PERCEPTIONS OF BARRIERS TO LEARNING MANAGEMENT SYSTEMS AMONG TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES TEACHERS IN ALABAMA AND MISSISSIPPI

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This quantitative study aimed at investigating various barriers that hindered the diffusion of learning management systems (LMSs) as perceived by teaching English to speakers of other languages (TESOL) or English as a second language (ESL) teachers in the states of Alabama and Mississippi. A nonprobabilistic purposeful sampling was used in the selection of participants for this study ($N = 99$). Data were collected using an online questionnaire. The study determined the perceptions held by ESL/TESOL teachers about potential barriers to the adoption of LMSs in their online teaching. Results showed moderate barriers to the adoption of LMSs and concerns about time, planning, finances, technology, and incentives. The barriers with the highest levels were planning, time, and incentives.

INTRODUCTION

The increasing demand for studying the English language frequently requires teachers to meet the needs of a large population of English language learners (ELLs) from diverse backgrounds with various educational needs. Teaching English to speakers of other languages (TESOL) often entails teachers accepting and integrating innovation and change into the learning process (Godwin-Jones, 2015). Several factors contributed to the shift to the latest innovations in teaching English as a second language (ESL). First, the emerging use of technological interventions in education at large through adopting online/hybrid learning has motivated change at the teaching and learning levels (Turnbull, 2010). Second, the fact that universities adopt learning management systems (LMSs), a trending technologi-

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cal innovation, implies that a set of responsibilities are added to the role of the ESL/TESOL, which leave educators unable to choose which platform to use for students' learning (Varghese & Jenkins, 2007). Third, the need to provide learners with more interactive skills has increased the need to promote teachers' performance to adopt a set of innovative teaching approaches and tools, including LMS environments.

Blackboard, Moodle, Desire2Learn, Schoology, and Canvas are leading LMSs (Salisbury, 2018). LMSs have been used in language teaching to create an online presence where learners can access and perform different learning activities. Examples are downloading files and notes to access the discussion boards, viewing short videos, and submitting quizzes and assignments (Blair & Hoy, 2006). An LMS is also used to support face-to-face course delivery (Coates et al., 2005), blended instruction, virtual training, and distance education (Dahlstrom et al., 2014).

THEORETICAL FRAMEWORK

For this research, the theoretical framework was drawn from Everett Rogers' (2003) Diffusion of Innovation. Rogers (2003) noted that "an innovation is communicated through certain channels over time among the members of a social system" (p. 5). Diffusing an innovation requires some mediums of communication (Rogers, 2003). Diffusion, according to Rogers (2003), is "a kind of social change" (p. 6) occurring in the structure of a social system. The diffusion rate is linked with how adopters perceive a specific innovation and its characteristics (Rogers, 2003). The perceived attributes of innovation are, therefore, a good explanation of the rate of adoption that happens over a specified time frame. Five attributes of innovations affect the adoption rate and impact the speed of its diffusion: relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Innovations with low complexity and high relative advantage, observability, trialability, and compatibility can diffuse quickly (Moore & Benbasat, 1991). Other factors, often called barriers, can negatively influence perceptions, the characteristics, and the rate of innovation diffused (Schifter, 2000). Teachers' adoption of LMSs increases when barriers are eliminated (Schifter, 2000; Tabata & Johnsrud, 2008). Similarly, facilitating conditions in teaching can encourage users' adoption of an innovation and reduce barriers (Panda & Mishra, 2007).

LITERATURE REVIEW

A literature review found significant studies (Hussein, 2011; Shea et al., 2005; Zhao et al., 2002) regarding barriers that may inhibit TESOL teachers from adopting a LMS. Barriers are operationally defined as negative influence factors on the perceptions and attitudes of the adopters of LMSs. The researcher for this study has identified five possible barriers based on the literature: time, incentives, finance, planning, and technology concerns (Betts, 1998). Myers et al. (2016) found that resistance to a new idea can hinder the adoption and diffusion of innovations (Wilcox et al., 2016). Obstacles to the adoption and diffusion of innovation can be related to "program credibility, administrative support, planning issues, technical expertise, financial concerns, concerns about time, concerns about incentives, infrastructure, conflict with traditional education, and fear of technology" (Li & Lindner, 2007, p. 47).

Other studies on teachers' perceptions of barriers to the diffusion of LMSs have shown that factors such as technical support, previous positive experience, course contents, and university departments' logistics affect faculty's perceptions and attitudes to integrating technology in the classroom (Shea et al., 2005). To examine the factors influencing the use of LMSs in Saudi Arabian higher education, Asiri (2012) identified and described some sets of external barriers that faculty members

encountered. He classified them into three core categories: planning barriers, technological barriers and social barriers. Planning barriers are related to the organizational and logistic measures usually made to support technology in the classroom setting (Zhao et al., 2002). Al-Senaidi et al. (2009) explained that poor planning and technical support within public institutions are significant obstacles to faculty's adoption and use of Jusur LMS.

Hussein (2011) examined faculty members' attitudes at Saudi universities toward Jusur LMS. Results from the study revealed a set of positive attitudes toward Jusur LMS and three types of barriers: personal constraints, administrative constraints, and physical constraints (Hussein, 2011). According to Hussein, personal barriers refer to the strong resistance toward change or development in academia. Also, there is sometimes a need for more awareness about the importance of the integration of LMS, and therefore resistance to change emerges as an attitude toward the shift to distance education (Garrote, 2012).

Ottenbreit-Leftwich (2010) argued that teachers' beliefs about instruction tools indicate classroom use of technology (Ertmer & Ottenbreit-Leftwich, 2010). Ngai et al. (2007) indicated that facilitating conditions are enablers or barriers that impact a user's perception of simplicity or difficulty when carrying out a job. In a study investigating teachers' perceptions of library LMSs, results revealed the following barriers: the need for more awareness about the importance of the innovation, the lack of incentives, and the lack of training. These obstacles hinder faculty adoption and use of the library LMS tools (Leeder & Lonn, 2014).

Bennett and Bennett (2003) argued that teachers' perceptions of time spent learning how to teach using technology and the complexity of the innovation are major obstacles to not fully adopting instructional technologies. Researchers also agree that many types of instructional technologies require time for learning and teaching (Heijstra & Rafnsdottir, 2010). Introducing an innovation requires more commitment to pedagogy (Benson & Palaskas, 2006). This situation makes faculty need help with the course's pedagogy and how to communicate the learning goals to the students by utilizing LMSs as an innovation. Such a process often takes time and effort to be effective (Reid, 2014). Instructional technologies such as LMSs have facilitated the shift to student-centered learning; however, Folkestad and Haag (2002) reported that faculty adopters perceive this as a disincentive and noted it necessitates more time compared with face-to-face instruction (Worley & Tesdell, 2009). Instructors are regarded as the first contact to whom students can report their LMS technical issues, which adds more workload on the teacher (Judge & O'Bannon, 2008).

Another barrier that impedes faculty's adoption of LMSs is legal concerns. All types of LMSs, such as Canvas, Moodle, or Blackboard, require instructors to upload class contents and materials into the online environment. This process involves ownership concerns, raising questions about copyright laws (McGrail & McGrail, 2010). Because the legal aspect of the online environment involves complex copyright regulations, faculty often express uncertainties and resistance by avoiding sharing class material online (Bruner, 2007). Universities do not treat online course materials as intellectual property, which creates a conflict of ownership among the academic community (Bruner, 2007).

Along with these challenges, incentive barriers can also inhibit the adoption of LMSs among faculty. The online environment has changed the role of the instructor, who is becoming both an instructor, a facilitator, and a technician of online courses via LMS. Such a shift in the roles, when not adequately supported by structure, training, and funding, can generate task concerns for adopters (Khan et al., 2015) and hinder innovation adoption. Online educators' need for compensation and recognition has regularly been identified as an obstacle for potential adopters (Muilenburg & Berge, 2009). Edwards and Minich (1998) found that most instructors needed to be recog-

nized for their distance education times and efforts. Padilla and Terry (2010) argued that other types of incentives could motivate instructors to be invested in the innovation by "creating mechanisms to give faculty from different disciplines course credits for team teaching" (Hainline et al., 2010, p. 5). Feldstein (2017) argued that teachers would only remain motivated to spend time and effort if institutions provided some incentives. Wolcott (2001) explored faculty views on compensation and workload concerns and found that this population was more motivated by intrinsic factors than by extrinsic factors (Meyer, 2012). Betts (1998) noted that extrinsic factors are related to the intellectual challenge, personal drive to use technology, ability to reach out to a new population of students who cannot attend on-campus face-to-face classes, promotion, tenure, and recognition and reward. Intrinsic factors are related to the lack of release time, the lack of technical support, and the lack of clarity regarding workload. Intrinsic factors impact faculty participation in online education more than extrinsic factors (Betts, 1998).

PURPOSE

The purpose of this descriptive study was to describe teachers' perceptions of barriers to adopting LMSs (time, incentives, finance, planning, and technology). The findings presented in this article are part of a more extensive study that aimed to understand the influence of faculty perceptions about attributes and barriers influencing the diffusion of LMSs.

METHODS

The research presented in this study is part of a larger study that examined the influence of selected factors on the adoption of a LMS by TESOL) or ESL teachers. The target population was the faculty and teachers of TESOL in the states of Alabama and Mississippi. Very few studies at the time of the research have examined the perceptions of LMSs among TESOL teachers in the states of Alabama and Mississippi. The target population was selected based on their role as leaders of their classes and part of communities of practice, adult educators, ESL teachers, and Intensive English Programs (IEPs) full-time and part-time instructors.

A nonprobabilistic purposeful sampling was used to select participants for this study, and the board of the Alabama-Mississippi Teaching English to Speakers of Other Languages (AMTESOL) permitted access to the population. The target population had 400 TESOL/ESL teachers (L. Preston, personal communication, May 14, 2019). Cochran's (1977) formula was used to estimate the sample size ($N = 99$). A questionnaire administered online was used to collect data. The instrument was based on research by Harder and Lindner (2007), who studied the diffusion of eXtension among the Cooperative Extension agents in the state of Texas (Harder, 2008; Li & Lindner, 2007). The instrument was used in several contexts to measure participants' perceptions when adopting innovations in agriculture.

Participants were asked to rate 28 statements on a 5-point summated scale, where 1 = *strongly disagree*, 2 = *disagree*, 3 = *neither agree nor disagree*, 4 = *agree*, and 5 = *strongly agree*. Harder (2007) proposed five constructs that this study has adopted: (a) financial concerns (4 items), (b) concerns about time (5 items), (c) concerns about incentives (6 items), (d) planning concerns (5 items), and (e) technology concerns (8 items). Under each construct, statements were modified based on Harder's (2007) instrument.

In a replicate study, Lindner and Harder (2007) previously tested the instrument's reliability, where $\alpha = .92$ (Cronbach, 1951). The instrument was adopted from Lindner and Harder (2007), where permission was obtained from J. Lindner (personal communication, August 20, 2018). Content validity was tested in the original instrument by a panel of experts

composed of faculty members in the Department of Agricultural Education, Leadership, and Communications at Texas A&M University and the national marketing director of eXtension. The wording for several statements was modified and tailored to survey TESOL teachers and increase the possibility of obtaining valid and reliable results. Table 1 summarizes the number of items that this study did differently from Harder's (2007) number of items.

The questionnaires were emailed to (a) IEP directors working for the public system in Alabama and Mississippi, (b) IEP instructors in both states, (c) the TESOL International organization e-lounge, and (d) the Alabama-Mississippi Teaching English to Speakers of Other Languages. Email invitations to take the survey introduced the researcher, the research, and its importance, along with an attached letter of information, including the institutional research board permission to collect participant data. Data collection started on April 17, 2019, and ended on May 30, 2019. Nonresponders were reminded after 10 days of nonresponse. The total number of responses was 150, and the final sample size was (N = *99*), with a 25% response rate. There were 51 responses removed because of incomplete or missing data.

RESULTS

This study describes teachers' perceptions of barriers to adopting LMSs by time, incentives, finance, planning, and technologies. Results show the means and standard deviations of the five barriers. The barriers that have higher values at the level of the mean were: planning (M = 3.66, SD = 0.90), time (M = 3.54, SD = 0.96), and incentives (M = 3.53, SD = 0.91). Barriers with lower mean values included technology concerns (M = 3.47, SD = 0.81) and financial concerns (M = 3.48, SD = 0.98). TESOL/ESL teachers from Alabama and Mississippi perceived all five constructs as moderate barriers to adopting LMSs.

CONCERNS ABOUT TIME

Five statements measured participants' perceptions about time concerns as a barrier to the adoption of a LMS. Table 2 displays the results, which were described by frequencies and percentages. Forty-eight point four percent of participants agreed or strongly agreed about time concerns accessing material in LMS. Forty-eight point four percent of participants indicated it was a strong or very strong barrier to responding to online requests through LMS, and 22 indicated it was moderate. As to the lack of time to meet students' needs, 57.2% of

TABLE 1

Reliability Levels of Internal Scales

Measures	*Scale*	*Cronbach Alpha, as Described in Harder and Lindner (2008)*	*Harder's (2007) Number of Items by Construct (Items Adapted for This Research)*
Concerns about time	5-point summative scale	.89	5 (5)
Concerns about incentives	5-point summative scale	.92	7 (6)
Financial concerns	5-point summative scale	.91	5 (4)
Planning concerns	5-point summative scale	.92	5 (5)
Technology concerns	5-point summative scale	.88	9 (8)

Note: Reliability levels ≥ .80 were considered acceptable (Harder, 2007; Harder & Lindner, 2008).

TABLE 2

Distribution of Participating ESL/TESOL Teachers by Their Perception of Concerns About Time as a Barrier to the Adoption of a LMS

		No Barrier		*Weak Barrier*		*Moderate Barrier*		*Strong Barrier*		*Very Strongly Barrier*	
T Time Concern Items	*n*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Lack of time available to access material in the LMS	91	2	2.2	25	27.5	20	22.0	19	20.9	25	27.5
Lack of time to meet the need of students using LMS	91	5	5.5	15	16.5	19	20.9	28	30.8	24	26.4
Lack of time to learn to incorporate LMS into job responsibilities	90	1	1.1	14	15.6	19	21.1	35	38.8	21	23.3
Lack of time available to respond to online request	91	2	2.2	25	27.5	20	22.0	19	20.9	25	27.5
Lack of time available to search for information on LMS	89	0	0	20	22.5	21	23.6	29	32.6	19	21.3

Note: Overall $M = 3.54$; $SD = 0.96$; scale: 1 = *no barrier*, 2 = *weak barrier*, 3 = *moderate barrier*, 4 = *strong barrier*, 5 = *very strongly barrier*; $n \neq 99$ due to item nonresponse.

participants indicated it was a strong or very strong barrier, while 20.9% indicated it was a moderate barrier.

As to the need for more time to learn how to incorporate LMSs into the typical jobs for teachers, 15.9% of participants indicated it was a weak barrier. In comparison, 62% indicated it was a strong or a very strong barrier. Regarding the lack of time to search for information on LMSs, 53.9% of participants indicated it was a strong or very strong barrier, and 23.6% indicated it was a moderate barrier. Overall, the mean and standard deviation for concerns about time as a perceived barrier to adopting LMSs were $M = 3.54$ and $SD = 0.96$. ESL/TESOL teachers tended to perceive time concerns as a moderate barrier.

CONCERNS ABOUT INCENTIVES

Participants' perceptions of concerns about incentives as a barrier to adopting LMSs were measured by participants' responses to five statements. Table 3 displays the responses' results described by frequencies and percentages. Monetary compensation was indicated as a barrier to adopting LMSs, and 48.4% of participants indicated it was a strong or very strong barrier. The lack of institutional recognition can be a barrier to adopting LMSs, and 51% of respondents indicated it was a strong or very strong barrier. Participants indicated that the lack of correlation between a teacher's use of LMSs and teachers' evaluation could be a barrier. Over 20% of these participants indicated it was a very strong barrier, 27.5% revealed it was a strong barrier, and 39.6% indicated it was a moderate barrier.

Concerning the lack of rewards for involvement with LMSs, 33% believed it was a strong barrier and 24.2% indicated it was a very strong barrier, and 30.8% indicated it was moderate. The lack of monetary incentive for using LMSs was a barrier that hindered the adoption of LMSs. Forty percent indicated it was a strong barrier, and 24.2% stated it was a very strong barrier, while about 28.6% indicated it was a moderate barrier. Regarding the lack of time to search for information on LMSs, 24.2% indicated it was a strong barrier, whereas 15.4% indicated it was a very strong

TABLE 3

Distribution of Participating ESL/TESOL Teachers by Their Perceptions of Concerns About Incentives as a Barrier to the Adoption of LMS

Inventive		*No Barrier*		*Weak Barrier*		*Moderate Barrier*		*Strong Barrier*		*Very Strongly Barrier*	
Concern Items	*n*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Lack of monetary compensation for using LMS	91	2	2.2	25	27.5	20	22.0	19	20.9	25	27.5
Lack of monetary incentive for using LMS	91	3	3.3	9	9.9	26	28.6	31	34.1	22	24.2
Lack of reward for involvement with LMS	91	4	4.4	7	7.7	28	30.8	30	33.0	22	24.2
Lack of correlation between use and evaluation of LMS	91	1	1.1	10	11.0	36	39.6	25	27.5	19	20.9
Lack of institution recognition for using LMS	91	5	5.6	14	15.6	25	27.8	29	32.2	17	18.9
Lack of time available to search for information on LMS	91	8	8.8	18	19.8	29	31.9	22	24.2	14	15.4

Note: Overall $M = 3.53$; $SD = 0.91$; scale: 1 = *no barrier*, 2 = *weak barrier*, 3 = *moderate barrier*, 4 = *strong barrier*, 5 = *very strongly barrier*; $n \neq 99$ due to item nonresponse.

barrier, and 31.9% of participants indicated it was a moderate barrier. In comparison, 19.8% indicated it was a weak barrier. Overall, the mean and standard deviation for concerns about incentives as a perceived barrier to adopting LMSs were $M = 3.53$ and $SD = 0.91$. ESL/TESOL teachers tended to perceive incentive concerns as a moderate barrier.

CONCERNS ABOUT PLANNING

As shown in Table 4, perceptions about planning issues as a barrier to adopting LMSs were measured by participants' responses to five statements. Regarding the lack of identified needs for LMSs, 19.8% of participants indicated it was a very strong barrier, whereas 33% indicated it was a strong one, and 26.4% indicated it was a moderate barrier. As for the need for a shared vision toward the role of LMSs with traditional institution structure, 35.2% of participants indicated it was a strong barrier, 25.3% indicated it was a very strong barrier, and 24.2% of indicated it was a moderate barrier. Regarding the need for more strategic planning for LMSs, 37.4% of participants indicated it was a strong barrier, and 25.3% believed it was a very strong one. In comparison, 22% indicated it was a moderate barrier.

Regarding the lack of coordination between LMS staff and faculty, 26.4% of participants indicated it was a very strong barrier, and 37.4% believed it was a strong one. In comparison, 20.9% indicated it was a moderate barrier. As to the lack of planned opportunities for teachers to learn about LMSs, 36.3% of participants indicated it was a strong barrier, and 25.3% believed it was a very strong barrier. Twenty-two percent of participants indicated it was a moderate barrier. Overall, the mean and standard deviation for planning issues as a perceived barrier to adopting LMSs were $M = 3.66$ and $SD = 0.90$. ESL/TESOL teachers tended to perceive planning issues as a moderate barrier to adopting LMSs.

TABLE 4

Distribution of Participating ESL/TESOL Teachers by Their Perception of Planning Concerns as a Barrier to the Adoption of LMSs

		No Barrier		*Weak Barrier*		*Moderate Barrier*		*Strong Barrier*		*Very Strongly Barrier*	
Planning Concern Items	*n*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Lack of coordination between LMS staff and faculty	91	1	1.1	13	14.3	19	20.9	34	37.4	24	26.4
Cost of strategic planning or LMS	91	1	1.1	13	14.3	20	22.0	34	37.4	23	25.3
Lack of opportunities to learn about LMS	91	2	2.2	13	14.3	20	22.0	33	36.3	23	25.3
Lack of shared vision with institution structure	91	2	2.2	12	13.2	22	24.2	32	35.2	23	25.3
Lack of identified needs for LMS	91	4	4.4	15	16.5	24	26.4	30	33.0	18	19.8

Note: Overall $M = 3.66$; $SD = 0.90$; scale: 1 = *no barrier*, 2 = *weak barrier*, 3 = *moderate barrier*, 4 = *strong barrier*, 5 = *very strongly barrier*; $n \neq 99$ due to item nonresponse.

FINANCIAL CONCERNS

Participants' perceptions about financial concerns as a barrier to the adoption of LMSs were measured by participants' responses to four statements. Table 5 displays the results, which were described by frequencies and percentages. As to the lack of funds to implement LMSs, 33% of participants indicated it was a strong barrier, and 17.6% indicated it was a very strong barrier. Twenty-two percent of participants indicated it was a moderate barrier. As to the lack of financial resources to support the necessary development of LMSs, 44% indicated it was a strong barrier, 17.6% indicated it was a very strong barrier, and 18.7% said it was a moderate barrier. For financial concerns about the resources to support necessary computer technology, 29.7% of participants indicated it was a strong barrier, whereas 20.9% believed it was a very strong barrier. Twenty-three percent of participants believed it was a moderate barrier. Thirty-four percent of participants indicated that the cost of purchasing the necessary computer technologies was a strong barrier, and 19.8% stated it was a very strong barrier. Also 24.2% indicated it was a moderate barrier. Overall, the mean and standard deviation for financial concerns as a perceived barrier to adopting LMSs were $M = 3.48$ and $SD = 0.98$. ESL/TESOL teachers tend to perceive financial concerns as a moderate barrier.

TECHNOLOGY CONCERNS

Participants' perceptions about technology issues as a barrier to the adoption of LMSs were measured by participants' responses to eight statements. Table 6 displays the results that were described by frequencies and percentages. As to the lack of teachers' access to LMSs, 30% of participants indicated it was a strong barrier, 14.4% indicated it was a very strong barrier, and 18.9% indicated it was a moderate barrier. As for the concern about the loss of important information when using LMSs, 29.7% of participants indicated it was a strong barrier, 17.6% indicated it was a very strong barrier, and 23% perceived it as a moderate barrier. As to the lack of teachers' access to technical support, 40% of participants indi-

TABLE 5

Distribution of Participating ESL/TESOL Teachers by Their Perception of Financial Concerns as a Barrier to the Adoption of LMSs

		No Barrier		*Weak Barrier*		*Moderate Barrier*		*Strong Barrier*		*Very Strongly Barrier*	
Financial Concern Items	*n*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Lack of financial resources to support necessary development of LMS	91	2	2.2	16	17.6	17	18.7	40	44.0	16	17.6
Cost of purchasing the necessary computer technologies	91	0	0	20	22.0	22	24.2	31	34.1	18	19.8
Lack of funds to implement LMS on-site	91	2	2.2	23	25.3	20	22.0	30	33.0	16	17.6
Lack of financial resources to support necessary computer technology	91	1	1.1	23	25.3	21	23.1	27	29.7	19	20.9

Note: Overall $M = 3.48$; $SD = 0.98$; scale: 1 = *no barrier*, 2 = *weak barrier*, 3 = *moderate barrier*, 4 = *strong barrier*, 5 = *very strongly barrier*; $n \neq 99$ due to item nonresponse.

TABLE 6

Distribution of Participating ESL/TESOL Teachers by Their Perception of Technology Concerns as a Barrier to the Adoption of LMSs

		No Barrier		*Weak Barrier*		*Moderate Barrier*		*Strong Barrier*		*Very Strongly Barrier*	
Financial Concern Items	*n*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Concerns about loss of face-to-face contact	90	2	2.0	12	13.3	19	21.1	30	33.3	27	30.0
Lack of training programs to learn to use LMS	90	2	2.2	15	16.7	17	18.9	33	36.7	23	25.6
Concern about intellectual property rights	91	2	2.2	16	17.6	19	20.9	35	38.5	19	20.9
Lack of teachers' access to technical support	90	5	5.6	15	16.7	20	22.2	36	40.0	14	15.6
Concern for legal issues (e.g., computer crime)	91	2	2.2	21	23.1	20	22.2	29	31.9	19	20.9
Concern about losing control of information	91	2	2.2	25	27.5	21	23.1	27	29.7	16	17.6
Concern that LMS will be used to replace teachers	91	7	7.7	20	20.0	21	23.1	19	20.9	24	26.4
Lack of teachers' access to LMS	90	5	5.6	28	31.1	17	18.9	27	30.0	13	14.4

Note: Overall $M = 3.47$; $SD = 0.81$; scale: 1 = *no barrier*, 2 = *weak barrier*, 3 = *moderate barrier*, 4 = *strong barrier*, 5 = *very strongly barrier*; $n \neq 99$ due to item nonresponse.

cated it was a strong barrier, 15.6% indicated it was a very strong barrier, and 22.2% indicated it was a moderate barrier. Regarding legal issues, 31.9% of participants indicated it was a strong barrier, 20.9% believed it was a very strong barrier, and 22.2% indicated it was a moderate barrier.

Regarding the concern that LMSs would replace traditional teacher positions, about 20.9% of participants indicated it was a strong barrier, and 26.4% believed it was a very strong one. Twenty-three percent indicated it was a moderate barrier. Regarding intellectual property rights concerns, 38.5% indicated it was a strong barrier, and 20.9% believed it was a very strong barrier, while 20.9% indicated it was moderate. As for the lack of training programs to learn how to use LMSs, 36.7% indicated it was a strong barrier, and 25.6% believed it was a very strong barrier, while 18.9% indicated it was moderate. As to the concern about losing face-to-face contact with students, about 64% of participants indicated it was a strong and very strong barrier, and 21% indicated it was moderate. Overall, the mean and standard deviation for technology issues as a perceived barrier to adopting LMSs were $M = 3.47$ and $SD = 0.81$. ESL/TESOL teachers tended to perceive technology issues as a moderate barrier to adopting LMSs.

CONCLUSION, RECOMMENDATIONS, AND IMPLICATIONS

The study provided information that may contribute to addressing factors that impede the rate of adoption of LMSs. Alabama and Mississippi TESOL/ESL teachers perceived barriers to the diffusion of LMSs as moderate barriers. Planning concerns were perceived as the most significant barrier, and the concern about incentives was the second-largest concern on the list. The findings indicate that most participants agreed moderately with the five barriers identified by Rogers (2003) that would influence the diffusion of LMSs in Alabama and Mississippi. All the items were perceived as moderate barriers to the diffusion of LMSs.

PERCEPTION OF TIME AS A BARRIER

Based on the perceived concerns about time as a potential barrier to the diffusion of LMSs, the study found that most TESOL/ESL teachers agreed with concerns about time as a potential barrier; 27.5% of the participants strongly agreed about time concerns accessing material via an LMS platform; 27.5% of participants agreed with the lack of time available to respond to online requests for information via LMSs; and 23.3% strongly agreed with the lack of time to learn how to incorporate LMSs into typical job responsibilities for teachers. Alabama and Mississippi TESOL/ESL teachers tended to perceive time concerns as a moderate barrier to the diffusion of LMSs. The findings confirm Bennett and Bennett (2003), who concluded that time is a major obstacle to not fully adopting instructional technologies such as LMSs. Teachers should be incentivized for the time they spend in LMSs.

PERCEPTION OF FINANCIAL CONCERNS AS A BARRIER

As to perceived financial concerns as a potential barrier to the diffusion of LMSs, results revealed that the majority of Alabama and Mississippi TESOL/ESL teachers moderately agreed with the existence of this barrier. Most participants were concerned about the need for more financial resources, funds, and the costs of securing necessary technologies. Forty-four percent of participants agreed that the lack of financial resources to support the necessary development of LMSs is a strong barrier, and 33% strongly perceive the lack of funds to implement LMSs as a barrier. The findings indicate that economic assessments may be needed to study why finances are considered barriers to the diffusion of LMSs. Alabama and Mississippi, public schools and university

policy in both states need to be aware of the outcomes coming from the economic assessments of LMSs to decide whether provisions of financial resources translate to LMSs' long-term sustainability. Khan et al. (2015) conclude that the lack of funding can hinder the adoption of the innovation, which is a barrier.

PERCEPTION OF PLANNING CONCERNS AS A BARRIER

As to perceived planning concerns as a potential barrier to the diffusion of LMSs, this researcher found that the majority of Alabama and Mississippi teachers moderately agreed with the existence of this barrier, 37.4% of participants agreed that the lack of strategic planning for LMSs is a strong barrier, and 35.2% agreed that the lack of shared vision for the role of LMSs with traditional institution structure is a strong barrier. The findings indicate that the lack of identified needs for LMSs, the lack of shared vision for the role of LMSs, the lack of coordination between LMS staff and faculty, and the lack of strategic planning for LMSs all were seen as barriers that prohibit the diffusion of LMSs in Alabama and Mississippi. This finding agrees with Rogers (2003), who recognized that prerequisites and innovativeness were critical for an individual's innovation adoption behavior. Asiri (2012) confirmed that planning barriers related to the organization and logistic measures translate to a barrier to the adoption of LMSs.

PERCEPTION OF INCENTIVES AS A BARRIER

As to perceived concerns about incentives as a potential barrier to the diffusion of LMSs, this researcher found that the majority of TESOL/ESL teachers in Alabama and Mississippi agreed moderately with the existence of concerns about incentives as a potential barrier. Most participants were concerned about the lack of monetary incentives as a potential barrier to LMSs. More than 50% of participants agreed with the following statements: (a) lack of monetary compensation for using LMSs; (b) lack of institutional recognition for using LMSs, and (c) lack of rewards for involvement with LMSs. The findings also confirm Muilenburg and Berge's (2009) findings that the lack of compensation and recognition in using an online platform has been identified as a barrier to LMSs.

PERCEPTION OF TECHNOLOGY CONCERNS AS A BARRIER

As to perceived technology concerns as a potential barrier to the diffusion of LMSs, the study found that the majority of TESOL/ESL teachers in Alabama and Mississippi moderately agreed with the existence of this barrier. A good majority of participants were concerned about possible complications derived from technology as a potential barrier. More than 50% of participants agreed with the following statements: (a) lack of training programs to learn about how to use LMSs; (b) concern for legal issues computer crime, hackers, software piracy, copyright), and (c) concern about intellectual property rights. The findings confirm McGrail and McGrails' (2010) statement that online platforms involve complex copyright regulations that teachers express uncertainties and resistance about. Ownership concerns are, therefore, a barrier.

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