Chapter 31
Developing Professional Competence in Project Management Using E-Simulation on Campus

Ian Searle
RMIT University, Australia

Hossein Zadeh
RMIT University, Australia

ABSTRACT

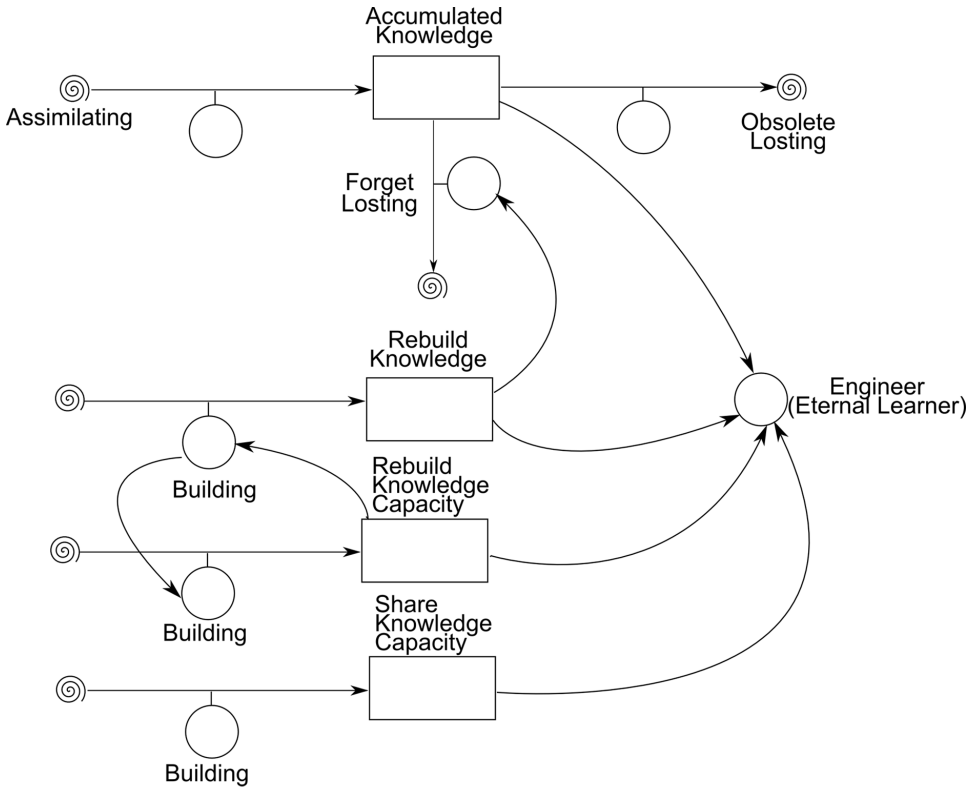
Professional Competency is an important aspect of tertiary education. The term implies not just theoretical knowledge but practical know-how and ability to perform in the workplace. This chapter describes an approach to building professional competency in the field of project management developed in a postgraduate Project Management course at RMIT University, Australia. The course involves an extended twelve-week project simulation in which all phases of the Project Management Life-Cycle are exercised. The aim of the simulation is to build professional competency in the management of projects with particular emphasis on the Project Management Body of Knowledge (PMBoK) project management framework. The simulation uses various techniques to provide a realistic experience for students. Some the techniques involve electronic simulation tools, including electronic communication media and animations. Student evaluation of the use of the simulation tools is presented and discussed.

INTRODUCTION

One of the early works on how knowledge is acquired and accumulated, and how obsoleteness and forgetfulness affect the accumulated knowledge, was done by Richmond and Peterson (1992). As shown in Figure 1, they argued that knowledge is accumulated through assimilation, and its value is reduced through forgetfulness and obsoleteness. But more importantly, Richmond and Peterson (1992) argued that the process of learning through assimilation is only part of the big picture; a learner's knowledge is augmented through rebuilding knowledge, rebuilding knowl-

DOI: 10.4018/978-1-4666-4153-2.ch031

Figure 1. Model of life-long learning (adapted from Richmond & Peterson (1992), and Zambon, Saito, Yonenaga, & Figueiredo (2000))



edge capacity, and through sharing knowledge capacity (see Figure 1).

The learning process based on assimilation is the main, sometimes sole, learning process followed in traditional teaching schools (Zambon, Saito, Yonenaga, & Figueiredo (2000). The "flow of knowledge", as shown in Figure 1, is from the teacher to the students' knowledge repository (i.e. their brain). It is hoped that these repositories keep accumulating knowledge and that it can be recalled when requested. Unfortunately, this is usually not the case; some of the accumulated knowledge loses its value over time (a certain way of solving a problem might not remain the best practice indefinitely), and the knowledge bank is constantly depleting due to forgetfulness. In order to keep this stock of knowledge refreshed and up to date, teachers (and students) must use the remaining learning methods in addition to assimilation. In some disciplines, such as mathematics and engineering, the current body of knowledge already includes a well-developed set of relationships (Richmond & Peterson, 2000). Therefore, in those disciplines, knowledge is re-created and captured by students through developing problem-solving methodologies by way of assimilation and knowledge rebuild. Students with pre-existing creativity and ingenuity can extend their knowledge bank by rebuilding and extending their knowledge capacity and sharing their new knowledge capacity with others.

In less procedural disciplines, such as management, the effect of assimilation on learning is reduced, as there are less universally applicable sets of relationships and methodologies. In these disciplines, each problem presents unique challenges and hence requires unique solutions. Therefore, it is pivotal that teaching and learn-