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Good practice in undergraduate peer support

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The Maths, Stats & OR Network (MSOR Network), in conjunction with sigma - centre for excellence in mathematics & statistics support, has, over the years, developed a programme of activities associated with supporting specialist mathematics and statistics students. Research has shown that peer support and peer-assisted learning can motivate and encourage students to engage with mathematics.

The Network has commissioned the authors of this paper to produce a Good Practice Guide to identify and disseminate current good practice in the area of undergraduate peer support, where both undergraduates and postgraduates support other students – in the same or different year groups – in formal or informal situations.

This paper outlines the project aims and objectives which are: a) to collect data from Higher Education Institutions (HEIs) and Centres for Excellence in Teaching and Learning (CETLs) throughout the UK, b) to establish the nature of current peer support mechanisms (both informal and formal) and c) to identify good practice in peer assisted-learning, which may be provided either face-to-face or by e-support.

1. Introduction

In order to provide an overview of current good practice with regard to peer assisted-learning in the UK, the project aims to collect data in the following ways:

a. through visits to HEIs and relevant CETLs in order to carry out both focus group and one-to-one interviews with staff and students

b. through a survey, delivered online, to all HEIs in the UK.

The information gathered from the above data, together with a sound literature review, will form the basis of a Good Practice in Peer Support Guide. This will inform the field and enable HEIs to encourage and introduce, or develop further, peer support mechanisms within their departments. The guide will be published in June 2009 and the authors will also facilitate a workshop to help disseminate the findings.

2. Literature review and examples of current good practice

2.1 Literature review

Much of current peer support practice has evolved as a result of work pioneered in the United States. The Basic Supplemental Instruction (SI) Model was first developed at the University of Missouri, Kansas City in 1973. Its initial raison d’être was “to stem the tide of health-science school dropouts” [1] but the model has since broadened to encompass other academic disciplines and student groups. In essence, any support programme of this kind serves to encourage, motivate and support learning.
The settings in which this happens can be diverse (e.g. official learning spaces as well as cafes and other informal environments), as can the mechanism by which it is provided (i.e. from formal, academic-led support sessions to informal student and peer-led sessions to support of distance learning). In current practice, individual HEIs have adapted the SI Model to suit their own institution’s requirements.

The above variation in delivery is supported by the work of researchers like Bidgood [2], who have explored the different ways in which students are used as mentors or tutors to their peers. Bidgood identifies four roles for students involved in peer support:

- pastoral;
- in tutorials or other class environments;
- as peers in peer-assisted learning; and,
- in group work and peer assessment.

In her exploration of the subject, Bidgood [2] underlines the fact that different students will benefit from different teaching/learning activities or methods of support: “[a range of] activities should enable a large proportion of them to engage with the course content, enjoy their studies and be successful”.

Barber and Heal [3] investigated collaboration in learning in their work with 20 teacher trainees. Initially, tutees had “expressed their own panic about mathematics”. However, following intervention in the form of peer support through collaborative learning, students gained in confidence and welcomed the opportunity to discuss problems or issues on a one-to-one basis, judging this as a positive experience.

Much research to-date has focused on the transition from school to higher education and the support required for this in mathematics. Croft, Solomon and Bright [4] underline the importance of not forgetting those students already involved in studying mathematics: ie support for those at years two and above also require similar opportunities to boost their confidence in their subject, as not all are motivated to independent study. In their research, Croft et al held focus group interviews with second year students and found that “many students value, first and foremost, the support of their peers” in helping them to develop their study skills and mathematical knowledge from year to year.

2.2 The spectrum of current good practice

2.2.1 University of Leicester

One of the research initiatives that set out to review various maths support strategies used by HEIs was the MathsTEAM Project, set up in October 2001 and involving a number of universities. The Project published three booklets that reviewed a number of case studies (n=65) looking at resources and teaching methods available for maths support in higher education and identified barriers and enablers to this support.

One of the universities involved in the Project was the University of Leicester: their support for students in the Department of Mathematics focuses on students in their first year. Support at this HEI incorporates small timetabled groups containing up to 8-10 students. Help is given to these groups by second and third year students and their remit is to reinforce knowledge of first year material and, through this, build the students’ confidence. Leicester’s reasoning behind using student peers in this way supports the research cited above. As Levesley states: “the central idea is that people learn best from those who are closest in them in experience because the ‘teacher’ still remembers what it was like to struggle with the information and the ‘learner’ is not intimidated by the expertise of the ‘teacher’” [5]. The success of the programme is evident in student feedback and has led in some cases to a distinct career path: “The peer support system that I took part in, in my second and third year, really inspired me to help others which is why I’ve decided to teach” [6].

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2.2.2 London Metropolitan University

Peer support at London Metropolitan University originated from work developed by London’s Guildhall University in 1996 and shows the applicability of support mechanisms across disciplines. The current Peer Assisted Study Support (P.A.S.S.) sessions are run in several of the University’s departments and support is provided for over 60 modules in the fields of finance, applied social sciences, economics, humanities, law, business, mathematics and others.

The University provides, for example: language support in some 25 languages and a ‘buddy’ system that supports students with ‘English chat’ (conversation and cultural knowledge exchange), essay-writing skills, equal opportunities issues and welfare and cultural activities. Their P.A.S.S. scheme is coordinated by core staff who, together with mentors and team leaders, liaise with academic staff in the relevant disciplines. Mentors are organised into department and subject areas; team leaders are chosen from the experienced mentors and are responsible for organising the mentor sessions and publicity for the scheme [7].
2.2.3 West and Mid Wales Widening Access Partnership

Our third example comes from the West and Mid Wales Widening Access Partnership and shows how undergraduate peer support can stretch not only across different disciplines, with support for subject knowledge, but also address any other aspect of life at university, including social and financial needs as well as the academic. The support provided by this Partnership also acknowledges the need for specialist provision for those students with, for example, Aspergers, and also the length of contact required: some students will need only short-term support, whilst others will need more input for longer.

One of the Partnership’s schemes is called Signpost, a peer support scheme for first year students. The mentors in the scheme act as a link to services available for students within the university. In this model, those appointed as mentors include third year undergraduates, post-graduates and young members of staff. Another scheme in the West and Mid Wales Widening Access Partnership is run at Lampeter University. Lampeter’s Peer Mentoring Model identifies groups of students that are sometimes at risk of being excluded, that is: “deferred students, part-time [students], mature students, young people with disabilities, young people from Care or [those with] lack of parental support” [8].

3. Good practice in peer support guide

The good practice guide commissioned for this current project will be produced once analysis of the data collected from HEIs has been completed (see section 4 below). The content of the guide will include coverage of the following areas, and a brief resume of content is included under each heading:

a. Relating theory to practice

   This section will look at different models of mentoring and peer support and how these are implemented within mathematics.

b. The benefits of peer support

   Peer support is a two-way process. The guide will explore benefits to both the mentor and mentee, as well as the HEI concerned. The reasoning behind peer support will be explored (e.g. confidence boosting, retention and so on), as well as the different groups of students whose needs may be addressed (c.f. the discussion above) and the focus of support provided – for example to help with logical reasoning, dissertations, particular modules and so forth.

c. The student experience

   Within any student’s experience exist a number of preconceptions and prior experiences of teaching, learning and mentoring. These will be explored in the guide with reference to the literature and the HEI data collected.

d. Good practice

   Examples of current good practice will be included in the guide for the benefit of colleagues and students in HEIs across the UK. Issues addressed will include those areas already highlighted in the literature review provided above and within the spectrum of good practice examples given in section 2.2.

e. Nature of support

   From the examples given previously, it is clear that support and its provision varies from institution to institution and according to student needs. This section of the guide will look at how support is delivered (e.g. face-to-face or online), whether it is targeted for individuals or groups with particular needs and how to ensure equality in delivery across the board.

f. Challenges and constraints

   There are many considerations that need to be taken into account when implementing peer support mechanisms; these include ethical considerations, resource issues, administrative demands, and health and safety factors.

g. Support implementation

   Here the guide will focus on the recruitment, retention and training of mentors, mentees and staff; the publicity necessary to advertise support schemes to students and also the resource implications of such initiatives for HEIs and individual departments.

h. Liaison with, and involvement and support of, academic staff

   In order for peer support mechanisms to be successful, institutions and their academic staff need to be fully engaged with and supportive of the process. The guide will consider how best to make use of academic staff skills, time and involvement in both formal and informal settings.

i. Monitoring and evaluation

   In order to ensure success and assure quality, there need to be good systems in place to allow feedback from:
   - mentor to mentee;
   - mentee to mentor;
   - both mentor and mentee to academic staff; and,
   - all parties to the HEI concerned.

j. Recommendations for future practice

   The final section of the guide will make recommendations for enhancing the processes involved in setting up or maintaining peer support schemes.
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4. Work in progress

To conclude, progress to-date has included a number of visits to HEIs and CETLs in the UK, with further visits arranged for 2009. An on-line questionnaire has been prepared for dissemination to HEIs and CETLs throughout the UK in late 2008, in order to establish the nature of current formal and informal peer support mechanisms. The responses to the surveys, together with feedback from the focus group and one-to-one interviews with students and staff in the HEIs and CETLs, will help the authors of the guide to identify good practice in peer assisted-learning. The authors of this paper would like to thank those who have already participated in our project: their contributions have proved invaluable in the design of the survey and in our growing understanding of this important area. All participants will be acknowledged, with heartfelt thanks, in the final good practice guide.

References


8. West and Mid Wales Widening Access Partnership, “Peer mentoring and other models of mentoring”.