Evolving Project Management Teaching and Practice at Whitireia New Zealand

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ABSTRACT

This paper reviews the evolution of the teaching and application of project management techniques for Bachelor of Information Technology students in their third year of study at Whitireia New Zealand. In that year of study the students complete a paper on Project Management in their first semester and then participate in a capstone project in their second semester course. Both the paper and the project have been modified due to experience over the years, and further changes are planned.

Categories and Subject Descriptors

K.6.1 [**Project and People Management**]

General Terms

Management.

Keywords

Project Management, PMBOK, PRINCE2, Capstone Project.

1. INTRODUCTION

Whitireia New Zealand offers two undergraduate courses in information technology, a Bachelor of Information Technology and a Graduate Diploma in Information Technology. Both qualifications include a compulsory 20 credit paper in project management in the first semester of the final year and a compulsory 40 credit capstone project in the second semester. The project management paper was designed around the Project Management Body of Knowledge (PMBOK) approach developed by the Project Management Institute (PMI) and students were expected to use this method to manage their capstone project. Most capstone projects are carried out by groups of two or three students but the nature of the projects vary widely.

2. CHANGE DRIVERS

2.1 Student Managers

The first stage of every project is the development of a project proposal including a project plan but, although a few students, mainly the mature ones, referred to their project plans during the execution of their projects, without pressure from supervisors very few would do so, or record their progress. Also project groups would state in their proposal that they would use a particular approach, yet, when the projects were reviewed, it was apparent that they had not really applied it correctly, or at all.

2.2 Work Experiences

Recently two students who were already in employment carried out their capstone projects in their workplace under staff supervision. Both these students were required by their management to control their projects using the PRINCE2 approach. PRINCE2 is now listed, along with the PMBOK, in the New Zealand State Services Commission Better Practice Guidelines. As students could be working on PRINCE2 projects when they graduate it was considered that PRINCE2 should be included in the program.

3. PAPER CHANGES

The project management lecturer undertook a study of PRINCE2 and realized that it made use of all the knowledge from the PMBOK but added a framework around the process that could be tailored to any size project. It added clearly defined roles, responsibilities, and processes that potentially could help students plan and manage their projects, without a major change in the paper or the capstone project. PRINCE2 was introduced into the project management paper in stages as its value has become more apparent, firstly as a mention, then as an extra, and now as an integrated part of the course.

4. CAPSTONE CHANGES

In order to improve the project management practice in the capstone project and to incorporate PRINCE2 as a management option, a number of changes have been implemented.
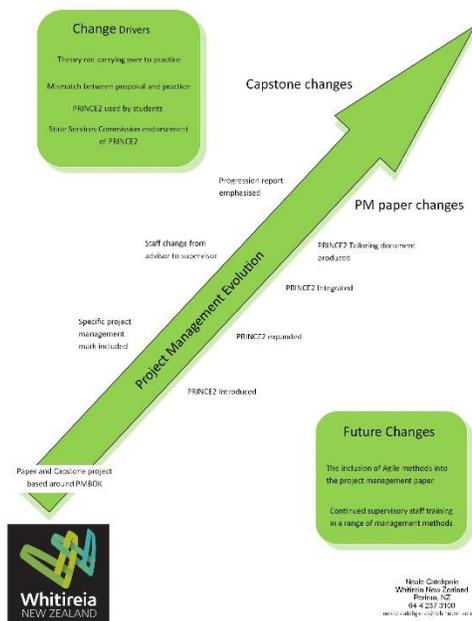
4.1 Supervisor management

Until recently the academic supervisors have been given an advisory role, but this is being modified to the more controlling role that PRINCE2 calls "executive". Staff are expected to put greater emphasis on ensuring the project is managed correctly. It is also expected that the supervisory role will allow quicker response to changes and greater protection for students against scope creep.

Supervisory staff also need to be trained in the appropriate management techniques and this is under way.

4.2 Marking emphasis changes

The marking scheme for the capstone project has been adjusted to include a specific mark for how the project was managed and, associated with this, regular progress-against-plan reports are required.

4.3 Tailored Framework

For those planning to a PRINCE2 approach a paper has been written giving guidance in tailoring PRINCE2 to projects of the general size of the capstone projects.

5. THE FUTURE

The PRINCE2/PMI approach is not always suitable for the capstone projects and it is acknowledged that other approaches should be used in many cases. Efforts by students to use agile methods have not proved particularly successful from a management point of view. Managing agile projects needs to be added to the material presented in the project management paper to better prepare students for its use in the capstone project. The PMI has recently produced its agile equivalent to the PMBOK and this will be the basis for this. The challenge is that the paper is being converted from 20 credits to 15.

6. SUMMARY

The wide range of activities available for capstone projects means that no one project management process can answer all needs, and the capstone processes and marking need to be flexible enough to cope.

Project management papers also need to reflect a range of current practice as students need to be provided with the skills to use these methods, both for the capstone projects and for their eventual progression into the workplace.