



**UCD Mathematics Support Centre
University College Dublin**

Report on the Academic Year 2009/2010

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Contents

<i>Executive Summary</i>	4
1.1 Origins of the Mathematics Support Centre (MSC)	5
1.2 Aims of the MSC.....	5
1.3 Services provided.....	5
1.4 Staffing	6
1.5 Improving facilities and coping with increased numbers	6
1.6 Record keeping	7
1.7 Accommodation and opening hours	7
8 Publicity.....	8
1.9 Funding.....	8
2. <i>Mathematics Support Centre usage</i>	10
2.1 Annual visits to the MSC since 2004.....	10
2.2 Programmes using the MSC	10
2.3 Number of single visits and average time of visits	11
2.4 Percentage numbers of students from various levels	12
2.5 Equality of opportunity.....	12
2.5 Weekly visits to the MSC in 2008/2009.....	13
2.7 Identifying areas of greatest need: developing Hot Topics.....	14
2.8 Retention Figures	14
3 <i>Evaluation of quality of service provided by the Mathematics Support Centre</i> 15	
3.1 Level of student attainment in mathematics prior to third level.....	15
3.2 Knowledge of existence and purpose of the MSC	16
3.3 Why students first decided to use the MSC	17
3.4 Students' opinions of the MSC	18
3.5 Had the student passed the module for which they sought help	21
3.6 Students' opinions of the MSC staff	21
4. <i>Students' descriptions of their experience of using the MSC</i>	26
5. <i>Conclusions</i>	32
6. <i>Recommendations</i>	32
<i>Appendix 1 MSC Attendance Form</i>	33
<i>Appendix 2 MSC Evaluation Form</i>	34
<i>Appendix 3 Students' descriptions of their experiences using the MSC</i>	36

List of graphs and charts

<i>Figure 1. Annual Number of visits to the MSC.....</i>	<i>10</i>
<i>Figure 2. Number of visits per student</i>	<i>11</i>
<i>Figure 3. Level of students attending the MSC 2009/2010</i>	<i>12</i>
<i>Figure 4. Semester 1 & 2 student visits</i>	<i>13</i>
<i>Figure 5. Student prior level of mathematical attainment.....</i>	<i>15</i>
<i>Figure 6. Students knowledge of the existence and purpose of the MSC.....</i>	<i>16</i>
<i>Figure 7. Why students first decided to use the MSC.....</i>	<i>17</i>
<i>Figure 8. The MSC has a welcoming atmosphere.....</i>	<i>18</i>
<i>Figure 9. The MSC has suitable opening hours.....</i>	<i>19</i>
<i>Figure 10. The MSC encourages teamwork.....</i>	<i>20</i>
<i>Figure 11. The MSC is a relaxed place to study.....</i>	<i>20</i>
<i>Figure 12. Staff are friendly and approachable.....</i>	<i>22</i>
<i>Figure 13. The MSC staff have good teaching abilities.....</i>	<i>22</i>
<i>Figure 14. The MSC staff have a good knowledge of mathematics.....</i>	<i>23</i>
<i>Figure 15. The MSC staff help you cope better.....</i>	<i>24</i>
<i>Figure 16. The MSC staff motivate you to study.....</i>	<i>25</i>

Executive Summary

The Mathematics Support Centre (MSC) offers support in mathematics to students throughout all programmes in UCD not just those studying mathematics. This includes students at all levels from Access to PhD students and assists New Era, Mature students and students with disabilities.

Students from 57 out of a total of 81 programmes throughout the University attended the MSC in 2009/2010. This represents over 70% of the total undergraduate programmes in UCD. It demonstrates the essential requirement of a good grounding in mathematics for many third level students. Students studying Architecture, Arts, Agriculture, Commerce, Chemistry, Economics, Engineering, Finance and Actuarial Studies, Geography, Health Sciences, Mathematics, Mathematical Physics, Nursing, Statistics and Veterinary Nursing were some of those tutored by the MSC this year.

The MSC assisted New Era by developing and delivering mathematics workshops both for New Era students coming into UCD August 2009 and the New Era summer school project for 5th year second level students in June 2009. For the first time they also organised workshops for mature students coming into UCD.

The Manager instigated a targeted publicity drive that resulted in a further increase in the usage of the MSC over the last academic year. (Figure 1. Number of visits to the MSC) There were a total of 3508 visits to the MSC in this academic year an increase of 147%. An extensive evaluation process of the MSC and its staff was carried out in Dec 2009 and May 2010. (See Section 3 Appendix 2) The results of this were very encouraging and were highly complimentary of the work of the MSC.

Respondents' descriptions (Section 4) of their experience of using the MSC were very positive with one notable exception and that related to inadequate opening hours resulting in overcrowding.

The first year (2007/2008) UCD funded the MSC 1400 students attended. In 2009/2010 this had risen to 3508 students. This is a substantial increase in numbers. Budgets allocated to the MSC have however remained at the same level. The ability of the MSC to cater for the large increase in numbers is now a major concern for the Centre. This year it was only made possible by the additional emergency funding of the School of Mathematics who became aware of the necessity to extend the opening hours to adequately cater for the increased numbers attending. They gave the MSC €7,200 in the second semester, which however they stated was definitely on a once off basis.

In conclusion the MSC is currently more than fulfilling its stated aims, students show a very high level of satisfaction with the mathematical support provided but have expressed considerable dissatisfaction with the opening hours despite the fact that continued analysis of pattern of attendance and context of sessions has allowed for more time and cost effective working patterns to be implemented. To continue coping with the increased demand an increase in the MSC budget will be required in 2010/2011.

We believe that the MSC represents a model of best practice for the provision of support within UCD.

1. Introduction

1.1 Origins of the Mathematics Support Centre (MSC)

In 2003 the Department of Mathematics secured Higher Education Authority (HEA) funding for the establishment of the UCD Mathematics Support Centre. A manager was appointed in February 2004 and the Mathematics Support Centre was opened on 16th February 2004. Further HEA funding was sought and awarded in 2004 and 2005. University College Dublin has funded the MSC since September 2007.

1.2 Aims of the MSC

The Mathematics Support Centre aims to:

- Provide mathematics support for undergraduate students of all mathematical abilities, on a one-on-one or group basis, in a friendly, relaxed and informal atmosphere.
- Enable students who are experiencing particular difficulties in mathematics to overcome their fear of the subject, take control of their own learning and build confidence in their own mathematical ability.
- Ease the transition of first year students from secondary-level to tertiary-level mathematics.
- Provide targeted mathematics support for Access students, New ERA students, mature students, and students with disabilities.
- Increase the effectiveness of the MSC by evaluating the Centre's activities and communicating and co-operating with other mathematics support centres in Ireland and the UK.

1.3 Services provided

The MSC provides a range of services including:

- Dedicated drop-in centre staffed by friendly and supportive tutors.
- One-to-one tuition or group-tuition as required.
- Supervised study.
- *Hot Topic* tutorials.
- Relevant textbooks and handouts.
- Web-based learning materials including self-diagnostic tests.
- Directed link on Blackboard to the MSC.
- Practise sheets covering problem areas for Access and Level One students.
- Computer access to Blackboard

1.4 Staffing

The Director is a member of staff from the UCD School of Mathematical Sciences. A full-time manager currently staffs the MSC. A large majority of tutors employed are postgraduate students usually those studying for PhDs in Mathematics, Finance, Mathematical Physics or Statistics. This year a number of the MSC tutors completed their PhD studies and having obtained work in their fields of expertise they were no longer available for work in the MSC. For this reason the MSC needed to employ new tutors. These positions were advertised internally. Interviews were held and a number of new tutors appointed. (See 3.6 Students' opinions of the MSC staff for students' comments)

1.5 Improving facilities and coping with increased numbers

The MSC was initially set up in a small office on the second floor of the John Henry Newman Building. The location was unsuitable as it was not centrally located or of sufficient size to cater for the numbers attending. In 2007/2008 the MSC was relocated to a pleasant room with a large window situated on the ground floor of the Physics building. However, due to development of that area, a smaller room in the Maths Science building was allocated to the MSC. Last year, as stated in the Annual Report 2008/2009 the question of the room size was a major concern for the MSC. We would like to thank Dr Philip Nolan for allocating a budget to allow us to extend the room and also to thank Dr Anna Kelly for agreeing to allow the MSC to extend into the adjacent office which had previously been occupied by the Office of Access and Lifelong Learning. The increased area has been much appreciated by both students and tutors. Lecture rooms are made available in the same building in the evenings when required for larger group tutorials.

Office space with a computer and facilities such as a printing and photocopying, are essentially situated in an area other than in which tutoring takes place, to allow the manager of the MSC carry out her managerial function. These are provided by sharing an office in the School of Mathematics.

The MSC has a laptop, which has been extensively used by staff and students while working in the MSC and also a separate computer used by students solely for the purpose of logging in and out each visit. (See 1.6 Record Keeping)

The MSC has once again increased its library of suitable books on mathematical topics thanks to gifts from lecturers in the School of Mathematics. Both tutors and students avail of these while in the MSC. UCD library have been very helpful in ordering certain textbooks that have been found to be especially useful for students attending the MSC.

Worksheets containing sample questions, and also some extra notes are available in the MSC. These have been drawn up by the tutors in specific areas that they find cause difficulty for students.

A number of leaflets containing the common integration and differentiation functions, statistical formulae and other maths physics formulae are also very popular. These leaflets are produced by The Higher Education Academy in the UK and have been very generously provided to us free of charge.

1.6 Record keeping

A database of all students attending the MSC is maintained. During the first semester at each visit the student filled out an attendance sheet recording his or her name, student number, programme and module for which help is being sought. At the end of the visit the tutor completed this form recording the tutor's name, the topic covered and time of arrival and departure of the student and any other pertinent comments. These were then entered on a data base. However, thanks to Dr Brendan Quigley in the School of Mathematics, a very successful student log-in log-out system was introduced in the second semester. This allows student data, as previously obtained on the attendance sheet, to be registered directly onto a database. Tutors have now only to update the data with a description of the topic covered and any other comments. A copy of the first semester attendance sheet can be found in Appendix 1.

1.7 Accommodation and opening hours

The MSC opened officially for 2009/2010 on 28th September 2009 on a drop-in basis. Prior to that date an "appointments only" system was in place and a number of students used this facility. The MSC opened four days per week during Semester 1 including both revision week and assessment weeks. Opening times were as follows:

Mon/Tues/Thurs 11:00 to 13:00 and 14:00 to 17:00

Wed 11:00 to 13:00 and 14:00 to 19:00

However because of the increasing number of students using the MSC overcrowding occurred on many occasions. (See Figure 1. Annual number of visits to the MSC)

The School of Mathematics who, realising that the MSC could not satisfy the increased demand for its services came to its assistance by providing extra funding and this allowed opening times to be extended as follows. (See 1.9 Funding)

Mon/Tues/Thurs 10:00 to 17:00

Wed 10:00 to 19:00

Friday 11:00 to 13:00

Despite the extra opening hours, there was still a problem with overcrowding. This year the MSC booked an extra room in the same building during study weeks and the first week of exams. This relieved the pressure on the MSC but as the MSC works on a skeleton staff it put a lot of extra pressure on the tutors. In addition the MSC held *Hot Topic* and Revision tutorials. These are held in the evenings due to lack of availability of lecture halls during the day. These proved very popular with the students.

The MSC operates an appointments only basis throughout the holidays and students, who for example have not passed exams and perhaps may have exceptional circumstances, avail of this one-on-one tuition.

1.8 Publicity

Second level students are informed of the Mathematics Support Centre services in UCD through the Qualifax website which is the National Learners website organised by the Guidance Councillors of Ireland. Also all of those answering queries on the Leaving Certificate helpline were informed of the MSC. This was to allow them to reassure students worried about third level mathematics that extra mathematics help would be available in UCD for any student who required it.

The Manager also contacted all the Student Advisers early in both semesters informing them of the larger venue and opening hours of the MSC.

Students attending orientation, with the assistance of the student advisers, were specifically targeted. These included international students, mature students and students with disabilities. The students were given information about the assistance provided by the MSC, its location and webpage, and were informed that it was a free service for all undergraduate students in UCD. It was emphasised that the MSC was not a grind centre and that students would be expected to carry out the work themselves but given as much help from the tutors as they needed. They were told that students aiming for an “A” grade were frequent visitors as indeed, were those struggling to pass.

In order to further publicise the MSC, and in particular for those actually taking mathematics as one of their modules, the Manager (with the agreement and support of the lecturers) visited first year mathematics lectures at the beginning of the semester. The students were told that the MSC did not replace lectures or tutorials but was an extra facility provided for all students to enhance their performance in mathematics and in particular for those finding problems with their mathematical studies. The students were also reminded by the lecturers on a regular basis of the benefits of using the MSC. This once again proved to be a highly effective strategy and an important factor in the attendance of students at the MSC. Other forms of advertising used were posters, plasma screens, flyers and Blackboard. (See 3.2 Knowledge of existence and purpose of the MSC)

1.9 Funding

The MSC initially received HEA funding for three years. Since September 2007 the MSC has been funded by UCD with an annual budget of €100,000. The majority of this funding pays for the staffing costs of a full-time manager and post-graduate tutors and a small balance goes towards the purchase of necessary equipment and stationary.

The annual attendance at the MSC has increased exponentially. (See Fig 1. Annual number of visits to the MSC) Average annual numbers attending the Centre prior to UCD funding were approximately 700. The first year (2007/2008) UCD funded the MSC 1400 students attended. In 2009/2010 this had risen to 3508 students. This is a substantial increase in numbers. Budgets allocated to the MSC have however remained at the same level. The ability of the MSC to cater for the large increase in numbers is now a major concern for the Centre. This year it was only made possible by the additional emergency funding from the School of Mathematics who became aware of the necessity to extend the opening hours to

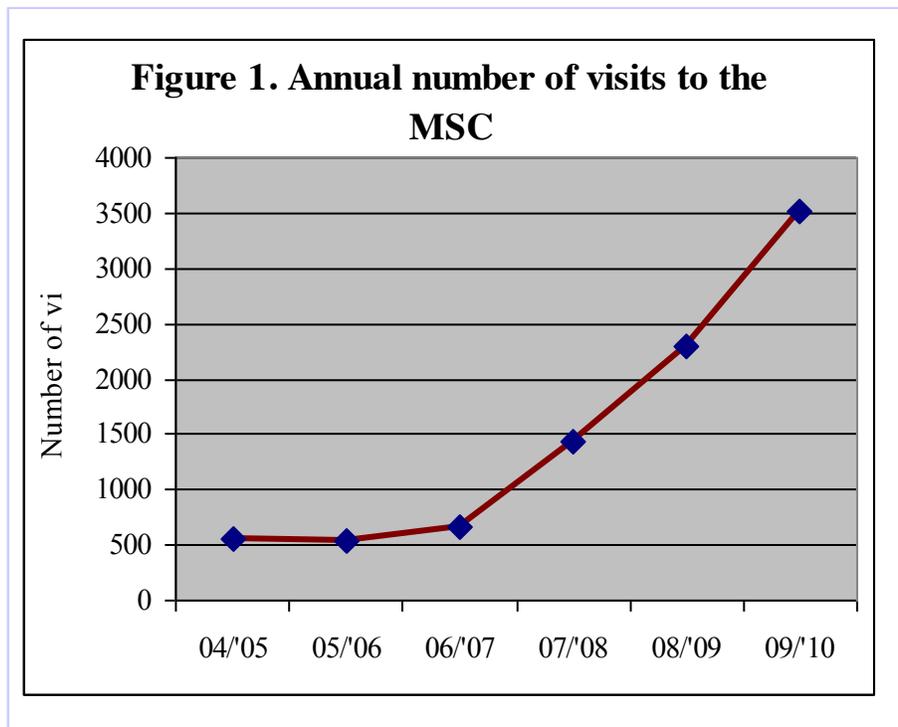
adequately cater for the increased numbers attending. They gave the MSC €7,200 in the second semester, which however they stated was definitely on a once off basis.

The lack of funding has required the manager to tutor excessive hours and has necessitated her working extended hours in order to carry out her managerial function.

To continue coping with increased demand an increase in the MSC budget will be required.

2. Mathematics Support Centre usage

2.1 Annual visits to the MSC since 2004



The number of visits to the MSC (see Figure 1) grows steadily each year. In 2009/2010 the number of visits to the MSC was 3508 and this is 146% of last year's total. Despite the improvement in the accommodation this put severe pressure on the staff of the MSC to cope with the numbers. The number of hours that we could open was limited by our budget. The effective running of the MSC was only made possible by the financial assistance of the School of Mathematics. (See 1.9 Funding)

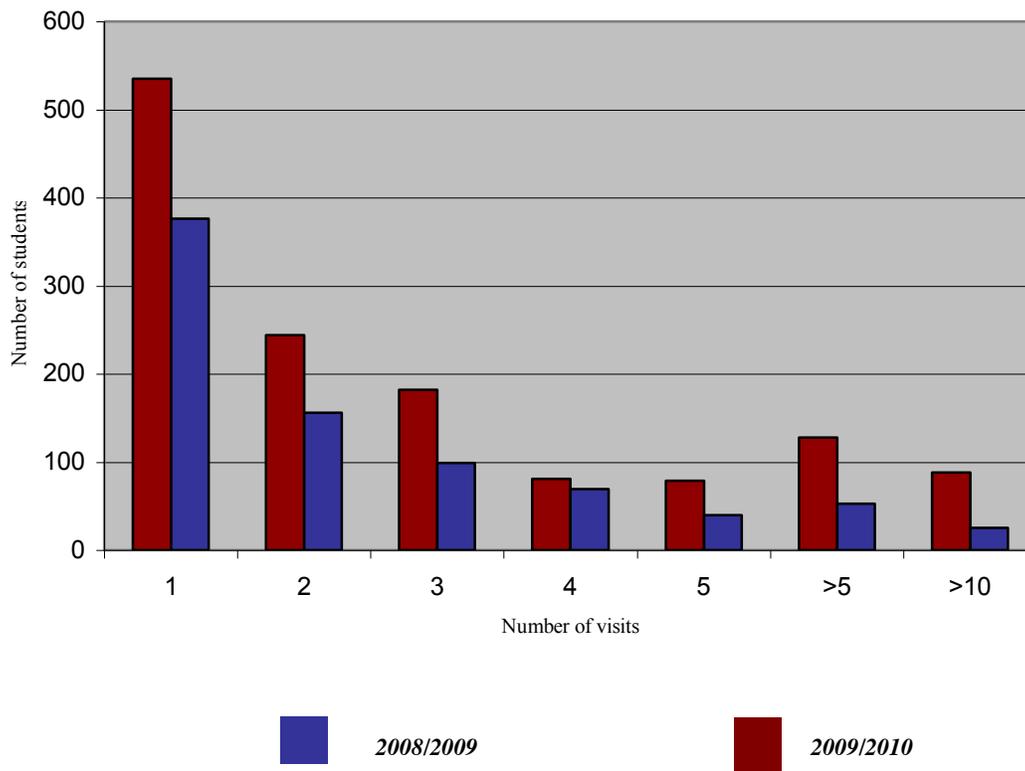
2.2 Programmes using the MSC

The MSC is important not just for the School of Mathematics but is an essential service throughout UCD. Students from 57 out of a total of 81 programmes spread across the University attended the MSC in 2009/2010. This represents over 70% of the total undergraduate programmes in UCD. It demonstrates the essential requirement for students to have a good grounding in mathematics. Students studying Arts, Architecture, Agriculture, Commerce, Chemistry, Economics, Engineering, Finance and Actuarial Studies, Geography, Health Sciences, Mathematics, Mathematical Physics and Statistics, Psychology, Nursing and Veterinary Nursing were some of those tutored by the MSC this year. (See 4.5 Usage of MSC by programmes throughout UCD for students' comments)

2.3 Number of single visits and average time of visits

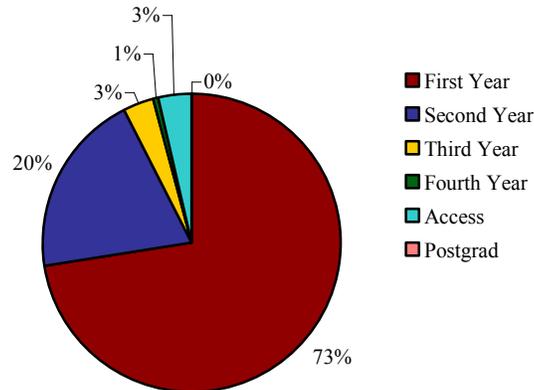
The total average time spent by a student in the MSC was just over 71 minutes very similar to last year. The median number of visits by a single student increased from 1 last year to 2 visits this year. The number of visits by any one student ranged from 1 to 44 visits. The large number of single visits was partly due to the attendance at Hot Topics. Hot Topics were normally two hours in duration. Possibly many students attending these Hot Topics did not feel the need to seek further help. The most marked increase in number of visits is seen at the greater than 5 and greater than 10 visits. Some of the reasons for this could be explained by the extreme difficulty with third level mathematics sometimes experienced by international students, mature students and those who attend UCD with qualifications other than the Leaving Certificate. For example students with A level (Advanced level) qualifications but with GCSE (General Certificate of Secondary Education) level in mathematics. (See 4.3 International students and those who do not have LC mathematics for students' comments)

Figure 2. Number of visits per student



2.4 Percentage numbers of students from various levels

Figure 3. Level of students attending MSC
2009/2010



Students from first level formed the majority of attendees at 73% of the total number. This was very similar to last year. Second level increased from 17% to 20% and there was an equivalent decrease in students from third level. Access students, with a slightly decreased percentage, made up 3%. Once again this indicates a high usage of the MSC compared to the overall student proportion of Access students.

2.5 Equality of opportunity

The continued close co-operation between the Student Advisers and the MSC has proved to be very effective. The MSC and the Student Advisers were in frequent contact during the year. The MSC assisted New Era in running the mathematics element of their Summer school for Second Level students in June 2009. The course drew to a close with a sponsored competition requiring the students to produce, using what they had learnt during the course, an equation for the perfect father's day. Once again this year, the MSC developed and delivered two mathematics workshops for the New Era Orientation programme in August. These were for those students who were entering academic programmes with some mathematical element. They were organised at a higher and lower level. The first, which was for those students coming in with Ordinary level LC (Leaving Certificate), was a basic mathematics workshop and for the higher level LC students we had a statistics workshop. Also for the first time the MSC, in conjunction with the mature students' advisor, developed and delivered a workshop for mature students entering UCD in 2009. (See 4.6 Mature students and Access students for students' comments)

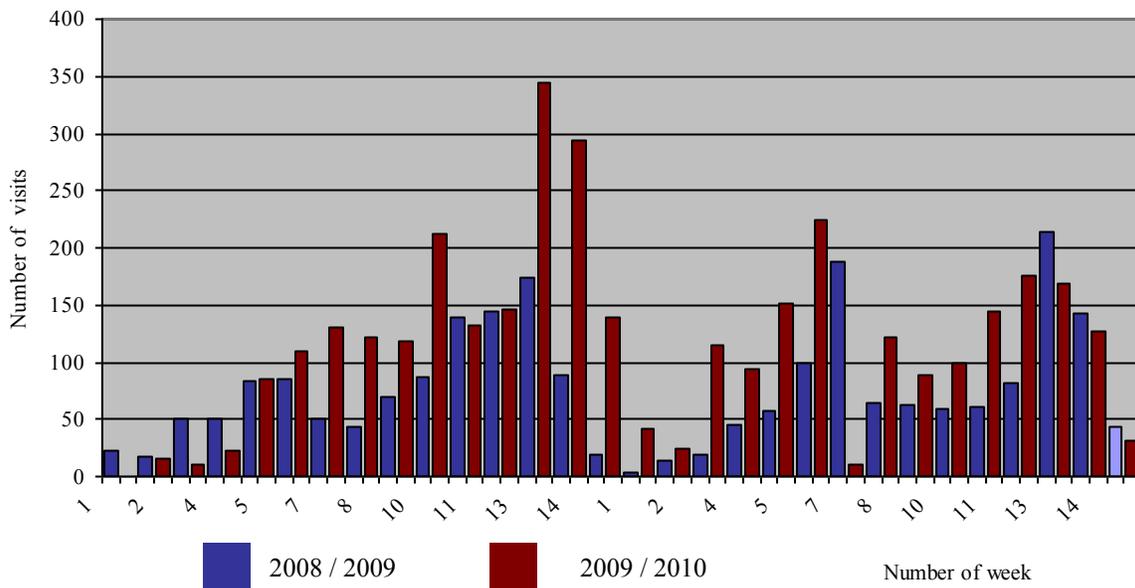
A further benefit that ensued from these courses was the familiarity of the students with the MSC tutors which meant they had no qualms attending the MSC when they needed its services.

The manager also spoke to the Mature students at Orientation informing them of the MSC facility and advising them of the self-assessment tests on the MSC website. These are designed to help students revise their second level mathematics. Mature and Access students may either have forgotten a lot of the mathematics they once knew or else may not have reached the required standard. The MSC had a large attendance by mature students both at Access and undergraduate level and even postgraduate level. These students are normally well motivated but need the assistance which can most effectively be given on a one to one basis. This however can be difficult when the Centre is busy. In light of the current financial situation in the country the number of Mature and Access students may rise and the support given by the MSC could be a critical factor in allowing them to complete their programme to degree level. The MSC had a desk at the orientation day run by the international office and also gave an information briefing to students with disabilities at their orientation day.

2.6 Weekly visits to the MSC in 2008/2009

The number of visits as expected was lower at the beginning of each semester but increased over the course of the semester. Due no doubt to the fact that students were unaware of their difficulties early on but as the coverage of the module increased and mid-term examinations approached the students realised they needed the extra support. Another factor that was most noticeable at the beginning of this semester 1 was that when students had to email for an appointment, smaller numbers attended. This emphasizes the importance of having the MSC open on a drop-in basis. The percentage increase in numbers was maintained in the second semester. The number of visits per week for 2008/2009 and 2009/20010 is shown in Figure 4. Semester 1 & semester 2 student visits.

Figure 4. Semester 1 & 2 student visits



2.7 Identifying areas of greatest need: developing *Hot Topics*

If lecturers or students identify particular areas in which students are having difficulty, the MSC design and deliver Hot Topics in these areas. Hot Topics are normally two hours in duration, held in evening times and lecture rooms are booked for these sessions. This year Hot Topics were run for Business maths, statistics and calculus courses. The Hot Topic sessions in calculus were particularly well attended and were run as a workshop where a topic was briefly covered by the tutor and students were then given some problems to work with under the supervision of extra tutors. (See 4.7 Hot Topics for students' comments)

2.8 Retention Figures

Students who get help in time can be prevented from failing and possibly dropping out of college. However retention figures are difficult to quantify. First year students often need that extra help with basic mathematics which they may have either forgotten or never understood. Once they get this basis they can build on it to a higher level. (See 4.4 Retention Figures for students' comments) Often you will hear very able students remark that they could never do "maths". This lack of confidence in their mathematical ability and the related stress may also be a factor in causing them to drop out. Yet with the right help they can move on to at least be capable mathematically and hopefully to enjoy it. Sometimes it is just that they need the extra support to adjust to third level and are often shy about looking for help. One-on-one is particularly important for these students. It is essential that the MSC is seen as someplace where you can always go no matter how low you feel your level of understanding of the module may be. Many students commented on the importance of the MSC in helping them gain this confidence. (See 4.11 Increased student confidence for students' comments)

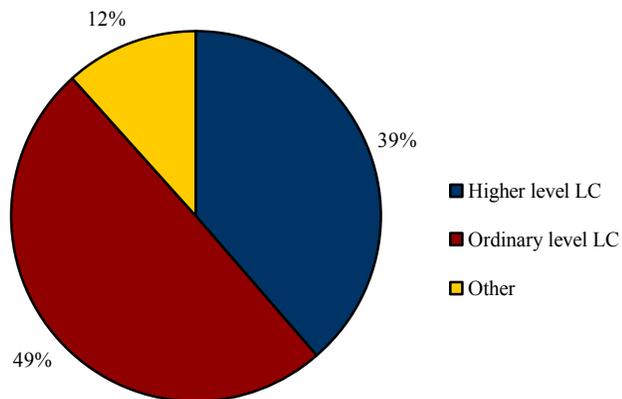
3 Evaluation of quality of service provided by the Mathematics Support Centre

Once again this year the MSC Evaluation Form was put on line and students who had attended the MSC 2009/2010 were emailed in Dec 2009 and May 2010 to inform them of the address of the site on which the form could be found and were encouraged to complete the evaluation. This chapter summarises the results of this survey.

3.1 Level of student attainment in mathematics prior to third level

In response to this question 39% of students stated that they had taken the Higher Level Leaving Certificate (LC) in Mathematics, 49% the Ordinary Level LC and the balance at 12% were students from GCSE or other qualification examinations. Of those who took the Higher Level LC 9% obtained an “A”, 31% obtained a “B” and 24% a “C” whereas of those who took the Ordinary Level LC, the majority at 34% obtained a “B” with 31% obtaining an “A”. Only students who stated they had taken the Ordinary LC were asked if the award of extra points for the higher level mathematics examination was offered, would it have influenced them to take the higher level paper, 27% said it would. This, though a small sample, would appear to be an interesting result and perhaps justifies further investigation.

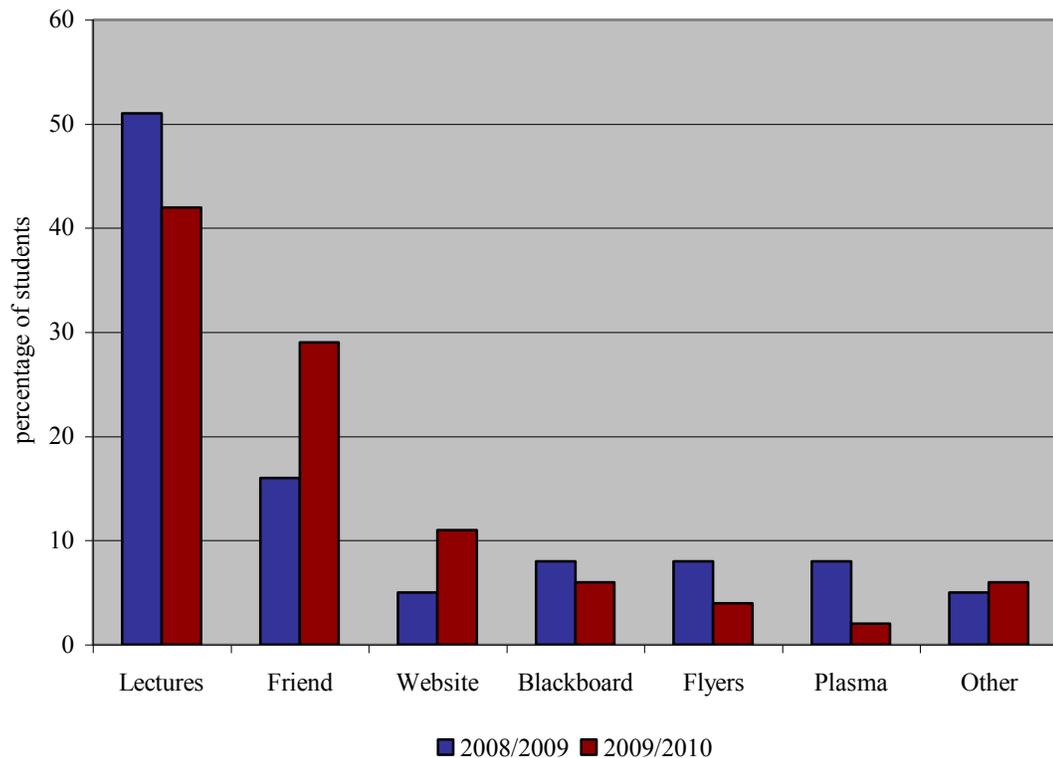
Figure 5. Student prior level of mathematical attainment



3.2 Knowledge of existence and purpose of the MSC

The students were asked to tick one or more ways in which they had found out about the MSC. The recommendation and reminders by lecturers, as in previous years, are a very important factors in encouraging students to attend the MSC. This was confirmed by the number of students 42% indicating in the Evaluation Form (see Appendix 2: Evaluation Form) that they had heard of the MSC at lectures. What was of particular interest this year was that the second most effective method of advertising was word of mouth i.e. being informed by a “friend”; this method at 29% was a considerable increase on the previous year’s result of 16%. The importance of this method of advertising the MSC has been further backed by the answers given to the question asking “Would you recommend the MSC to a friend?” 97% said “yes”. The MSC website was the next most popular method at 11%. The effectiveness of Blackboard, plasma screen and flyers was lower at between 5% and 8%.

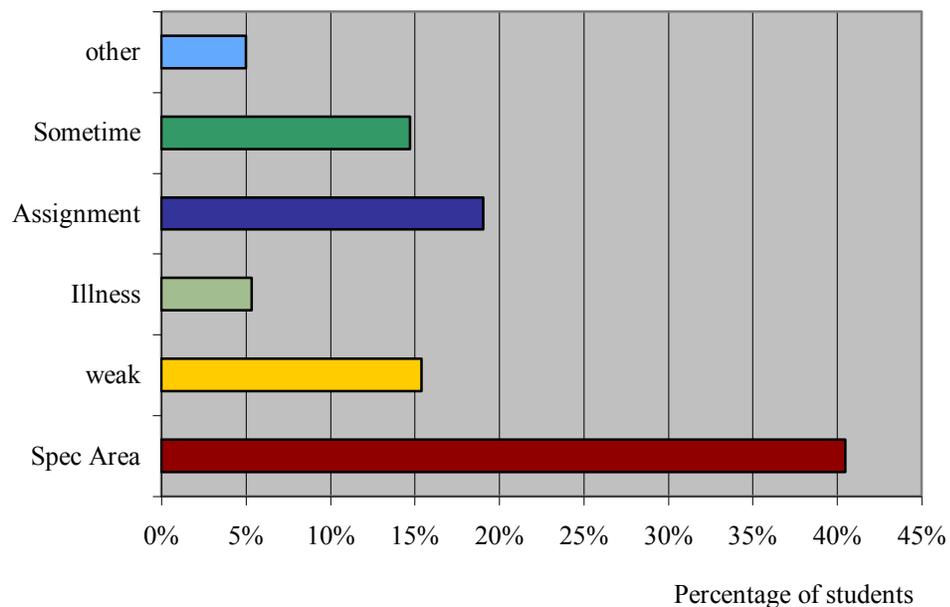
Figure 6. Student knowledge of the existence and purpose of the MSC



3.3 Why students first decided to use the MSC

Respondents were allowed to indicate multiple reasons if applicable. Approximately 40% per cent indicated their attendance was motivated by needing help in a specific area. Often a student might have a problem in a particular area that could be resolved in a single visit to the MSC. 15% felt their background in mathematics was weak and 14% that it had been a while since they had studied mathematics. 18% stated that attendance was motivated by a tutorial/assignment/project to hand in. Illness (resulting in missed lectures) was cited as a reason in 5% of respondents. This was an increase of 3% over last year probably due to ‘flu and accidents in the snow. Once again the majority of the “other” reasons expressed the necessity to study for exams.

Figure 7. Why students first decided to use the MSC



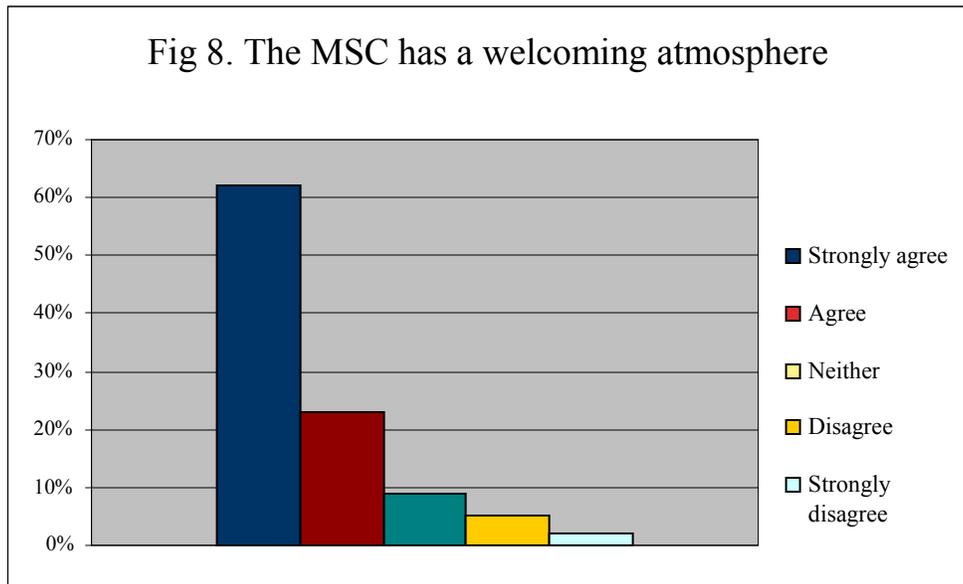
3.4 Students' opinions of the MSC

The respondents were asked for their opinions on various aspects of the MSC using a five-point Likert item.

The questions were as follows: Did the MSC

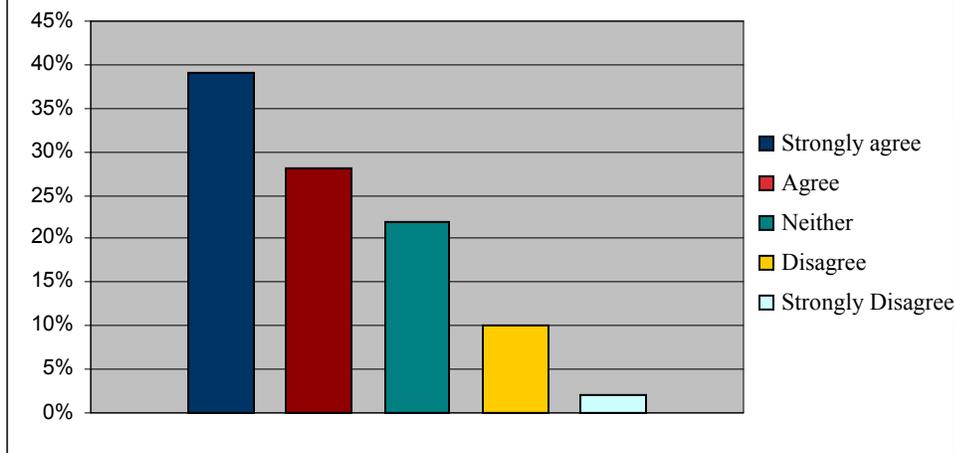
- Have a welcoming atmosphere?
- Have suitable opening hours?
- Encourage students to work with other students in their class?
- Provide a relaxed place to study?

The following charts describe their replies.



The welcoming atmosphere of the MSC is a critical factor in encouraging students to attend. Students may often be quite nervous coming in for the first time. As shown 84% of respondents agreed or strongly agreed that the MSC has a welcoming atmosphere. The increased numbers using the MSC without increased opening hours, which put tutors under serious stress at times, was likely a contributing factor to this decline from 90% last year. Students were at times intimidated by the crowded room and furthermore they felt that they were not able to stay on for further study, under tutor guidance, as others were waiting for seats.

Figure 9. The MSC has suitable opening hours



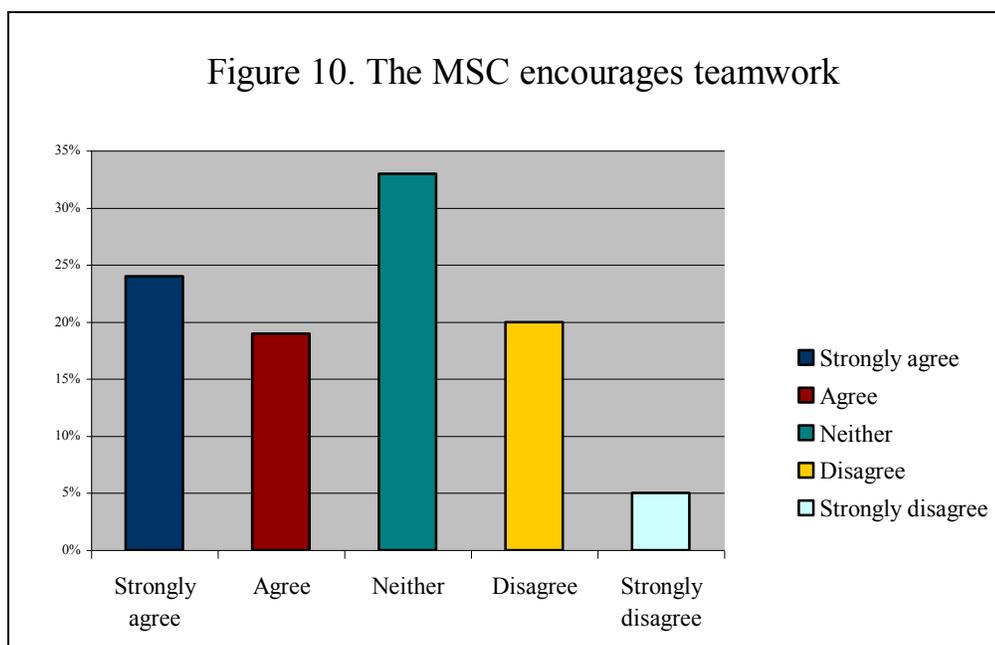
There was a slight increase in student satisfaction with the opening hours this year over last year when 62% of respondents agreed or strongly agreed that the MSC had suitable opening hours. This year 66% agreed or strongly agreed that the MSC had suitable opening hours, 22% neither agreed nor disagreed. 12.0% disagreed a opposed to 10% the previous year. There is no doubt that if it hadn't been for the financial assistance given by the School of Mathematics which allowed for the expansion in hours in the second semester, the MSC could not have catered for the numbers wishing to attend and many would have had to be turned away when the room was full.

As it stands budget restrictions and the capacity of the room does mean that the MSC cannot satisfy the growing need of assistance with mathematics that students in UCD require. Without a realistic increase in funds we cannot hope to provide enough hours for our exponentially increasing numbers. The majority of negative comments emphasized the confined opening hours even though we were able to extend our opening hours, in the second semester. (See 1.5 Accommodation and opening hours).

Other problems were related indirectly to this. Certain topics beyond first year require an understanding not just of the mathematics involved but also the area of study, for example economics. When tutors had more time they could read the student's notes and thus were able to help them and this did happen in a number of cases. However time spent with one student often had to be restricted because of the numbers attending. The MSC recommends students to come at specific times for these subjects but with our restriction on tutors these times are very limited and may not suit a student's timetable. (See 4.12 Opening hours and resulting concerns for student's comments)

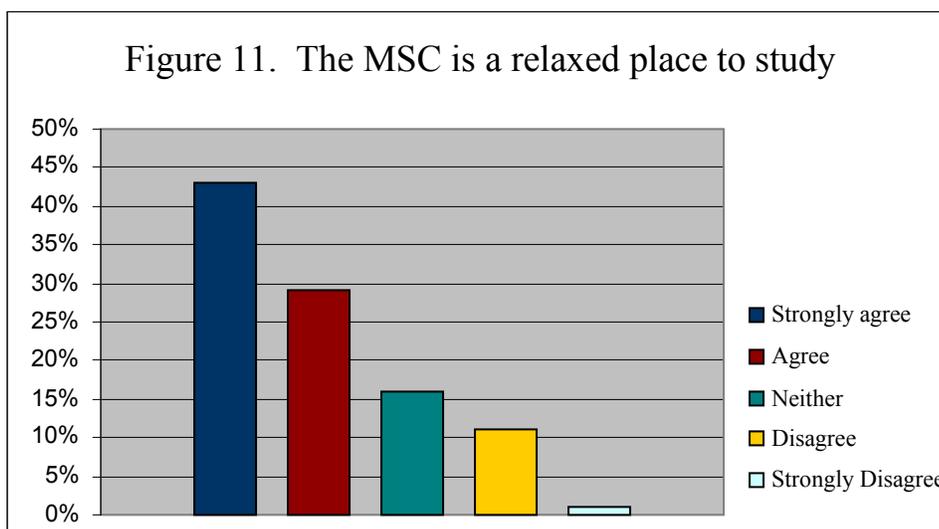
The manager has taken on board these comments but is only in a position to implement these improvements if it is possible to employ additional tutors and thus be in a position to extend opening hours.

Figure 10. The MSC encourages teamwork



The tutors tried to encourage small groups of students to work together. If students from the same module came in to the MSC they would, if possible, be taken together and then encouraged to remain and work with each other in solving further problems. It was hoped that they would continue this group work outside the MSC. At 43% these numbers are down and this is no doubt largely due to availability of space and limited opening hours both of which hinder our ideal of group work with guidance from the tutors. Despite this there were still a small number of groups who returned to the MSC together for their next session.

Figure 11. The MSC is a relaxed place to study



Teaching in the MSC is difficult due to background noise from multiple simultaneous teaching sessions. Despite these environmental restrictions, an increase from last year's value of 66%, 72% agreed or strongly agreed that it was a relaxed place to study. This was no doubt due to the expansion of the room size at the beginning of this year. Indeed many students expressed the wish to remain

in the MSC after a session to carry on with their study and have guidance as needed. However due to the limited space available this was not always possible.

3.5 Had the student passed the module for which they sought help

The percentage pass rate, as given in the evaluation forms, of 97% was up on last year's rate of 94%. Some students thanked the MSC for the help they received and remarked that thanks to the MSC they had passed their mathematics modules. Some indicating that without the assistance given to them they would not have survived first year. (See 4.4 Increased retention of students for students' comments)

It is very important that the MSC is also viewed as somewhere that students can attend to lift their standard to the highest level and where they can receive a first class grounding in their mathematics module. The MSC aims to increase the level of a student's understanding of mathematics and it was pleasing to note that some students commented on the fact that it was not just a question of passing their modules but of doing exceptionally well. (See 4.8 Students achieved high level results for students' comments)

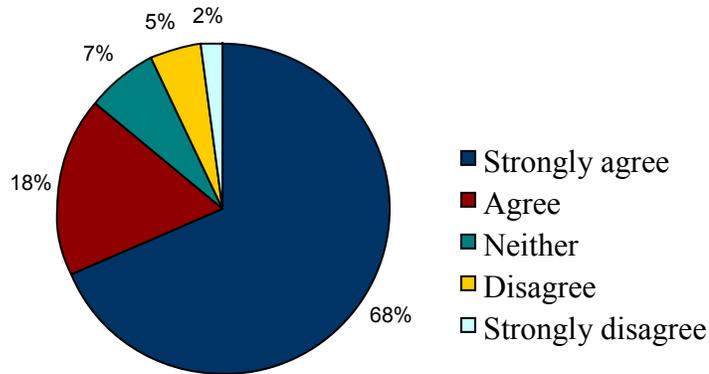
3.6 Students' opinions of the MSC staff

The respondents were asked for their opinions on various aspects of the MSC Staff again using a five-point Likert item. The questions asked about the MSC staff were as follows

- Are they friendly and approachable?
- Have they good teaching abilities?
- Have they a good knowledge of mathematics?
- Do they help you to cope better?
- Do they motivate you to study?

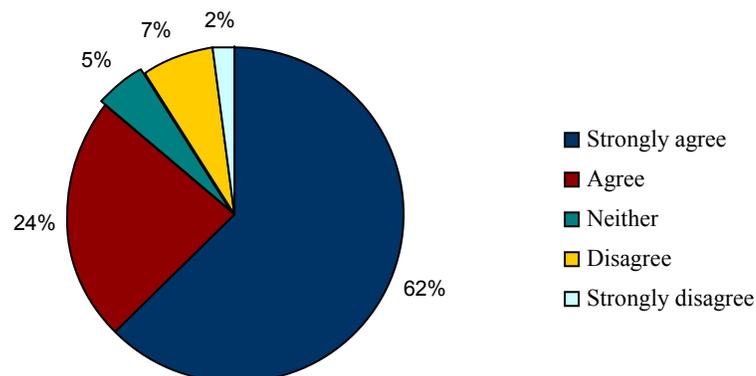
The importance of the quality of tutors employed in the MSC cannot be over stated. The comments on the Evaluation forms have clearly demonstrated not only the exceptional ability of these tutors to communicate their knowledge but also the encouragement and support given by them to the students attending the MSC. This year in particular the tutors were often under huge pressure due to the increased numbers attending the Centre. The manager would like to thank to all the tutors for their dedicated work often under difficult circumstances. The MSC employed 16 tutors in 2009/2010. They were Alex Byrne, Anna Heffernan, Arthur White, Ciara Morgan, David Browne, David Conti, Ger Boland, Ian Harris, Jonathan Mackey, Laura O'Brien, Lisa Banahan, Ronan Flatley, Sean Delaney, Thomas Jaeck, Triona Ryan and Vijay Singh.

Figure 12. Staff are friendly and approachable



The attitude of the staff to students coming in to the MSC is very important as often those coming in for the first time are quite anxious. It is essential that they feel that they can approach the staff and not feel intimidated. The tutors are well aware of this and encourage the students to relax and explain where they are having problems. 87% of respondents agreed or strongly agreed that the tutors were both friendly and approachable. (See 4.2 Friendly and Supportive tutors for students' comments)

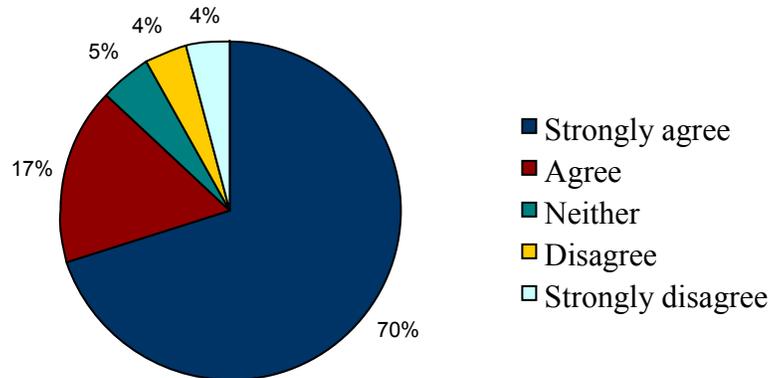
Figure 13. The MSC staff have good teaching abilities



The fact that 86% of the respondents agreed or strongly agreed that the MSC staff have good teaching abilities was very encouraging. The widely expressed satisfaction with the standard of tutoring is in no small measure due to the care that

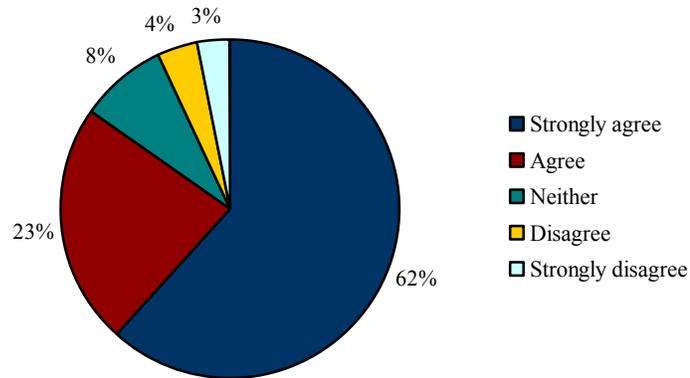
is taken when recruiting tutors. Not only their mathematical knowledge but their ability to communicate this knowledge is critically important. (See 4.1 Satisfaction with the high standard of tutoring for students' comments)

Figure 14. The MSC staff have a good knowledge of mathematics



The tutors teaching in the MSC are mainly studying for their PhD or doing research in various mathematical areas. 87% of the respondents agreed or strongly agreed that the staff had a good knowledge of mathematics. However we cannot expect our tutors to be knowledgeable in all areas requiring mathematics beyond a certain level. We therefore allocate times for specific topics and advertise these on our website and also on our notice board.

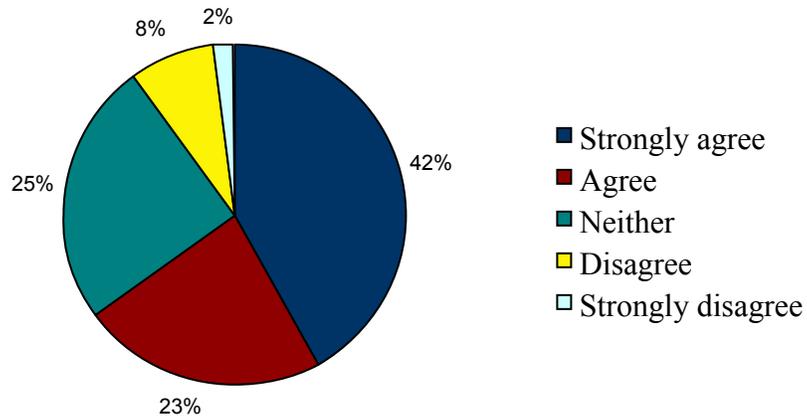
Figure 15. The staff help you cope better



It is essential that the students do not regard the MSC as a place where they can come to avoid doing the work themselves. The students coming to the MSC should get a good basic understanding of the topic and must be encouraged to develop this understanding further by working on their own and if necessary coming back to the MSC with any further problems. (See 4.9 Students' independent learning for students' comments)

From the above diagram it can be seen that 85% of respondents agreed or strongly agreed that the MSC helped them cope better. Confidence in their ability is often a problem for students coming in to third level. Many students expressed the view that the MSC had given them confidence in coping with their module. (See 4.11 Increased student confidence for students' comments)

Figure 16. The MSC staff motivate you to study



A slight decrease on last years numbers 65% of respondents (70% previous year) agreed or strongly agreed that it motivated them to study.(See 4.11 Motivated the students to study for students' comments)

Sometimes a student may feel that either there is so much to learn that they don't know where to start or else get lost in a specific area. Coming to the MSC will often give them the wherewithal to move on with their study. However there is no doubt that the imminent approach of examinations is a greater motivation and this is evident in the increased numbers attending at these times.

4. Students' descriptions of their experience of using the MSC

The Mathematics Support Centre (MSC) has a crucial role to play in enhancing students' knowledge of mathematics and in supporting those students who are having problems associated with mathematics. This is confirmed by the comments given by the students in the completed evaluation forms. To give some indication of these we have categorised some of the comments under headings as given below. The comments were, on the whole, very positive, (See Appendix 3 for all comments).

1. Satisfaction with the high standard of tutoring.

The MSC is a fantastic way to help students. We spend a lot of time complaining about how expensive university is, but this is free help, i dont think people appreciate how much this help is worth. I would have had to pay €50-60 for every hour of help i recieved. It was very professional and i hope they get well funded from the university. Perhaps we could take a small percentage of the money from the fund for the colour-posters and drinks promotions.

I cannot speak highly enough about this fantastic service. The Professor and the PHD students are very patient with me and are very skilled in explaining concepts that I struggle with. I get a very strong impression that everyone is motivated and enjoys helping. Having this safety net is very very very important. You all deserve medals, gold ones. Thankyou very very much for your help.

Awesome tutors, Never would have got through exams without them.

Extremely helpful and knowledgable staff.The best part for me was the fact that the problems in question were solved with a different perspective and sometimes a different method from what was thought in the lectures which broadens our mathematical understanding. One thing that I might suggest; is having a seperate table for those who want to attempt to solve the problems themselves, undistracted. If any problems arise for them then they can move to the tables where the helpers are based.

I thought the maths centre was very helpful, i needed help with understanding the harder math in algebraic structures and in linear algebra i would know the answer was simple i just needed a head start. The Math centre helped me with these very easily and it is never too busy all the time,which is important if you only really wana ask one thing or two,you dont want to be there all day.

2. Friendly and Supportive tutors.

The staff couldnt be more helpful. They made everything so clear and had great patience. Also they didnt make you feel stupid when you felt you had a silly question. I would definitely recommend this support center,they do great work especially Nula shes very nice. Im very grateful for all their help. Thank you maths support center!

So helpful and friendly. One of the best facilities i have come across in UCD.

For me it was great to be able to go somewhere you could talk to someone about the difficulties you are having in your module, often its just some basic thing like a misunderstanding of algebra that needs to be cleared up.

Friendly and never made you feel bad about not understanding the simplest of things.

What a wonderful place, I left every time empowered with a smile on my face,

3. International students and those who do not have LC mathematics

I am international student and it is my first experience studying abroad. And of course it was difficult to understand all material that was given on the lectures, especially math. So my friend suggested me to go to the MSC. Initially, I was shy to ask questions, but tutors were so friendly, always ready to help and I decided ask them all that I did not understand. I spent all my free time in MSC solving problems and proving theorems. Now, I am more confident in math and statistics. Thank you MSC!

I felt like I was completely thrown in at the deep end in my 3 compulsory maths classes, as most people already knew what integration, differentiation and matrices were. It took a lot of patient explanation from staff at the maths support centre for me to get basic stuff, before I could move on to understanding my lectures. I think (as maths is not compulsory for alevels) that any northern student who had not studied maths would be lost without the maths support centre. There is not really any other support for them. Without the maths support centre I think I would have failed at least one of Calculus and Matrices&Vectors. They were very supportive and friendly, even when I started turning up more and more and they were really busy.

For me it was extremely important to get help with maths, I am so happy that MSC exist, I wish I could come more often than I did because of the far travel distance from my home.

4. Increased retention of students.

when there are people available to help you it is great, I have no doubt that without it I would have dropped out by now. I do however feel that it is very understaffed.

I would not have survived first year without their help, excellent centre.

I found the centre very helpful and I definitely wouldnt have gotten through my maths modules without it. I am very thankful to all the tutors for helpin me pass my modules!

Awesome tutors, Never would have got through exams without them.

5. Usage of MSC by programmes throughout UCD

What a wonderful place, I left every time empowered with a smile on my face.
Applied Environmental Science Student

It was a huge help to me as I did not do higher level maths for the leaving I found myself confused with some of the concepts. MSC helped me out a lot.
Business with Law Student

I found it really helpful to know that i was right in what i was doing and not just guessing.
Pharmacology Student

Fantastic explained it easily and it stuck
Horticultural, Landscape & Sportsturf Management Student

6. Mature Students and Access Students

One to one help was essential for me to understand basic maths that I had either never understood or completely forgotten. I think I would have struggled to pass the subject in access science without this help. I needed to practice maths alot and this was possible because of the support.

I found the one on one tuition extremely helpful, the tutors were very patient and understanding. The MSC is an invaluable resource for the mature student. Thanks.

Always inviting, patient, enthusiastic and fascinating.

7. Hot Topics

The extra classes they put on for us ... really helped because it was like a lecture set up in which they went through the material first but then gave us a chance to go through questions ourselves and they went around and helped if we needed it and really explained it. This really helped us all get a better knowledge of the module and is definitely the reason I passed.

I attended the MSC last year and found it really helpful. I attended the MSC again this year and was again delighted with the help I received. The staff are always very helpful and understanding. I was also very grateful and impressed with the special lecture held specifically for my Biostatistics module ... and really benefited from it. I am also very appreciative of the extra time and work that is dedicated to these such workshops. Many thanks for all the work the MSC does.

8. Students achieved high level results.

My problem area was Statistics for Economics, I had never really understood it during my last degree 10 years ago. One week after I was completely lost in Stats, the MSC helped me to get a C+ in the midterm and then an A+ in the final exam. They should get more funding to expand their study space, increase advertising and pay their staff as much money as the lecturers get because they are of equal value. You could find the funds by cutting the budget for posters for the SU and societies, then only half the campus would be re-wallpapered every week, instead of every inch of wall space in UCD.

Thanks to nuala and the MSC staff I got 91% overall in my maths exam.

I found the MSC very helpful on areas where I got stuck on in webwork and was a valuable asset to my studies, it undoubtedly helped me grasp top marks in the class by explaining some fundamental concepts of the formulas which were used in the course.

Warm Friendly supportive atmosphere conducive to study and to understanding the topic more deeply

9. Students' independent learning.

I found that it was very helpful with the areas of maths I was finding difficult and didn't pick up in lectures, and going to the support centre they helped me with the questions and as a result I was able to do the maths myself.

Very helpful in explaining concepts, and by using examples managed helped me to understand how to use a particular technique, so that I could complete my tutorials on my own.

Friendly, and gave me very good help on how to do maths without doing it for me.

10. Motivated the students to study.

I was impressed with the MSC and I feel it is an extremely valuable resource in the university. Unfortunately I came in very late in the semester and the subject matter for my 3rd year maths phys assignment was a bit abstract for the tutors to be able to help me with on the spot. All the same I found the experience very motivating and they at least steered me in the right direction allowing me to make headway in my own time. Thanks again for the help and I will be sure to come in earlier next semester if I have problems!

Very helpful and motivating. Increased my confidence with Mathematics.

Very helpful... really motivated me.

I knew that if I am stuck I will have help it motivated me to do more until i got stuck.

I thought that i was lost in the specific area but after help from MSC i realised i could do it and all i needed was a littel push.

11. Increased student confidence.

The calculus course and the MSE made me realise that with a bit of work maths is not only for geniuses. I actually enjoyed learning and understanding something I thought was beyond me.

Thank you very much for you time and expertise during the year. i could not have been happier with the help i got in the msc, it really helped me understand maths when i thought id never understand it!! one 2 one is so much easier to understand and ask questions than in the lectures!

The MSC has been so helpfull to me throughout the year. Whether it was just a small querie or a major problem, the MSC was on hand to help and assist me and inevitably enable me to become better and more confident at dealing with maths. I think the MSC is one of the most helpful places in UCD and I would recommend it to evryone.

My experience has been very positive and I now enjoy maths.

I was always a talented maths student, but this year i was struggling with Stats and Probability. The MSC helped me to see the logic behind it and to understand it. My confidence was greatly helped by this.

I personally feel that the msc is great. whether its just a small question or a complicated problem, the msc will sit down with you, make you feel at home and ultimately help you to defeat the problems you are having with maths. I can honestly say that it was the continuous help from the msc that enabled me to go into my maths exam happy and confident. The msc is definitley a super centre to have on campus, thanks for all the help!!!

I was particularly worried about my maths abilities. The staff were very reassuring and helpfull.

I thought that the staff were great. they put in great hours and really help you out. they dont give you so much help that it gets the work done for you, they simply give you the tools you need to work it out for yourself and are there if you have any problems. i would definitely recommend it to a friend!

12. Opening hours and resulting concerns:

It was very packed and had to wait a long time to be seen, when i was seen they would leave and not be able to come back for a good while, therefore i lost out on alot of study time just sitting around so I ended up usually just leaving and went and paid for grinds outside of ucd, i found them more helpful in a more quiet room. I think the MSC needs more staff.

Very helpful when i went last year for pure maths, this year i needed help in quants for business and their knowledge wasnt as strong as before, however i still came out of the centre understanding much more than in class.

Thanks for all the help during the year. The extra space you were able to obtain made a significant difference - though it was still crowded for most of the time. Hope you can get an extra venue - in the Newman Building perhaps.

It was fantastic a great help I really appreciate all the help I got. The only thing I would change is to increase the opening hours. It a great centre and thank you to all who helped me.

I found the Maths support centre very helpful in first year and the early part of second year probably because i was catching up on the foundation maths aspect of my course. However as the mathematical aspect of my course has become more influenced by economic theory I have found the MSC to be unhelpful and in some cases to add to the confusion. I believe to a lack of tutors whose background is economics. I believe this is one area in which the msc can improve.

5. Conclusions

- Attendance at the MSC has increased by 147% compared to 2008/2009.
- The quality of service provided by the MSC was formally evaluated in 2009/2010 with very positive results. Recommendations from the 2008/2009 report have been implemented and the premises are very much improved.
- Students show an extremely high level of satisfaction with the services provided. However they have expressed considerable dissatisfaction with the available opening hours despite the increase in size of the venue. The inability to increase the opening hours arises from a lack of adequate funding needed to employ further tutors. This will be the main restriction to maintaining the professional operation of the MSC and will certainly curtail the further growth of the MSC.
- The MSC is currently fulfilling its stated aims.

6. Recommendations

- Continued analysis of the pattern of student attendance and the mathematical content of the sessions tutored should be employed. This should allow for more time and cost effective working arrangements to be implemented in future years. These arrangements would include the times of employment of tutors and the addition of extra *Hot Topics*.
- The ability of the MSC to cater for the large increase in numbers is now a major concern for the Centre. To continue coping with the increased demand an increase in the MSC budget will be required for 2010/2011.
- Staff should continue to promote and develop the MSC as a centre of excellence.
- Advertising the benefits of the MSC to all relevant bodies is critical for its survival and frequent communication with students, lecturers and student advisors is essential.
- Evaluation of the quality of service provided by the MSC should continue to occur on an annual basis.

Appendix 1 MSC Attendance Form

Maths Support Centre UCD (MSC)

Please complete in BLOCK CAPITALS

TO BE COMPLETED BY STUDENT:

1. Student's Name:

2. Student Number: **ModuleCode:**

3. Student's Signature:

4. Student Email address:.....

TO BE COMPLETED BY Tutor

1. Tutor's Name:

2. Day & Date:

3. Student Time in: **Student Time out:**

4. Topics covered with student:

.....

.....

.....

.....

.....

.....

5. Any additional comments:

.....

.....

Appendix 2 MSC Evaluation Form

Mathematics Support Centre Evaluation Form

1. Student No.: Student Name:.....

2. Are you a mature Student?

3. What was the highest level of maths you studied at school?
What grade did you achieve?

4. Have you used any online resources (eg. Google, Wikipedia etc.) ?
Did you find them helpful?

5. How did you find out about the Maths Support Centre (MSC)?
(Please tick one or more)

- a) Announcement at lectures.
- b) Announcement on the Plasma Screen around UCD.
- c) Flyers.
- d) From a friend.
- e) From the Website.
- f) From Blackboard.
- g) Other (Please explain)

6. Why did you first decide to use the MSC? (Please tick)

- a) Your background in Maths was weak.
- b) It had been a while since you had studied Maths.
- c) You needed help with a specific area.
- d) You needed to catch up on areas missed through illness.
- d) You had a Tutorial/Assignment/Project to hand in.
- e) Other (please explain)

7. Did you pass the maths module for which you sought help?

8. Please circle as appropriate.

The MSC ...

has a welcoming atmosphere?

Strongly disagree 1 2 3 4 5 *Strongly agree*

has suitable opening hours?

Strongly disagree 1 2 3 4 5 *Strongly agree*

Please turn over

is a relaxed place to study?

Strongly disagree 1 2 3 4 5 *Strongly agree*

encouraged me to work with other students in my class?

Strongly disagree 1 2 3 4 5 *Strongly agree*

9. Please circle as appropriate.

The MSC staff ...

are friendly and approachable?

Strongly disagree 1 2 3 4 5 *Strongly agree*

have good teaching abilities?

Strongly disagree 1 2 3 4 5 *Strongly agree*

have a good knowledge of Mathematics?

Strongly disagree 1 2 3 4 5 *Strongly agree*

help you to cope better?

Strongly disagree 1 2 3 4 5 *Strongly agree*

motivate you to study?

Strongly disagree 1 2 3 4 5 *Strongly agree*

10. Would you recommend the MSC to a friend?

11. In your own words describe your experience of using the MSC.

I consent to this form being confidentially stored and used for research purposes.

Signed: Date: ____/____/____

Appendix 3 Students' descriptions of their experiences using the MSC

The following are a copy of all the comments on the evaluation forms, in the order they were received from students attending the MSC.

Very helpful when i went last year for pure maths, this year i needed help in quants for business and their knowledge wasnt as strong as before, however i still came out of the centre understanding much more than in class.

Very helpful.

I found it was a bit small as many people need help in maths so it was very crowded and often took a while for someone to get aorund to help you, however the maths was explained very well and it was very helpful.

Yes was very helpful, i had not studied some of the topics covered in First Year Commerce, and the tutors were extremely helpful.. it was quite crowded tho at times, and there was limited help.

They were very helpful and helped me understand the section i needed to understand in a couple of minutes.

I find maths hard to learn by yourself.the msc is a great help

I attended the MSC last year and found it really helpfull. I attended the MSC again this year and was again delighted with the help I recieved. The staff are always very helpful and understanding. I was also very grateful and impressed with the special lecture held specifically for my Biostatistics module STAT20070 and really benefited from it. I am also very appreciative of the extra time and work that is dedicated to these such workshops. Many thanks for all the work the MSC does.

Very helpful.

Helpfull. I got what I needed and the staff were helpful.

Good one on one help however due to big numbers of students and only a few assistants means there are long waits sometimes.

I was impressed with the MSC and I feel it is an extremely valuable resource in the university. Unfortunately I came in very late in the semester and the subject matter for my 3rd year maths phys assignment was a bit abstract for the tutors to be able to help me with on the spot. All the same I found the experience very motivating and they at least steered me in the right direction allowing me to make headway in my own time.

Thanks again for the help and I will be sure to come in earlier next semester if I have problems!

*I felt they were very willing to help and understanding.
Extremely helpful, the staff were very nice and understanding of my level of maths and of others in the group. Very patient.*

Was good experience, maths is too hard for commerce if u did pass, i think no lectures should be given and all tutorials, maybe three tutorials a week instead of lectures and tutorials.

*Extremely helpful if you have any problems at all they will help
the only bad thing i could say about the MSC is during exam times it gets very busy and there is not a lot of staff to cope with this.*

The staff was very helpful. If I had different questions than my friends they made sure to help us with everything we needed.

My experience has been very positive and I now enjoy maths.

If I did not have help at hand while studying maths, I don't think my attempt at the exam would have been as strong.

Re Q 10 I don't know my results yet

I thought that i was lost in the specific area but after help from MSC i realised i could do it and all i needed was a little push.

I had a very good experience. The staff are very helpful and a similar service for chemistry would be greatly appreciated.

The MSC is a fantastic way to help students. We spend a lot of time complaining about how expensive university is, but this is free help, i don't think people appreciate how much this help is worth. I would have had to pay €50-60 for every hour of help i received. It was very professional and i hope they get well funded from the university. Perhaps we could take a small percentage of the money from the fund for the colour-posters and drinks promotions.

I was always a talented maths student, but this year i was struggling with Stats and Probability. The MSC helped me to see the logic behind it and to understand it. My confidence was greatly helped by this.

Thank you very very much.

I personally feel that the msc is great. whether its just a small question or a complicated problem, the msc will sit down with you, make you feel at home and ultimately help you to defeat the problems you are having with maths. I can honestly say that it was the continuous help from the msc that enabled me to go into my maths exam happy and confident. The msc is definitely a super centre to have on campus, thanks for all the help!!!

Found it excellent for statistics, explained how to do the formulas much better than lectures.

Friendly, and gave me very good help on how to do maths without doing it for me.

Warm Friendly supportive atmosphere conducive to study and to understanding the topic more deeply.

Very helpful as it was basically one on one help and they made sure you understood it before going on any further.

I was particularly worried about my maths abilities. The staff were very reassuring and helpfull.

I found it very helpful as it explained the work i had to do so as i would understand it and not in complicated maths language

There is comfort in knowing that if there is something that you don't understand, and maybe think yourself foolish to make a point of it in class, then there is always the MSC to turn to.

The staff were a great help in my vector calculus class. Although im not sure if i passed it or not yet, the only reason i was able to attempt any of the questions in the exam was because of them.

Special thanks to Nuala who gave up some of her time on a friday to help me out.

It was fantastic a great help I really appreciate all the help I got. The only thing I would change is to increase the opening hours. It a great centre and thank you to all who helped me.

Good experience, would have struggled without it.

Friendly and never made you feel bad about not understanding the simplest of things.

Never went to the center just attended the hot topics in the quinn school. found it good! notes were good cleared up a few points such as basket weaving and inverces maxitrics

It went once to the msc as i had gotten stuck on a specific question, i attend my class tutorials and lectures but had gotten stuck.the was a lot of people there at the time i went and the lady who was trying to help a lot of people at once was having huge difficulty, she could not explain answer or help to the extent needed. i did not benifit from that visit and did not return after

For me it was great to be able to go somewhere you could talk to someone about the difficulties you are having in your module, often its just some basic thing like a missunderstanding of algebra that needs to be cleared up

Very positive. Given the high demand at certain time, additional opening times would be useful.

Helpful

The staff couldnt be more helpful.They made everything so clear and had great patience.Also they didnt make you feel stupid when you felt you had a silly question.I would definitely recommend this support center,they do great work especially Nula shes very nice. Im very grateful for all their help. Thank you maths support center!

I found the support centre helpful.

My experience in using the MSC was very useful, unfortunately the material in which I was getting help in was too difficult, and I could not understand any of the concepts. I could only complete questions or understand them with the help of the MSC but once I attempted them alone and I was not able to finish a question correctly even with the notes from the MSC.

Very welcoming and friendly. The advice really helped me in the area of Fourier Series!

I found it a brilliant help with areas i was struggling, Nuala is a brilliant teacher of Maths and she was a huge help at times. i left the msc 50% of the time feeling it was a very productive days work with my maths.

Vvery good for first year maths for business and helped me get an A, but very disappointing in the area of quantitative analysis for business.

The msc really helped me to work at some of the key areas for my exam which i was struggling with. i found the 2 hour tutorial really helpfull.

Very helpful and motivating. Increased my confidence with Mathematics

I thought that the staff were great. they put in great hours and really help you out. they dont give you so much help that it gets the work done for you, they simply give you the tools you need to work it out for yourself and are there if you have any problems. i would definitely recommend it to a friend!

When there are people available to help you it is great, I have no doubt that without it I would have dropped out by now. I do however feel that it is very understaffed.

Very helpful but sometimes there would be too many students and it is hard to get attention.

I am international student and it is my first experience studying abroad. And of course it was difficult to understand all material that was given on the lectures, especially math. So my friend suggested me to go to the MSC. Initially, I was shy to ask questions, but tutors were so friendly, always ready to help and I decided ask them all that I did not understand. I spent all my free time in MSC solving problems and proving theorems. Now, I am more confident in math and statistics. Thank you MSC!

It was extremely helpful. Any module in which I recieved help from the MSC I did well in. It was particulary beneficial that the staff in the MSC helped me answer past exam papers something that is rarely covered by lecturers.

I am thankful for people who eager to give a help for students and making math a bit easier as a lesson.

Very helpful... it would be better if there were more tutours though.

*I felt like I was completly thrown in at the deep end in my 3 compulsory maths classes, as most people already knew what integration, differentiation and matrices were. It took a lot of patient explanation from staff at the maths support centre for me to get basic stuff, before I could move on to understanding my lectures. I think (as maths is not compulsory for alevels) that any northern student who had not studied maths would be lost without the maths support centre. There is not really any other support for them. Without the maths support centre I think I would have failed at least one of Calculus and Matrices&Vectors. They were very supportive and friendly, even when I started turning up more and more and they were really busy. I think the matrices exam went very well. And there was only 4 calculus questions that I didnt understand.. :D:D:D:D:D
THANKYOU MATHS SUPPORT CENTRE!!!!!!!!!!*

I would continue to use this resource, but could only attempt 2 questions on my maths paper in my exam. I would have to consider grinds externally and pay because I would at least have the same person tutoring me and get one full hour tuition. Sometimes in the maths lab, I use a lot of time and get less tuition. I will have to revise how I approach the repeat, and how I approach the learning, my problem may require remedial teaching. I think also the maths lab is very crowded and not comfortable with people sitting on top of each other at times. I dont like going to the maths lab, its a must, but Nuala does a terrific job of managing and I greatly admire her.

At times the MSC can be very crowded, perhaps a larger room could be used but otherwise its a very helpful place.

Helped me to understand better some specific areas in my maths modules I had difficulty with. MSC helped me to improve my final maths result by at least by a grade.

I thought the MSC was quite helpful.

Extremely positive and beneficial, staff were co-operative and approachable

I cannot speak highly enough about this fantastic service. The Professor and the PHD students are very patient with me and are very skilled in explaining concepts that I struggle with. I get a very strong impression that everyone is motivated and enjoys helping. Having this safety net is very very very important. You all deserve medals, gold ones. Thankyou very very much for your help.

Fantastic explained it easily and it stuck.

They explain maths in an easy understandable way.

It was helpful for what i needed i only needed it once.

Great help in Statistics! Got help every week and it helped in the final exam! Thank You !

I think it is an invaluable resource.

Very helpful

This years facilities were way better than last years as the room was bigger and there was more space for students to sit down.However comin up to exam time you find yourself waiting a long time to see the teacher as there are so many students.Other than that it was excellent .

*It is very helpful and i passed my math module and thanks a million for your help guys
Thanks to nuala and the MSC staff I got 91% overall in my maths exam*

I found the staff to be friendly and helpful. They explained in detail the specific problems that I had in the subject area and helped me to comprehend the subject

I only attended once and the center was quite busy at the time,so i didnt get to utilise my time fully.I believe that the centre is a great resource for the students.I will attend again,more regularly next semester

Was very helpful as i couldnt understand my lecturer at all

For me it was extremely important to get help with maths, I am so happy that MSC exist, I wish I could come more often than I did because of the far travel distance from my home. It is a pity that it is closed on fridays, I would certainly use it fridays too.

Very helpful and approachable

I had a very good experience using the MSC. It has been a lot of years sinse I was at school and my maths standard was not very high to begin with. As soon as I found myself struggling with a question or problem I went straight down to the MSC and Nuala and her team sorted it with me in a very simple manner which helped me to understand the problem. The friendly athmosphre and the methods used to assist students is the highlight of the MSC. I achieved a good result in my exams which I would not have done without the support I received from the MSC.

If I could make one recommendation it would be to extend the size of the room. The room is quite often full to capacity where I have noticed students had to leave again on a few occasions.

So helpful and friendly. One of the best facilities i have come across in UCD.

Amazing help

I found the Maths support centre very helpful in first year and the early part of second year probably because i was catching up on the foundation maths aspect of my course. However as the mathematical aspect of my course has become more influenced by economic theory I have found the MSC to be unhelpful and in some cases to add to the confusion. I believe to a lack of tutors whose background is economics. I believe this is one areain which the msc can improve. I am fortunate enough to have good mathematical ability and extra effort normally allows me to overcome any difficulties, however there are many students who cannot and i believe that a section of msc dealing primarily with economic problems would help economic students. I believe this will improve grades within the school of economics and would result in an increase in students opting for more advanced courses in quantitative economics. I feel it is a serious problem as the advanced quantitive economics course has been withdrawn from next year on wards due to low enrollment. Therefore i feel that both the MSC and the school of economics can be greatly improved by focusing on assisting students with economic problems.

Found it very help, some days it was very busy. Maybe a bigger room would be better.

One to one help was essential for me to understand basic maths that I had either never understood or completely forgotten. I think I would have struggled to pass the subject in access science without this help. I needed to practice maths alot and this was possible because of the support.

I think the MSC is an invaluable resource. Many students would be lost with out it.

The center is helpful. However on the occasions I have sought help, the appropriate tutor was not available. Although their knowledge in the area was not primal, the tutor was still very helpful and thus deserves my gratitude. I am still awaiting my results for my semester 2 module

My problem area was Statistics for Economics, I had never really understood it during my last degree 10 years ago. One week after I was completely lost in Stats, the MSC helped me to get a C+ in the midterm and then an A+ in the final exam. They should get more funding to expand their study space, increase advertising and pay their staff as much money as the lecturers get because they are of equal value. You could find the funds by cutting the budget for posters for the SU and societies, then only half the campus would be re-wallpapered every week, instead of every inch of wall space in UCD.

I thought the maths centre was very helpful, i needed help with understanding the harder math in algebraic structures and in linear algebra i would know the answer was simple i just needed a head start. The Math centre helped me with these very easily and it is never too busy all the time,which is important if you only really wana ask one thing or two,you dont want to be there all day.

I would not have survived first year without their help, excellent centre.

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Very helpful and helped me pass my maths module

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It was a great help but some tutors got fed up if you didn't catch on quick enough, making you feel stupid and off put by the center.

Very helpful... really motivated me

Brilliant, needs more opening hours though. Very difficult for engineering students to find time to visit.

I had a good experience at the MSC but there were too many students for the staff to help.

Very helpful in general, but the 2 extra hot topic lectures given for introduction to calculus were extremely helpful.

Very helpful staff, tutors, helped you as best they could. Broad knowledge.

Met Nuala and showed her the problem and it was all sorted out in a couple of minutes, when the mature students had their open day in February we were disappointed that none of the ambassadors showed the prospective students where the support centre was but we tried to make up for this omission over lunch.

It was very packed and had to wait a long time to be seen, when i was seen they would leave and not be able to come back for a good while, therefore i lost out on alot of study time just sitting around so I ended up usually just leaving and went and paid for grinds outside of ucd, i found them more helpful in a more quiet room. I think the MSC needs more staff.

Although the staff in the maths support centre were very helpful and I could see they tried alot, personally I felt they made the maths more complicated to me than my understanding going in the door. Although my visits to the maths support centre were frequent, I always went with friends, and then had to either have the sum explained to me after by them or use online video tutorials that I found. I do appreciate the efforts of the msc but one particular sum was explained to me 5 different ways, leaving even more confused than when I came in I found help to the solution online and it was neither something that was said to me or something as complicated that was said to me.

The msc is a relaxed learning environment, it has great tutors which explain very well how to work out problems.

Awesome tutors, Never would have got through exams without them it was fantastic I only wish there was a chemistry support centre.

The MSC has been so helpfull to me throughout the year. Whether it was just a small querie or a major problem, the MSC was on hand to help and assist me and inevitably

enable me to become better and more confident at dealing with maths. I think the MSC is one of the most helpful places in UCD and I would recommend it to everyone.

I found the MSC very helpful for the questions I had, although the only thing I felt was wrong was that around exam time there the MSC was always packed and it probably could have done with a few more tutors to deal with the high demand.

Thanks for all the help during the year. The extra space you were able to obtain made a significant difference - though it was still crowded for most of the time. Hope you can get an extra venue - in the Newman Building perhaps.

I wanted to get an A which I did in the first semester which I don't think would have been possible without MSC. The only problem I found was that sometimes it's very busy and the staff may not have enough time for you, though this only happened coming up to exams and is completely understandable.

It was very useful in helping me understand parts of maths that I found difficult. Although I didn't like having to make an appointment to use the MSC during exam time this semester.

Yes I do highly agree that it is very helpful as it encouraged all students to go to the centre if help was needed!

The MSC is an excellent resource for any student as long as the tutor working with them has experience in the particular topic in question. The staff are all very approachable and friendly; they all have an excellent knowledge of mathematics and where they were not familiar with a problem they made an effort to find a solution.

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The MSC was a lovely place and the people were nice but for our course, Economics and Finance I found myself explaining terms and methods to them as they didn't actually understand what we were doing. They weren't able to help me with my questions.

For weaker maths students taking easier maths subjects I would recommend this service however the last module I took I found that the tutors in MSC had no real idea how to teach us and each tutor gave us different ways to do the same topic each claiming that the method other tutors had taught us was wrong needless to say we were very confused.

I went to the extra tutorials that were put on for MATH10070. They were really helpful as they focused specifically for the final MCQ.

The extra classes they put on for us (math 10070) really helped because it was like a lecture set up in which they went through the material first but then gave us a chance to go through questions ourselves and they went around and helped if we needed it and really explained it. This really helped us all get a better knowledge of the module and is definitely the reason I passed math10070.

The staff were all very friendly, approachable, and eager to help. However the questions I needed help with none of the staff could answer at all. The questions were not hard to do, I eventually found out myself (they were actually extremely basic), after finding time to talk to the lecturer. But I found the MSC extremely poor, a complete waste of my time. I would not be confident to return if I was struggling with something or had a query.

I found the MSC to be brilliant, I was struggling due to a bad lecturer and partial notes on blackboard, but the centre were more than welcoming and amazingly patient. They are great.

Very helpful.

I used the MSC to help me with calculus, which I was having a great deal of trouble with. The two Math10070 tutorials at the end of the year were of particular help in my summer exam for the subject.

It was a great quick way to learn what needed to be learned. In maths I find practice more useful than lectures, for that the MSC was great. Solving problems kept me interested however during lectures I lost track and got bored soon after the beginning, everything seemed 100 times harder during lectures. The people were nice. The room is always warm (temperature wise too), that matters too!

Helpful in the extremely hard module that I was doing and I wish I had attended it quicker.

It was extremely helpful right before my exam. The one on one aid is great and helps to learn better.

The centre was extremely helpful in understanding problems in the closing weeks before a maths exam

Overall the MSC was excellent. Extended opening hours would be welcome! Keep up the good work

It really helped me with Matrices and Vectors. Everyone there was really nice and very helpful. I got a good grade thanks to the MSC.

The calculus course and the MSE made me realise that with a bit of work maths is not only for geniuses. I actually enjoyed learning and understanding something I thought was beyond me.

I found the MSC very helpful on areas where i got stuck on in webwork and was a valuable asset to my studies, it undoubtedly helped me grasp top marks in the class by explaining some fundamental concepts of the formulas which were used in the course. The only negative feedback i would give is that sometimes the room gets crowded which creates an uncomfortable study atmosphere.

Extremely helpful and knowledgable staff. The best part for me was the fact that the problems in question were solved with a different perspective and sometimes a different method from what was thought in the lectures which broadens our mathematical understanding. One thing that I might suggest; is having a seperate table for those who want to attempt to solve the problems themselves, undistracted. If any problems arise for them then they can move to the tables where the helpers are based.

Always inviting, patient, enthusiastic and fascinating.

This help centre proved to be a great resource to me i could drop in every Wednesday afternoon and there was always someone there to help me with anything at all.

It was very helpful and made it easier for me to get my head around the basic concepts of my subject.

*I really liked attending the MSC , I found it a great help and I used many tricks I learned there in my exams.
Thanks to Nuala and all*

I found it really helpful to know that i was right in what i was doing and not just guessing.

Thank you, Nuala, for arranging appointments at odd times - even during the later exam weeks - and generally being there for us when we really need you.

In general, I thought the MSC was very helpful and most of the time, I came away with a better understanding of the subject material I was having difficulty with. The only thing I could criticise about the MSC would be the opening times. It would be better if it was open from 9 in think.

The centre was pretty helpful as there was always people there to help and i always left the centre with more understanding in the mathes topic i went for.

I knew that if I am stuck I will have help it motivated me to do more until i got stuck.

The maths supprt centre was very usful to me as i find maths very difficult and they made it easier to understand. It is a very welcome and friendly atmosphere.

Very pleasant and productive experience, covered topics in an hour long period that would otherwise have taken much longer on my own. Helped me to understand areas of modules that lectures and tutorials could not.

It was a huge help to me as I did not do higher level maths for the leaving I found myself confused with some of the concepts.MSC helped me out alot

Very supportive environment for all levels and abilities. I had a good background in maths but the MCS enabled me to do better in the assignments and exams than I would have done on my own, Thanks Nuala!

Very helpful. Would be good if a sheet was given out at the start of the year in relation to need to know background material before start of course for calculus for agriculture module!!!! I had never even seen the basics before.

What a wonderful place, I left every time empowered with a smile on my face, God bless Nuala.

I found the centre to be set up to aid students that need help in specific areas of their modules.This is excellent and really benefits those students.I felt that it was not effective for me,Because i have a fundamental problems in grasping mathematical concepts.I found myself reluctant to ask the questions that i needed to ask due to the risk of sounding "stupid" in front of other students.This is not a reflection on the M.S.C (whom staff were excellent)but more so, a reflection on me and my inability to engage the subject in earnest.If i could make a suggestion i would like to see the msc offering one on one tutoring to students like myself that, as mature students ,coming back to education do not fully realise the standard of maths that is required to succesfully negotiate a third level degree.

Thank you very much for you time and expertise during the year.

i could not have been happier with the help i got in the msc, it really helped me understand maths when i thought id never understand it!! one 2 one is so much easier to understand and ask questions than in the lectures!

Helpful, as it broke the teaching down to a one-to-one basis,which can in itself overcome a lot of students problems when faced with a meths lecture with hundreds of students.

The maths support centre helped me to do well in my exam and helped me to understand some areas of maths that I was confused about. The staff are really friendly so I was able to ask questions. I would use it again. Because it is so difficult to learn maths without actually working through questions it is great to have somewhere to go when I got stuck.

I found the centre very helpful and I definitely wouldnt have gotten through my maths modules without it.I am very thankful to all the tutors for helpin me pass my modules! :)

I found the one on one tuition extremely helpful, the tutors were very patient and understanding. The MSC is an invaluable resource for the mature student. Thanks.

Very helpful in explaining concepts, and by using examples managed helped me to understand how to use a particular technique, so that I could complete my tutorials on my own.

I found that it was very helpful with the areas of maths i was finding difficult and didnt pick up in lectures, and going to the support centre they helped me with the questions and as a result i was able to do the maths myself

*I was really struggling to grasp calculus, matrices & vectors but they helped me so much and simplified the overly complicated explanations and methods of the lecturers.
Nula is an amazing teacher, Thank you so much*

I found the support centre extremely helpful. I hope to avail of it again next year if I have any difficulties. The staff are very patient and have a wide knowledge of maths.