

# Maths Support and Drop-In Centres

## The Provision of Maths Learning Support at De Montfort University, Leicester

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### Abstract

*The Maths Learning Centre (MLC) was first established as a library service in 1994 but initially struggled for funding and recognition at a wider University level. Since 2000 it has been incorporated into the centrally funded Student Learning Advisory Service (SLAS).*

### The Execution

The Maths Learning Center (MLC) is part of Student Learning Advisory Services (SLAS) which was formed in May 2000. SLAS brought providers of learning support within the University together to form a team which provides direct specialist learning support to students and professional development for academic and support staff. Prior to its incorporation into SLAS the MLC had been a library service which was set up as part of a wider library based learning support service in 1995.

### What Support Was Needed?

MLC staff believe that students need to learn maths in context but no one person can understand the context in which every student in the university is learning maths. Our staffing level is now slightly more than one full time post but it is shared between 4 people; one from engineering, one from the maths department with a statistics background and two generalists with FE / adult education backgrounds. We try to direct students from different faculties to the person who is most likely to be able to help them but we also support and educate each other.

The focus of the MLC is clearly a student's maths learning needs. However we feel that wider learning support issues, ranging from encouraging the development of an organised approach to study to dealing with the emotional factors involved with maths learning, are very important in helping students achieve their own maths learning goals.

All staff are experienced teachers who have developed, through formal study or reflective practice, an appreciation of the complexity of student support but this is an area in which staff development is also needed. The placement of the MLC within SLAS facilitates the development of this aspect of our work.

Within the SLAS team there is a wide range of professional expertise in learning support. As a result the MLC finds itself in an environment in which the full range of learning support issues are discussed. Such discussions help to broaden the understanding of the staff who take part in them. As a department we have also organised joint staff development sessions with other sections of Student Welfare, such as counselling, which have been very helpful in enhancing our ability to understand the wider aspects of student support.

### The Barriers

Since 1998 the MLC has had one permanent half time post and a number of part time hours. Because of the way in which the university sets its budgets the Centre never knows from one year to the next how many hours it will have in the following year, so forward planning is very difficult.

The hourly paid staff mainly work at the lunchtime drop-in sessions. Students come to the drop-in of their own accord, sometimes as a result of staff recommendation. According to the feedback we collect they are appreciated by the students who use them. However we don't see this as the only way to deal with the diversity in maths background and learning needs that the student body brings to their modules. We have had some success working directly with colleagues, but hourly paid staff do not enable the MLC to offer the time-tabling flexibility needed to promote this kind of work as much as we would like.

### The Enablers

The key to success in working with colleagues is 'working together'. We believe that you can't teach maths to someone who does not want to, or does not perceive the need to, learn. So our starting point is the students' perception of their own learning needs. We also believe students need to learn maths in context so we need colleagues to provide us with the context.

We have run a number of pilots for direct support programmes. From this experience we are developing a model of 'best practice'.

## Stage 1

Following a request from a department for the MLC to work with their students the first stage is the writing of a self assessment exercise which contains maths questions set in the context of the subject, provided by colleagues, and more abstract questions which we write.

If possible and if appropriate we try to emphasise the applied nature of the maths the student now needs to learn by including a question for which the 'correct' answer may not be the one which accurate calculation alone will give. Judgement related to the subject is also necessary.

The exercise is given to all the students in a group. This may happen during induction, in a tutorial session, at the start of a lecture; the timing is the choice of the department concerned. Students are asked to:

- read the question.
- consider how confident they feel about being able to answer it.
- try to work out the answer .

They are then shown the answers with suggested methods (the opportunity is taken to show them that there is often more than one way of arriving at the correct answer) and asked to:

- mark their own work.
- re-assess their confidence level.

## Stage 2

The second stage is the production of subject specific materials to teach with. We ask colleagues to provide subject specific questions and incorporate them into our generic teaching materials. With a reasonable knowledge of MSWord this is not too difficult. It is very important that colleagues provide questions because;

- They enable us to gauge the level they want their students to work at.
- It is clear from feedback that the students respond well to subject specific questions.
- It encourages colleagues to become involved.

## Stage 3

Following the self assessment but as part of the same session students are informed that there will be a short (anything from 3 to 12) series of weekly maths classes and they are told what topics will be covered – or if the group is small and the situation sufficiently informal they are asked what topics they would like to cover.

Attendance is voluntary. Getting students to attend and work seems to depend more than anything else on how well organised things are. Ideally everything is planned well in advance; the time slot for these classes appear on student timetables, hourly paid staff can be asked to teach them and the materials used are well thought out.

## Stage 4

The fourth stage is the collection of feedback from students and department staff and the dissemination of student feedback to colleagues.

## Evidence of Success

- Every student who attends the drop-in is asked to 'sign the attendance book' and comment, briefly, on the support received.
- Feedback is collected from all class taught groups.
- We receive anecdotal evidence of the success of our work from students who return to thank us but we are starting to track students we support in a more formal way.

## How Can Other Academics Reproduce This?

The institution has to be convinced that it should provide centralised learning support and that maths learning support should be part of this provision. Arguments that might be used are well documented in other places. Our experience suggests that the following are important:

- The provision of a well-organised, visible and accessible student support service is likely to attract students with diverse learning needs. It helps the university to enable students not only to progress through their degrees but also to develop skills that contribute to career enhancement.
- The integration of specialists from a number of areas of learning support provides economy of scale:
  - Support can be provided all year round, not only in relation to taught courses.
  - The support is provided by specialists in specific areas of student support.
  - The service can play a role in staff development.

## Quality Assurance

The MLC's line management structure is through the SLAS department manager who is a member of the senior management team which reports to the Pro-Vice Chancellor responsible for The Student Experience. This structure enables the MLC's voice to be heard at higher levels in the university structure and in turn enables the university to monitor the activities of the Centre.

### Reference

Maths Learning Centre;  
<http://www.library.dmu.ac.uk/About/MLC/>; (13-09-02).