EXPLORING A BLENDED LEARNING ECOSYSTEM IN THE ACADEMIC ENVIRONMENT

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ABSTRACT

Blended learning is widely applied in academic institutions. To explore the utilization of blended learning features in an academic environment, a study was conducted in Harokopio University of Athens over a period of three years. If blended learning is to be successful, interrelations between stakeholders involved in it should be effectively explored. The term blended learning ecosystem is introduced to describe blended learning constituents and the evolving relations between them. The purpose of the study was to explore the relation between instructors and students in the blended learning ecosystem of Harokopio University of Athens and the relation of each one of them with the e-learning infrastructure.

KEYWORDS

Blended learning, blended learning ecosystem, assessment of learning methods, academic environment, case study

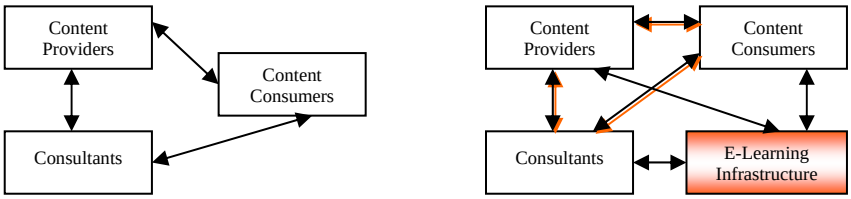
1. INTRODUCTION

E-learning approaches are applied both in entrepreneurial environments as well as in educational institutes. In Universities and other higher education institutes, e-learning methods are usually combined with traditional face-to-face teaching, leading to what is called *Blended Learning* or *Hybrid Learning* (So and Bush, 2008; Olapirivakul and Sher, 2006; Bonk et al., 2005). As it is implied by its name, blended or hybrid learning is in general the combination of multiple methods for the delivery of instruction, but most often refers to the use of technology in traditional pedagogical approaches. An example of blended learning would be the combination of a typical classroom lecture with follow-up material online. The application of blended learning for undergraduate courses was explored in Harokopio University of Athens, Greece by introducing the combination of typical classroom lectures with e-learning features. Both static (for example material download) and interactive (for example assignment/project management) features of e-learning were employed. To explore the implications of blended learning in the interrelations between stakeholders, i.e. learners, instructors, technicians, etc. the concept of *blended learning ecosystem* was adopted, based on the principals introduced in (Uden and Damiani, 2007). In Through the interactions between stakeholders, the blended learning ecosystem is dynamically transformed leading to the gradual formation of a new learning paradigm.

2. THE BLENDED LEARNING ECOSYSTEM OF HAROKOPIO UNIVERSITY OF ATHENS

According to our point of view, a blended learning ecosystem consists of four main elements: *content providers*, *content consumers*, c*onsultants* and e-*learning infrastructure*. Figure 1(a) shows the interrelations of these entities in traditional learning. The introduction of technology, i.e. e-learning infrastructure, created three additional relations, as shown in Figure 1 (b): a) between content providers and infrastructure, b) between content consumers and infrastructure, c) between consultants and infrastructure. Moreover, it altered existing relations as

implied by the shade in the respective arrows. The role of consultants is also affected, since another consultant group was added apart from strategic consultant. *Technology specialists*, regarded as consultants, are responsible for supporting the use of e-learning technology and for solving technical issues.



(a) **(b)**

Figure 1: (a) Entities and interrelations in traditional learning
(b) Entities and interrelations in blended learning

In our study, we focused on a) the relation between e-learning infrastructure and content providers, b) the relation between e-learning infrastructure and content consumers and c) the impact of technology on the relation between content providers and content consumers. It is assumed that technology specialists provide all necessary support to both content providers and content consumers to effectively use the infrastructure. These three relations were explored based on the research conducted in Harokopio University of Athens during a period of three years. In this research, the blended learning methods offered were evaluated by both instructors and students. The evaluation by the students was performed via a structured closed-type questionnaire, while instructors filled in an open-type questionnaire in order to qualitatively investigate their opinion. The statistical elaboration of the questionnaires included, initially, descriptive statistics and factor analysis. Some secondary analyses followed, focusing on the perceived usefulness of e-learning services: factors revealed by factor analysis, related on specific service usage and usefulness as indicated by students, were utilized as independent variables, and correlated to the rest of the variables in the questionnaire. This process utilized the extraction of conclusions regarding the way students were using the e-learning platform with respect to their previous experience with information technology and the way it affected their relationship with their instructors.

Both instructors and students evaluated the employment of blended learning very positively. One of the most interesting observations of our research is that the introduction of blended learning methodologies, despite some initial second thoughts, did not reduced physical presence of the students in the classroom neither face-to-face instructor-student communication, while basic computer skills were the only prerequisite for e-learning services employment. Regularly attending students responded very eagerly and were particularly excited about the e-learning services. For both instructors and students, gender and level of computer literacy had no affect on their willingness to facilitate blended learning features. Interactive e-learning features were mostly preferred by students, while their employment by instructors only depended on their teaching habits.

In the future, we plan to explore how the provision of streaming video downloads for all the lectures of specific courses may affect the e-learning ecosystem of our University, since such methods are already extensively applied in well-known academic institutions world-wide. Furthermore, we investigate alternatives on improving the teaching style of instructors widely adopting blended learning features in their courses.

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