Programmes of Study: Bringing Added Value to a Programme

Nick Wempe

Whitireia Community Polytechnic
Porirua City, New Zealand
n.wempe@whitireia.ac.nz

ABSTRACT

Students will choose a particular programme of study in IT for a variety of reasons. While these reasons are unique to the individual there is generally a goal that is consistent throughout, that is the goal of employment. This is true whether the programme is the Certificate in Business Computing, the Diploma or one of the flavours of degree that has recently permeated the Polytechnic scene.

The problem often with the programmes of study is that there are often modules within these programmes that many students see as unnecessary or "boring". Subjects such as accounting, ethics and the use of an application often already used by the student are seen as unconnected with work in the IT industry. While as IT professionals we know that these programmes are of importance and are included in the programmes curriculum for a reason. The issue remains if you cannot change the structure of a programme to engender enthusiasm, what other avenues are open to a Programme Manager to prevent students from leaving that programme of study?

At Whitireia we are attempting to tackle this issue with a different approach. Rather than trying to make students enthusiastic about a subject in that they have little interest, we offer an extra programme separate from their primary programme of study. These programmes include "hands on" PC programmes or specialised networking programmes. In some cases what they have learnt in their existing programme of study may have a Recognition of Prior Learning (RPL) outcome for the additional programme. An example of such an additional programme is the PC Support course.

1. INTRODUCTION

Many students, in particular young male students begin studying toward an IT qualification with the belief that a programme of study such as the Certificate in Business Computing or the first year of a Bachelor of Information Technology will allow them to pull apart and install interface cards into a computer. Generally these programmes do not allow for the freedom of students to dismantle machines. Indeed IT managers within organizations, responsible to providing computing services for the whole institution,

take a rather dim view of an enthusiastic student investigating the internal workings of their PC's.

To control such enthusiasm the School of Computing has created one lab in which a number of machines have been allocated to be used as 'show and tell' machines. The machines are predominantly used in such modules as CBC's HF100, OS100 and NM100. Even in the relative freedom of this lab control must still be exercised as there is often only a twenty minute window of time available for the technician to re-image machines and remove any dismantled machines before the next class begins.

Although the opportunity to delve inside a machine may be enough to conquer student boredom, some students desire a greater challenge. If this enthusiasm is ignored the result may be that a student may withdraw from their programme of study to pursue another programme offered either by the same institution or worse a competitor. Yair (2000) states "Students' alienation, boredom and low emotional mood while learning are inherently correlated with their school experiences."

At Whitireia Community Polytechnic the Certificate in Computing programme and the Bachelor of Information Technology programme are offered by the School of Computing. The School of Technology runs the PC Support course. This 1-year programme is designed to produce entry-level hardware technicians. Other technically based programmes being set in place by the School of Technology are the Cisco Certification programmes. While the programmes being offered by each school has a particular focus there seemed little reason not to investigate the similarities of the programmes, especially if this would lead to a more comprehensive qualification for a graduating student.

The first step was to review both the programmes and identify those areas of module similarity. From this a new programme framework was devised. Certain modules within the PC Support programme for example will are similar to those within the Certificate of Business Computing.

An example of the similarity are these PC Operating System module descriptors.

Programme - PC Operating Systems

Module - PC Concepts

Descriptor - An entry-level introduction to basic PC hardware, DOS, Windows and application software to enhance student confidence in the PC environment.

Module - Intermediate DOS and Utilities

Descriptor - Consolidation of basic DOS commands from the introductory unit, with more advanced commands and utilities.

Module - Advanced DOS & Utilities

Descriptor - Further use of applications in the DOS environment.

Module - Windows Environment

Descriptor - A close examination of the windows environment from both a user and system manager perspective.

When these module descriptors from the NACCQ blue book are compared to the above descriptor elements similarities can be seen between modules such as NM100, OS100, SF100 and HF100.

By comparing module similarity a case for the recognition of prior learning exists. This allows for a shortened programme, from one year to six months, to be offered to Certificate in Computing and Bachelor degree students. Students may submit individual cases for RPL toward the certificate in PC support based on their success in their main programme of study. Strict guidelines must be enforced in awarding any certificate based on RPL evidence. Students will not be awarded their certificate until all RPL criteria has been met and this has been verified by the school's academic committee. For some students this means they may not receive their certificate for up to six months after completing the PC support programme.

The modules to be completed by a Certificate of Business Computing student are as follows: BC100, DB100, DT100, ET100, IP100, HF100, NM100,

OS100 & SF100. For a Bachelor of Information Technology the required programmes are IT101 Communications, IT102 Fundamentals of Information Technology, IT103 Fundamentals of Software Development and Design and IT106 The Information Technology Environment.

The modules that are required to complete the PC Support Certificate are the Electrical Service Technician (Paper A), Digital Electronics and Hardware Assembly & Networking. The EST and the Digital Electronics are both run as block programmes to minimise the impact of the student's primary programme of study. For the Hardware Assembly and Networking portion students are allocated a machine for the duration of the module.

The timetabling of the PC Support programme was another hurdle that had to be overcome. The PC Support programme is an addition to the student and should not interfere with the primary programme of study. As this programme was originally trialed with CBC students who had graduated in July the decision was made to run in the second semester. In the School of Computing Wednesday and Friday afternoons are set aside for students to self-study. Access to the computer labs is made available for all programmes of study within the School of Computing. This time is also valuable for tutors to carry out administration tasks. Therefore the EST and Digital Electronic modules were timetabled for these periods. As students can apply to the School of Computing for an after hours computer lab access card it was felt that this time would impact on students the least. The Hardware Assembly & Networking module was accommodated by running block programmes within the first week of the holiday break at the end term three and the end of term four.

2. ADVANTAGE TO STUDENTS

The students gain a far better appreciation of the integration of hardware and software. Much of the theory that they have learnt during their primary programme of study becomes clearer. Students tend to become more focused on a career in the IT industry and their overall knowledge makes them a better prospect for employment.

3. DISADVANTAGE TO STUDENTS

The PC Support Certificate is not by any means a soft option for students. The programme involves practical ability and a degree of mathematics which although is present in the Degree programme is not present in the CBC. Consequently students often feel stressed with learning a new subject such as mathematics. The volume of study also increases for the student. The increase from eighteen hours of structured class time to twenty-four hours of structured class time plus the corresponding increase in self-directed study can adversely affect some students. Consequently students who apply for the PC Support Certificate are carefully monitored by the Head of School of Technology and the respective programme managers in the School of Computing. Any student who is not performing to a suitable standard in their primary programme of study would be dissuaded from applying to do the PC Support programme. Those who attempt the programme are organised into study groups to minimise the problem of struggling alone. The result of this monitoring programme is that less than a quarter of the students able to attempt this programme of study will actually do so.

4. ADVANTAGES TO THE POLYTECHNIC

Despite the Minister's call to end competition amongst providers, all tertiary providers are in a constant trawl for the elusive EFTS. This item controls the level of support each school receives dictating budget and staffing. This is not a criticism, but a fact. Therefore when the opportunity arises to obtain additional EFTS from the same pool of students then this should be investigated. The students are effectively a captive market having already taken on a programme of study within the polytechnic. The School of Computing could take the attitude that the School of Technology is 'poaching on our patch'. However in the long run this argument is counter productive both for the school as well as the student who still may exercise their right to leave the programme. Unlike new students to a programme the students who exercise this option tend to be mature and focused. They have already identified their individual strengths and weaknesses and have a drive to complete both programmes of study.

5. FUNDING

The programme meets the criteria for ministry funding bringing in an EFTS value of .48 per student. Allowances are not available to students for the programme however as the programme is run during the second semester, those students who require an allowance are receiving the allowance because of their primary programme of study.

There are many institutions who are see the value in adding modules into the existing structure. UCOL (2000) has introduced the CISCO certification programmes into the BAppIS degree programme in attempt to satisfy both the employer who is looking for the degree graduate and the employer who requires specific skills. While Whitireia will be introducing the Cisco certification programmes later this year the decision has been made to separate this programme from a students primary programme of study. The trend toward mixing practical with the theoretical is not unusual as tertiary institutes strive to distinguish their programme from a competitor. The UK's Cambridge University has for example has a MBA programme that comprises of a nine week term of full time study followed by twelve months of work, a further nine weeks, a further twelve months and finally the last nine weeks at Cambridge.

This sort of co-operative approach need not be confined to within organisations. If the view of the Minister is taken a step further why shouldn't programmes that have an identifiable assistance to each other and therefore the student be explored? The student of today is far more discerning then his or her predecessor. They are seeking an education that they perceive will allow them to continue employment in an industry that offers no other certainty other than change.

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