

Training ELF teachers to create a blended learning environment: encouraging CMS adoption and implementation

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Abstract. E-learning has become a crucial component of most tertiary institution's education initiatives (Park, Lee, & Cheong, 2007) and core to most e-learning strategies is the institution's Content Management System (CMS). A CMS has the potential to enhance language courses by facilitating engagement with class content, providing students with opportunities to communicate, promoting student confidence during virtual interactions, fostering deeper connections between teachers and peers, and creating more personalized learning activities. However, getting faculty to use a CMS proves to be challenging (Black et al., 2007). As part of a study by the authors to learn how they might encourage teachers in a campus-wide English as a Lingua Franca (ELF) program to adopt a CMS, this paper reports on results from a Technology Acceptance Model (TAM) analysis (Alharbi & Drew, 2014).

Keywords: CMS, blended learning, ELF, teacher training.

1. Introduction

Within the large variety of e-learning technologies on the market, universities around the world have invested in electronic CMSs or Learning Management Systems (LMSs) for a range of purposes (Alharbi & Drew, 2014; Toland, White, Millis, & Bolliger, 2014). Defined by McCabe and Meuter (2011) as “an integrated set of web-based tools to help facilitate course administration and delivery” (p. 150), a CMS makes it possible for teachers to manage their courses both electronically

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and remotely, fulfilling such tasks as document sharing, assignment distribution and collection, quizzes, wikis, blogs, discussion boards, exam management, and grading management (Toland et al., 2014). Effective CMS implementation also allows students to engage with class content at times convenient for them and they can utilize a variety of learning tools found within the system.

Using the Technology Acceptance Model (TAM), this study will report on staff perceptions of the established Blackboard CMS in a university-level ELF program, and present some suggestions for augmenting the effective use of the CMS in a language program.

1.1. The technology acceptance model

Introduced by Davis (1989), the Technology Acceptance Model (TAM) remains a favored theory that models how users of information systems come to accept and use a technology. The TAM model's longevity can be attributed to its reliability and flexibility as a measurement device (Fathema & Sutton, 2013). The model considers factors that affect an individual's intention to use computer systems or software applications and explores the interaction between two key variables: Perceived Usefulness (PU) and Perceived Ease Of Use (PEOU). PU was identified by Davis (1989, p. 320) as the extent to which the potential software application augments the user's job performance. PEOU considers whether the performance benefits of a system outweigh the efforts of use.

Recognizing that teachers have crucial roles to play in the application and use of CMS technology, few studies have focused on teachers. This study mirrors the work of Alharbi and Drew (2014) who considered the perceptions of a LMS among university faculty in Saudi Arabia.

1.2. The teaching context

This investigation is being undertaken by a center which manages a campus-wide, university ELF program in Tokyo, Japan. The program is comprised of approximately 2600 students taught by 41 teachers – 29 of whom are part-time. As this program observes a hiring policy that all teachers need not be native English speakers, it has attracted a diverse faculty representing 12 different nationalities. The faculty have different teaching experiences and varying degrees of familiarity with technologies. This diversity and the substantial number of part-time teachers represents a challenge in that CMS adoption, and a willingness to use a CMS, may be influenced by both employment status and previous experiences with

technology for educational purposes. As most faculty in this study teach at multiple universities, there may also be a reluctance to invest the time and energy required to implement a CMS effectively.

Among all faculties, ELF teachers are recognized as the heaviest users of the CMS – with 88% of the full-time and 78% of part-time faculty using the system (Milliner & Cote, 2014). In spite of relatively high levels of use, the authors were interested in teachers' perceptions of the CMS to learn how they might leverage adoption and usage rates.

2. Research methods

2.1. Hypothesis testing

The basic assumption of the TAM model is that (a) a teacher's intention to use the CMS is positively affected by their perception of usefulness and their overall attitude towards the CMS, (b) a teacher's attitude towards using the CMS is positively affected by their perceptions of the CMS' usefulness and ease of use, and (c) a teacher's perception of usefulness is directly affected by their perceptions of ease of use. In the context of this study, PU is defined as the degree to which CMS use would support and/or enhance teaching practices, while PEOU is the perceived degree of effort required when learning how to use the CMS. This study investigates eight hypotheses (listed below) concerning relationships between the following variables: PEOU, PU, Attitude Towards Using (ATU), and Intention To Use (ITU) the CMS. Two additional variables were tested: the possible influences Employment Status (ES) and Blackboard Experience (BE) may have on intentions to use the CMS.

2.2. Participants

29 teachers employed as full-time assistant professors (7) or part-time instructors (22) participated in the study.

2.3. Instrumentation

Prior to the 2015 academic year, all teachers were asked to complete an online questionnaire. The first five items focused on teaching and experience using Blackboard, while the remaining questions (20) concerned the TAM analysis. All TAM items used a seven-point Likert scale and a reliability assessment was completed using Cronbach Alpha. Our calculation of Cronbach Alpha produced an

overall result of 0.91, which reinforces the reliability claims of the TAM scale and enhances the validity of the following results.

3. Results

3.1. Respondent data

11 of the 29 respondents (38%) reported that they had either never used Blackboard (8), or used it for less than a year (3). The most common response was 1-3 years of Blackboard experience (14/48%). Four teachers (14%) reported that they had been using Blackboard for more than three years.

3.2. Hypothesis testing

For the TAM items, a correlation analysis was implemented to examine the relationship between different variables, and ultimately, to make decisions on whether to accept or reject the eight research hypotheses. Table 1 (below) provides a summary of the statistical results.

Table 1. Summary of Spearman's r correlation statistics (N=29)

| | PEOU | PU | ATU | ITU | ES | BE |
|--------------------------------------|-------------|-----------|------------|------------|-----------|-----------|
| PEOU r _s -value | 1.000 | .512** | .461* | .364 | .058 | .260 |
| PU r _s -value | .512** | 1.000 | .754** | .669** | .164 | -.183 |
| ATU r _s -value | .461* | .754** | 1.000 | .595** | .039 | -.194 |
| ITU r _s -value | .364 | .669** | .595** | 1.000 | .030 | -.048 |
| ES r _s -value | .058 | .164 | .039 | .030 | 1.000 | |
| BE r _s -value | .260 | -.183 | -.194 | -.048 | | 1.000 |

*. p<.05. **. p<.01.

Our analysis enabled us to accept the following hypotheses:

- Perceived ease of use positively affects perceived usefulness of the Blackboard CMS (.512).
- Perceived ease of use positively affects attitudes towards using the CMS (.461).
- Perceived usefulness positively affects attitudes towards using the CMS. This correlation (.754) was the strongest hypothesis tested.
- Perceived usefulness positively affects behavioural intention to use the CMS. This correlation was also notable (.669), suggesting that teachers' perception of usefulness may be the most significant variable influencing their decisions to use the CMS.
- Attitude towards using positively affects intention to use the CMS (.595).

The following hypotheses were rejected:

- Perceived ease of use positively affects intentions to use the Blackboard CMS.
- Employment status positively affects intentions to use the Blackboard CMS.
- Prior Blackboard experience positively affects intentions to use the Blackboard CMS.

4. Conclusion

Similar to previous findings, this investigation has been able to confirm the reliability of the TAM for measuring faculty members' intentions to use new technologies. When teachers face the decision to utilize a new technology or not, it appears that perceptions of its usefulness, and more importantly, the degree to which it could augment teaching practices, is most significant. Nevertheless, perceptions about whether the benefits of a technology outweigh the efforts to use the technology are similarly important because, as our analysis found, perceived ease of use influences teacher attitudes towards using the CMS and their perceptions of its usefulness.

Moving forward, the authors of this study intend to consider the information gathered from this TAM analysis to refine their strategy of increasing CMS adoption among the faculty. Specific plans call for a review of individual course templates

and default settings to make them more useful; to provide training sessions that highlight the usefulness of certain functions by demonstrating with examples from our own classes; and, bring attention to the quality of e-learning support at the university.

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