

Mentoring and Aimhigher/Widening Participation: A literature review
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Introduction

This review examines the literature on:

- higher education students acting as mentors for 'at risk' school students in the UK and US
- business/community mentors for 'at risk' undergraduates
- peer mentoring in higher education for 'at risk' undergraduates from the UK, US and other English speaking countries.

ICDL/HEMentornet has examined approximately 30 published documents in journals and on the internet to carry out this initial review. ICDL/HEMentornet would welcome hearing from others who know of other work that may be relevant to the focus of the review and to assist us to strengthen the emerging knowledge and analysis on mentoring in higher education.

This review is a starting point not an end point and we would like colleagues to recommend research and evaluation from the UK and beyond which can be added. This might be published work from refereed journals or 'grey literature' from local Aimhigher evaluations. Following this initial stage we will identify gaps in the knowledge about what works in mentoring within the context of Aimhigher programmes and university schemes.

1. *UK Evidence of HE students Mentoring School Students*

Background

Higher Education (HE) students can help mentees to raise study skills and grades. This is by using the skills that they have developed during their academic careers. HE students can also act as role-models for younger students, showing what can be achieved through application at school. During the 1999-2000 academic year, there were 181 student volunteering schemes in universities and colleges in the U.K. (Community Service Volunteers 2000). Of these, there were 8,405 student volunteers from 77 institutions. In line with the area of mentoring in general, the vast majority of mentors were female. Many HE students wanted to become mentors because the experience can add to both employability, and correspondingly, earning potential (Huddleston 2001). An example of a mentoring programme where HE students mentor school students was the FOCUS and sports mentoring scheme. This project was started in 1999 with a group of London universities. The programme recruited students who had a talent in music or sport to work with local school children. The aim was to show school children that whilst many HE students wished to work in areas such as sport and music, they still realised and valued the benefits of a good education (Paczuska 2001).

HE students are also increasingly being used as mentors to encourage groups of people who would not traditionally attend university to do so. This is a key part of the Government's 'Widening Participation Agenda' and the Aimhigher programme of which the National Mentoring Scheme is a part. This agenda is focused on widening participation in HE by under-represented groups through raising the aspirations of students who do not have the background traditionally associated with entry into HE. Many universities now have in place mentoring programmes where students work with local schools and community groups to encourage participation in university (see Aimhigher National Mentoring Scheme first newsletter). Some examples of schemes that have undertaken evaluations are described below.

Middlesex University Mentoring

Middlesex University currently has an active mentoring programme. The programme seeks to help:

- Students with the potential to achieve 5 good GCSE's
- Underachievers in general
- Students who are getting good grades but do not feel HE is an option
- Students with poor social and communication skills.

Between 1999 to 2001 there were 76, 88 and 50 mentors involved in the scheme. To engage the mentees in the process, mentors sought to raise awareness of HE life by taking mentees on visits to campuses and relaying their own experiences of life at university. Mentors also helped mentees with coursework and gave support with exam revision. In a formative examination of how the programme was developing, a number of problems were identified with the programme.

Problems with mentors were:

- Not attending supervision and support meetings
- Failing to respond to e-mails or letters
- Ending the relationship without informing the programme.

Problems with mentees were:

- Non-attendance
- Lack of good preparation and training for mentees, so that they understood the benefits of attending.

Problems with schools were:

- General failure to communicate with mentors – not responding to messages from mentors
- Failure to reschedule meetings if mentees missed appointments
- Difficulties obtaining rooms for mentors and mentees to meet in
- Failure to put in place systems to run mentoring programmes, even if an expression of interest was made.

As the programme went on schools also began to want mentors for a wider variety of students. However, HE students typically wanted to mentor underachievers and could be 'put off' if a more able student was placed with them (Miller 2002).

National Mentoring Pilot Project

The NMPP was the largest programme that is currently running in the U.K that seeks to match HE students with school students. NMPP was run by the University of Wales, Cardiff and funded by the Department for Education and Skills. The National Mentoring Scheme which forms part of the ANMS is the successor to the NMPP and operates in a broadly similar way. NMPP paid university students to act as mentors for students between the ages of 12-17 in local Education Action Zone schools. The majority of mentees were predicted to gain GCSE C/D borderline grades and who with the help of mentors should be able to achieve five A-C grades. Mentors had to be full-time students and make a commitment to four hours of mentoring per week.

Using a case study of a NMPP at South Bank University, mentors in NMPP were encouraged to take mentees on 'trips', for instance to universities. But the primary focus of NMPP was on school work. The mentoring was very focused, with mentors being encouraged to review targets set for mentees in school and record action points that had been put in place to achieve said targets (Miller 2002). An evaluation of the NMPP that included the project at South Bank University found the topic

most frequently discussed at meetings was progress in GCSEs and at school in general (Huddleston 2001). The evaluation found that the key factor in the success of a NMPP program was the effectiveness of school coordinators. This suggests that mentoring programmes which are school-based should seek to ensure that school staff are well-trained and committed.

A final evaluation has taken place for both the two year and one year cycles of the NMPP. The evaluation of the two year project took place after students had experienced NMPP for two academic years. Five schools involved in the NMPP provided data on 111 students who were mentored. A random sample of 111 students was drawn from the same 5 schools for comparison. To examine the effectiveness of the NMPP, a comparison has been made between actual GCSE attainment for mentored and non-mentored young people students A* - C grades were slightly higher. For Maths, the number of A* - C grades were the same. However, whilst mentored students did achieve higher grades than non-mentored students, average grades across the whole group were quite low. When the average grade equivalents were converted into actual GCSE grades, the mentored students obtained GCSE's in the range of grades E – D. Non-. For English, Maths and Science, mentored young people achieved a significantly higher level of attainment. The differences in the grades of mentored and non-mentored students was most prominent in English. The number of grades between A* - C was 16.3% higher for mentored students. For science, mentored mentored young people had grades within the range of F – E. While mentored students did obtain better GCSE's on average then, the average attainment overall for mentored students was quite low.

The one-year cycle of the NMPP started at the beginning of year 11 (September 2002) and finished in July 2003. Six schools provided data on 175 mentored school students. As with the two-year cycle, a random sample of 175 non-mentored students was used for comparison. The results indicated that mentored young people again achieved a significantly higher level of GCSE attainment than the non-mentored group. For English, 64% of mentored young people had grades between A* - C in comparison to 29.7% of young people who were not mentored. In Maths, 49% of mentored students had grades between A* - C compared to 22% of non-mentored students. For Science, 64% of mentored young people had A* - C grades compared to 32% of non-mentored young people. When the average grades were converted into actual GCSE grades, mentored students obtained GCSE's in the range of D to C. Non-mentored students obtained grades within the range of F – D. The results of the NMPP final evaluation indicate that students mentored for one year achieved higher GCSE grades in English, Maths and Science in comparison to students who were not mentored. In relation to the length of NMPP mentoring, students mentored for one-year obtained higher GCSE's in comparison to those mentored for two-years. Rather than being because mentoring is less effective over a longer period of time, the results may have been due to mentors only being contracted to the NMPP on an annual basis. Therefore, many mentors on the two year project will not continue to the second year. Thus, the success of mentoring appears to be linked to quality, consistency and intensity rather than to length of mentoring (Huddleston et al 2004).

The Birmingham Connection

The Birmingham Connection was a partnership of colleges and universities in the Birmingham area set up for a community student tutoring initiative. With the introduction of widening participation, the Birmingham Connection sort to use HE students to raise attainment, aspirations and progression to both Further Education and HE through tutoring school children. The project took part in a number of initiatives including:

- Literacy and reading in Education Action Zone (EaZ) primary schools
- Science, maths and engineering mentors for secondary schools
- Easter and summer schools.

An evaluation of the Birmingham Connection was conducted by means of interviews and questionnaires with 214 teachers, tutors and pupils. The evaluation found for pupils that:

- 83% considered lessons to be more enjoyable
- 84% had a better understanding of their subject
- 82% felt more motivated to try harder
- 85% of pupils intended to progress to HE, with 54% stating that this was directly because of the influence the tutor had on them (University of Aston Conference Paper 2002).

The examples given of the programmes at Middlesex and the Birmingham Connection highlight the differences between 'mentoring' and 'tutoring' school children. Whilst the Middlesex programme focused on the HE student relaying experiences and taking mentees on trips to campuses, the mentoring format used in the Birmingham Connection made the HE student more of a tutor. Instead of attempting to act as a role model, HE students were expected to take on a role similar to a teacher, with an explicit focus on helping mentees with their school work. Whilst there are some differences between 'mentoring' and 'tutoring' per se, the relationship is still one in which a HE student is acting as a 'mentor'; forming a personal relationship as an instrument for helping the disadvantaged (Freedman 1992). NMPP focused on widening participation and bringing together aspects of both mentoring and tutoring

Mentoring Older Students/E-mentoring

Mentoring school students can involve working with older students in Further Education (FE). An example of a mentoring programme that is attempting to encourage participation in university by mature students is Kingston University's e-Access scheme. This was an e-mentoring programme where mature undergraduates e-mentored mature students who were currently on access courses to university. Mentors were assigned up to eight mentees and had an initial face-to-face meeting. Mentor and mentees were expected to communicate weekly.

The interim report of the e-Access programme found that the undergraduate mentors were seen as slightly distant and less relevant to the mentees at their current stage of learning. Indeed, mentees were very keen to broaden the membership of the groups to include students on access courses at other colleges. The programme also had difficulties incorporating staff from the colleges into the programme. Staff were expected to provide materials designed to support mentoring and ensure that computers were available for mentoring sessions to take place. However, the logistics proved problematic. With regard to technological issues, the report found that students felt a synchronous discussion was more helpful than an asynchronous one. A synchronous discussion over the internet is one which takes place in real time (e.g. MSN), whilst asynchronous discussions are emails sent between mentor and mentees which may not be replied to straight away.

As a consequence of the interim report, the e-Access programme was changed so that mentors and mentees were matched on a one-to-one basis and less commitment was expected from the FE institution (Heaton-Shrestha et al 2003). An important note to take from this report is the desire of students to interact with other students of the same academic level. Older students can also be used to mentor younger students who are at a similar academic level.

2. *UK Evidence of Peer Mentoring for 'at risk' Undergraduates*

Supplemental Instruction and Peer Assisted Learning

Peer mentoring is when people of a similar age and or status take on roles of mentor and mentee (Miller 2002). However, this definition masks the complexity of the term. The earlier discussion of the differences between 'mentoring' and 'tutoring' also applies to peer mentoring. A recommended term that encompasses the entire scope of peer mentoring is 'peer helping' (Rosenroll 1994). In peer mentoring programmes, mentors can be of the same age, near age (1-3 years difference) or cross-age (4 years or more). Mentors may be matched with someone of a broadly similar level of

academic ability or the mentor's ability may be relatively high compared to the mentee. To ease in new students, older students can be recruited to act as mentors to younger students. The increasingly popular method of doing this is based upon Supplemental Instruction (SI).

SI was originally developed in the U.S.A at the University of Missouri, Kansas City in 1975. SI works by having older students, known as student leaders, hold group sessions with first year students where they can ask questions about course material they do not understand (Wallace 2002). SI is based on the theoretical frameworks of cognitive development, particularly Vygotsky (1962) cited in Falchicov 2001, who argued that a wider range of skills that can be developed through peer collaboration. SI is usually attached to courses which are traditionally 'difficult', such as Law, Medicine and Maths rather than being targeted at students who are 'at risk' per se (Topping 1996). Students on these courses are more likely to drop-out and so need to be positively motivated towards their studies and taught effective learning strategies.

However, in line with the Government's widening participation drive, more students are now going to university who have not had any family or friends who have been through the experience (Cox & Bidgood 2003). Many of those new to the university experience may find it daunting and be ill prepared for the work load and lifestyle. Access to higher education is not only a matter of getting into university, it is also a matter of staying in and emerging in good standing (Select Committee Education and Employment Sixth Report 2001). 'Supporting the first year experience is a key factor in retaining students' (pg.1). As increasing numbers of first year students are now considered as being 'at risk' of dropping out, SI has been used on a wide variety of courses.

Funding for SI to be implemented in UK universities was provided by the Higher Education Funding Council for England (HEFCE) in 1993. SI is commonly known in UK institutions as Peer Assisted Learning (PAL). Student leaders are known as PAL leaders. Some empirical research has been conducted into the effectiveness of PAL programmes. Both Bidgood (1994) and Coe et al (1999) found that attendance at PAL is correlated to marks. Based on this, PAL is effective in helping first year students to raise their grades. However, these studies contained no qualitative research, strictly examining the effects of PAL on student performance. Evaluating PAL on quantitative data alone does not reveal the other benefits that PAL may have, such as helping first year students to settle in socially. PAL is included in this review as it can be seen as a form of group mentoring.

Bournemouth University's Evaluation of PAL

Bournemouth University's evaluation of PAL used both qualitative and quantitative research methods. During 2002/03 PAL ran on a total of 15 courses in Schools such as Finance and Law, Conservation Sciences and Media. The qualitative methods used were a semi-structured interview with both students and PAL leaders and a cohort survey. There were a total of 34 PAL leaders and 620 first year students participating in the scheme. The interview responses illustrate the effectiveness of PAL. Positive comments about PAL were that:

- Students felt they could ask PAL leaders about anything they did not understand
- Students noted that it was 'easier to talk to (the PAL leaders) than most lecturers (p.13 Chapstick 2004)'
- Students felt that 'PAL sessions and the discussions helped with settling into uni life' (p.14).

Interviews with PAL leaders highlighted areas they had improved in since becoming a mentor. PAL leaders reported improved:

- confidence
- presentation skills
- group speaking.

Some of the shortcomings of PAL were also highlighted by the interviews. Leaders note that the participative element of PAL could be detrimental because they are unable to give more direct help to struggling students. Leaders also stated that it could be difficult to discuss some topics because students knew very little about issues linked to the area (Chapstick 2004).

Students agreed PAL was most effective in the following areas:

- Opportunities to clarify basic concepts
- Opportunities to air concerns away from teaching staff
- Understanding the subject matter of the course
- Obtaining a second year's perspective on the course.

The four lowest rated areas were:

- Development of confidence
- Reassurance about non-course-related concerns
- Development of study skills
- Remembering factual information (e.g. names, dates).

In line with Bidgood (1994) and Coe et al (1999), a significant positive correlation for PAL attendance was found by Chapstick (2004). It is suggested that this finding is more reliable than either of the two previous studies described as attendance at other course units was accounted for. This is a more rigorous technique as other studies controlled for previous A-level results. Attendance at other course units may be more indicative of students' ability or motivation as it is a measure of motivation whilst students are at university and takes into account the benefits these students may be receiving from attending additional parts of the course, such as seminars (Chapstick 2004).

Use of Control Groups

A problem with the studies presented thus far that have examined PAL's effectiveness is the lack of information on attrition rates for students in PAL and the lack of a control group. A study that addressed both of these issues used a control group who were matched on points level and subject expertise. Comparing the control group to those peer tutored, Parkinson (2004) found:

- Significantly fewer students dropped out in the tutored group than would be expected
- Tutored students did significantly better in a chemistry test than the control group
- A significantly larger proportion of the tutored students presented for math tests than did the control group.

Qualitative feedback was also obtained from both students and tutors. This was used to examine which areas of the peer tutoring were working and which were not. Students felt that the specific focus on areas of difficulty, and the coverage of examination papers and tutorial questions were particularly helpful. On areas which students would like improved, many felt that calling a roll of students would have been useful, as students who did not regularly attend could be replaced. With regard to the strategies in the peer tutoring programme that tutors felt were effective, many noted that providing a structure to the tutorials worked well as it allowed the students to get engaged in straight away. Mind-mapping and brain-storming also proved to be effective techniques, as did looking at problems from a variety of angles. Using peers as tutors and mentors for groups of students appears then to be highly effective in reducing attrition rates and improving grades. With the increasing number of students entering university as part of the widening participation drive many, if not all universities, will be considering having a programme such as PAL in place.

E-Mentoring

Kingston University developed a peer mentoring scheme that contained elements of e-mentoring. The mentors were second and third year students in English Language and Sociology. Mentees were first year students completing the same degrees. The Sociology e-mentoring component had limited success. It was intended that mentors and mentees would meet during weekly drop-in sessions which would be backed up by computer communication. However, despite mentors encouragement to use email and discussion boards the scheme remained predominantly face-to-face. In the English degree, mentors were assigned four to five mentees. Mentoring was expected to take place predominantly by email and through discussion boards. However:

- Mentees did not contribute to the discussion boards
- Emails were predominantly used to arrange meetings and not to ask questions etc
- Linked to the lack of uptake in the use of electronic communications, mentors requested that a two-hour slot be allocated each week in which mentors and mentees could meet.

The above suggests that the e-mentoring component completely failed, but this may be because the students preferred personal contact when this was an alternative. However, some of this failure was attributed to the lack of awareness in the positive benefits the scheme could have. The university thus undertook a campaign to increase awareness of the e-mentoring scheme. In conjunction with this, in semester 2 of the programme, e-contact between first year students and second and third year students outnumbered instances of face-to-face contact between the groups, whilst mentoring or not (Heaton-Shrestha et al 2003).

3. *UK Evidence of Business/Community Mentors for 'At Risk' Undergraduates*

National Mentoring Consortium

The National Mentoring Consortium (NMC) was initially started at the University of East London in 1992. Since then, the NMC has become a nationally recognised organisation that works with 16 universities and over 300 employers. The main aim of the NMC is to support disadvantaged and minority ethnic students. It provides support by linking minority ethnic students with mentors who are professionals in the world of work. This gives mentees experience and professional skills as well as sources of support in work organisations. Ideally, this will lead to the mentee finding a good job. For employers, the benefits are that they are given access to good undergraduates who they may have otherwise overlooked. An evaluation was conducted into the effectiveness of the NMC by Warwick University. The report found that successful outcomes of the NMC were:

- Satisfaction among the majority of mentees that the programme had met their expectations, particularly in developing their career
- Satisfaction that the programme had met other expectations, such as improving self-confidence and study skills
- A commitment to the mentoring task from mentors and satisfaction in the tangible benefits it gave to mentees
- The programme helped to build relationships between organisations and the ethnic community, e.g. the police force
- The programme was judged to have a good training process and training materials for both mentors and mentees (Band & Parker 2002).

4. *US Evidence of Undergraduates Mentoring School Students*

Department of Education

A large-scale American study by the Department of Education investigated 1,700 mentoring programmes in which college students mentored school children (Cahalan & Farris 1990). It found

that 4 out of 10 mentees were in elementary schools, a third were in middle schools and a third were in high schools. The study provides a comprehensive background to the aims and format of school mentoring programmes in America. With regard to the aims of the mentoring programmes the report found that:

- 61% of programmes focused on improving basic skills
- 12% of programmes focused on improving self-esteem
- 8% of programmes sort to provide a role model
- 5% aimed to prevent school drop-out.

The report also contained background information about the mentors in the programmes:

- Of the reasons given as to why volunteers wanted to become mentors, 77% wanted to gain practical experience related to the professional field they wanted to enter
- 71% wanted to develop a commitment to public service
- 54% wished to gain non-campus experience
- The majority of mentors were female and a quarter come from minority backgrounds
- 96% of students fulfilled their commitment to programmes.

One-to-one sessions were the most common way mentors and mentees interacted followed by small group sessions and large group sessions. The median time mentors spent with mentees was 3 hours per week. The study found an interesting difference in programmes' primary focus. If programmes described themselves as a tutoring project, only 12% of the time spent between the pairs was on recreational activities, with the rest of the time spent on improving basic skills and homework support. In mentoring programmes, recreational activities were where the majority of the time was spent, with support for basic skills and homework receiving less attention. In terms of the outcomes of the programmes, 90% of the programmes frequently rated themselves as very successful in providing 'role models' and 74% rated their programme as very successful at 'improving basic skills'. A criticism of the findings, however, is that no data was provided by schools or programmes to determine the accuracy of these self-assessments.

Campus Partners in Learning

Tierney & Branch in Sipe (1996) investigated six college HE mentoring school children programmes. The colleges were part of a *Campus Partners in Learning* programme sponsored by the Education Commission of the States. The mentoring programmes that the study examined were based at Boston University, Connecticut University, Georgetown University, Porterville Community College, West Virginia Wesleyan College and Xavier University. To gauge the programmes' outcomes, in-depth interviews were conducted with 29 pairs of mentors and mentees and questionnaires were administered to 52 youth and 50 mentors. The main findings of the study were:

- 45% of matches formed a successful relationship
- Mentors in successful relationships allowed the relationship to be youth driven
- Mentors exhibited improvements in self-esteem, scholastic competence and social skills
- Mentors did not feel that they improved communication skills, Grade Point Average (GPA) or the sense that they could change the world
- Mentees were exposed to additional social and cultural activities
- Mentees sense of control over their lives improved
- Mentees showed no improvements in behaviour or academic performance.

The Learning Connection

When peer mentoring is specifically targeted at educational needs, it is sometimes referred to as service learning. Service learning can be defined as the practice of students becoming involved in their community in order to utilise knowledge learned in the classroom and to gain opportunities for learning through experience (Valerius & Hamilton 2001). There are benefits in service learning for mentees, mentors and academic institutions. Mentees gain by having a helper that is solely focused on their academic needs. For students, service learning provides them with an opportunity to interact with the larger community and apply their knowledge to a 'real world' setting. For institutions, such programmes provide an opportunity to establish a more engaged academic environment. An example of a service learning programme is The Learning Connection (TLC) in Pennsylvania. TLC matches college students with local fourth graders (age 9 years) who are at-risk of failure in school. The entry requirements for children into TLC were:

- An academic average of C or below
- Come from low-income families
- Come from single parent or blended families
- Show potential for learning
- Could potentially benefit from the programme.

A post-mentoring survey found that all but one mentor reported having an unconditionally rewarding experience. Mentors' learn important lessons about children, themselves, and the importance of community work and value of the relationship. Their comments included:

- Lessons about children: 'I learned that trust and loyalty are very important in dealing with children; if you let them down, it's hard to build that trust back up again' (p. 212 Schmidt et al 2004)
- Lessons about themselves: 'One person can really change the life of a child'
- Importance of community work: 'Giving a little to your community goes a long way'
- Value of the relationship: 'The mentees definitely teach you just as much as you teach them' (all p. 212 Schmidt et al 2004).

Sinclair Goodlad's Review of Student Tutoring

Sinclair Goodlad (2002) has been described as one of the 'founding fathers' of student tutoring. In his paper entitled 'Tutoring – the neglected partner?' he reviews international literature on student tutoring and closely examines service learning. For a copy of the report, refer to the www.hementor.net website.

5. US Evidence of Peer Mentoring for 'At Risk' Undergraduates

Helping students who are having difficulty making the transition from school to college is a pressing issue in America. The *Times Higher Educational Supplement* notes that one in four students drops out in the first year and that only 54% of low income students actually graduate in six years (Marcus 2004). Methods that can increase the retention of 'at risk' undergraduates for American colleges are required and one such method is peer mentoring. To be a peer mentor, students should have the following qualities:

- Knowledge of subject matter
- Skills in interpersonal relationships
- Time to commit
- The ability to identify problem areas in 'at risk' students (Rafoth 1998).

A way of identifying students 'at risk' of failure is to examine test marks. At Tarrant County College in Texas, students on a medical-surgical course were defined as being 'at risk' if they had an average score of less than 70 after the first two tests. From 209 students, 26 were identified. 20 wanted to participate in the mentoring programme. A number of considerations were made when matching mentors and mentees. These were:

- That mentor and mentee took the same course
- Similar cultural backgrounds
- Proximity
- Language – if students second language was English an attempt was made to match with mentors whose second language was also English.

A statistical analysis of the data revealed that there was a significant relationship between academic performance, retention and participation in the peer tutoring programme (Higgins 2004). Whilst there are some limitations to the findings, i.e. the results cannot be generalised to courses other than a medical course and because the participants were not randomly selected, the study again provides support for a link between higher grades and retention rates for students who participate in peer mentoring programmes

MAP at Indiana University

Another example of a peer mentoring programme for 'at risk' undergraduates was at Indiana University. The University itself had an 'open access' admissions policy, where it actively sought to recruit from the local community. However, the University still aimed to maintain high academic standards and as a result, did not score well on student retention. To combat this, the University put in place a number of mentoring schemes with mentors recruited from the student body of the University. The project was entitled The Student Mentoring/Advising Program (MAP). MAP served students who scored at or below a 10th grade reading level. Peer mentors were available for one and a half hours a week. The activities the peer mentor engaged in were:

- Introducing mentees to campus support systems
- Taking students on tours of facilities
- Providing general support
- Acting as a friend and a guide.

The evaluation of MAP found that students enrolled in the program had a significantly higher GPA when compared to the previous year's students. The previous year's students had the same educational classes as MAP students but were not offered a peer mentor. However, although MAP mentees did have a higher GPA than students in special education classes who chose not to partake in MAP, the difference was not significant (IMIR Research Brief 1997).

The University of Indiana also offered another peer mentoring scheme. The mentees in this programme did not have any difficulties per se. However, the mentees were enrolled onto difficult courses where the failure rate was high, and where it could be suggested that there is a higher likelihood of students dropping out. Peer mentors in the programme were assigned to a group rather than having a one-to-one relationship as in MAP. Thus the programme followed the SI model. Mentees were classified as having taken part in the programme if they attend at least three mentoring sessions. To examine how effective SI was, a comparison group of those who enrolled in the programme but who did not attend at least three sessions was used. The evaluation found that:

- Participation was significantly linked to higher GPA
- Participation was significantly linked to re-enrolment rates
- Significant findings remained even when controlling for differences linked to preparation for college, e.g. age and previous GPA

- Students felt better about the social aspects of college having had the opportunity to interact and work with older students outside of class (IMIR Research Brief 1997).

6. *Peer Mentoring in Other Countries*

South Africa

South Africa is also experiencing problems retaining students in HE. An article in *The Sunday Times* noted that whilst South Africa has the highest number of students in sub-Saharan African, less than two students in every ten graduate (Anstey 2003). Widening participation is a particularly pressing issue for South African universities because of the demise of apartheid. Universities which until recently had only enrolled white undergraduates need to actively recruit from the black community to more accurately reflect the population demographics of South Africa. However, to increase the number of black students, universities have had to recruit students from poor scholastic and socio-economic backgrounds. These students are not adequately prepared for the difficulties of university. One university that felt this problem more keenly than most is Stellenbosch University. The university already had a high drop-out rate of students from its medical programme because of its rigorous structure, with 13-18% of second year students dropping out. To combat the risk of a large number of black and other students of colour dropping out of the course, Stellenbosch University put in place a peer mentoring scheme. An evaluation of Stellenbosch University peer mentoring found that:

- Top students in the second year class were used as mentors
- Peer mentors were expected to meet with mentees at least two hours a week to discuss academic issues
- The aim of the programme was to equip students with knowledge and self-confidence
- 6 mentees dropped out of the course in comparison to 17 before the implementation of peer mentoring
- The programme was judged to be such a success that it was implemented throughout the university into subjects such as nursing, physiotherapy and speech therapy (Page et al 2005).

In conclusion, peer mentoring has been found to be effective in both ensuring that 'at risk' students do not drop-out and in increasing grades. The last example of peer mentoring has shown that this remains the case even when there are deep-rooted cultural and historical barriers standing in the way of students' potential success.

Australia

In Australia, 'at risk' students have been defined as having/being:

- Non-English speaking background
- Low socio-economic background
- Rural and isolated
- Aboriginal and Torres Strait Islander
- Students with disabilities
- Women in non-traditional disciplines.

Students who fall into one or more of these categories are termed 'equity groups' by the Department of Employment, Education and Training (DEET). Much like the other countries examined in this paper, many mainstream students in Australia are also classified as being 'at risk' of failure or dropping out. A change in Australia to mass participation in HE has brought with it a number of school leavers who have diverse backgrounds and many who may not be prepared for the university experience. Again, methods of peer tutoring have been identified as being a means of

helping to prevent drop-out and low grades for 'at risk' students. At the University of Queensland, two such programmes have been initiated. A peer tutoring programme was set-up for equity students in a Biochemistry course. An evaluation of the programme by McNamara & Kelly (1996) found that:

- All equity students enrolled in the programme had a passing grade – bar one who had severe personal and cultural problems
- Average grades were higher than previous years – 5.6 compared to 3.7 in the previous year
- Re-enrolment to the second level was higher – 10 out of 18 went on compared to 3 the previous year.

There were however a number of problems with the programme. As a number of equity students were in employment, some had a hard time attending as peer tutoring was only offered on a small scale with a few set time slots. Another issue was that students may perceive the tutoring as having a 'welfare' orientation. Many students may have a problem with this as they do not want to be perceived as being 'special' or 'needy'. The stigma of peer tutoring as 'welfare' provision was perhaps due to it being run by student services and not by the academic department itself. As lecturers and other members of academic departments were not directly involved they may be unsupportive of the programme and some may believe that it is only there for those students who perhaps should not be in HE in the first place. Implementing SI in HE helps to reduce the 'welfare' stigma, as it is directly run by individual teaching departments and is for students of all abilities in 'high risk' courses. In Australia, SI is known as Peer Assisted Study Sessions (PASS). The features defined as making a course 'high risk' in Australia are:

- Large lectures with no tutorials
- Limited opportunities for feedback
- Requirements for verbal presentations and new vocabulary
- Large numbers of students obtaining low grades
- Limited number of students having to continue the subject at year level
- Assumptions of prior learning.

The evaluation of PASS for a Biochemistry course at the University of Queensland found that:

- 80% of students obtained 5 or more sessions of PASS
- Equity students attended 100%.
- Higher mean grades were obtained – raising from 52.7% the previous year to 63.2
- There was a significant decrease in those achieving a grade of 50% or lower – from 27.5 to 13.6% (McNamara & Kelly 1996).

This example of peer mentoring in HE from Australia suggests that whilst academic institutions need to have support structures for 'at risk' students in place, these should not make less able students feel uncomfortable about obtaining the extra help. A way of ensuring that this does not happen is to run SI, or whatever it may be called, as it originates from academic departments themselves. This helps to remove some of the stigma attached to programmes, such as peer mentoring, which are designed to help, not repel, 'at risk' students.

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