The Contribution of Technology Facilitated Learning in the Development of Actuarial Competencies in Tourism Business Management Education: An Empirical Investigation

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Abstract

This paper reports the outcome of a quasi-longitudinal investigation into the effects on students’ performance of integrating technology facilitated learning (TFL) using MS Excel into the business statistics syllabus of a tourism management programme. By varying the magnitude of TFL applied in the syllabus of the subject across four consecutive cohorts, the impact on the students’ performance was cross-compared. The outcome of this investigation suggests that TFL contributes constructively towards enhancing the students’ performance. The inferences were found to be consistent with a host of theoretical considerations in published literature.

1. Introduction

This study was carried out across four cohorts, each comprising of two majors, hotel, BH, and tourism, BT. The year of intake is indicated in the brackets. The topics in the syllabus remained unchanged during the length of the study.

2. Methodology

Ceteris paribus the magnitude of the computer assisted instruction (CAI) attribute (MS Excel) in the syllabus was steadily increased from cohort to cohort as demonstrated in Figure 1. The topics taught through CAI were initially explained from the theoretical perspective. Instances illustrating the topic’s application to tourism business and economics were discussed. Thereon, the relevant functions in Excel were demonstrated from the standpoint of problem solving. The course evaluation was made on the basis of a group project, two tests and a final exam and the weight allocated to the topics in the syllabus remained unchanged for all the four cohorts.

3. Analysis & Outcome

Normality of the datasets (students’ grades) was established, allowing for application of parametric tests. To account for lack of randomness in allocation of groups, a baseline test was performed on the basis of the students’ GPAs. There were no significant differences observed between the BT and BH groups, making inter-cohort comparison possible. An inter-cohort comparison was made using ANOVA and LSD post hoc test. All parametric tests were performed at p = 0.05. The results of this investigation suggest that the effects of CAI with an intervention level of up to 10% do not yield any perceptible differences. The threshold value at which these effects begin to manifest themselves was observed to be 55%. So as to gauge the minimal threshold value beyond which the effects begin to set in, an iterative trial and error approach would be necessary.

4. Conclusion
It can be concluded from this research that TFL in the form of CAI contributes constructively to the students' understanding of the subject matter. This outcome is consistent with a host of theoretical models. This empirical methodology offers further scope for research by virtue of replication of such a study involving other subject areas, the outcome of which will *inter alia* provide further scope for establishing the reliability of the design and validity of the inferences arrived at in this study.