

The Weekly Mathematics Clinic at the University of Derby

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Abstract

The Mathematics Clinic is provided throughout the 'teaching year'.

- Offered on a drop-in basis to ALL university students accessing mathematical modules.
- Timetabled to be accessible to all Stage One and Stage Two specialist mathematics students, (main users: Stage One students in first semester).
- Clinic is staffed by friendly, approachable and experienced members of staff.
- Feedback confirms student appreciation of this facility.

The Execution

A fundamental aim of the specialist programmes which comprise the Undergraduate Mathematics Scheme at the University of Derby, is to enable wide access and facilitate the development of mathematical skills in students who on entry may not be well qualified in terms of traditional qualifications in A Level mathematics. The provision of appropriate support has therefore been an inherent component of the scheme since its outset and the monitoring and enhancement of that support an ongoing feature. One component of that support is our Drop-in Mathematics Clinic.

A weekly Mathematics Clinic is provided throughout the 'teaching year'. This is offered on a drop-in basis to ALL university students accessing mathematical modules and is well-used. The clinic is timetabled to be accessible to all Stage One and Stage Two specialist mathematics students. However the main users are Stage One students (specialist and computing).

The Clinic is available one morning per week from 09:00-12:00 and students can 'drop-in' at any time; no appointments are necessary. One experienced member of staff is always available, with a further member of staff 'on-call' should there be an expectation of increased demand. Final year students, particularly those with a career interest in teaching, are sometimes willing to assist on an occasional voluntary basis.

What Support Was Needed?

The key components to the success of the Drop-in Clinic are:

- students quickly realise that they can have confidence that they will receive both sympathetic support and expertise appropriate to their needs;
- the clinic is timetabled alongside Stage One and Two mathematics modules, ensuring its availability to all specialist mathematics students;
- it is resourced appropriately with respect to rooming and PC facilities.

The Barriers

Barriers to success occur if there is difficulty in providing any of the resources for the above three components. This is likely to occur in factors outside of our 'local control', for example

- inadequate size room, inhibiting staff access to individual students.
- timetabling difficulties (e.g. engineering, science subject students, clinic times may clash with lectures/tutorials).

The Enablers

It is essential to continuously remind prospective customers of the existence of the Mathematics Clinic. Strategies include:

- the Clinic specified on student timetables;
- promoted during Induction and advertised via the School Website and School Noticeboards. However it is notable that students are more likely to turn up following a more specific reminder;
- A notice on Stage 1 Computing Noticeboard saying "Have YOU got a resit exam in Maths for Computing? Drop in to the Tuesday Maths Clinic" ...etc;
- reminders to staff to promote the clinic to their students in lectures/tutorials;
- personal tutors encouraging their tutees to attend to help overcome difficulties induced by absence or poor time management etc.

The ultimate requirement is supportive staff both manning the clinic and encouraging students to attend!



Evidence of Success

Student feedback has been well documented over the years indicating both the success and the appreciation of this provision from the student perspective.

It is important however to keep a log of student participation. Individual names are not required, but the following information is necessary:

- numbers attending and from which programmes;
- specific topic/area of advice.

This information can usefully:

- enable further help-sessions to be organised;
- assist in decisions as to appropriate staffing of the clinic;
- provide important feedback to module leaders/teams with respect to appropriateness of module content or their expectations of prerequisite knowledge.

How Can Other Academics Reproduce This?

The initial requirement is for a mathematics department to identify whether their students and staff would benefit from the provision of a Drop-in facility such as the Maths Clinic. As mentioned before supportive staff are key to the success of this facility. Staff not directly involved in the Clinic provision should generally benefit, e.g. small groups of students taking problems to the Clinic rather than as individuals requiring personal sessions with individual tutors, actually enables more effective use of staff time.

Support from your Head of Department/Division is essential, in order to achieve appropriate staffing. The extent to which you can extend the support to servicing the mathematical needs of other subject areas will depend very much on the way your Institution structures and manages its financing of Schools/Faculties.

Quality Assurance

In each Academic year, one member of staff is designated as having responsibility for the organisation of the Mathematics Clinic and reports back to the relevant committee i.e. Undergraduate Mathematics Programmes/Applicable Mathematics and Statistics Subject Committee. The performance of the Clinic with respect to usage and student feedback is reviewed as part of the annual monitoring of the Mathematical Programmes and Subject provision.

Other Recommendations

In addition to the Clinic provision described above, further clinics, specifically to support software packages (e.g. Minitab, Matlab, etc.) are scheduled at appropriate points in the Academic Year.

An important requirement in the operation of the clinic is an awareness by the 'facilitators' of current assignment specifications and deadlines and the extent to which direct or indirect help is appropriate. In the early days of running the clinic students did try to 'hoodwink' the facilitator into providing illicit help! This is to be avoided as it actually inhibits the deeper student learning which the clinic is aiming to encourage. This again returns to the fundamental requirement that the Clinic is staffed by experienced tutors.