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***Ideal to Reality: Implementing a University-based
cross-age/cross-institutional student tutoring programme***

by

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Introduction

Joseph Conrad once observed that action is the corruption of the ideal – a rather pessimistic view of the inevitable compromises that must be made when moving from concept to reality - but there is no doubt that any mentoring scheme must adapt to meet the pragmatic constraints of the context in which it will operate. This paper will discuss how a university based cross-age, cross-institutional tutoring programme was introduced at RMIT University and the ways in which the programme was, of necessity, adapted from Murdoch University's STAR model.

Impetus for the programme (Ideal meets reality)

The impetus to establish the programme was twofold. At the state level there was a growing awareness of what educators (Cervini 1999) had referred to as an ongoing crisis in the state's science and maths education (indeed some would argue that this is symptomatic of Australia as a whole). Currently 50% of Victoria's Year 7/8 mathematics teachers have no tertiary mathematics qualification. There are only 18 physics teacher-trainees to serve 538 schools, yet the Year 12 physics enrolment in 1999 is 7,903 students and the average age of teachers is 47. A shortage of qualified teachers has produced a reduction in the time allocated for science so that Victorian Year 7 – 10 students receive a third less science than their NSW counterparts. The need to raise the profile of science in the secondary system was indisputable, and there was a clear obligation for the tertiary education sector to provide some leadership in this field.

Within RMIT University itself there were also strong motivating forces. Firstly there was a recognition by some staff of the success achieved by tutor/mentoring programmes such as STAR, allied to concerns over declining enrolments in some science courses such as applied physics, and the need to attract more female enrolments in courses that had traditionally been a male domain. There was also a tacit understanding that the implementation of a volunteer tutor programme would gain support by meeting the University's goal of developing graduates who are '...knowledgeable, creative, critical, responsible, and employable, as well as being life long learners and potential leaders.' (RMIT University 1998: 3)

Thus for both altruistic and pragmatic reasons the introduction of a tutoring programme became a worthwhile goal. It would allow RMIT University students in a range of science, maths and technology courses to be involved in assisting teachers in high schools. Ideally, the volunteers would help to promote maths and science as worthwhile areas of specialisation. This was the main aim. To offer 'solutions to problems' (Goodlad 1997: 6). A secondary aim was to give undergraduates the opportunity to extend their professional training and to develop their interpersonal skills.

Implementing the programme (Reality Bites!)

Initial planning speedily identified no fewer than six challenges the programme would have to overcome if it was to succeed. Unlike some smaller universities, particularly those that are regionally based, RMIT University has no clearly identifiable 'feeder schools' or 'feeder zone' so participating schools had to be recruited. The response was to use a combination of networking using staff and student contacts, and the more challenging option of 'cold calling'.

Students needed to be drawn from different faculties and campuses, so there was the issue of developing an efficient recruitment strategy and training format. For instance engineering students could be based on one of three campuses, and each engineering course would impose different timetable constraints. Recruitment thus incorporated a range of strategies: a mail out to targeted students (e.g. second year undergraduates in traditional science disciplines); flyers and notices; and 'word of mouth'. Training was offered as an intensive early in the semester and at times that were unlikely to clash with course commitments.

Cross campus and cross-campus dispersion also posed a communication challenge. How best to maintain tutor contact? Again a range of strategies had to be deployed: email, phone, mail-outs, surveys, evaluation sessions. Students could use email or phone to raise queries and report back.

The lack of synchronicity between the four-term school year and the two-semester university year meant that the placement and assessment schedule had to be flexible. Students committed themselves to a ten-week placement, with a morning or afternoon time-slot, but placements could be interrupted to meet timetabling or other contingencies (e.g. examinations; field work) and starting times were negotiated to suit both parties. Assessment deadlines were individually tailored; each programme participant submitted set tasks at the end of their placement.

An unforeseen complication was the confusion some tutors encountered about their role. Some school staff tended to automatically identify the tutor as a teacher trainee; and in the absence of the 'link teacher', or other staff familiar with the programme, there were occasions when a relieving teacher assumed that the tutor would take the class. A speedy response to this issue was to provide all tutors with a letter that clarified their role, as a supplement to the material provided to the link teacher since this was not always widely circulated.

And finally there was the challenge of formally recognising the contribution the students were making, both with a certificate and having the programme accredited as an elective subject, part of RMIT University's Context Curriculum Programme, an elective programme designed to place the student's professional learning in a wider context. The Context Curriculum model had several advantages. Firstly, all RMIT undergraduates take three Context Curriculum subjects, so class groupings can accommodate students from a range of year levels and faculties. Secondly, the cost of staff involvement in the programme could be partially offset by Commonwealth Operating Grant funding, and finally the assessment options mandated by the Context Curriculum Assessment Policy would give the students a useful opportunity for reflection and analysis of their tutoring experience. Thus by participating in training sessions, writing a weekly reflection on their classroom/tutoring experiences, and producing a piece of critical analysis on a given topic relating to the programme, students could not only meet subject requirements but also reflect on the communication and pedagogical issues that tutoring entailed.'

Programme 'snapshot'

Volunteer tutors could either participate in the programme as an extra-curricular activity or have their involvement assessed as a four credit point elective, with the majority taking the latter option, despite the assessment requirements involved. In Semester 2, 1998 when the programme commenced, it placed 28 tutors in 11 schools; tutors were second and final year mathematics, chemistry and physics undergraduates. In 1999 47 tutors have been placed in 18 schools, both government and Catholic, and the volunteers now include students from courses as diverse as environmental science, psychology, engineering and disability studies.

Typical tutor activities include:

- one-to-one support with specific learning activities;
- a roving commission in the classroom, working with Years 7 to 12;
- 'after-school support' with final-year secondary students;
- acting as a demonstrator or assistant in science practical classes;
- presenting a topic or delivering a lesson (approximately 20% of tutors).

A typical RMIT tutor does not exist. Sixty per cent have been female, but the ethnic backgrounds vary: from young Moslem women to recently-arrived international students; from students of Anglo-Celtic origin to students from migrant backgrounds such as Vietnamese and Maltese.

Why volunteer?

Most students choose the option of enrolling in the programme for elective subject credit, but is this their main motivation? Clearly not according to survey feedback. A consistent pattern that emerges from participants' reports, a survey and follow-up interviews, and informal feedback, indicates that students are not motivated to do the programme simply as a unit of study. Nor are they only seeking to develop a particular set of skills in communication and organisation, or knowledge enhancement. They are looking to gain first-hand experience in a school – in a teaching-learning environment.

Participant feedback displays two distinct motivational trends - the opportunity:

- to experience a teaching role; and
- to give something back to the school community.

The latter is most noticeable where tutors have been successful at university, despite coming from a disadvantaged socio-economic background – succeeding against the odds of their own educational background. The chance to gain first-hand experience of a professional teaching-learning situation is the key motivation of most tutors. They want to try their hand at a teaching role; indeed after their participation in the programme several volunteers have enrolled for postgraduate teacher training.

Reality checks

The transition from expectation to reality has been smooth for the clear majority of tutors but there have been some logistical problems. Reality checks include teachers' misinterpretation of the tutor's role; the difficulties of arranging tutor placements when 10 or 6-day school timetables operate; and an absence of advance notice of excursions, class tests or similar activities that make a tutor's presence redundant.

The main concern has been the delay - often of several weeks - in placing tutors in an appropriate setting. Once the school has agreed to be part of the programme, the volunteer tutor becomes the responsibility of an individual, the link teacher, but in a demanding work environment with all its daily pressures, the priority of placing a volunteer is not always addressed in a timely way. At this early stage of the programme the tutors are seen as a bonus – not a necessity.

Despite this, very few volunteers have failed to complete their placement. Less than five per cent have dropped out, and of this percentage only three tutors have withdrawn from the programme based on difficulties they have experienced in their school placement, indicating that appropriate planning between RMIT University and the school in question can be improved.

The warm and fuzzy feeling

The tutor programme offers tertiary students various rewards. Feedback from participants includes comments such as:

- “I was able to contribute to the students’ learning process. The students responded to me in different ways. Some were eager to ask for help so I felt I was of some benefit. This was rewarding for me.”
- “It was rewarding to be able to assist students who needed support with their learning.”
- “I enjoyed the experience of being a tutor – it’s good to say that I’ve done that.”
- “I would highly recommend it to other undergraduates.”

As previously indicated, survey results and in-depth interviews revealed that most of the tutors are motivated by the opportunity to experience a teaching role. This is the most satisfying part of doing the programme. Satisfaction for tutors also comes from:

- applying and sharing their knowledge; and
- development of their own communication skills – for instance most wanted to present a lesson to the whole class if given the opportunity.

Based on feedback from volunteers, communication and interpersonal skills improved noticeably when tutors worked with younger students - Years 7-10. Thus according to one volunteer, “My observational skills improved, particularly in regard to body language.” Another tutor recorded the following statement as a positive experience: “I got an insight into how difficult it can be to get the attention of the student I’m working with.” Many felt they gained confidence and increased self-esteem, as summed up by this student:

“I am no longer worried about talking in front of groups of people, especially people that I do not know. I used to be very apprehensive about meeting new people and going places where I would not know anyone. By doing this programme I was forced to face these fears and have overcome them completely.”

Secondary rewards include:

- credit for the programme as an extra curricular subject;
- the formal recognition of a certificate and a reference;
- sharing knowledge and enjoyment of maths and science.

Applying their knowledge was more rewarding for volunteers working with Years 11 and 12, but most volunteers appeared to find younger classes more receptive to their presence and this allowed for greater involvement in the teaching role, as the following statements indicate:

- “Younger classes were better in that they were more receptive and you can achieve more as they need to know the foundations.”
- “I liked helping the kids learn - that was the most rewarding part.”

Reports indicate that tutors want to be accepted by the students they work with. But the tutors fill an unusual role – they are not teachers, not even trainee teachers. Students they are working with are often not sure how to accept them.

Knowledge versus recall

Knowledge gained from university studies does not appear to be the key advantage tutors have in helping younger students learn. Their real advantage lies in their ability to specifically recall the learning process. This is particularly useful in the Victorian education system where the average age of secondary teachers is in the late forties (Cervini 1999)

Most tutors can recall their learning at specific year levels or with specific topics and can often draw on this when explaining approaches to problem-solving to younger students. Knowledge is important but the ability to apply it or communicate is fundamental to the tutoring process and their close proximity in age provides the key. Thus tutors commented:

- “I was able to talk the students through their work, step-by-step. I know the pitfalls of learning chemistry because I wasn’t that good at it myself.”
- “I remembered the logical steps to problem solving. I was able to help the students quite a lot.”

Moving forward

The next challenges are clear. There is a need to establish the tutors’ non-traditional role within schools; to streamline the placement system to avoid delays; and to further explore the possibility of involving volunteers in teaching-learning situations other than school-based ones. Science ‘camps’ such as the Siemens Science Experience and other holiday programmes for secondary students provide opportunities for tertiary to secondary peer mentoring. Other opportunities include National Science Week activities; the ‘Switch onto Physics’ programme hosted in universities for secondary students; and Youth ANZAAS (Australia-New Zealand Association for the Advancement of Science) activities for primary students. Already at a local level we have linked to the work provided by the Young Scientists of Australia, who actively support numerous universities in the promotion of science to the youth of Australia.

Conclusion

The results of our new programme are not unique. RMIT University's programme is modelled closely on STAR but it also aspires to the common qualities of many other peer tutoring programmes throughout the educational community. Like those we struggle to match promise with performance, mindful that any tutoring scheme, however worthwhile, will also be complex, multi-faceted, and always challenging. In the words of one committed volunteer following a typically rewarding placement: "The programme is not for everyone but it's a great experience for those who want to do it."

References

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