# Chapter 10
# Interdisciplinary Problem–Based Learning Practices in Higher Education

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## EXECUTIVE SUMMARY

*More and more students in higher education are enrolling on interdisciplinary programs. This phenomenon occurs since universities are breaking the boarders of a single subject area. At the university of Nicosia, the lecturer of two interdependent courses: MGT-372 Management of Innovation and Technology and MIS-151 Business Software Applications attempted to bring together students from different disciplines to explore the two topics. More specifically, through Interdisciplinary Problem-Based Learning (IPBL), the lecturer (author) aimed to eliminate the fragmentation and the learning of isolated skills and investigate students' motivation for learning and their level of active engagement through the use of technology (Google Apps). To address the above, the study employed a case study approach, collecting qualitative data through student focus groups, online/in-class observations, and lecturers' comments. The study showed that students seemed intrigued and satisfied working on interdisciplinary tasks, shared prior and newly researched knowledge, as well as acquired an integrated viewpoint and solution-focused strategies deriving from those disciplines.*

## ORGANIZATION BACKGROUND

More and more students in higher education are enrolling on interdisciplinary programs within multidisciplinary departments. This phenomenon occurs since universities are breaking the boarders of a single subject area. Interdisciplinary learning (IL) initiatives are multiplying throughout higher education at an extraordinary rate (Creamer& Lattuca 2005; DeZure 1999). At the university of Nicosia, the lecturer, of two interdependent courses: MGT-372 Management of Innovation and Technology and MIS-151 Business Software Applications attempted to bring together students from different disciplines to explore the two areas: management of technology innovations and software applications. The topics varied and focused on technology innovations, software applications, information communication technologies, social networking technologies and e-business.

The implementation of IL approach, for the purpose of the current study, aimed to seek meaningful connections between the two courses were students could complete a critical analysis of those connections, for example integrate Social media technologies in an enterprise.

With the current study the lecturer intended to provide students new opportunities to experience deep, challenging and relevant learning through stimulating activities using knowledge and learning from two different courses.

The two aforementioned courses were united on one relevant topic/issue/problem, through the analysis, comparison, and contrast of perspectives contributed by each discipline. Contextualized, complex, open-ended, authentic problem sets and innovative projects based on the union of the two courses, were presented to students individually and/or in groups for investigation. A class/virtual discussion followed as well as a group progress report on earlier/present learning issues and future plans (Ktoridou 2010).

More specifically, through Interdisciplinary Problem-Based Learning - IPBL the author aimed to eliminate the fragmentation and the learning of isolated skills allowing students through the use of technology (Google Apps) to increase their motivation for learning as well as their level of active engagement. To address the above, the study employed a case study approach, collecting qualitative data through focus groups with students, online/in-class observations and lecturers comments.

This section discusses the essential background information on Interdisciplinary Learning and Problem-Based Learning. It then proceeds with a brief introduction to Cloud Computing Applications and Services along with a description of Google Applications for education. Finally brief descriptions of the two courses used for the purposes of case study: MIS-151 Business Software Applications and MGT-372 Management of Innovation and Technology follow.

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