

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Ringsend College  
Cambridge Road, Dublin 4  
Roll number: 70200D**

**Date of inspection: 27 February 2015**



**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

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### INFORMATION ON THE PROGRAMME EVALUATION

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| <b>Dates of inspection</b>   | 27 February 2015   |
| <b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and key staff</li><li>• Interaction with students</li></ul> | <ul style="list-style-type: none"><li>• Observation of teaching and learning during three class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and relevant staff</li></ul> |

### MAIN FINDINGS

- The quality of teaching and learning ranged from fair to very good.
- In the lessons where the teaching approaches were effective, learning for understanding was promoted and observed.
- The mathematics department has experienced much change in personnel in recent years.
- Management is very supportive of Mathematics and the newly appointed deputy principal, a mathematics teacher, has assumed the overall coordination and development of the subject.
- Subject department planning is progressing and schemes of work have been devised to include relevant strand of the syllabus.

### MAIN RECOMMENDATIONS

- The use of a greater range of active teaching methodologies that appropriately challenge students should be used in all lessons.
  - Questioning strategies and student tasks should be differentiated to cater for the diverse range of student abilities within class groups.
  - Teachers should ensure that opportunities are provided for students to discuss and articulate their mathematical reasoning which should result in less reliance on teachers.
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## **INTRODUCTION**

Ringsend College is a co-educational school with an enrolment of 126 post-primary students. The school is under the patronage of the City of Dublin Educational Training Board and participates in the Delivering Equality of Opportunity in Schools (DEIS) initiative. The school offers the Junior Certificate, the Junior Certificate School Programme (JCSP), the Leaving Certificate Vocational Programme and the established Leaving Certificate. Ringsend College also provides a range of Further Education courses at levels 4, 5 and 6 in the areas of Computer Studies, Business, and Horticulture as well as a variety of part-time evening courses for adults.

## **TEACHING AND LEARNING**

- The overall quality of teaching ranged from fair to very good in lessons observed. Scope for development included greater use of teaching approaches such as those promoted by Project Maths. The use of questioning strategies that would provide students with opportunities to discuss and articulate their mathematical reasoning was recommended in many lessons.
- Teacher preparation and planning for many lessons were mostly good or very good. Resources necessary for lessons were prepared and used to support the teaching and learning. Information and communication technology (ICT) was available and was used effectively as a learning tool, with some further scope for its use discussed.
- In some lessons, teachers explicitly stated the learning intention for the lesson and often recorded them on the whiteboard. However, a review of the learning intentions is recommended at the end of class to reflect on the learning outcomes and to support teacher planning and preparation for further lessons.
- Very good practice was observed in the lesson where student-centred teaching approaches were used to very good effect. In this lesson, the predominant method used was paired work. This approach allowed students to work collaboratively, to discuss and share ideas and to arrive at a solution to the questions. The success of this approach was evident as all students had a clear understanding of what was to be achieved.
- In the majority of lessons, traditional whole-class teaching was observed and was of a fair to good standard. This method generally took the approach of teachers demonstrating a question and students completing an exercise based on this work. It is recommended that mathematics teachers discuss and share best practice regarding the most effective approaches to teach various topics with a view to increasing student participation in their learning.
- In most lessons, students were asked to complete tasks. It was noted however, that such tasks were not sufficiently differentiated. It is therefore recommended that teachers ensure that there are sufficient challenges in the range of tasks to support the diverse range of student abilities within each class group.
- Where challenging and probing type questions were observed, they were very effective as they required deep thinking by students about the topic. In such instances, students were more likely to question their teachers about the topic which resulted in some very good learning opportunities.
- In the majority of lessons however, procedural type questions that required the recall of facts or to provide the next step in the question were noted. In such lessons teacher talk dominated and there were few opportunities for students to deepen their understanding of mathematical concepts. It is recommended that greater use of higher-order questioning strategies that challenge students be used more often in all lessons.

- The quality of learning observed in lessons ranged from fair to very good. Where very good learning took place, there were sufficiently high expectations by the teacher for full participation by students which was sustained with appropriate teaching strategies. Classroom management was mostly good or very good, although some students were less motivated about their learning in some lessons than in others and at times were easily distracted.
- Student work and subject specific materials were observed in classrooms visited. It is recommended that additional displays of mathematics be included in classrooms as a tool for supporting teaching while promoting numeracy development throughout the school.
- The traditional classroom layout was observed in all lessons. The use of an alternative configuration should be considered as it would also support more active learning among students.
- A review of students' copybooks during the evaluation indicates that in some instances, written formative feedback is provided. This is an area that requires development so that students have guidance in areas for attention and in how they can improve their work.

#### **PROGRAMME PROVISION AND WHOLE SCHOOL SUPPORT**

- The school has recently moved to the timetabling of one-hour class periods. Although time allocated to mathematics is mostly very good, the current timetabling does not facilitate daily contact with the subject for most year groups. Commendably, management is planning to increase time in senior cycle to include an additional class period per week for sixth-year students.
- This year first and second-year students are taught in mixed ability classes for Mathematics. In third year management deploys an additional teacher to facilitate the creation of independent level groupings. It is anticipated that as school enrolment increases the possibility of having independent level groupings would become the norm. This would be welcomed as participation at higher level in junior cycle Mathematics is increasing in the school each year.
- Management encourages and facilitates attendance at continuing professional development (CPD) courses. As many of the recommendations within this report focus on teaching and learning, further areas for whole-staff CPD could usefully focus on teaching strategies particularly in a mixed ability setting and assessment for learning strategies.

#### **PROGRAMME PLANNING, CO-ORDINATION AND EVALUATION**

- Given the recent changes in personnel within the mathematics department, the deputy principal is undertaking the position of coordinator of Mathematics. Commendably structures are being developed to ensure that in time all members will share in the responsibility for coordinating and developing the mathematics department.
- Minutes of meetings are retained and mostly pertain to information about organisational details such as class organisation and resources to be used. As the department continues to develop, it is recommended that agenda items for meetings could include the sharing of effective teaching strategies for the teaching of various aspects of the mathematics curriculum. This work could usefully serve to support a whole-school approach to numeracy.
- Good work has taken place in the development of a subject department plan. This includes the organisational details for the subject, schemes of work linked with the relevant strands of

the syllabuses and a review of students' performance in state examinations. To support this work it is recommended that a detailed analysis be included to augment the review of students' attainment in state examinations. This should then support the mathematics department when planning for the subject.

- In line with best practice there is a clear link between the DEIS plan and mathematics planning. The numeracy targets should be further developed by the mathematics department with associated action plans to reduce the number taking foundation level at junior cycle.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal and deputy principal at the conclusion of the evaluation. The board of management of the school 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.

# **Appendix**

**SCHOOL RESPONSE TO THE REPORT**

**Submitted by the Board of Management**

**Area 1 Observations on the content of the inspection report**

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

- CPD on differentiation sought.
- Maths Department meeting to share and discuss methodologies.