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## E-Learning Service in the School of Mathematical Sciences

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### Abstract

The e-Learning system is an important medium that can help lecturers and students to do various teaching and learning activities online. Thus, a study aims to investigate students' perceptions towards the usage of the system in teaching and learning activities through a survey which was conducted in semester II of session 2009/2010. The target group was students who undertook courses at the School of Mathematical Sciences, Universiti Kebangsaan Malaysia. A questionnaire consisted of students' levels of importance and satisfaction towards components provided by the e-Learning system was developed. Based on the findings, the service gap in e-learning system, problems encountered by the students and their recommendation to improve the system were identified. This study shows that students' main purpose in using SPIN is to obtain extra materials.

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### 1. Introduction

E-Learning is a generic term that displays various forms of electronic-based learning (Ketabchi *et al.* 2008; Ozkan & Koseler 2009). This method is believed to be able to increase effectiveness and efficiency of various forms of existing training (McCrea *et al.* 2000; Driscoll & Alexander 1998). According to Lee (2005), the effectiveness of the use of an e-Learning has to be evaluated and the effectiveness measurement can be a useful tool to support the decisions on any strategies that are needed in e-Learning (Figuera 2003). In Universiti Kebangsaan Malaysia (UKM), the Interactive Teaching and Learning Management System or known as SPIN is a special e-Learning system that was developed in 2008 to help lecturers and students to carry out various online learning activities such as syllabus and course content, lecture notes and quizzes in SPIN as well as online forums and discussions (Mohd Iqbal 2009). This system supports the use of teaching materials in the forms of soft copies and multimedia applications. Therefore, in line with the university's direction that SPIN will enhance lecturers and students in the process of life-long teaching and learning, a study was conducted to investigate perceptions of students towards the

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usage of the system. A survey was conducted on undergraduate at the School of Mathematical Sciences, UKM with the purpose to find the reasons of using SPIN, identifying the factors as well as measuring the level of importance and satisfaction of SPIN, determining the relationship between the levels of importance and satisfaction of SPIN and students' performance. The ultimate aim is to identify the challenges as well as recommend ways to improve SPIN services.

## 2. Methodology

The data was collected from 300 students who undertook courses at the School of Mathematical Sciences (PPSM) in the Faculty of Science and Technology of Universiti Kebangsaan Malaysia. The respondents were chosen based on convenience sampling. The instrument used in the study was a questionnaire that was developed according to the features and applications that are available in SPIN. This questionnaire was also earlier tested through a pilot test and focus group. The results showed that the questionnaire was reliable to be used. This questionnaire was distributed after the mid-semester II break of session 2009/2010. This was a suitable time as students had experienced in using SPIN for courses they undertook for seven (7) weeks prior to the mid-semester break. The process of the distribution of the questionnaire and data collection took three (3) weeks. Then the data was analysed using descriptive, gap analysis, mean analysis, correlation analysis and cross tab analysis.

## 3. Results and Discussions

Fig. 1 shows percentages of students who were involved in this study based on programmes of studies. The highest involvement was students from the Statistics programme. Meanwhile, 17.6% of the students were from other faculties who undertook courses at the PPSM. The majority of 74.0% of the students were females. The respondent of Malays and Chinese students was the highest namely 56.0% and 38.7% respectively.

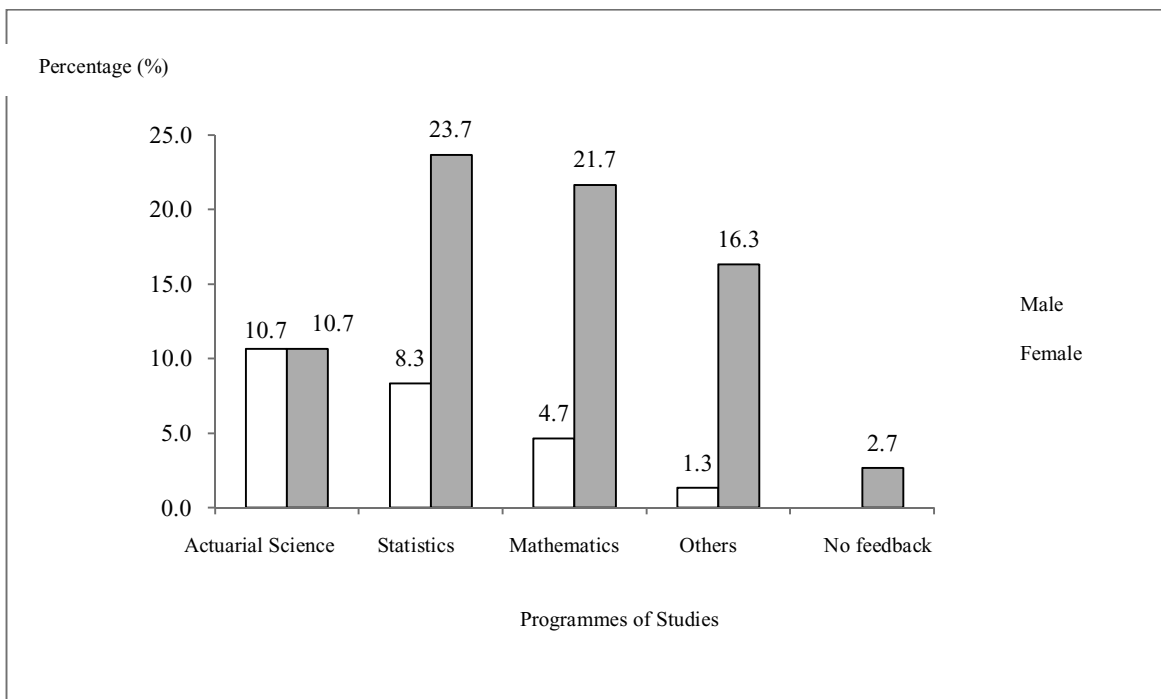


Figure 1 Percentage of students based on gender and programme of studies

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