E-Learning Tools Using GOALS for Network and Management Information System Course and Its Challenges in USIM

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Abstract

This paper presents a list of modules that have been utilised for course Network and Management Information System. This course has managed to achieve 50% usage of e-learning tools after a pre-evaluation assessment conducted by the GOALS. To evaluate the lecture and lab teaching, a survey consists of four questions have been conducted online using GOALS module. Three of the questions were close-ended questions that asked the learners to choose only one answer from several options. The final question was an open-ended to encourage the learners to give their opinion based on pre-defined questions in the survey module. The results were analysed based on the survey responses. Discussion based on the findings will assist the instructor to improve in utilising the e-learning tools and also the conventional learning method. Other than that, challenges in implementing the e-learning tools are observed throughout this course. Therefore, it is expected that this study will benefit the instructor to produce more conducive e-learning tools towards improving the implementation of blended learning methods in Malaysian higher education.

Keywords: e-learning tools, blended learning, challenges

1.   Introduction

The integration of e-learning tools in student's learning has grown and been employed by many education institution. According to [1], e-learning refers to the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance. The e-learning medium is still evolving in Malaysia particularly in USIM community by introducing a blended learning method which covers 30% of the overall learning method. In designing a blended

learning [2], it is necessary to take into account both learning objectives and organisation mission specifically in USIM. Blended learning is referred as hybrid teaching methodology where this term is increasingly used to support e-learning that combined with traditional classroom methods and independent study. Modules that have been predefined and introduced to the learners for this course are (i) news forum (online announcement), (ii) course outline, (iii) forum, (iv) upload file and website links, (v) online quiz, (vi) Web 2.0 tools (Prezi) and (vii) assignment. Those modules could be accessed through the e-learning tools are used by both lecturers and learners using Global Open Access Learning System (GOALS) specifically in USIM.

2.   Methodology

To assess the lecture and lab teaching for Network and Management Information System course, four questions have been conducted online using GOALS module. Survey questionnaire was based on two types of response format which is close and open-ended questions. For close-ended format, learners were asked to choose only one answer from several options. This types of response format allowed the researcher to extract exactly the information needed, making the procedure efficient and straightforward [3]. The final survey was an open-ended question to encourage the learners to give their opinion based on the pre-defined questions in the survey module. A total of 186 online survey invitations for each types of survey were sent via GOALS. The respondent was the undergraduate students of year three and four from Faculty of Quranic and Sunnah Studies (program Sunnah and Information Management). At the end of 9 days period, 539 responses for the entire survey were returned for analysis. According to [4], when average response rates are high (72.45%), the probability of error is small.

3.   Findings and Discussion

Five hundred and thirty nine responses were received for the study, a 72.45% average response rate for four questions. All responses were received online using options and survey module in GOALS. The results were downloaded as Excel file. For the first question, Figure 1 shows that majority of the learners agreed that e-learning tools help students to gain knowledge and obtain skills faster than the traditional method. Figure 2 presents the findings of the second question where it helps the lecturer to improve other chapters in order to make it more

interesting. The third question was conducted by asking whether the social media (WhatsApp messenger) that created in a group helps students to get information quicker by providing two ways communication. This survey achieved the highest response rates (89.78%) where majority strongly agree to this effective approach.
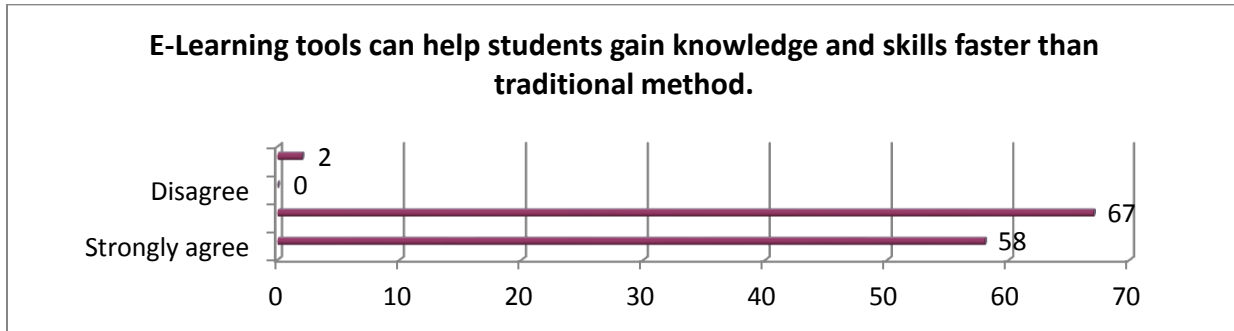
E-Learning tools can help students gain knowledge and skills faster than traditional method.

	Value
	2
Disagree	0
	67
Strongly agree	58

Figure 1: Close-ended questionnaire results on e-learning tools in comparison to the traditional learning method.

Which chapter that you find the most interesting?

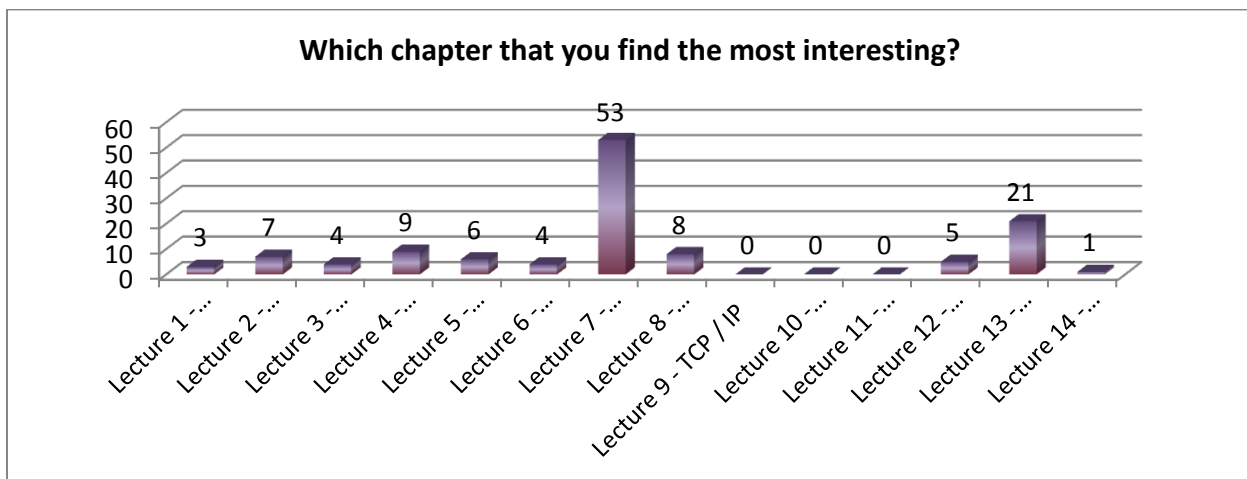| Lecture	Value
Lecture 1 - ...	3
Lecture 2 - ...	7
Lecture 3 - ...	4
Lecture 4 - ...	9
Lecture 5 - ...	6
Lecture 6 - ...	4
Lecture 7 - ...	53
Lecture 8 - ...	8
Lecture 9 - TCP / IP	0
Lecture 10 - ...	0
Lecture 11 - ...	0
Lecture 12 - ...	5
Lecture 13 - ...	21
Lecture 14 - ...	1

Figure 2: Close-ended questionnaire results on finding the most interesting lecture – Network Topologies and also the unpopular lecture.

Social media (e.g: WhatsApp messenger) that created in a group helps students to get information faster by providing an effective two way communication.

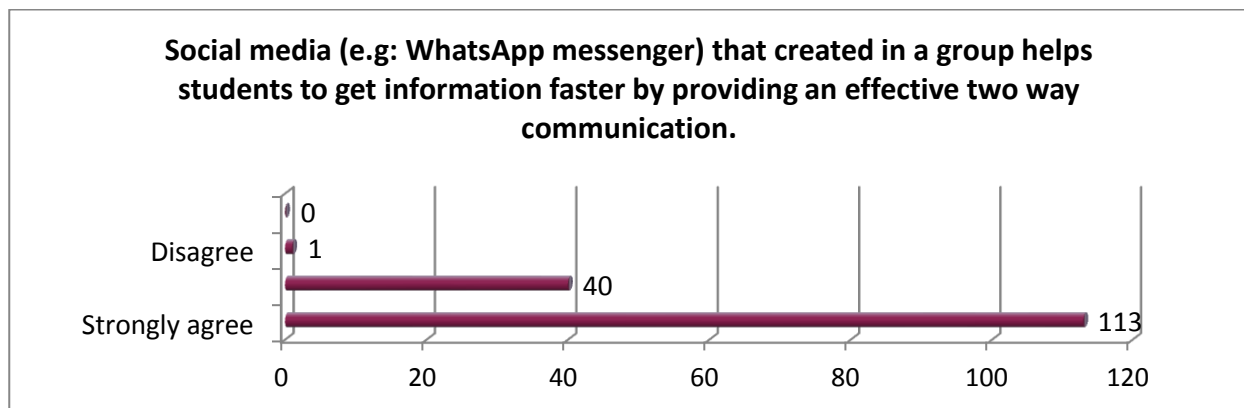|	Value
	0
Disagree	1
	40
Strongly agree	113

Figure 3: Close-ended questionnaire results on finding the benefits of social media.

The final questionnaire asked the four predefined questions using survey module in GOALS as shown in table 1. Variety of answers was received. However, only five interesting answer were selected as an indicator to extract useful responses. 104 learners respond to answer this open-ended question. The remainder was 82 learners did not respond to this survey. This kind of survey received the lowest response rates (56.45%) due to the nature of the format where the respondent had to think and write their opinions.

Table 1: Specific issues that were predefined questions using survey module in GOALS.

Questions related to lecture and lab survey	Response (5 random interesting selection based on the answer)
At what moment in class were you most engaged as a learner?	1) All the time in lab and lecture are very interesting and comfortable to learn and also when get high mark. That will make us as a learner eager to study and learn hard. 2) In the beginning of the class. 3) When the lecturer show videos that are related to the topic. Besides, when the lecturer was using drawing tools to explain to us about the topic. 4) Practical session based on computer - peer to peer. 5) When there was a discussion between lecturer and students.
At what moment in class were you most distanced as a learner?	1) Never have this moment. 2) When I fall asleep and unable to give full concentration because the lecture was at night. 3) During lecture class. It is because, the lecture is held during the night. 4) Too strict of using language in English. 5) Lecture class because too many students.
What action from anyone in the forums did you find most affirming or helpful?	1) When anyone in this forum talk about due date and work to do outside this forum. 2) When he/she asking something that I also thinking about the question or any particular problem. 3) The actions that have good explanation about the details of some topic. 4) Follow the guidelines that already predefined. 5) When other students posted new post in the forum and interesting essay.
What action from anyone in the forums did you find most puzzling or confusing?	1) Not follow the guideline. 2) So far, I did not face any situation that puzzling me. 3) When I see someone post something which is difficult for me to understand. 4) When everyone interacting with each other at the same time. 5) When they post wrong information.

3.1   Issues and Challenges Faced by the Learners in Implementing e-Learning in USIM

The main issues were identified through verbal communication and also through observation during the entire course. First, limited access to the network where some of the students only depend on the internet access only during the lab session. Secondly, the bandwidth issues and connectivity of free WIFI provided by USIM is accessible and high WIFI signal for certain places. Interactive content such as Youtube video and Prezi require higher bandwidth due to the combination of multimedia elements. Slow bandwidth creates frustration and boredom among learners and discourages them from exploring the updated modules in GOALS. Third challenges are that learners were allowed to use lab in the faculty only during the lab session and monitored by an instructor. Fourth issues that learners feel disappointed when the online quiz could not be completed within the time due to the network server error by GOALS. This could be too many learners' access at one time and limited database server. There are many issues and challenges that need to be overcome in order to enhance the effectiveness of e-learning especially in USIM environment.

4.   Conclusions

It is hoped that this study will benefit the instructor and the institution to produce more conducive e-learning tools towards improving the implementation of blended learning methods in Malaysian higher education. On top of that, the way this course learning was taught could be improved based on the findings.

References

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