The case for a national degree: if not why not and what next?

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This paper revisits the case for a national computing degree and attempts to identify a way forward that might prove acceptable to all the institutes aligning themselves with the national Advisory Committee on Computing Qualifications (NACCQ).
The concept of a national computing degree has been around for some time and has been an issue for debate among NACCQ membership since shortly after the introduction of the National Diploma in Business Computing in 1986. Until now, the reaction of member institutes to a national computing degree concept has ranged from warm enthusiasm to disinterested observer.
This paper outlines previous efforts made to gain support for a national degree concept and investigates the perceived barriers to the adoption of such a proposal from the point of view of academic management and computing practitioners. The paper investigates a number of options, which focus on first year degree study activities, and that could prove acceptable to most interested parties. These options include identification and delivery of common core papers and the introduction of an "Advanced Standing" concept where institutes recognise a body work as being equivalent to first year degree study without the need for formal cross crediting.
The paper aims at identifying an approach that will address the concerns of member institutes and provide a pathway for students that is accepted by the majority of institutes.

Keywords

computing education, computing practice, computing research, national degree, transferable education.

1. INTRODUCTION

The concept of a national degree in computing was first discussed in 1993, when pressure to provide degree level computing qualifications lead the National Advisory Committee on Computing Qualifications (NACCQ) to investigate the possibility of converting the successful "Blue Book" qualifications into a degree programme. Seeking an agreed definition of what constituted a national degree from the New Zealand Qualifications Authority (NZQA), at the time, proved a frustrating and iterative process, and as a result the idea was abandoned and individual polytechnics began developing and delivering their own degrees.

Attempts to rekindle interest in the national degree concept have met with mixed reactions, with a number of smaller and medium sized polytechnics favouring the idea, while the larger polytechnics appear to favour the retention of individual institute degrees.

This paper starts by revisiting the previous attempts that have been made to gain support for a national computing degree and identifying the perceived barriers that have resulted in the idea being a matter of debate rather than an agreed and working concept. The paper then presents the findings of a survey of technical institutes conducted to establish why the concept of a national degree has stagnated and to identify if there is support for a number of initiatives involving the first year of degree study. The paper concludes by proposing a way forward that could see students having the ability to transfer between institutes at the successful completion of a year of study, being given full credit for their endeavours and entry to the second year of degree study.

2. BACKGROUND

It is almost twenty years since the National Advisory Committee on Computing Qualifications (NACCQ) introduced the Certificate of Business Computing (CBC) as a replacement for the New Zealand Certificate in Data Processing (NZCDP). By 1990 the NACCQ had developed a further two computing qualifications, the Advanced Certificate of Business Computing (ACBC) and the National Diploma in Business Computing (NDBC) (Young

and Joyce, 1998). These three qualifications, commonly referred to as the "Blue Book" qualifications, formed the backbone of computing offerings for most New Zealand Polytechnics for several years. By the mid 1990s, pressure to deliver degree level computing programmes saw the NACCQ investigate the possibility of converting the three "Blue Book" qualifications into a national computing degree. The attempts to develop a national degree coincided with the introduction of the National Qualifications Framework (NQF) and the adoption of a set of competency based computing Unit Standards covering the same levels as the three NACCQ qualifications. NACCQ sought clarification from NZQA as to what would be required for a national degree, and received mixed and confusing messages. As a result, NACCQ abandoned the idea, and at the same time individual polytechnics were accredited to offer their own localized degrees.

In 2001 the polytechnic computing departments were surveyed to gauge if there was any the level of support for revisiting the concept of a national degree. The findings were presented at the NACCQ national conference in Napier (Corich, 2001). The survey found that the majority of polytechnics were offering computing degree programmes, and that there was some commonality among the course offerings, since most of the degrees were loosely based on the "Blue Book" qualifications. Of the seventeen institutes responding to the survey, only 42% offered qualified support for the national degree concept.

The opponents suggest that the time for a national approach to degree study has passed and that too many institutes had invested large amounts of money and time gaining accreditation for their own qualifications, and they would be reluctant to change. Another argument offered against a national degree concerned individual ownership and the flexibility that it provides. Local degrees were seen as being easy to modify and able to be quickly changed to cater for industry changes and to meet local industry requirements. Perhaps the biggest obstacle to a national degree related to the difficulties in defining a national degree and obtaining approval to offer one.

The case for a national degree was revisited at the 2003 annual NACCQ conference in Palmerston North, when the concept was discussed at a Curriculum and Quality Working Group committee meeting. There was enough positive support to suggest that the matter deserved to be revisited.

3. THE 2004 SURVEY

During April 2004, the NACCQ membership were surveyed to identify the perceived barriers to national degree implementation and to establish their reaction to a number of initiatives relating to first year degree activities.

Thirteen institutes responded, all of them were offering their own degrees and only five offered support for a national degree in computing, while six were unsure. When asked to rate a number of advantages gained from a national degree, the synergy gained from sharing resources was viewed as being the most popular option. Other options to rate well across all institutes were the advantages of collective marketing and the ability of students to transfer between institutes.

General comments made in support of the national degree concept, suggested that if Universities could be convinced to accept a polytechnic degree, then students moving to higher study would have an easier path to tread. It was also suggested that since six institutes were already offering very similar degrees (different flavours of the Waikato degree), that a defacto standard degree already exists. Other advantages that were suggested included the ability to ensure that industry have a good understanding of what a degree graduate was like and the benefits gained from having many minds producing shared teaching resources.

The investment of time and money into existing degrees was seen as the biggest barrier of national degree acceptance, followed closely by the likelihood that too few institutes would support the idea to enable it to gain credibility. Other barriers that were suggested included the probable delay in getting changes approved and the lack of recognition for regional/local needs. It was also pointed out that most New Zealanders expect a degree to be a local qualification and that establishing "ownership" of such a qualification would be an interesting issue to address. Competition between institutes and the need to differentiate offerings to attract students were also viewed as a barrier to national degree acceptance.

When asked if their institute would consider modifying the first year of their degree so that it was the same as a national first year, 11 institutes indi-

cated support and only one indicated opposition. This would seem to indicate that identifying common papers and encouraging institutes to offer them would be an option worthy of further investigation. One institute pointed out that since their first and second year courses were all compulsory, such a move would be difficult to achieve. Other comments made in relation to a standard first year included a desire to see a standard degree entry criteria and the advantages gained when deciding what to do with students transferring from other institutes.

In relation to "Advanced Standing Entry" regulations, where an institute recognises a body work as being equivalent to first year degree study without the need for formal cross crediting, only three institutes had such a policy established. Ten institutes suggested that they would consider such a policy and only one institute registered their opposition. Along with the standard first year offering, it would appear that this idea is also worthy of further investigation. Such a regulation has a precedent within NACCQ with regulations 3.4.3.3 and 3.4.4.3 in the regulations for the NDBC family of qualifications stating the following:

> *"3.4.3.3 The appropriate body may approve direct entry to DipICT L6 for a candidate who can demonstrate work experience or qualifications equivalent to DipICT L5 (formerly CBC). Students who obtain direct entry to DipICT L6 on the basis of work experience or equivalent qualifications will not be awarded the DipICT L5 (formerly CBC)."*
>
> (NACCQ, 2002)

> *"3.4.4.3 Direct entry to the NDBC programme is expected to occur infrequently. Students who obtain direct entry to NDBC on the basis of work experience or equivalent qualifications will not be awarded the DipICT L5 (formerly CBC) or the DipICT L6 (formerly DipBC)."*
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> (NACCQ, 2002)

General comments made about the idea of a national degree included the need to ensure that any process adopted is able to respond quickly to changing industry needs, and the benefits that could be gained from creating a national identity, since New Zealand was too small to have a proliferation of degree offerings. One respondent suggested that the time to adopt a national degree was 10 years ago and that perhaps we have "missed the boat". Another suggested that perhaps it would be better to concentrate on national certificates and diplomas of a specialised nature, which could compete with the practical focussed programmes being offered by private training providers.

4. WHERE TO NEXT

The findings of the survey would suggest that while the time for chasing a national degree may have passed, there is merit in investigating further the idea of a common first year and the development of an "Advanced Standing Entry" regulation.

A review of institute Web sites would suggest that there are already a number of courses, both compulsory and optional that are common to most institutes. Courses such as Business Communications, Business Systems, Operating Systems, Program Development, Internet & Web Design , Mathematics for Computing and Information Systems Principles. Maybe these could be reviewed and common papers be established.

Perhaps the answer lies in a model similar to that adopted by the Open Learning Australia Centre. The Centre was formed when several Australian universities decided to collaborate and identify a number of common degree courses that can be offered without requiring prerequisites. They then shared the responsibility of developing the courses for on-line delivery and offered the courses on-line as a cooperative venture. All of the participating universities, recognise the course within their individual degrees and give full credit to any student who has successfully completed an on-line course.

While an "Advanced Standing Entry" regulation would normally mean that one institute accepts the year one of another institutes degree as being the equivalent of their own, this concept could be modified slighting to be a "Conditional Advanced Standing Entry". This would be where students who have completed year one of another institutes degree are granted the equivalent of one years worth of courses, but may still be required to complete some year one courses to meet compulsory or prerequisite requirements. If NACCQ was to encourage member institutes to adopt such a regulation, this could, in time, lead to the year one of different degrees moving closer together.

5. CONCLUSION

Support for the case for a national degree has waned somewhat since it was first introduced as a concept in 1993. Problems defining what a national degree would look like, and the proliferation of local degrees, have created an environment where confusion reigns and opinions are polarised. The smaller institutes see the advantages that could be gained from collaborating with the delivery of degree level courses and the opportunities for creating specialized subject niches where students could move between institutes developing the skills that they require. The larger institutes, which tend to compete more for student numbers, prefer to brand their own degrees and see benefits in providing courses that have been tailored to meet their individual needs.

Survey results suggest that while opinion is divided, the likelihood of progressing a full three year national degree is unlikely to succeed. The high level of support for a set of common first year courses does indicate that the development of such courses is worth pursuing. If a model similar to the Australian model, is adopted, the possibility of developing common courses that are delivered either within an institute or on-line exists. The possibility to develop common on-line courses would also open up the opportunity to pursue government funding for a collaborative e-learning development venture.

A first step towards a set of common courses may be for NACCQ to encourage member institutes to adopt "Conditional Advanced Standing Entry" regulations, with a long term view of this encouraging the year one of different degrees moving closer together. This approach would appear to have a much higher level of support than the concept of a national degree, but would deliver a number of the perceived advantages of a national degree.

REFRENCES

Corich, S. (2001) The Case for a National Degree, Proceedings of the 14th Annual Conference of NACCQ, Napier.

NACCQ (2002). New Zealand Qualifications in Information and Communications Technology. National Advisory Committee on Computing Qualifications

Young, A. & Joyce, D. (1998). NACCQ: The Evolution of an APNZ Subject Forum. APNZ Conference Procedings 1998.