

Chapter 46

Competition–Based Learning: A Model for the Integration of Competitions with Project–Based Learning using Open Source LMS

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ABSTRACT

In an effort to enhance the learning process in higher education, a new model for Competition-Based Learning (CBL) is presented. The new model utilizes two well-known learning models, namely, the Project-Based Learning (PBL) and competitions. The new model is also applied in a networked environment with emphasis on collective learning as well as collective outcomes. The new model, which is referred to as CBL, provides educators with an alternative solution to overcome many of student's deficiencies associated with traditional learning practices; such as lack of motivation, lack of self esteem, insufficient practical and real-life experience, and inadequate team work practices. The new CBL model makes a clear distinction between PBL and competitions and CBL. It avoids the disadvantages of competitions, while at the same time gaining from the many benefits of PBL. Identification features of CBL, components of CBL, as well as advantages are presented. An open source Learning Management System (LMS), namely, Moodle is used for the implementation of a networked environment to support CBL.

INTRODUCTION

There are several challenges facing students and teachers in higher education (Hanna 2000; Scott 2000). Such as: the rapid advancements in

technology including new means of communication and social networking, lack of students self motivation, and lack of preparation of students to meet professional working environments. These are only few of the many challenges that need to

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be carefully addressed by researchers and educational institutions (Kolb 2005, Martin-Dunlop & Fraser 2007, Lewenstein 2009). Employers prefer graduates who not only possess technical skills, but who are capable of working with team members, have the logic of problem solving, who can work with clients, and who are familiar with project management skills including budgeting, and time management.

To overcome deficiencies in higher education, researchers have been exploring different forms of learning models hoping to achieve the Indented Learning Outcomes (ILOs) specified in a program of study. When examining a given curriculum, we should expect to find a reasonable number of ILOs which focus on the concept of motivation, self esteem, problem solving, team work, solving real-world problems, competition, and innovation (Alkhatib et al., 2011, Issa et al., 2011, Issa et al., 2010).

Consequently, a number of learning models have been developed and in-use for different learning levels, such as: PBL (Ruenglerpanyakul et al., 2012, Rahman et al., 2012, Erdem 2012, Willard & Duffrin 2003, Mifflin 2003, Howard 2002, Thomas 2000), competition (Cantador & Conde 2010, Lawrence 2004, Yu 2002, Lam et al., 2001, Ediger 2000), Networked Learning (De Laat 2006, Banks et al., 2003), collaborative learning (De Laat & Simons 2002), and active learning (Fasli & Michalakopoulos 2005). The most widely models are PBL, competition, and Networked Learning, and they will be discussed later on.

However, as we shall discuss later on that all of these models have their own advantages and disadvantages, and we believe that they short from providing satisfactory learning process. This gives us the motive to look for a more satisfactory model.

Therefore, in this paper, we propose a new learning model aiming at enhancing the learning process and boosting the levels of learning outcomes. The new model utilizes two well-known learning models, namely, PBL and competitions,

and uses them in a networked environment; therefore, it is referred to as the Competition-Based Learning (CBL) model. We believe when combined with PBL, competitions often enhance the learning experience for learners, improve learning satisfaction, and give learners a flavor of real-life business competitions. Furthermore, the course ILOs and any other objectives of the learning process can be successfully satisfied through the application of the CBL model. However, when applying CBL, there is a need to distinguish between curricula and non-curricula activities and thus, to distinguish between PBL, competitions and CBL.

LITERATURE REVIEW

Project-Based Learning (PBL)

PBL is a learning model that has been recognized as an effective teaching method for many years (Thomas 2000; Chard 1998; Howard 2002; Mifflin 2003). It is centralized around projects that are defined as complex real-world tasks, based on challenging problems that require design, problem solving, decision making, and creativity. Students are expected to work on such projects over extended period of times with minimal directions from the teacher.

Thomas (2000) presented five distinguishing features (criteria) for PBL in an attempt to address the confusion with what constitutes a PBL and what does not. The five criteria are centrality, driving question, constructive investigations, autonomy, and realism. These five criteria lead to the following understanding of PBL: Projects are part of the curriculum in which students learn core concepts. Projects are not used for merely illustration nor are used to enrich students with knowledge outside the curriculum. The above criteria distinguish between an exercise and a project, the problem to be investigated must be complex enough to drive students to inquire, build new knowledge, and resolve conflict. The mere

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