no other recent innovation in higher education has resulted in such rapid and widespread use as CMS. In the early to mid 1990’s, faculty

utilized a variety of web-based tools to supplement course content and curriculum. Many faculty began using email and basic HTML functionality in an attempt to increase student interaction and expand the depth and breadth of the teaching and learning process. Universities, in an attempt to lessen the burden on faculty, soon began hiring webmasters and instructional designers to assist faculty in putting together more dynamic learner-friendly sites. Concurrently, several higher education institutions and commercial (for-profit) companies foresaw the need for more flexible approaches to putting course materials on the web and the need for increased availability to learners via the Internet. These entities began developing systems that would be relatively easy to use, requiring little or no knowledge of programming language (HTML, Java), and with the tools necessary to be useful for instruction. Subsequently between 1995 and 1997, several university and commercial CMS applications were launched in the higher education market.

These early CMS saw only slight variation in available tools (Gray, 1998 and 1999; Katz, 2003). Over time, a core group of tools were available with essentially all CMS. These core components included tools for synchronous and asynchronous communication, content storage and delivery, online quiz and survey tools, grade books, whiteboards, digital drop boxes, and email communication. While the majority of these tools are seen in the most commonly used CMS today, the robustness, flexibility, and ease of use have generally all been refined. Additionally, a vast array of additional components have been added, including mechanisms for “just in time” delivery and integration to front and back-office administrative computing systems.

CMS UTILIZATION

The use of the Internet in higher education settings has become a more accepted and widely used tool in academia (Angelo, 2004; Glahn and Gen, 2002; Hawkins, et. al., 2004;

Katz, 2003; Maslowski, et al., 2000). With the advent of web editing tools and other programs, the need to learn HyperText Markup Language (HTML) and other programming languages has diminished. The use of the Internet has evolved from the display of static, dull, and lifeless information to a rich multimedia environment that is engaging, dynamic, and user friendly (Powel and Gill, 2003). As a result, the use of Internet resources (i.e. web pages) in course and curriculum development has made a significant impact on teaching and learning.

Recently, the development and refinement of university and commercially developed course management systems (CMS) like Blackboard , WebCT, and Prometheus, have accelerated web use in higher education (Angelo, 2004; Morgan, 2003). These technologies have made it possible to easily and efficiently distribute course information and materials to students via the Internet and have created opportunities for greater online communication and interaction (Gray, 1998 and 1999; Stith, 2000). Although these tools were initially developed for use in distance education pedagogies, their use in on-campus classroom settings to compliment traditional courses is now considered a viable and often preferred option.

SURVEY RESULTS AND DISCUSSION

During the spring of 2004, the authors conducted an on-line survey of a national random sample of 350 academic department chairpersons. One hundred fifty five (155) respondents completed the survey for an effective response rate of 45.0%. Approximately 11% of the respondents (17 chairpersons) were from departments within business schools. Table 1 below reveals the academic affiliation on all of the survey respondents.

Academic Affiliation

The academic disciplines reported by the survey respondents were broad. The most frequently identified academic discipline was Business (9), followed by Social Sciences and Communications (6 each), and Mathematics (5). Table 2 reveals that when disciplines were grouped by academic classification, the majority of respondents (39.4%) chaired departments in the Liberal Arts and Humanities, followed by Science and Technology (19.4%), Nursing and Allied Health (13.5%), Business (10.9%), and Education and Human Services (9.6%).

The survey instrument designed and field tested by the authors, collected data and information relative to the perceptions of academic department chairpersons and program directors on the life-cycle of web-based course management systems. The authors were also interested in the perceived degree of utilization of course management systems over time, and the perceptions of department chairpersons regarding the degree to which they perceived the use of course management systems led to measurable increases to either student learning or quality of instruction.

The survey was structured to collect data and information in four major areas (1) demographic data on institutional control, institutional type, location of institution (state), and the academic discipline represented by the respondent; (2) the length of time of CMS usage, the primary types of course for which a CMS is utilized; and the number of CMS course shells developed by departmental faculty; (3) an assessment of the degree to which CMS utilization over time has contributed to student engagement, student learning, quality of teaching; and (4) an evaluation of the reliance, time commitment, and enthusiasm of departmental faculty for CMS utilization over time. Analysis of survey data consisted of simple descriptive statistics.

Demographics

Table 2 illustrates that sixty-one percent (61.3%) of survey respondents reported that their current academic assignment was at a public institution. Most reported being employed in a public, Master's comprehensive institution (29.7%), followed closely by department chairs at public Doctoral research institutions (23.2%). Nearly forty percent (38.7) of the respondents indicated employment at a private institution. Department chairpersons at two year institutions comprised 3.2% of the sample.

Survey respondents came from 42 different States. The majority of survey respondents were from Midwestern states, followed by the southeastern and northeastern states. The business department chairpersons were almost evenly split between institutional types with 47.1% from public institutions and 52.9% from private institutions.

Departmental History of CMS Utilization

Nearly ninety percent (89.1% for the total sample and 88.2% for business chairpersons) of the respondents indicated that their department is currently using a web-based course management tool (i.e. Blackboard, WebCT, Prometheus, e-College, etc). CMS adoption patterns were consistent among both public and private institutions.

Table 3 provides answers about the primary types of courses for which the CMS was used. The majority of respondents indicated that CMS was used primarily to support traditional face-to-face courses (44.1%). Nearly one third of the department chairpersons indicated that hybrid courses (on-line supplement for traditional face-to-face courses) were the primary courses for which the CMS was used. Only one in four respondents (25.2%) indicated that the primary use of their CMS was to support web-based distance education courses.

Department chairs in business schools indicated a greater prevalence of using CMS for support of distance education courses, whereas the overall sample had a higher proportion of

CMS utilization to support hybrid courses. Survey data indicated no discernable differences between the business schools or other schools in using CMS to support tradition face-to-face courses.

A significant number of business departments have been using course management systems for more than five years (29.4%). The majority of business respondents (76.5%) have been using CMS technology to support their academic courses for more than two full academic years. Approximately one in ten respondents in the overall sample (10.8%) are relative newcomers to the use of course management tools, indicating departmental adoption as late as the fall of 2003.

Effects of CMS Utilization over Time

Table 4 illustrates that nearly seventy percent of the respondents (67.6%) indicated that departmental utilization of and reliance on their course management system has increased over time. For business chairpersons, the level was only slightly lower at 62.5%. Fewer than five percent of the department chairs indicated that CMS utilization and reliance had decreased over time. However, more than ten percent of the business chairpersons (12.5%) stated that departmental reliance on CMS had decreased over time.

However in Table 5 we see that just over half (51.4%) of survey respondents indicated that faculty enthusiasm increased concurrently over the same time period. 48.3% responded that faculty enthusiasm for using the course management system had either decreased or remained unchanged over time. Within business schools a slightly higher percent (56.3%) stated that faculty enthusiasm had decreased or remained unchanged over time.

Table 6 shows that 47.1% of respondents felt that there were corresponding increases in student learning while only 36.3% of business chairpersons agreed that there was an increase in student learning. In addition, 50.0% of business chairpersons believed there

is no appreciable change in student learning as a result of CMS adoption. Almost one in five business respondents (18.8%) believe that course management systems actually decrease student learning.

When asked to indicate the perceived degree to which the quality of teaching and instruction was affected, over time, by course management systems, Table 7 reveals that the majority of respondents (51.1% overall and 56.3% in business) felt that CMS utilization had not affected the quality of teaching in the department. Overall, only seven respondents (5.0%) responded that the use of web-based tools had decreased the quality of departmental teaching.

CONCLUSIONS

Since the majority of survey respondents (both inside and outside business schools) have been utilizing a CMS for more than two years – their responses are considered to be informed and non-trivial. It is assumed that their perceptions and opinions concerning the effectiveness and efficiency of CMS are valid.

There is no evidence from these survey findings to suggest that departmental utilization of a CMS leads to appreciable increases in student learning. Furthermore, there is no evidence to suggest that departmental utilization of a CMS leads to increases in the quality of instruction. In that respondents indicated no or negligible perceived gains to student learning or the quality of teaching (instruction), the primary purpose and/or advantage for continued CMS utilization is considered to be convenience to students.

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Table 1 -- Academic School Affiliation

School	Frequency	Percent
Business	17	10.9
Education and Human Services	15	9.6
Liberal Arts and Humanities	61	39.4
Science and Technology	30	19.4
Nursing and Allied Health	21	13.5
No Academic School Affiliation Noted	11	7.2
Total	155	100.0

Table 2 -- Institutional Type and Institutional Level – Total Sample

		Institutional Level				Total
Institutional Type		Associate's/Two Year	Bachelor's	Masters /Comprehensive	Doctoral /Research	
Public	Count	4	9	46	36	95
	% of Total	2.6%	5.8%	29.7%	23.2%	61.3%
Private	Count	1	10	30	19	60
	% of Total	.6%	6.5%	19.4%	12.3%	38.7%
Total	Count	5	19	76	55	155
	% of Total	3.2%	12.3%	49.0%	35.5%	100.0%

Table 3 – In what type of course does your department primarily use a web-based course management tool?

	Total Sample Percent	Business Percent
Support for Traditional face-to-face on campus course	44.1	41.2
Hybrid course (i.e. online supplement for traditional face-to-face course)	30.3	23.5
Web-based distance education course	25.2	35.3

Table 4 -- Over time, how has your departmental reliance on a web-based course management tool in teaching changed?

Reliance over time	Overall Percent	Business Percent
Increased Reliance	67.6	62.5
Decreased Reliance	4.9	12.5
Stayed About the Same	27.9	25.0

Table 5 -- Department's enthusiasm for using web-based course sites for its courses?

Departmental Enthusiasm	Overall Percent	Business Percent
Increased Enthusiasm	51.4	43.8
Decreased Enthusiasm	14.5	31.3
Unchanged Enthusiasm	33.8	25.0

Table 6 -- Perceived impact of a web-based course management tool on student learning

Perceived impact on student learning	Overall Percent	Business Percent
Increase in Student Learning	47.1	36.3
Decrease in Student Learning	8.1	18.8
No Change in Student Learning	47.1	50.0

Table 7 -- Has the quality of teaching in your department been affected by the utilization of a web-based course management tool?

Perceived change in the quality of departmental teaching	Overall Percent	Business Percent
Increased the Quality of Teaching in Our Department	43.6	31.3
Decreased the Quality of Teaching in Our Department	5.0	12.5
Not Affected the Quality of Teaching in Our Department	51.4	56.3