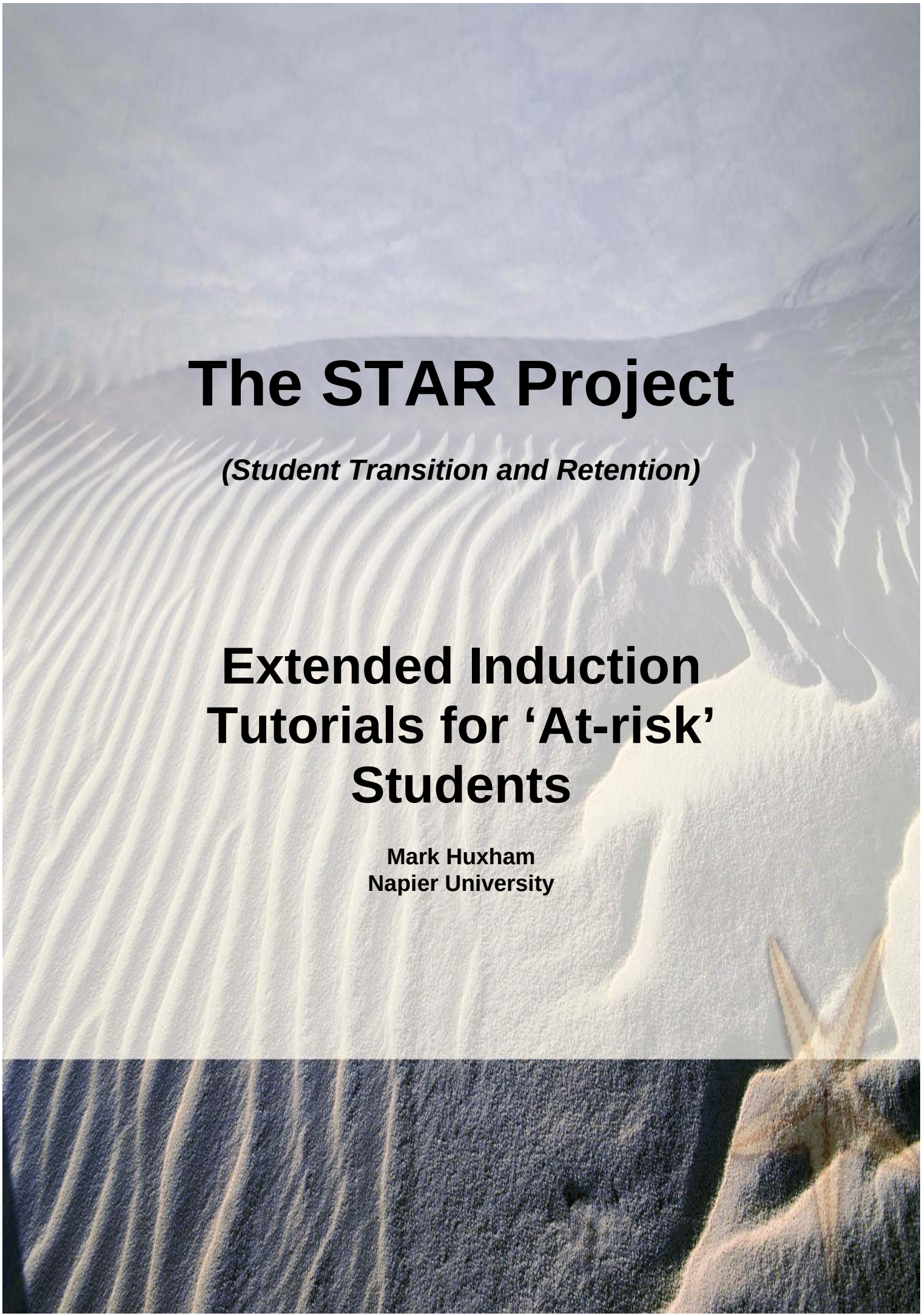

The STAR Project

(Student Transition and Retention)

Extended Induction Tutorials for ‘At-risk’ Students

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SUMMARY

Biology students at risk are identified through the completion of a diagnostic test, which is based on the characteristics of early leavers. Those students identified as being at risk are offered the opportunity to attend a series of tutorials – Biology plus. The tutorials were evaluated by focus group meetings and by comparing the performance of the “at risk” group who attended the tutorials with a group of peers. Students found the tutorials friendly and helpful. None of those who attended dropped out but non-attendance remained the greatest risk factor for failure. The diagnostic test and an exemplar set of tutorial topics are appended.

Keywords: induction, non-attendance, at risk students.

INTRODUCTION

How best to support our students, and ensure that they succeed academically and socially at university, is a question that has received much attention at Napier University in the last decade. In common with most of the HE sector, the expansion in student numbers combined with pressures from funding councils has meant that attrition rates have become a focus for concern. In addition to such external pressures, staff accept a moral and academic duty to do their best to support students, which therefore generates internal concern to address retention issues.

In 2002/3, 11% of students entering first year study (all programmes combined) at Napier withdrew (‘dropped out’) during the year. An additional 15% did not pass sufficient modules to allow them to continue to the next year. The reasons for withdrawal and failure during the first year are complex. Research at Napier by the University’s Student Retention Project has shown that entry qualifications have a major effect; students with six or more Highers are four times more likely to succeed in first year than those with one Higher (Johnston, 1998). However, this factor interacts with others such as age (older students performing better), family expectations (pressure from family members to attend university being a negative factor) and hours of paid work during term time (with students working more than 16 hours per week at particular risk). Anecdotal evidence from colleagues with long experience of teaching first year students suggests that many of the students withdraw in the first few weeks of the new semester. Such evidence concurs with research highlighting the importance of the transitional period for students entering university. Davies (1997) suggests that a relative lack of confidence in the quality of support provided at classroom level might be the crucial factor distinguishing students that choose to withdraw from those that, despite having similar

backgrounds, stay and succeed. Hence good academic and personal support is crucial during the first few months of a student's university experience.
In the School of Life Sciences, this support has long been provided by a year tutor system. In addition, a system of induction tutorials was piloted in 2001/2002. It allocated small groups of students to individual members of staff in the School. Groups met weekly for the first 5 weeks of term to allow students to get to know academics and to discuss personal and academic issues. These tutorials had mixed success; they were of limited use to some groups because the staff and students concerned lacked the time or because the staff were not involved in first year teaching and so could not provide direct academic support. A different system was therefore implemented, and has run for the last three years. This aims to focus support on students identified as 'at risk' of withdrawing, and uses staff already heavily involved in first year teaching and support. This report discusses these extended induction tutorials – called 'Biology Plus' tutorials – and evaluates their effectiveness.

RELEVANCE TO THE STAR GUIDELINES

At its outset the STAR project researched, produced and published a set of guidelines based on the causes of student attrition and which pointed the way towards possible good practice. The STAR guidelines relevant to this case study are 2.1, 2.2, 2.4 and 2.5.

2.1 Induction activities should familiarise students with the local area, campus and its support services.
2.2 Induction activities should highlight students' academic obligations and the obligations of the staff to the students.
2.4 Induction events should provide the foundations for social interactions between students and the development of communities of practice.
2.5 Induction activities should promote the development of good communication between staff and students.

Cook, *et al.* 2005

THE PRACTICE

The School of Life Sciences recruits approximately 100 students each year into the first year of the Biological Sciences suite. Since 2001, all new students have been asked to complete a 'guidance questionnaire' during induction week. This asks for basic factual and contact information, as well as for details of appropriate qualifications. For two of these years, an extended questionnaire was used based on research conducted by Napier University Student Retention Project, which led to the production of a diagnostic tool for the identification of students 'at risk' of withdrawal (Johnston, 2000). The tool consists of a questionnaire with 14 questions, with each possible answer carrying a score (Appendix 1). The sum total of scores allows the classification of the respondent into three broad categories of 'risk', with low scoring students being those most vulnerable. Two of the questions on the original questionnaire, relating to hours of academic study per week and whether the student had considered changing programme, were not relevant to students in induction

week and so were omitted. The remaining questions score the following factors (in decreasing order of importance; shared numbers have equal weightings): 1) academic qualifications 2) age 2) hours of paid employment 3) family expectations 4) whether a motivation for enrolling in H.E. was to avoid full time employment 5) term time accommodation 5) desire to do a particular course 6) whether the university was chosen because it was convenient to home 7) whether the student worries about having sufficient money 7) the length of commuting time to university.

The questionnaires were used to identify the 16-20 students likely to be most at risk of withdrawal each year. These students were contacted by letter, and asked to attend a weekly 'biology plus' tutorial, consisting of a group of around 10 students, starting in the first week of the semester, lasting one hour and running for 10 weeks. Each group of 10 students were allocated to a single member of staff, who ran all the tutorials for that group. Attendance was monitored and non-attending students were contacted by phone or post. Tutorials mixed academic support, tied to the teaching occurring that week, with more general support and discussion about adapting to university life. Example tutorial topics are given in Appendix 2.

The tutorials were evaluated in two ways. First, an external facilitator was invited to run an hour-long focus group with six of the students involved in the first year of the project (who volunteered their time). This session explored the students' experiences of and attitudes to the support tutorials, and reported these anonymously. Second, a group of 'control' students, with relatively low questionnaire scores but who were just above the threshold for inclusion in the tutorials, were selected each year. The mean marks obtained in first semester modules were compared between 'control' and 'treatment' groups.

EFFECTIVENESS

Attendance

Attendance was high initially, but tailed off during the term. In total, 50%, 57% and 45% of the selected students attended 50% of the sessions in 2001, 2002 and 2003 respectively – these students are subsequently referred to as 'regular attendees'. Between 1 and 3 students did not attend a single session each year, despite being reminded by phone calls and letters.

Non-attendance was an important indicator of risk. For example, 63% of those students who attended 1 or no sessions in 2003 either withdrew from or failed their first semester. No regular attendees failed or withdrew.

Evaluation

The students who attended the tutorials regularly were enthusiastic. The focus group recorded that students found the tutorials useful and liked their informality:

> *'It was quite informal –like a friendly get together; it was easy to ask questions'.*

‘It gave you confidence to speak up and ask questions’.

When asked about how they would like to see the sessions run in the future, students wanted more time spent on them, and suggested that they continue into the next semester:

‘It was a shame they were only for one hour.’

‘.. I’d like it to continue for next term’

When asked about their peers who had poor attendance at the tutorials, the group felt this was the result of laziness:

‘They couldn't be bothered – it was too early for them’

However, there was some resentment at the monitoring of attendance in first year classes in general:

Question: ‘You feel you are under surveillance?’
Answer: ‘Yes!’ ..‘It should be our own choice about whether we go or not’

The mean marks of the regular attendee ‘Biology plus’ students in their four first semester modules were compared with those of a control group. They were 45 vs 49, (biology plus vs control) 48 vs 40 and 54 vs 56, in 2001, 2002 and 2003 respectively. None of these differences were statistically significant (two-tailed t-test).

DISCUSSION

Student feedback (both informal and from the focus group) showed that regular attendees valued the tutorials, and in fact wanted more such support. The informal nature of the tutorials was particularly appreciated. The quantitative comparisons (of mean marks obtained in the first semester) suggest that students who do attend perform as well as the comparator group. Whilst this clearly does not constitute a controlled trial of the tutorials, it does at least support the qualitative evaluation in suggesting that the tutorials are useful.

Non-attendance, however, remains a major challenge, and correlates strongly with the risk of poor academic performance and withdrawal. All biology plus students who failed to attend were pursued with either letters or telephone calls; part of the rationale of this focused support was to allow this kind of follow-up. This caused some resentment among students. Achieving the correct balance between proactive pastoral care and encouraging students to be fully autonomous, independent learners is very difficult, and it remains one of the key challenges for the staff involved. It is likely that the failure or withdrawal of biology plus students who did not attend, despite the efforts to encourage them to, result from complex factors beyond the influence of academics. There is a danger that zealous policing of attendance is counter-productive.

In conclusion, the use of a diagnostic tool to provide extended tutorials for ‘at risk’ students does allow staff to focus their energies on vulnerable students, and has been generally well received by the students involved. Non-attendance at these sessions is an indicator of risk; future work exploring the reasons for non-attendance is a priority and may help improve the current system.

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FURTHER INFORMATION

http://www.napier.ac.uk/qes/studentretentionproject/SRPhome.asp - Student Retention Project at Napier University

APPENDIX 1

The Diagnostic Questionnaire

(note questions 7 and 10 are omitted for the biology plus programme)

Q.1. How old were you at the beginning of October?

- 18 years or less
- 19 to 23 years
- 24 or more years

Q.2. How many Highers do you have? (If you have Highers and 'A' levels then calculate 1 'A' Level = 2 Highers and select the nearest category below)

- None
- 1-2
- 3
- 4-5
- 6 or more

Q.3. How many A Levels do you have?

- None or N/A (calculated along with Highers in Q.2.)
- 1
- 2
- 3
- 4 or more

Q.4. What type of accommodation do you stay in?

- At home
- Napier-owned accommodation
- Private accommodation sharing with other students only
- Other

Q.5. If you have a job during term-time, for how many hours are you normally employed each week?

- None
- 1-10 hrs
- 11-15 hrs
- 16+ hrs

Q.6. How long does it normally take to travel from where you stay during term-time to your normal Napier site?

- Less than 15 minutes
- 16 minutes to 1 hour
- More than 1 hour

Q.7. How many hours of academic study do you normally do in a week (including timetabled hours)?

- Less than 25 hrs
- 26-35 hrs
- 36+ hours

Q.8. Do you worry that lack of money will force you to abandon your programme?

- No
- Yes

Q.9. Did you gain your place through clearing?

- No
- Yes

Q.10. Since coming to Napier, have you considered changing your programme?

- No
- Yes, and I have changed
- Yes, but I haven't changed

Q.11. Did family expectations contribute to your reasons for choosing to study in Higher Education?

- No
- Yes

Q.12. Would you say that one of the reasons for deciding to go on to Higher Education was that you didn't want to work full-time yet?

- No, I would have been happy to work full-time
- Yes, I preferred Higher Education to working full-time

Q.13. Did you come to Napier to study a particular course?

- No
- Yes

Q.14. Did you choose to come to Napier because it was convenient to home?

- No
- Yes

NOTE: The answers to these questions are weighted by factors which are specific to Napier University students and which were arrived at through comparisons of the characteristics of early leaving and persistent students. An on-line version is available at
http://www.napier.ac.uk/qes/studentretentionproject/Diagnostictest/Dpageone.htm

APPENDIX 2

Example Programme of Tutorials Week Activity

1 Ice-breaker. Introductions, explanation of the role of the tutorials and discussion of expectations, hopes and fears (usually after writing these down anonymously and then grouping them into categories)

2 Tackling short answer problems, set by module leaders, referring to topics covered in the first two weeks of teaching in theory modules. Discussion of any new issues, such as problems with matriculation and timetabling.

3 Discussion in small groups of 'student support case studies'. These describe (fictitious) students who have problems with accommodation, motivation, family and social issues and funding. Students asked to discuss best ways of overcoming these problems. The idea here is to discuss problems that are common amongst some first year students in a non-threatening environment.

4 Discussion of the first coursework assignments due for submission in the next week or two. Focus is on what makes a good or bad answer – model answers given to the group and discussed.

5 Short answer problems set by module leaders, dealing with topics covered in lectures and which usually cause problems, are tackled in small groups.

6 A 'free' session to respond to any new or ongoing problems that may have arisen. We usually refer back to hopes, fears and expectations in this session. As a back up, an exercise giving short 'biographies' of great figures from science (such as Mendel, Darwin and Pasteur) and asking students to identify their contributions and their names is used. This exercise helps re-enforce the history of science learned by some of our students, and give context to these names for those without biology backgrounds.

7 Revision and examination preparation. Past papers are read and discussed, students agree on aspects of good and poor answers in small groups.

8 Second, major piece of coursework is due in two weeks. This session is used to discuss any problems with this coursework, and techniques to overcome these problems. Examples of good work are produced to help this.

9 A final examination preparation and revision session, with guided reading from the core text books.

10 Social event and 'summing up' – in the student café or bar.