

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Drogheda Grammar School
Drogheda, County Louth
Roll number: 63870L

Date of inspection: 5 April 2011



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

Dates of inspection	4 th , 5 th April 2011
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 seven class periods• Examination of students' work

MAIN FINDINGS

- Students participated well in almost all lessons and made some good use of mathematical terminology. Students' questions and responses, as well as their written work, indicated that learning was taking place.
- The learning environment was positive and supportive in all lessons and teachers had a relaxed working relationship with students. Students are encouraged and supported in studying the subject at the highest level and the rate of uptake of Mathematics at higher level is very good in the school.
- Concurrent timetabling from second year to sixth year appropriately facilitates students' access to the level most suited to their abilities and interests and allows their movement between levels.
- The subject is well-resourced with hands-on materials and information and communication technology (ICT) hardware and software.

MAIN RECOMMENDATIONS

- In lessons, greater use needs to be made by teachers of higher-order questions as a means of challenging students' understanding and fostering a problem-solving approach.
 - To ensure the school's capacity to continue to offer Mathematics at higher level, at least two teachers should share the task at both junior and senior cycles.
 - When recruiting and deploying staff to teach Mathematics classes, management should take cognisance of the need for teachers to hold a specialist qualification in the subject.
 - Opportunities provided by subject meetings to share experience and expertise should be used to focus more on the discussion of teaching methodologies.
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INTRODUCTION

Drogheda Grammar School is a fee-paying school with a current enrolment of 90 girls and 173 boys. It offers established Junior Certificate and Leaving Certificate programmes, as well as a compulsory Transition Year. Mathematics is a core subject on the curriculum.

TEACHING AND LEARNING

- The quality of teaching and learning observed was variable and ranged from fair to very good. All teachers prepared for their lessons and a range of materials including worksheets and digital presentations was used, with different levels of success, to support the achievement of lesson objectives.
- Learning was enhanced through the inviting of students to work at the board, a measuring activity that fed into a student census questionnaire, the use of dominoes and playing cards and, in one instance, the inclusion of humour.
- There were lessons that did not begin with a statement of learning objectives. All mathematics teachers should clearly identify and explicitly state the objectives to be achieved in all lessons.
- There was good incorporation of ICT, including the interactive whiteboard, in many lessons. In addition, some rooms supported a mathematics-rich learning environment through the display of student projects, posters and charts.
- There were high levels of student participation in almost all lessons and some good use of topic-specific terminology. Students' questions and responses, as well as students' written work, indicated that learning was taking place.
- The learning environment was positive and supportive in all lessons and teachers had a relaxed working relationship with students. Students are encouraged and supported in studying the subject at the highest level and the rate of uptake of Mathematics at higher level is very good in the school.
- Students' progress in class was assessed through questioning and checking of written work. Greater use needs to be made by teachers of higher-order questions, challenging students' understanding and fostering a problem-solving approach.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The quality of whole-school support and provision for Mathematics is very good. There is a good time allocation and lessons are well spread through the week.
- Concurrent timetabling from second year to sixth year appropriately facilitates students' access to the level most suited to their abilities and interests and allows their movement between levels. An additional teacher has recently been allocated to Mathematics in fifth and sixth years as an extra support for students who are finding the subject challenging.
- First-year classes are taught as mixed-ability groups. This good practice allows students appropriate time prior to any decisions being made regarding the level at which they will study the subject.

- The responsibility for Leaving Certificate higher level rests with one teacher. This is not good practice. To ensure the school's capacity to continue to offer the subject at this level, at least two teachers should share the task at both junior and senior cycles.
- Students' progress is assessed through in-class questioning, the completion of homework, and the marking of chapter tests. The good practice of administering common end-of-term examinations within levels is in place.
- The system of identifying students with numeracy deficits that includes information received from primary schools, performance in a standardised test, and teacher referral is appropriate. Information obtained from the incoming first-year mathematics assessment should be discussed by the mathematics team and used to inform the first-year programme.
- A number of members of the mathematics team are specialists in subjects other than Mathematics. It is recommended that a review be carried out to see if this is the most effective use of such teachers' expertise and to explore the possibilities for upskilling, where appropriate. When recruiting and deploying staff to teach Mathematics classes, management should take cognisance of the need for teachers to hold a specialist qualification in the subject.
- The subject is well-resourced with hands-on materials and ICT hardware and software.
- Teachers' continuing professional development (CPD) is supported by the school and there had been full involvement in Project Maths activities up to the time of the evaluation. Participation by a small number of team members in CPD taking place outside school time is evidence of their commitment to the subject and to the students.

PLANNING AND PREPARATION

- The quality of planning and preparation for Mathematics is fair. A subject department structure is in place and the work of the team is co-ordinated by the principal mathematics teacher. A subject plan has been developed along School Development Planning (SDPI) guidelines. Some notable elements include a comprehensive list of CPD activities attended, copies of a number of subject inspection reports, information on co-curricular activities and examination data from 2006.
- Formal scheduled meetings take place approximately once per term but teachers also participate in lunchtime meetings when required. It is recommended that subject meetings include a stronger focus on the discussion of teaching methodologies, making the most of the opportunities to share experience and expertise.
- Programmes of work should be agreed by the subject team, should reference the relevant syllabus and should be presented in terms of learning outcomes for students. Teachers' individual planning should focus on classroom activities and record progress made in the implementation of work programmes.
- Data on achievements in certificate examinations should be compiled over three to four-year periods so as to facilitate discussion and the identification of trends. Analysis should be documented and accompanied by action plans to address areas for development.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation.

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