

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Kylemore College
Kylemore Road, Ballyfermot, Dublin10
Roll number: 70240P**

Date of inspection: 28 September 2012



**A N R O I N N | D E P A R T M E N T O F
O I D E A C H A I S | E D U C A T I O N
A G U S S C I L E A N N A | A N D S K I L L S**

**REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS**

INFORMATION ON THE INSPECTION

Date(s) of inspection	27 and 28 October 2012
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during six class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning was either good or very good in the majority of lessons.
- The most effective lessons featured the effective integration of resources, a rigorous treatment of the mathematics underpinning the lessons and paid due regard to developing the students' literacy skills.
- Assessment practices, particularly relating to assigning and correcting homework, are very good.
- Student behaviour and classroom management were of a very high standard.
- The mathematics department is very well resourced and timetabling provision for Mathematics is very good.
- Subject department planning in Mathematics is excellent.

MAIN RECOMMENDATIONS

- The mathematics department should supplement its existing approaches to teaching and learning through the use of open-ended questioning and problem solving as key classroom strategies.
 - The section of the subject department plan dealing with cross-curricular links should be extended to include statements from other subject departments detailing the numeracy demands of each subject and how they will be addressed during lesson delivery.
 - The schemes of work in senior cycle should be amended to include reference to the relevant Teaching and Learning Plans developed by the Project Maths Development Team.
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INTRODUCTION

Kylemore College is a co-educational, non-denomination school operating under the aegis of the City of Dublin Vocational Education Committee. It caters for the educational and other needs of 283 mainstream students and also provides Post-Leaving Certificate courses to twenty-eight adult learners. A range of programmes are on offer to mainstream students, including the Junior Certificate School Programme (JCSP), Transition Year (TY) and Leaving Certificate Applied (LCA).

TEACHING AND LEARNING

- The quality of teaching varied from excellent to fair with good or very good teaching evident in the majority of lessons. The best lessons featured a range of teaching methods, innovative use of resources and provided the students with opportunities to engage in discovery learning and other activities advocated by Project Maths. In a small number of lessons this approach was not followed and resulted in lessons that were overly teacher-led and where opportunities for independent and collaborative learning were few.
- In the most effective lessons, the intended learning outcomes were clear from the outset, the lesson content was appropriate and the mathematics underpinning the content was treated with appropriate rigour. In less effective lessons, the approach adopted, particularly the pacing of the lessons, did not allow for in-depth treatment of the lesson content.
- Team teaching was seen to very good effect in one lesson. The teachers worked very effectively in delivering and differentiating the lesson content. Very good practice in developing the students' literacy skills was also in evidence. This was achieved by engaging the students in designing their own problems and discussing the solutions with their peers.
- The mathematics department has made very good progress in embracing the approach to teaching and learning espoused by Project Maths. In order to continue this development, the department should extend the use of open-ended questioning and begin to adopt a problem-solving approach, where students engage in analysis, planning, implementation and review, as an integral part of curriculum delivery.
- Student learning was, in the majority of cases, very good. This was evident from the student responses and the questions they asked during lessons and from the quality of the work contained in their copybooks.
- Classroom management, student engagement and behaviour were very good. Classroom interactions were respectful and the students and teachers collaborated very effectively in creating a productive and supportive atmosphere.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling provision for Mathematics is very good. The time allocated is generous and the configuration of the timetable whereby each lesson is one hour long is ideally suited to the active teaching methods preferred by Project Maths.
- Arrangements for establishing the mathematical ability and knowledge of students transferring from primary school, and subsequent progress, are very effective and include a proficiency test designed by the school's mathematics department. The process would

be further enhanced if success criteria for each curricular strand were developed and students' performance against the criteria was used to inform the delivery and assessment of the first-year mathematics programme.

- The process of identifying and supporting students with special education needs or requiring learning support in Mathematics is very effective. A whole-school approach, managed by one of the school's assistant principals and involving teachers from a range of disciplines, ensures that the various interventions are appropriate to the needs and abilities of the students.
- Arrangements for assessing student progress in Mathematics are very good. Homework is given a very high priority in the school and department members collaborate very effectively in providing common formal assessments where appropriate. The existing policy which refers exclusively to homework should be extended to include assessment and should capture and develop the very good assessment practices already in place.
- The mathematics department is very well resourced and enjoys the strong support of senior management. All mathematics classes have access to the school's extensive information and communication technology (ICT) infrastructure and to resources designed to facilitate active teaching and learning. Very good use is made of the school library and the mathematics department works very closely with the librarian in developing and providing workshops to develop the students' numeracy skills.
- The members of the mathematics department are committed to continuing professional development and have availed of all of the workshops provided as part of the rollout of Project Maths. Many have also attended courses leading to postgraduate qualifications in their own time.

PLANNING AND PREPARATION

- The mathematics department's approach to subject department planning is exemplary. The department is jointly and ably co-ordinated, regular meetings are held and an excellent subject department plan is in place.
- The schemes of work contained in the plan are comprehensive and the schemes for junior cycle reference the relevant Teaching and Learning Plans developed by the Project Maths Development Team. This ensures that the schemes of work are a valuable and relevant classroom resource. The schemes of work in senior cycle should be amended to also reference the appropriate Teaching and Learning Plans
- The subject department plan is informed by *The National Strategy to Improve Literacy and Numeracy among Children and Young People, 2011 – 2020*, and includes strategies to address the enhanced literacy demands of the revised mathematics curricula. In order to develop this approach the section of the plan dealing with cross-curricular links should be extended to include statements from other subject departments detailing the numeracy demands of each subject and how they will be addressed during lesson delivery.
- Subject department planning in Mathematics contains detailed analysis of student performance in the certificate examinations and action plans for improvement. Planning in this area has already had a positive influence on the number of students opting for ordinary level rather than foundation level and now strategies targeting enhanced uptake of higher level are being implemented.

- Individual teacher planning was, in almost all cases, very good. Where the planning was best, the lessons had a clear focus, featured very good resource integration and were delivered in a manner appropriate to the needs and abilities of all of the students. Where there was room for improvement, the focus of the lessons was unclear and the resources chosen did not significantly support the lesson objectives.

The draft findings and recommendations arising out of this evaluation were discussed with the principal, deputy principal and the subject teachers at the conclusion of the evaluation. The board of management was given an opportunity to comment in writing on the findings and recommendations of the report, and the response of the board will be found in the appendix of this report.

Published January 2013.

Appendix

School response to the report

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report

The Advisory Sub-Committee, Principal and Maths teachers welcome this very positive report and consider it to be an accurate evaluation of the quality and teaching of Maths in Kylemore College.

We are delighted that the variety of assessment practices, the very high standard of student behaviour, student engagement and classroom management were commended.

We are pleased the good rapport that exists between the students and staff which underpins the positive learning atmosphere throughout Kylemore College was recognised.

The Advisory Sub-Committee, Principal and teachers wish to acknowledge the courteous and professional manner in which the subject inspection was conducted.

The Advisory Sub-Committee and Principal wish to commend the Maths Department for their hard work and commitment to their students and the school.

Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection

The Maths teachers have welcomed the recommendations of the inspector and have noted the emphasis that must be placed on open ended questions and problem solving.

Consideration has been given to further developing cross-curricular links with other subject departments.

The senior cycle schemes of work will be amended to include specific reference to the Project Maths Teaching and Learning Plans.