

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Royal School Cavan
County Cavan
Roll number: 61080S**

Date of inspection: 14 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

Date(s) of inspection	13, 14 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 six class periods• Examination of students' work

MAIN FINDINGS

- There was a wide variation in the quality of teaching and learning but overall they were of a good standard.
- In all lessons observed teachers had prepared well and the learning objective was clear. There were good examples of the linking of lesson content to real life and a student activity observed generated enthusiasm and enjoyment.
- Students have very good access to the different levels of the subject and they are facilitated in studying at the highest level for as long as possible. First-year classes are, appropriately, taught according to a common programme.
- School management assigns teachers to classes in line with their qualifications and expertise. There is a strong commitment from teachers to teaching Leaving Certificate higher level.
- The subject plan, prepared in line with published guidelines, contains a notably comprehensive list of CPD engaged in by teachers as well as a useful "future plans" section.

MAIN RECOMMENDATIONS

- Probing questions that test students' understanding and extend their thinking should become an integral part of every mathematics lesson.
 - Care needs to be taken to ensure that lessons are appropriately challenging for all students in a group, giving all students the opportunity to achieve to their full potential.
 - It is recommended that methodologies and activities tried by teachers in class should be formally shared and discussed at team meetings. Successful strategies should then be integrated into planning documentation.
 - The higher level TY programme is in need of review and should incorporate strategies and content that provide students with a more active learning experience.
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INTRODUCTION

Royal School Cavan is a co-educational fee-paying school with a current enrolment of 223 students. The school caters mainly for students from the local area and from neighbouring counties. Programmes offered are the Junior Certificate and established Leaving Certificate, along with a compulsory Transition Year (TY).

TEACHING AND LEARNING

- There was a wide variation in the quality of teaching and learning that ranged from fair in a significant minority of lessons to very good in a small number. Overall, however, the quality was good.
- All teachers prepared well for their teaching and in all lessons the learning objective was clear. In almost all lessons, students engaged fully with the work of the class.
- Teachers used appropriate mathematics terminology and, in a small number of lessons, so too did students. In general, however, there should be a stronger focus on the development of students' mathematical communication skills. In their contributions to class they should be encouraged to use complete sentences and correct terminology.
- There should be a wider range of methodologies employed in mathematics lessons. The motivational benefits of varying teaching and learning methodologies were clear in one lesson where a student activity generated enthusiasm and enjoyment.
- There was a small number of good examples of the linking of lesson content to real life, increasing its relevance for students. There was also an appropriate focus on examination technique in third and sixth year classes.
- Higher-order questioning was used in a significant minority of lessons observed. Probing questions that test students' understanding and extend their thinking should become an integral part of every mathematics lesson. In addition, lessons should be appropriately challenging for all students in a group so that all can reach their potential.
- Classroom management was effective and attendance was noted by all teachers. The learning environment was positive and students' contributions were affirmed.
- A review of students' copybooks across all classes revealed written work that was relevant to both course and level but the quality of presentation was, in some instances, less than should be expected. An expectation of high standards in content and presentation of written work should be communicated to students and monitored by teachers on a regular basis.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- There is very good provision and whole school support for Mathematics. There is good time allocation to the subject, but further efforts should be made to schedule mathematics lessons across the five days of the week.
- All year groups are concurrently timetabled allowing very good access to the different levels of the subject and to students studying the highest level for as long as possible. First-year classes are taught a common programme, appropriately allowing them time to settle prior to the formation of level-specific groups.

- It is planned to administer a standardised numeracy test to all incoming first-year students from September 2011 and this should proceed as planned. In addition, numeracy support should be provided, as far as possible, by members of the mathematics team under the guidance of the learning-support department.
- Teachers are assigned to classes in line with their qualifications and expertise. There is a healthy interest and commitment from teachers as regards teaching Leaving Certificate higher level.
- School management encourages and facilitates participation in continuing professional development (CPD) or further study. All teachers are attending Project Maths CPD and there are plans in place for in-house CPD, making good use of the expertise available within the team.
- Mathematics is adequately resourced with hands-on, practical materials. Plans are in place to secure significant ICT hardware to which mathematics teachers will have access.

PLANNING AND PREPARATION

- The quality of planning and preparation is good. A subject department structure has been established and the role of co-ordinator is rotated. The subject plan, prepared in line with published guidelines, contains a notably comprehensive list of CPD engaged in by teachers as well as a useful “future plans” section.
- Formal meetings take place once per term. It is recommended that teaching and learning issues become their focus. Methodologies and activities tried by teachers in class should be formally shared and successful strategies integrated into planning documentation.
- The mathematics team should extend their cross-curricular planning towards the development of a whole-school numeracy policy. One step towards this will be the agreeing of methods, approaches and terminology across all subject areas.
- Changes have been made in recent years to the structure of Transition Year (TY) classes so as to encourage more students to continue with higher level for the Leaving Certificate. It is good practice that the effectiveness of the strategy will be reviewed in the coming years. The TY programme itself also needs review. At higher level, strategies and content that will allow students a more active experience and include, for example, discovery learning should be developed.
- An audit of resources available in the school to support teaching and learning in Mathematics would be further improved with details on the most effective uses of these resources as experienced by teachers in the classroom. In future, it would be good practice for the acquisition of subject department resources to be agreed by the team and channelled through the co-ordinator.
- There is currently limited access to ICT for teaching and learning purposes. However, commendably, the mathematics team is preparing for the planned arrival of digital projectors through the uploading of materials to the school server.
- Although there is an agreed policy regarding the assessment of students’ progress, practice was not always in line with this policy. This should be addressed by the team.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and 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; a response was not received from the board.

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