This study employs qualitative and quantitative research methods to capture how University of Wisconsin faculty use course management systems. Most previous research on course management systems has focused on faculty opinions of the technology or comparative analyses and rankings of competing products. Although both approaches yield useful results, neither tells us much about the contours of the technology use.

Studying technology use is challenging, and studying course management system (CMS) use is even more so, for several reasons. First, research must distinguish between self-description of use and actual use. Second, people with varying skills and needs use course management systems in different ways. In a single study such as this, which focuses on faculty CMS use in general, we could easily miss some of the nuances in use between, for example, those who make heavy use of the technology to teach distance education courses entirely online and those who use it to supplement their regularly scheduled face-to-face classes. Third, we face several obstacles in measuring CMS use:

- Most course management systems have poor reporting tools. Many, for example, lack ways to track courses offered by semester (or term), college, department, or any other criteria. Site administrators frequently have difficulty counting how many unique students are using a CMS. Thus, reporting on use is a tedious and time-consuming process that must often be done manually.1
- CMS site administrators keep a wide range of course sites on their servers. These include courses in development for future semesters as well as those rolled over from previous semesters that may still be active in some regard. This creates a disconnect between the courses listed in an institution’s course schedule or catalog for a particular semester and those listed as “active” on the CMS server during that semester. Consequently, to accurately determine how many courses are using a CMS in any given semester, site administrators can’t simply count the courses on the server (although this measure is frequently used), because this results in a serious overcounting of CMS use in instruction.
- Many instructors use different course sites for different sections of the same course. This makes it difficult to know whether to count these as single or multiple CMS uses for teaching.
- With most course management systems, it is difficult and at times impossible to measure activity without looking at each

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course individually. This means we can’t always tell whether faculty are using a course site or to what extent they’re using CMS features or tools. In addition, some CMS uses are ephemeral (for example, chat, unless the logs are saved), making it difficult to tell after the fact whether or not faculty have used certain tools.

**Quantitative and Qualitative Measures**

We sought to overcome these obstacles by using both quantitative and qualitative research methods. Through a process of triangulation, this research captures the multiple aspects of faculty CMS use. We used three research strategies:

- We developed and distributed a 31-question online survey to gather more quantitative data about how course management systems were being used, and analyzed all 730 responses to this survey.
- We interviewed 140 UWS faculty and staff about their use and support of course management systems.
- We analyzed usage logs of various CMS instances to get a more descriptive picture of the usage parameters.

**Quantitative Survey**

We constructed a 31-item survey using a commercial survey software package and asked CMS site administrators at each campus to distribute it to faculty using course management systems. We received 730 responses representing users from all UWS institutions.

**Faculty Interviews**

We conducted 140 semi-structured interviews that included UWS faculty and staff members and several faculty from other higher education institutions (see qualitative interview participants in Appendix A). In these individual interviews, we explored faculty CMS use by asking the following questions:

- How did you come to use the technology?
- What factors persuaded you to start using a CMS?
- For what purpose did you start using it?
- What features did you start using first?
- How has your usage changed over time?
- Has your usage increased?
- What factors drove you to increase or decrease your use?
- What tools did you add to your repertoire?
- What CMS features do you routinely use, for what purposes, and how successfully? What do you perceive to be the major advantages and disadvantages of course management systems? What other kinds of programs do you regularly use in conjunction with course management systems?
- What is your evaluation of student use, student technology skills, and student attitudes toward course management systems?

**CMS Usage Analysis**

We used two methods to analyze actual CMS usage. On three campuses, we opened and manually checked individual CMS course sites to determine how many sites were actively in use and what tools were being used. This analysis continued for a single semester at UW–Milwaukee, for two semesters at UW–Stout, and for five semesters at UW–Whitewater. These institutions had a sizeable number of courses in their course management systems. Unfortunately, some data had been lost in moving courses from one server to another. Chapter 6 presents the results of this data analysis.

On three other campuses, we used the Analog software tool to analyze usage logs and determine traffic on three CMS instances over two semesters. Chapter 6 also presents the results of this traffic analysis.
Endnotes

1. Some of the major CMS vendors are substantially improving these features in upcoming product releases. However, many of the measurement issues we uncovered in this study will likely remain problematic for some time.

