

USE OF E-LEARNING RESOURCES IN AGRICULTURAL HIGHER EDUCATION

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Introduction

E-learning strategies are increasingly being used in the higher education sector to facilitate the teaching – learning process. Many institutions have initiated developing e-learning materials (eLMs) to supplement course materials in the recent past. However, it is necessary to combine instructional material with three other basic elements of e-learning i.e. tutorial support, communication, and collaboration between the need for social communicative learning and instructional demand for active learning (Gunawardana, 2005) in order to facilitate higher order learning skills. The Faculty of Agriculture, University of Peradeniya recently established a Learning Support Centre (LSC), to which teachers can upload e-learning materials (eLMs) so that students would have free access to course-related additional learning resources. This system was initiated by using a free webhost and later replaced with the Moodle learning management system. During the time of this study, the LSC offered eLMs for 13 courses. This study was

conducted (i) to find out the level of use eLMs by the undergraduates, (ii) to identify their attitudes towards e-learning, and (iii) to suggest ways to improve the use of eLMs among undergraduates.

Methodology

Stratified random sampling was used to select 199 undergraduates for the study to represent three academic years ($n_1=69$, $n_2=69$, $n_3=61$). A structured self administered questionnaire was used in the data collection. Students' attitudes towards e-learning were measured using a 5 point Likert scale (Reliability coefficient alpha was 0.664) while descriptive methods, correlation tests and mean comparisons were used in data analysis.

Results and Discussion

According to the results, majority (80.6%) of the undergraduates has visited the LSC of the Faculty of Agriculture at least once and they were aware on the eLMs available in the LSC. However, only 59 % of the students have stated that they have used these e-learning materials for their studies (Table 1).

Table 1: Distribution of students by the total number of eLMs used

Total number of ELMs used	Percentage
0	80 (41.2%)
1 – 5	98 (50.4%)
6 – 10	13 (7.2%)
> 10	2 (1.0%)

Number of the eLMs used by a student varied from 0 – 14 while the average

number of eLMs used by a student was as low as 1.79. The use of eLMs were significantly low among the first year students when compared with second and third year students ($F=12.282, p<0.01$). According to the students' comments lack of time allocation to use eLMs, lack of awareness, and lack of computer skills were the major problems behind the less use of eLMs.

Use of computers and the internet for academic work was fairly common among the undergraduates. Majority (70%) of the respondents searched the World Wide Web for academic purposes at least once a week, while 48% of them used the internet as

frequently as 2-4 days per week for the same purpose.

Higher the academic year, higher were the level of use of eLMs (Spearman $\rho = 0.364, p< 0.01$) and the frequency of accessing internet (Spearman $\rho = 0.476 p<0.01$). The level of use of eLMs was higher with students having high z-scores ($r=0.679, p<0.01$) indicating higher academic performances. Furthermore the level of use of eLMs does not vary with the gender, and years of previous computer exposure.

Table 2: Distribution of students by the frequency of use of learning resources learning resource

Learning resource	Frequency of use			
	Daily	Weekly	Monthly/ During study- leave	Never
Handouts	118 (62.8%)	56 (29.8%)	12 (6.5%)	0%
Worldwide web /e-learning resources	38 (20.2%)	98 (52.1%)	43 (22.8%)	9 (4.8%)
Text Books	15 (9.6%)	70 (48.9%)	69 (33.1%)	32 (18%)
Academic journals	1 (0.6%)	17 (10.5%)	61 (37.7%)	63 (38.9%)

Interestingly, majority of the students share favourable (60.8%) and highly favourable (24.1%) attitudes towards using e-learning resources in the undergraduate degree programme indicating their willingness to use such resources in the future.

Frequency of use of worldwide web to access information was moderate among the undergraduates when

compared to other learning resources such as handouts and text books). As presented in Table 2, handouts were the most popular learning resource among the students. However majority (72.3%) of the students were seen accessing e-learning resources at least once a week.

Many students were seen using web based resources to obtain information when compared to text books. This is

probably due to the convenience, and accessibility of internet facilities.

Conclusions

The study concludes that the level of use of eLMs was fairly satisfactory among the agricultural undergraduates. Students possess favourable attitudes towards eLMs thus there is a high potential to introduce more computer based learning resources in the academic programme. Further, it is equally important to aware the student community on the availability of eLMs at the LSC.

Acknowledgement

This study was supported by the University Research Grants RG/2008/01/Agri.

References

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