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Abstract

In this study, I aimed to discover Iranian medical sciences students' evaluation of using a Learning Management System (LMS) in teaching English and to collect their suggestions for using the system more efficiently. To collect data, I conducted semi-structured interviews with 38 students. The themes emerging from the qualitative content analysis of the students' responses were (1) technical advantages (accessibility, and online homework bank), (2) educational gains (learning gains, benefits for professors, and professor-student interaction), (3) logistical benefits (optimizing class time, task management, and logistical support), (4) educational shortcomings (limited instruction, correction and feedback, and academic misconduct), (5) technical limitations (Internet problems, and technical glitches), (6) administrative problems (time mismanagement, and logistical challenges), (7) education development (instruction, educational materials, organizing tests, correction and feedback, and quantity and quality of assignments), (8) LMS platform modifications (offline platform, and upgrading the LMS), and (9) logistics improvement (student support, and time management). Based on the findings, the educational officials should consider the educational, technical and logistical requirements of using the LMS in the university programs, use a field-specific LMS or modify the existing one with an eye to the students' needs, and improve the infrastructure required for using web-based educational technologies.

Keywords

Evaluation, LMS, Medical Students, Qualitative Content Analysis, Schoology

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In this study, I aimed to discover Iranian medical sciences students' evaluation of using a Learning Management System (LMS) in teaching English and to collect their suggestions for using the system more efficiently. To collect data, I conducted semi-structured interviews with 38 students. The themes emerging from the qualitative content analysis of the students' responses were (1) technical advantages (accessibility, and online homework bank), (2) educational gains (learning gains, benefits for professors, and professor-student interaction), (3) logistical benefits (optimizing class time, task management, and logistical support), (4) educational shortcomings (limited instruction, correction and feedback, and academic misconduct), (5) technical limitations (Internet problems, and technical glitches), (6) administrative problems (time mismanagement, and logistical challenges), (7) education development (instruction, educational materials, organizing tests, correction and feedback, and quantity and quality of assignments), (8) LMS platform modifications (offline platform, and upgrading the LMS), and (9) logistics improvement (student support, and time management). Based on the findings, the educational officials should consider the educational, technical and logistical requirements of using the LMS in the university programs, use a field-specific LMS or modify the existing one with an eye to the students' needs, and improve the infrastructure required for using web-based educational technologies. Keywords: Evaluation, LMS, Medical Students, Qualitative Content Analysis, Schoology

Introduction

Electronic learning in the Iranian context was initiated at Shiraz University many years ago by the Iranian Ministry of Science, Research and Technology (Safavi, 2007). Masoumi (2010) reports that many universities in the Iranian context have already launched electronic learning programs or are in the process of establishing such programs, describing the establishment of virtual learning as a "groundbreaking initiative in Iranian traditional higher education" (p. 240). Electronic learning provides students and academics with many applications and systems which support teaching and learning processes in virtual learning contexts at universities and other educational institutions. One of the web-based systems, which is widely used to make electronic learning happen, is Learning Management Systems (LMS). According to Motteram (2013), an LMS is an online system developed with the aim of enhancing educational processes. Counting the advantages of such a web-based system, Sayfouri (2016) notes that it helps both teachers and students by removing time and space limitations, and facilitating teamwork and exchange of information. Motteram (2013) also highlights considerable advantages teachers can gain from the web-based systems, saying that LMSs enable them to host a range of online resources and tools such as message boards.

Statement of the Problem and Purpose of the Study

LMSs are used in many Iranian medical universities to contribute to the enhancement and expansion of education. Zare, Sadrinia, and Rajabpoursanati (2015) report that compared to universities in the developed countries, universities in the Iranian context make limited use of LMSs, stressing that educational and information technology administrators in Iran should expand the uses of LMSs at the universities. Guilan University of Medical Sciences (GUMS), which is affiliated with Iran's Ministry of Heath, Treatment and Medical Education, has recently started using LMSs; developments in this area, however, are still at embryonic stages and the electronic systems have been used for few courses at the university. There is also a scarcity of research on discovering Iranian medical students' evaluations of using such web-based systems for educational purposes in general and for teaching and learning English in particular. Moreover, the literature is lacking in studies discovering students' suggestions for improving the educational usability of LMSs. Still another gap in this area is that despite the abundance of quantitative studies (Feizabadi, Aliabadi, & Nili-Ahmadabadi 2016; Hemati & Mojarrad, 2016; Yaghoubi, Mohammadi, Iravani, Attaran, & Gheidi, 2008) investigating different aspects of employing electronic learning at universities, there is a paucity of qualitative research delving into college students' lived experiences of using LMSs. Conducting such qualitative research will contribute to the discovery of students' views, problems, expectations, and needs in this area. A qualitative study enables us to collect firsthand data from students through gathering their descriptions and explanations of their unique experiences and analyzing and interpreting their experiences. Researching the suitability of the systems for educational purposes, finding out their drawbacks, and collecting students' suggestions for improving the usability of LMSs can pave the way for broad adoption of the web-based systems at universities. With regard to the usability and suitability of the web-based systems, Green, Inan, and Denton (2012) underscore the necessity of evaluating the potential of LMSs so that the effectiveness and structure of the systems can be improved. Shayan and Iscioglu (2017), for instance, investigated the use of LMSs at two Iranian universities of Payamnoor and Farhangian, noting, "It is crucial to have a better understanding of Iranian students' needs, requirements, and expectations to optimize the LMS" (p. 1877). Students are one of the stakeholders in educational and academic institutions; therefore, discovering their views about the usability of electronic technologies, including LMSs, used in the educational processes gains the utmost significance. In this regard, Yaghoubi, Mohammadi Iravani, Attaran, and Gheidi (2008) argue that students' attitudes towards and perceptions of using technologies and electronic learning play a pivotal role in the success of implementing electronic learning. Thus, discovering students' views about an LMS can aid educational officials in having a clear understanding of the weaknesses and strengths of the system used at the university and in developing meticulous plans for implementing the policies which hinge on the proper use of the system. Therefore, to bridge the existing gaps, in the present study, I set out with the aim of discovering medical sciences students' evaluations of using Schoology as an LMS at GUMS. I also aimed to collect the students' suggestions for improving the potential of the web-based system so that it can be used more efficiently for educational purposes. In a nutshell, in the present study, I aimed to discover the merits of using the LMS in teaching English from the perspective of medical sciences students, to delve into the demerits of using the LMS in teaching English from the students' perspective, and to explore and collect the students' suggestions for improving the efficacy of the LMS in teaching English.

Review of Literature

Research into the use of electronic learning and electronic learning tools abounds. However, few studies have been conducted to evaluate the usability of an LMS from students' perspective. There is also a paucity of research in the area of exploring and collecting students' suggestions for improving the educational efficacy of an LMS. The studies which have delved into the students' views about elearning have revealed that overall they have a positive view about elearning; the students, however, have expressed concerns and dissatisfactions with certain aspects of employing elearing in educational institutions. For example, Yaghoubi et al. (2008) investigated perceptions and attitudes of virtual students' towards elearning in Iran, reporting that students had positive perceptions of elearning. They also named the students' assessment of the competency of e-learning, access to the Internet, computer and Internet usage, and assessment of current higher education system's shortcomings as factors affecting the students' perceptions of elearning. Similarly, Rasouli, Rahbania, and Attaran (2016) researched Iranian art students' readiness to use elearning. To do so, they targeted as many as 347 students from three public Iranian Universities of Alzahra, Tarbiat Modares, and Tehran. They used a researcher-developed questionnaire to collect the data. The results of their study showed that the students had a moderate level of readiness to use elearning. Hemati and Mojarrad (2016) also conducted a study on the application of elearning for master's students of Teaching English as a Foreign Language (TEFL) at Payame Noor University, using observation, a questionnaire, and interviews as data collection instruments. The findings of the study showed the students' satisfaction with certain aspects of elearning such as flexibility in time and class location. The students, however, expressed dissatisfaction with the LMS quality, web-based materials, and lack of interaction between students and teachers. It was also discovered that despite being dissatisfied with many aspects of the elearning program, they were eager to take elearning courses because of the convenience they provide for the students.

Some studies in the Iranian context have specifically concentrated on the use of LMSs at universities. These studies have mainly compared the use of different LMSs in the Iranian context with other countries, delved into the students' perceptions of using LMSs, and investigated the effect of using LMSs on the students' learning. Zare et al. (2015), as a case in point, investigated the use of LMSs in 52 Iranian medical universities and 58 universities of developed English-speaking countries of the US, Canada, Australia, and the UK. The results of the study showed that 63.5 percent of the Iranian universities did not have any LMS for delivering courses in academic degree programs. Of the remaining 36.5 percent of the Iranian universities, it was discovered that Moodle was used in 11 of them, ATutor was used in four of them, Docebo was used in one of them, and domestically designed LMSs were found in three universities. It was, however, revealed that all of the universities in the developed countries were using LMSs such as Blackboard, Moodle, Canvas, Desire2learn, and Sakai. In the same vein, Sayfouri (2016) conducted a study discovering the students' perceptions of the functions of the LMS used at Iran University of Medical Sciences. To achieve the purposes of the study, the students' experiences of using the LMS were collected and classified. The findings discovered that the students believed that the system had advantages for both the students and the teachers; the students, however, reported both technical and nontechnical problems with the system. Feizabadi et al. (2016) also researched the influence of Moodle as an LMS on students' learning of English as a foreign language. The study was conducted on 32 students who were selected by random sampling. A quasi-experimental method with pretest - posttest control group design was used for the purpose of the study. The results showed that the experimental group outperformed the control group on the posttest and thereby approving the positive effect of using the LMS. The study concluded that LMSs had a great ability to change teaching and learning and could contribute to the promotion of the "quality of teaching

and learning in education systems" if used properly. It suggests that educational policymakers should endeavor to "design web-based programs" and integrate them with the Internet so that they can facilitate learning English (p. 1435).

The review of the published literature shows that there are still gaps in our understanding of the use of LMSs in Iranian universities. The gaps and paucities of research are particularly in the area of discovering students' evaluations of LMSs through qualitatively researching their lived experiences of using the tools. Moreover, delving into students' suggestions for enhancing the educational usability of LMSs is an area of investigation which has remained unexplored. Therefore, I, as an educator, decided to use an LMS in my English courses at GUMS and investigate the students' evaluations of using the tool and their suggestions for improving its educational usability.

Self-of-the-Researcher

I (Iman Alizadeh), as the author of this study, have been teaching English in the Iranian context for almost 15 years. I have been teaching English at Guilan University of Medical Sciences (GUMS) for almost three years. I teach General English, Academic Writing, Medical Terminology, and English for Specific Purposes (ESP) courses at the university. As an assistant professor, I have always been looking for techniques for improving the quality of my teaching. Recently, there has been a burgeoning interest in using technological tools for educational purposes among students. Therefore, I decided to add a technological dimension to my English classes at the university within the framework of the educational procedures managed by the Education Development Center of GUMS and discover the students' reaction to this new experience in learning English. I believe that learning about the students' experiences through discovering their evaluations of the educational technologies used in the teaching process can help me employ technological tools more confidently and insightfully.

Research Design

In this study, I used a qualitative research paradigm, which, according to Holloway (2005), provides researchers with the means of understanding emotions and perceptions. The main reason for employing the qualitative research paradigm was the purpose of my study, which was to delve into the minds of the students to discover their evaluations of using the LMS and to collect their suggestions for using the web-based system more efficiently. According to Locke (1989), the purpose of the study and the research questions play a significant role in the selection of a research method. Taking into consideration the purposes of the study (exploring medical students' evaluation of using Schoology as an LMS in teaching English and collecting their suggestions for using the site more efficiently) and the research questions (1-What is medical students' evaluation of using the LMS in teaching English?, and 2- What are the students' suggestions for improving the educational usability of the LMS in teaching English?), I chose the qualitative content analysis as the research design of the study. Content analysis, as Grbich (2007) notes, employs a systematic coding and categorizing approach to the management of textual information and delineation of the trends and patterns in the data. Content analysis is a flexible method for analyzing textual data with the aim of collecting direct information from participants without any preconceived categories or theoretical perspectives in mind (Hsieh & Shannon, 2005). Polit and Beck (2012) describe that when using this method, the researcher can perform a content analysis of the narrative data to recognize key themes and the existing patterns among them. In the present study, I used the qualitative content analysis to explore the trends and patterns of medical students' evaluations of using the LMS and their suggestions for improving the educational usability of the platform. As different students may

have different perceptions and experiences of using the LMS, this method can help the discovery of the trends and patterns of their responses.

Participants

The context of the study was the schools of Nursing and Allied Medical Sciences, Guilan University of Medical Sciences, Iran. The participants of the study were 38 students studying Medical Laboratory Sciences (17) and Surgical Technology (21) at the schools. The students in each discipline were taking the General English course designed for their major at the schools. As I aimed to use an LMS in my General English courses as an innovative technique, I consulted with two of my colleagues at the schools before conducting the study. I also consulted with the deputy for education and the dean of the schools. The dean approved the implementation of the study at the schools in an official letter. I also informed the students that participation in the study would be voluntary and interviewed only those who were willing to participate in the study. After receiving the approval from the deputy for education and the dean, I explained the purposes of the study to the students and obtained informed consent from them. The students who expressed willingness to participate in the study were informed of their rights and ensured that their identities and information would remain confidential. The researcher also told the students that they had the choice to withdraw from the study anytime they wished. The students were both male (16) and female (22) and their ages ranged from 18 to 23. The students' average also varied from 13 to 18. All of the students could connect to the LMS anywhere anytime they could gain access to the Internet. They could use their android cellphones or personal computers. Purposive sampling was also used as the sampling method and participation in the study was based on the students' willingness. The researcher put considerable effort into having maximum variation in the sampling process by selecting students from different educational disciplines, targeting both male and female students, choosing students from different age groups, and having students with high and low grade point averages.

Data Collection

To implement the study, first, I designed a syllabus which required the students to use the LMS. The English courses in which the LMS was used were delivered in a blended mode; that is, a combination of both electronic and conventional face-to-face classes. The students were also instructed how to log into the LMS and make use of its applications. The activities the students were to do using the web-based system were also clearly outlined in the syllabus. According to the syllabus, part of the main assignments and a number of additional or extracurricular materials were uploaded onto the system and the students were asked to complete them. The web-based system provided the possibility for the professor to determine the scoring system and set a deadline for the completion and submission of the assignments. It also helped the professor have a record of the students' activities throughout the course. After the set deadline, the professor logged into the LMS to check the students' activities, download and correct the students' assignments, send back feedback on the assignments, and leave posts to those who had failed to upload or complete the assignments. Additionally, a post was sent to every student whose homework or activities had been received. Moreover, a message was sent to the representatives of the classes informing them that new assignments or files had been uploaded onto the LMS platform. The representatives of the classes then relayed the messages to other students.

The students used the LMS for ten weeks and then a semi-structured interview was conducted with them. In total, 15 face-to-face interviews (individual interviews and group

interviews with the participation of 3 to 5 participants) lasting between 30 to 45 minutes each were organized. All interviews were recorded and were subsequently transcribed. The interviews normally began with some warm-up questions on the students' experiences of using the LMS. Then, it continued based on the responses the students provided to the interviewer's questions, which were mostly oriented towards gaining information about the students' evaluation of the LMS and the ways the web-based system could be used more efficiently. Some of the key interview questions in the study were: "Can you please tell me about the strengths of using the LMS in the general English course at the university?," "Can you please talk about the weaknesses of using the LMS in the general English course at the university?," and "Can you please talk about the ways that the LMS can be used more efficiently in the general English course at the university?." Moreover, probing questions like "what do you mean by saying…?," "Can you elaborate on the point?," and "Can you give some more examples?" were also asked to dig deeper into the students' answers and to enrich the data. The data extracted from the interviewed participants determined whether to continue the interviews with more participants or not. The researcher continued with the interviews until no further relevant data were produced by the participants, which marked the data saturation point.

Data Analysis

The data collection and analysis were conducted concurrently. To analyze the data collected from the students' explanatory responses in the interviews, I employed the data analysis method advanced by Graneheim and Lundman (2004). To do so, first, I carefully transcribed the interviews and then read them several times meticulously to gain a general understanding of the issue. Next, I set the entire interview as an analysis unit. Then, I identified and pooled up the meaning units which consisted of words, phrases, sentences, and paragraphs with related content and meanings. The meaning units with similar content were subsequently condensed. The condensed meaning units were abstracted based on their underlying meanings and were labeled with a code. The codes were compared and contrasted and were clustered into categories. Finally, a meticulous study of the categories was conducted, which yielded up the emergence of the themes. The researcher put a lot of effort into ensuring trustworthiness and rigor in the data collection and analysis processes. To this end, the credibility, transferability, dependability, and confirmability criteria proposed by Lincoln and Guba (1985) were employed. The credibility of the data was secured by collecting accurate data, increasing the interaction time with the students during the interviews (30-45 minutes), allocating sufficient time for data collection and analysis (over three months), having variation in the sampling method (both male and female students from different disciplines and with different ages and averages), and asking questions soliciting the students' confirmation of the data. To ensure the dependability criterion, the data collection and data analysis procedures were followed meticulously in a step-by-step manner. The dependability criterion was also secured through observing the steps of the qualitative data collection and content analysis. Moreover, peer-checking was performed to help determine the dependability criterion in the study (i.e., three of my colleagues who were competent to conduct qualitative data collection and analysis analyzed and rechecked the handwritten textual data. To establish the conformability of the data, the views and approval of other faculty members at the School of Allied Medical Sciences were sought. As for the transferability criterion, a detailed and rich description of the research procedures and findings was provided to help other researchers judge whether the study is transferable to other contexts.

The content analysis of the students' responses resulted in the development of three merit themes, eight merit subthemes, three demerit themes, six demerit subthemes, three suggestion themes, and eight suggestion sub-themes. As I said, one of the merit themes of the

study was educational gains. The theme derived from the three subthemes of benefits for professors, learning gains, and upgraded professor-student interaction. An example of the meaning units, condensed meaning units, codes, and subthemes of the theme "educational gains" from the qualitative content analysis of the textual data is given below. The following text was targeted as a meaning unit:

> As the professor can connect to the LMS back at home, he can connect to system whenever he wishes. He can check the students' assignment when he is at home or anywhere else out of the classroom. As a result, he will have more time in the face-to-face class for teaching.

The meaning unit was condensed to the following condensed meaning unit: "More time for professors to check the students' assignments out of the class." The condensed meaning unit was abstracted and labeled with a code as follows: "Time for professors." The code was clustered with three other codes ("Professors access to the students' homework," "Professors' sharing of materials with students" and "Professor's feedback to students"), which emerged from a similar process of defining meaning units, condensing meaning units, labelling and coding, and constituted the subtheme of "benefits for professors." Next, another text was targeted as a meaning unit: "I was sure that the professor will check the assignments. Therefore, I spent more time to complete them correctly. I also studied more and tried more to do the assignments well and on time." The meaning unit was condensed to the following: "Spending more time and tried more to complete my assignments." The condensed meaning unit was abstracted and was labeled with a code as follows: "More effort in doing homework." The code was clustered with a group of other codes including "Improving English proficiency," "doing assignments with more precision," and "Improving sentence making in English," and formed the subtheme of "learning gains." Next, the following text was chosen as meaning unit: "If I had any problems in completing the assignments or any other educational issue, I could connect to the LMS, and ask my questions any time. The professor also could leave comments for me any time." The condensed meaning unit was abstracted and was labeled with a code as follows: "Removing time restrictions to interact with the professor." The condensed meaning unit was abstracted and was labeled with a code as follows: "Free student-professor interaction." The code was clustered with a set of other codes, including "better professor-student communication" and "out of class professor-student interaction" and made the subtheme "upgraded professor-student interaction." Finally, a meticulous study of the three subthemes of "benefits for professors," "learning gains," and "upgraded professor-student interaction" yielded the merit theme of "educational gains."

Findings

The qualitative content analysis yielded 542 primary merit codes from which three main themes ("logistic benefits," "technical advantages," and "educational gains") and eight subthemes emerged. The merit themes and subthemes are presented and discussed below.

Logistic Benefits

Many students believed that the LMS played an instrumental role in optimizing the face-to-face class time, contributed significantly to the management and completion of the assignments they received, and provided logistic support for them in dealing with their tasks in the English courses.

Optimizing class time

A large number of the students underscored the positive role of the LMS in saving the time of the face-to-face classes. One of the students, as a case in point, said, "As we upload our weekly assignments onto the LMS and as the professor checks them on the system, there is more time for class activities in the classroom." In fact, as the number of the students in each class was approximately 30, checking all assignments in the class would take a large portion of the class time. Using the system, the professor checked the students' assignments out of the classroom and provided them with the necessary feedback. In addition, the students, who had extra or personal questions, could ask them on the LMS platform without taking the class time. Therefore, the professor could manage the class time more appropriately. Another significant point in this regard was that the students highlighted the role the LMS played in improving the pace of teaching in the classroom. In this regard, one of the students said, "There is no need for the professor to check the students' homework or answer many of their questions in the class. Therefore, the LMS improves the pace of teaching process in the class." In fact, as the professor answered most of the students' questions on the LMS platform and checked their assignments on the system, there was more class time for teaching new lessons and doing extracurricular activities in the face-to-face class, which in turn optimized the class time.

Task management

The students also believed that the possibility and the means to follow up on their assignments, the setting of a particular time for the students to submit their assignments, and the very existence of discipline in completing and submitting the assignments helped them manage their English language tasks more easily. One of the students said, "We could easily log onto the LMS and find out what the assignments were and how they should be done. Even if we had been absent from some English classes at the university, we could learn about the assignments using the system." The students also commended the LMS for helping them learn and have discipline in receiving, completing and sending their assignments. One of the students said, "We have to do the assignments on time as the professor checks them by the set deadline. We will receive a "late mark" if we fail to upload the assignments on time." In this regard, it can be argued that the LMS provided the professor with the possibility to set a deadline for the submission of the assignments. The students were to submit their assignments well before the set deadline, or the system would not allow them to upload their files. This helped the students to learn that they should be committed to the completion and submission of their assignments on time. Moreover, the LMS provided the professor with the option to check the students who have submitted and those who have failed to do so. Therefore, the professor could consider a negative mark for those who had failed to submit their assignments on time, which could, in turn, help the students manage their assignments carefully.

Logistical support

The students also said that the user-friendliness of the LMS helped them a lot to use the system for educational purposes. They believed that as they had to use the Internet and their computer or cellphone to operate the LMS, they could also benefit the options on the Internet and the computer or cellphone. One of the students said, "The LMS is an online system. To use it we need to connect to the Internet and have a computer. While using the LMS, we can use language related applications and software on the computer or the Internet." Actually, in the traditional method of teaching and learning, which there was no use of the LMS, the students hardly used educational technologies available on the Internet and/or their personal

computers to complete their assignments. Using the LMS, the students could benefit from the language learning options available on the Internet and their computers or cellphones, which in turn supported them to complete their assignments more accurately and easily.

Technical Advantages

The students expressed that one of the advantages of the LMS used in the study was that it was readily accessible provided that they could connect to the Internet. They also commented that the LMS provided them with an online store where they could save and use their assignments.

Accessibility

The students pointed out in their responses that one of the most important benefits of the system was that it could be accessed anywhere anytime. They underscored that this application of the site helped them complete their assignments everywhere they could find the time to do so. One of the students said, "The most important point with regard to the advantages of the system is that it is accessible accessibility. Ease of access to the LMS is highly important. It provides the possibility for the students to do their assignments anywhere anytime." The point which can be made in this regard is that as the LMS was online, it allowed students to have access to their lessons and assignments anywhere or anytime they wished and could connect to the Internet. Actually, it removed the limitations of doing the assignments only at home or in the dormitory. Therefore, the LMS helped the student to have access to their lessons and assignments anywhere anytime.

Online homework bank

The medical students also praised the LMS for providing them with the possibility to have at their disposal all assignments they have already completed on an online platform. This possibility allowed the students to have a record of their assignments. One of the students commented, "We upload or assignments onto the system. Therefore, there will be a record of assignments on the system. We can have access and review our previously completed assignments anytime anywhere." In traditional classes, the students may miss their notes, previous lessons, assignments or even the notebook in which they have recorded their lessons, notes and assignments. Moreover, carrying a notebook in which the students have their lessons and assignments might be cumbersome. The LMS provided the students with the possibility to revise, update and review their previous lessons, assignments and notes whenever they needed.

Educational Gains

The medical students also commended the LMS for its educational gains. They said that the system improved the interaction between the professors and the students, provided a host of learning gains for the students and aided the professor in the management of the teaching task.

Benefits for professors

The students expressed that the LMS brought many benefits for the professor. The students stressed that using the system, the professor had more time to check the students' assignments out of the class. For instance, a student said,

> The system had many benefits for the teacher to manage the course both in the class and out of the class. The professor has access to a collection of students' homework at any time anywhere. He/she can check the assignments outside the class when he/she has time.

The professor could also use the online system to share with students all the assignments and materials he thought the students needed. Therefore, the LMS appeared to prove beneficial for the professor as well.

Learning gains

One of the advantages of the system, according to the students' responses, was that it helped the students learn English and have an enjoyable learning experience. They opinionated that using the system for learning English was a new enjoyable experience. They also believed that the system made them do more assignments and with more precision. One of the students said, *"*Using the system helped us become familiar with a new helpful educational program. It helped create a more exciting learning experience. It also helped the students to be more prepared for the class." Another student said, "As using the LMS for learning English was a new experience, it helped us to do more assignments and make more efforts to do the assignments." Traditionally, the students' assignments were generally text bound. That is, whatever they learned and did was based on the texts they received from their professor. The LMS seemed to provide the students with the option to receive audiovisual materials, which was a new and exciting experience. The availability of new educational options on the LMS platform motivated and encouraged the students to try more for learning and studying.

Teacher-student interaction

The students highlighted that the system helped them have more interaction with their professor. Using the system, the students could interact with their professor on the system anytime. One of the students said, "I believe that the system could successfully remove the obstacles in the way to interact with our professor. At times, the students might have some points to make but they cannot do so in a face-to-face situation. The LMS removes this limitation." Generally, the students have a three-hour class with the professor at the school, which proves quite inadequate to establish a relationship and have interactions. Some students might be shy and cannot collect enough confidence to communicate with their professors face-to-face. Besides, the professor may not have enough free time at the school time to communicate and interact with the students. The LMS provided the means for the students and professor to remove the obstacles and interact and communicate even outside of the school.

The content analysis also resulted in the discovery of 565 primary demerit codes, six demerit subthemes and three themes. "Administrative issues" as a demerit theme was derived from the two subthemes of "logistical challenges," and "time mismanagement." "Technical issues" as another theme contained "Internet problems," and "Technical glitches" as its demerit subthemes. The demerit theme of "educational issues" consisted of "Limited Instruction," "Correction and feedback" and "Academic misconduct" subthemes. The demerit themes, subthemes and direct quotations from the students are presented below.

Administrative Problems

The students believed that despite the benefits of the system, they faced many problems using it. They expressed that some of the problems were related to the students' skills to use

the site or to the equipment and tools related to the system. They said that problems were also related to the organization and schedule of the English courses on the system.

Logistical challenges

Some of the problems from which the students complained were related to the means the students needed to use the system. The students expressed that they lacked the skills to use the LMS. One of the students said, "Typing the assignments was really a big challenge not only for me but also for almost all students." Another one said, "Some students did have the equipment required for using the system. Many others were not familiar with different functions of the system for sending and receiving files." Concerning this issue, it can be argued that like any other educational technology, using the LMS necessitates meeting some requirements. For example, the students and professors need to have and know how to operate a computer and be familiar with different functions of Microsoft Office Words to do their tasks. The use of the LMS also requires the students and professors to be technology smart and know how to work with different options of the system. Lacking these skills and requirements may pose serious challenges to the students.

Time mismanagement

The students also complained about delays in uploading the assignments onto the system and the limited time they had to complete them and send them back to the professor. One of the students said, "As sometimes the assignments were not uploaded on time by the professor, we did not have enough time to complete the assignments and submit them." One of the requirements of using a system like LMS for educational purposes is that anyone involved in the process should be committed to doing his/her duties and responsibilities. For example, the professor might have forgotten to upload the lesson files or some technical glitches might have delayed the uploading of the assignment, which could disturb the flow of working and using the LMS for educational purposes for the students.

Technical Limitations

The students also made complaints about problems pertaining to the mechanism of using the system. They also said that the equipment they needed to use the system caused problems. Moreover, they believed that the overall status of infrastructure caused many problems for them.

Technical glitches

These problems refer to the deficiencies in either the system itself or the equipment the students used to connect to the system. A student, for example, said, "It happened that the sites booted slowly at times or the uploading did not complete." In this regard, it can be said that accidents happen. It is quite natural that a student's computer be down and he/she cannot upload his/her assignments or at times, the systems may not operate well.

Internet problems

One of the main problems the students pointed to while describing the technical deficits of the system was the Internet. One of the students said, "I was unable to send or receive the assignments when there was an Internet connectivity problem. Actually, the system was

unusable when there was an internet connectivity problem." Another one said, "The cost of the Internet is high. Many students like me cannot afford it." As for this problem, it should be said that the Internet is not free in Iran and the quality of the Internet is not acceptable at times. As having access to the Internet was the prerequisite for using the system, Internet problems could easily disrupt the students' educational activities on the LMS platform.

Educational Shortcomings

The students also underscored that they faced some issues pertaining to using the LMS, which affected the teaching and learning processes. They believed that the instruction they received on the LMS platform was limited. They also noted that the feedback they received from their professor on their homework was limited.

Limited instruction, correction and feedback

One of the main complaints of the students was that despite uploading their assignments, they were usually only informed whether their assignments have been received or checked. They were not, however, provided with any feedback on their assignments. One of the students said, "The LMS was mostly used for downloading and uploading assignments. Little teaching was done on the system." In this regard, it can be said that sometimes the LMS was used for sharing educational material and not for teaching. The teaching was done mainly in the classroom. The students, however, expected to received feedback and teaching, and regard the lack of these items as a drawback.

Academic misconduct

As the students completed the assignments out of the class without the supervision of the professor, it was not known whether the students themselves have completed the assignments or not. One of the students said, "As the students do the assignments outside the college and there is no supervision over them, some students tended to cheat which can result in laziness among students." Actually, there was the probability that the students take the completed assignments from other classmates and submit it. They could have also had others do the assignments. The students did not welcome such behavior and regarded it a demerit.

In this study, I also aimed to collect the students' suggestions for improving the efficacy of using the LMS. The analysis of the students' suggestions resulted in the discovery of 680 primary codes and three themes of "technical issues," "administrative issues," and "educational issues." The "technical issues" theme was made of "online platform" and "upgrade the LMS features" subthemes. "Time management" and "student support mechanism" were the subthemes constituting the "administrative issues" theme. The "educational issues" as a theme was extracted from the five subthemes of "instruction," "correction and feedback," "organizing tests," "educational materials," and "quality and quantity of the assignments." The proposition themes, subthemes and students' direct quotes are given below.

LMS Platform Modifications

The medical students proposed that changes should be made to the platform of the LMS by adding some parts to the web-based system and by making it work offline. They believed that the changes should make the process of using the system easier and more exciting.

Offline platform

One of the suggestions of the students was that the offline modality of the platform be used. They believed that the offline mode of the system could remove many of the problems pertaining to the online use of the system. They also believed that offline educational applications should be added to the LMS. One of the students said, "The system would benefit us more if an offline application was used instead of the online website; there should be a possibility to use the platform offline." One of the reasons for the students' call for the offline mode of the LMS could be the problems with the online mode of the system including the cost of the Internet. In addition, they might have found Internet connectivity troublesome.

Upgrading LMS features

The students pointed out that the options and applications the system had should be upgraded. One of the students said, "The options and applications of the site should be improved. For example, bilingual dictionaries should be added to the system to help the students while doing translation tasks." They suggested that recreational and motivational programs be added to the LMS. They also suggested that the process of uploading and downloading the assignments be facilitated.

Logistics Improvement

The students' suggestions indicated the need for improvements in the way issues were handled on the LMS platform. One of the students, for example, said, "The students should be provided with the training on how to use the system"; another one said, "Provide the students with free Internet." The students' comments showed the shortcomings they felt in using the system properly and conveniently. They also offered suggestions for improving the schedule based on which the assignments were uploaded onto the site and the feedback provided for the students.

Time management

The students expressed that mismanagement in uploading the assignments punctually caused problems for them and proposed that the assignments be uploaded regularly and punctually so that they could have enough time to complete and return them. One of the students said,

> The professor usually uploaded and assigned the homework late on the weekend. As the students have many other lessons, they could not have a plan for completing all assignments on time. It would be much better if there were a time schedule for uploading the assignments.

The professor might have delayed the uploading of assignments for many different reasons, including the load of university teaching. In such cases, it seems quite natural to allow the students to have more time to complete and submit their assignments. In any case, the students should have the time to learn and complete their assignments. The professor could inform the students of the potential delays and give them more time to complete the assignments.

Student support

The students also complained that they were lacking in the equipment the needed to use the system. Therefore, they suggested that the provision of the necessary items like a computer and free quality Internet would help them gain more from the system. They also wanted that training courses on how to use the system and to improve their typing skills be organized. One of the students suggested, "Many of the students in the class who live in the dormitory do not have a computer. They have to do their assignments in the computer room of the college where is noisy. The system would help more if the students had a computer in the dormitory." One of the requirements of any educational technology is the ease of its use; that is to say, it should be user friendly. The process of learning via the LMS will be facilitated significantly if the students are provided with the items they need to be able to work with the system properly. Besides, it seems a fundamental requirement to train students in using the system and benefiting its features.

Education Development Plan

The students' suggestions for improving the educational potential of the LMS constituted the major part of their propositions. The students called for improvements in the key components of the educational program, that is, teaching, materials, feedback, tasks and assessment.

Instruction

One of the educational propositions of the students was the provision of instruction for the students in the LMS. They believed that despite having the potential to be used for teaching purposes, the system was mainly used for only sending and receiving homework. A student said, "The LMS should be like an online class. The professor should teach new lessons and concepts on the system." The purposes for which an educator may use an LMS can range from teaching lessons to the mere provision of a discussion platform. The LMS itself has the potential to cover all educational issues. It is the educator and/or the students who decide how to use the system. The system provides the educator with the potential to upload different teaching materials which can be quite beneficial to the students.

Educational materials

The type of material the students received on the system was mainly textual. A student commented, "The professor should upload vocabularies, expressions or even short stories weekly to help improve students' knowledge of vocabulary." Another one said, "Educational clips should be uploaded weekly for improving students' listening ability." The students rightly believed that other formats of educational materials such as audiovisual materials should be used. The use of different types of materials pertaining to the course would add excitement to the course. The students also commented that extracurricular materials could be used on the system so that interested students could take advantage of them. Using only textual materials on the content of the lessons the students receive in the face-face university classrooms might prove tiring and tedious. Adding relevant educational clips and other files might enhance both the students' interest in the LMS and studying.

Correction and feedback

In addition to the shortcomings the students felt in the instruction on the LMS platform and the materials they received, they complained about the lack of or limited feedback they received from their professor. One of the students said, "The professor can help the students more if he checked their assignments and then corrected them and provided the students with correct answers and explanations." They believed that after submitting their assignments to the professor via the LMS, the professor should give them feedback on their mistakes and correct them.

Assignments quality and quantity

As dealing with assignments constituted the core of the students' activities on the LMS platform, the students put forward a number of suggestions for reducing the load of the assignments and adding their quality. They proposed that the assignments would benefit them more if they were more diverse and calibrated. One of the students said, "The load of homework assigned should be reduced so that the students can have a more pleasant experience of using the system." Another one said, "The quantity of the assignments should be so that it helps students' progress; if they receive loads of assignments which are not matched with their proficiency level, they might get demotivated." One of the factors which determines the quality and quantity of assignments is the course itself. As learning different language skills requires a lot of practice, therefore, it seems to some extent natural for the students to receive many assignments in the LMS. Therefore, the nature of the course and the goal of the educator determine the quality and quantity of the assignments; otherwise the system itself can handle any size and quality of assignments.

Organizing tests

One of the areas of education which was not run in the LMS and the students aptly called for it was testing. The system, despite having the potential that tests be organized on it, was not used for this purpose. The students believed that adding this educational component to the system would upgrade the educational advantages of the system. A student said, "I think that one of the uses which the professor can make of the system is to give weekly tests on the system." Another student said, "The professor did not give quizzes in the LMS; it would be interesting to use the LMS for taking quizzes. There is less stress." The LMS itself provides educators with testing and evaluation options. If the educator decides to administer a test or quiz in the LMS, he/she will face no problem operationally. A professor might, however, decide not to organize tests on the LMS platform for several concerns, including cheating and other academic misconduct. In the present study, the professor did not administer quizzes in the LMS as he could do it in the face-to-face classroom, which seems to be more appropriate for organizing tests and quizzes.

Discussion

I conducted this study to evaluate the uses of an LMS in teaching English from medical sciences students' perspective and to collect the students' suggestions for improving the usability of the system. I, therefore, tried to explore the strengths and weaknesses of using the system from the students' perspective and delved into the suggestions they put forward for improving the web-based system. Together, the findings of the study are critical in light of what is known about students' evaluations of and suggestions for improving the web-based

technological tools used at educational institutions. Previous research has also emphasized the necessity of evaluating the potential of LMSs so that the effectiveness and structure of the web-based educational tools can be improved (Green et al, 2012). The findings of the present study can be discussed with the merits and demerits of the system from the students' perspective and the students' suggestions for improving the LMS in view.

Merits of Using the LMS

One of the strengths of the system, highlighted by the students, was the technical benefits the LMS provided for them. In this regard, they underscored the "accessibility" and "online homework bank" as the prominent positive technological features of the LMS platform. The technological advantages of the LMS stressed by the students in the present study can be largely attributed to the online services of the web-based system, which corresponds to findings of other studies investigating other web-based learning management systems. The accessibility feature of an LMS has been underscored in the literature in terms of the fact that students have access to lessons, notes, lectures and other educational materials and are able to review and ask questions regarding their course materials outside of the classroom walls (Lochner, Conrad, & Graham, 2015). Bradford, Porciello, Balkon, and Backus (2007), also, list availability as one of the most significant features of an LMS, adding, "It is this accessibility that most appeals to students" (p. 303). The students in the present study also highlighted that the LMS worked as an online store of information. Actually, the students could retrieve, review and revise all contents of their English course on the LMS platform. In this regard, Rubin, Fernandez, Avgerinou, and Moore (2010) assert that an LMS can be used to store course information, such as syllabi, assignment instructions, and instructional materials, which corresponds to the findings in the present study.

The students in the present study also praised the LMS for bringing many educational gains for both the students and the professor. They expressed that the platform improved their learning, benefitted the professor, and upgraded their interaction with the professor. Research supporting the fact that LMSs improve students' learning experience is abundant. Chang, Huang, and Wu (2017) hold that LMSs help students increase their learning engagement. Dalsgaard (2006) also maintains that LMSs enhance students learning outcomes by providing the opportunity for the students to engage in different networks. Describing the learning gains LMSs bring for students, Dalsgaard (2006) also points out that LMSs speed up course management and provide students with the benefits of using electronic content learning.

A notable point finding in the study was that the students believed the LMS benefited not only the students but also the professor (Benefits for professors). For example, one of the students noted, "The professor will have access to a collection of students' homework at any time anywhere"; another one said, "The professor could check the assignments more accurately and comprehensively." In this regard, Sayfouri (2016) reports that the students at Iran University of Medical Sciences believed that both students and teachers gained advantages from the LMS used at the university. In the same vein, Nasser (2011) holds that LMSs help teachers achieve instructional goals. Similarly, stressing the benefits LMSs can have for both teachers and students, Chang et al. (2017) hold that the web-based systems help students increase their learning engagement and aid teachers in evaluating learning performance. Schlager (2016), in this regard, notes, "LMSs like Schoology promise features that can completely revolutionize the way teachers structure their classes" (p. 4). Moreover, Benson and Palaskas (2006) put forth several points including governance, management, and professional development of instructors as the benefits of using LMSs.

Another significant finding, I had in the study was the students' view that the LMS improved the interaction between the professor and the students. The finding has been reflected

in other studies. Arguing for the role an LMS can play in the improvement of the interaction between students and professors, Meishar-Tal, Kurtz, and Pieterse (2012) note that learning management systems provide a venue for educators and students to have more chances to interact outside of the classroom. Likewise, Chang et al. (2017) maintain that LMSs have great features and functions that may serve as a bridge between learners and educators, leading to better communication. Bradford et al. (2007), who investigated the benefits of Blackboard as an LMS, also counts the improved two-way interactions between the teachers and students as one of the advantages of using the LMS.

Caution, however, should be exercised when discussing the Internet-related benefits of the LMSs in the Iranian context. It can be argued that such merits can be transient and temporal in areas where the Internet infrastructure and services are not suitable. Such a notion is confirmed by the students' comments on the disadvantages of using the LMS.

Demerits of Using the LMS

The students also found a number of demerits in using the LMS, namely (1) educational shortcomings, (2) technical limitations, and (3) administrative problems. The findings with relation to the educational shortcomings show that the drawbacks relate to both the students and the professor. The students believed that the LMS was mainly used as a place for assigning, sharing and submitting course assignments and complained about the lack of teaching on the LMS platform. The students also complained about the mismanagement and disarrangement in the way the materials were uploaded onto the LMS. As for the quality of teaching, one of the students commented, "It is mostly used for downloading and uploading assignments. Little teaching is done." As for the management and arrangement of the educational materials one of the students lamented, "As sometimes the assignments were not uploaded on time by the professor, we did not have enough time to complete the assignments and submit them." The importance of this theme was so high for the students that they called for amelioration in this regard in the suggestions they made as well. One of the students, as a case in point, wanted, "There should be no time limit for uploading and submitting completed assignments." Such disadvantages seem to relate to the educators who may not have the required expertise, training or motivation to run courses electronically on an LMS platform. Criticizing the way educational technologies are employed, a number of studies have argued that new technologies have been mainly used as a medium to transmit information and have little to do with the improvement of the quality of teaching (Herrington, Reeves, & Oliver, 2005; Malikowski, Thompson, & Theis, 2007). According to Norton and Hathaway (2008), in courses run through the medium of new technologies, resources are typically gathered, the content of the instruction is produced and scheduled for different sessions and are finally transmitted to the students. One of the factors which can impede academics' appropriate educational performance on web-based platforms like LMSs could be, as Malikowski et al. (2007) hold, their lack of expertise to work within technological systems or unfamiliarity with establishing computer-based interactions or quizzes. Bradford et al. (2007), furthermore, identify the difficulty of learning how to use LMSs as one of the limitations of the systems which might adversely affect the way they are employed. Academics' motivation for using technological systems, including LMSs, creating electronic materials, and employing innovative teaching methods in the virtual space could also play a pivotal role in their teaching in such systems. In this regard, Heirdsfield, Walker, Tambyah, and Beutel (2011, p. 2) note, "Teachers do not have the motivation or time to become expert users of online systems thus limiting their use of innovative pedagogies." Delayed feedback from the instructors has been also reported as one of the dissatisfactions of students with Blackboard as an LMS (Liaw, 2008; Yang & Cornelius, 2004), which can, in turn, slow down the leaning process (Belcheir & Cucek, 2001). Another reason for the lack of instruction

and correction of the students' mistakes in the present study could have been the number of students (62) taking the English courses. The professor might have not had enough time to correct all assignments. The teacher participants of the study by Hemati and Mojarrad (2016), which was on the application of an LMS in a TEFL course, also complained about the high number of students in each class and asked for the organization of training courses on how to use the web-based system used in the course.

Another weakness the students found in the LMS pertained to the infrastructure of the context in which the platform was used and the problems of the devices on which the LMS was installed. In this regard, it can be argued that Internet problems and technical glitches were two Internet-related demerits in the students' responses. The cost of the Internet was also one of the problems the students highlighted. For example, one of the students said, "The cost of the Internet is high. Many students like me cannot afford it." The availability of the Internet was also another problem. One of the students complained, "I was unable to send assignments when there was an Internet connectivity problem." Rabiee, Nazarian, and Gharibshaeyan (2013), for instance, name mistrust and cost of the Internet as the main obstacles to the adoption of online electronic learning in the Iranian context for educational purposes. Problems with availability and connectivity have also been abundantly reported as Internet-related barriers to the broad adoption of elearning in Iran (Feyzi & Rahmani, 2003; Kamalian & Fazel, 2009; Mousavi, Mohammadzadeh, & Pezeshkiraad, 2011).

Suggestions for Improving the Educational Usability of the LMS

Most of the suggestions the students offered with regard to the use of the LMS for teaching English centered on the way educational issues were handled on the LMS platform. The students, for example, demanded the provision of correction and feedback (The assignments should be checked and the correct answers should be provided for the students), balancing the quantity and quality of assignments (The load of homework assigned should be reduced so that the students can have a more pleasant experience of using the system), promotion of instruction (There should be teaching on the problems we have in our homework), and variety in educational materials (Uploading vocabularies, expressions or even short stories weekly to help improve students' knowledge of vocabulary). In this regard, Schlager (2016) argues, "Schoology [as an LMS] allows a teacher to share resources and create educational experiences in a manner that has never been seen before" (p. 40). He further adds that Schoology provides a platform for discussions, formative assessment, video assignments, and electronic for teachers, emphasizing that they should employ these tools in their classes. Likewise, it has been reported that teachers can use the LMS platform to provide comments and feedback to students (Liu & Cavanaugh, 2011). Therefore, as the web-based platform provides teachers with the possibility of implementing different educational procedures, the teachers themselves should decide to benefit these applications and possibilities to upgrade their teaching quality and the students' learning outcome.

The students in the study also called for the organization of quizzes on the LMS platform. One of the students demanded, "We do not have tests on the platform. It will be helpful if we take tests on the platform." According to Matoos and Barber (2013), "LMSs typically offer both pedagogical and evaluation capabilities in the same package" (p. 5175). The students' demand for the organization of quizzes has been echoed in the study by Schlager (2016), where more than 40% of the students indicated that they would like to take quizzes on the platform. In addition, the teachers in the study also pointed out that they would like to set up quizzes on Schoology. Therefore, it can be safely argued that one of the reasons for not organizing quizzes on the LMS platform could be instructors' lack of expertise or motivation; the LMS itself seems to have the potential to support the administration of tests.

Another problem with which the students expressed disappointment was the likelihood and ease of cheating in doing the assignments on the LMS platform. Some of the complaints by the students were: "There is the possibility of cheating which can result in laziness," "The probability of cheating and copying is high," and the LMS "facilitates cheating." In this regard, it should be mentioned that misconduct in the programs delivered through the medium of elearning has been a real growing concern globally. Roberts and Wasieleski (2012), for instance, mention that the application of technologies involving the use of a computer is positively associated with misconduct, underscoring "the significant role of technology in enabling negative behavior" (p. 1). Matoos and Barber (2013) also stress, "Cheating in the electronic environment of an LMS is a real problem that needs to be addressed" (p. 5176). Therefore, it can be argued that cheating and dishonest conduct is not limited to a specific LMS. There are, however, strategies to cope with and mitigate such unethical behavior in the electronic environment of an LMS. Keresztury and Cser (2013), for instance, note, "Emergence of new tools in education not only advanced the techniques in teaching, but also in cheating," suggesting the use of both organizational and technical measures to confront such dishonest behavior (p. 1519).

One of the suggestions offered by the students was related to logistical challenges. Some of the students' complaints were: "Some students might not have the equipment required for using the system," "Typing the assignments is difficult," and "Not being completely familiar with different functions of the site for sending and receiving different files." Trivial though these problems might seem, they can directly influence the students' attitude and use of the system as they have a link with the adoption of and satisfaction with the system. In connection with this issue, Sayfouri (2016) reports typing in English as one of the problems of the students while using an LMS, stressing, "Recurrent technical problems they encountered decreased their positive attitudes toward the system to a great extent" (p. 7). Shayan and Iscioglu (2017) investigated the condition of using LMSs at Payamnoor and Farhangian universities as two LMS providers in the Iranian context, describing as satisfactory the status of LMS usage among "the vast majority of Iranian students" (p. 1877). They, however, added that the students were discontented with the platform and systematic design of the LMSs at the universities. One of the reasons for such complaints by the students could be the fact that they have not experienced elearning, which requires typing and having the rudimentary equipment. Another reason could be the fact that they were not provided with institutional and instructional support and the requirements of this mode of learning. Bower (2001) calls the provision of institutional and instructional support as a critical factor for the adoption of an LMS. Green et al. (2012) also highlight that "usability of the LMS and availability of technical assistance is strongly correlated with student satisfaction" (p. 189).

One of the technical suggestions, which the students offered, was changes to the LMS platform. They demanded the improvement of the options and applications of the site, addition of entertainment and motivational programs to the LMS, offline usability of the platform and ease of using the system. In this connection, Patel, Gadhavi, and Patel (2013) argue that all LMSs do not function similarly as they serve different purposes. The students' suggestions for changes in the platform could have possibly originated form their needs in the courses. For instance, the demand for additional applications like "bilingual dictionaries" could have been made probably because of the need to look up the meaning of unknown words. Alternatively, the call for offline usability of the LMS could have been made probably because of the Internet problems and the cost of the Internet.

Like any other study, this study has limitations. One of the limitations of the study was the lack of transferability, which was primarily due to its qualitative nature. This study was conducted at a medical school with a focus on using the LMS in teaching English. Therefore, the findings may not be transferable to other contexts, universities, and courses. To allay this

concern, the researcher, however, tried to improve the rigor of the study via having an appropriate number of participants and maximum variation in sampling. Another limitation of the study was that some of the students taking the English courses seemed technophobia and did not welcome the application of the LMS and therefore were not willing to participate in the study. With regard to this limitation, the researcher announced that participation in the study was not compulsory and only those who were willing could participate in the interviews voluntarily. The researcher, however, paid much attention to secure maximum variation in sampling the students through choosing both the males and females and targeting the students with good marks and those with weak marks in the English courses.

I found in this study that the medical sciences students, despite identifying logistical and educational problems with the LMS, reported many merits of using the system and advanced practical suggestions for improving the educational usability of the LMS. The findings lead me to the suggestion that developments should take place in four areas of infrastructure, educators, students, and the LMS. The status of the infrastructure for running the LMS should be improved. For example, free quality Internet together with the required equipment for using the LMS should be provided for the students. Educators should be encouraged to employ the LMS appropriately and innovatively. There should be an incentive mechanism for educators using the LMS. The educators using the LMS should try to teach on the platform, correct students' assignments and provide feedback for them; they should also consider organizing tests or quizzes on the LMS platform. As for the students, training programs or workshops on how to use the web-based system efficiently should be organized. Moreover, they should be trained to observe ethical codes of conduct while using the LMS, and avoid academic misconduct. As for the LMS platform, changes should be made to the LMS so that it can fulfill the students' needs, or a new field-specific LMS should be designed so that the students can have a more enjoyable learning experience. The researcher suggests that similar studies be conducted in other courses and universities to provide new insights into students' perceptions of using LMSs in different university courses. The findings of these studies will help educators use LMSs more efficiently through considering students' educational, logistical and technological needs and wants.

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