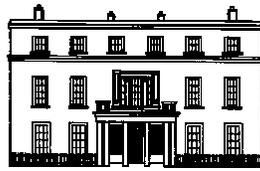


An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Gaelcholáiste Reachrann
Donaghmede, Dublin 13
Roll number: 76085N

Date of inspection: 25 February 2016



AN ROINN | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS

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

INFORMATION ON THE INSPECTION

Dates of inspection	24 and 25 February 2015
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• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning ranged from good to exemplary, with very good practice observed in the majority of lessons.
- A range of very effective methodologies was observed in the majority of the lessons.
- Teachers have high expectations of their students who respond to this with a very positive work ethic being evident in lessons.
- All interactions in classrooms were conducted through the medium of Irish and the use of mathematical terminology was excellent.
- There is very good support from school management for Mathematics.
- A very good range of opportunities is available to students to participate in co-curricular and extra-curricular activities.

MAIN RECOMMENDATIONS

- Teachers should make greater use of more challenging type questions that require students to provide justification for their answers in all lessons.
- All teachers should provide written formative feedback to students on their work.

INTRODUCTION

Gaelcoláiste Reachrann was established in 2001 and operates under the auspices of Dublin and Dun Laoghaire, Education and Training Board. It is an Irish-medium, co-educational post-primary school with a current enrolment of 345 students. The school offers the Junior Certificate, a compulsory Transition Year (TY) and the Leaving Certificate.

TEACHING AND LEARNING

- The quality of teaching and learning ranged from good to exemplary, with very good practice observed in the majority of lessons.
- Classroom management and student behaviour were excellent. All lessons were conducted in a positive atmosphere. Interactions between the teachers and students were very positive.
- Teachers had appropriately high expectations for their students, who in turn responded in a mature manner enabling very good learning and progress to be made in lessons with evidence that students were enjoying the subject.
- Excellent use was made of the target language and mathematical terminology in all lessons. Teachers and their students conducted all of their discussions through the medium of Irish.
- In most instances, teachers explicitly stated the learning objective for the lesson and, in many instances, revisited them. This gave a clear structure to the lesson and students were fully aware of the learning to be achieved. This practice should be extended to all lessons where appropriate.
- A range of effective methodologies was observed in most lessons. When used, traditional whole-class teaching was mostly of a high standard. The group or paired work featuring in most lessons was mostly of a very high or excellent standard; there was much evidence that students enjoyed working collaboratively.
- The success of group work was due to very good preparation of necessary materials in advance of the lesson by the teacher. In the most successful group activities, clear learning instructions were given to students as to what was to be achieved, and students were assigned specific roles and responsibilities for the completion of the task.
- A discovery method was used in a sixth-year lesson to excellent effect. In this lesson, students worked collaboratively and drew on various aspects of the curriculum to derive a solution to a problem while the teacher circulated to provide appropriate guidance.
- In most lessons, a range of effective questioning strategies was used. Initially, teachers opened the lesson by using recall-type questions in order to link current with prior learning. In many of the lessons, there was a good balance between global questions and directed questions.
- Very effective use of more challenging questions was noted in some lessons. Phrases such as “what do you think” or “explain your answer” were used frequently. In such lessons, students had opportunities to deepen their understanding of the topic and provide justification for their answers. It is recommended, therefore, that greater use be made of more probing-type questions that require students to think more deeply about the solution to questions.
- Resources were integrated effectively into lessons to support the teaching and learning of the topic. The textbook or tablet devices and worksheets were the dominant resources used in lessons. Of particular note was the effective use of information and communication technology and geometry software to support teaching.
- Teachers are classroom-based generally and there were many displays of students’ work in these rooms. A traditional classroom layout featured in non-specialist rooms; an

alternative configuration used in one lesson effectively supported collaborative learning. All teachers should consider how best to reconfigure the learning environment to support group work.

- In all lessons, homework was assigned enabling students to practise and consolidate their learning. During lessons, some teachers circulated efficiently to check students' homework. A review of student examination papers and copybooks indicates that teachers are monitoring students' work; however, it is recommended that teachers give students formative written feedback on a more regular basis.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- School management is very supportive of Mathematics; this is evident in very good time-tabled provision for all year groups and the deployment of an additional teacher to the majority of year groups.
- Concurrent timetabling takes place from second year onward enabling students have the opportunity to access a level most appropriate to their abilities. Commendably, the uptake of higher level at both junior and senior cycle and attainment at this level are very good.
- The mathematics department comprises four teachers. To ensure that there is sufficient capacity to teach Mathematics to the highest level possible, a teacher is undertaking the postgraduate diploma in Mathematics currently, as provided by the Department of Education and Skills through the University of Limerick.
- School management supports teachers to participate in nationally provided continuing professional development courses by facilitating attendance at in-service and school based training.
- Additional support is offered to students who find Mathematics challenging. In addition to the deployment of additional teachers to year groups, one-to-one and small-group support is offered to students, demonstrating management's ongoing support for the subject.
- A significant range of co-curricular and extra-curricular events is organised to ensure that students have an opportunity to participate in Mathematics outside the classroom context. These include involvement in events organised during Maths Week and in Irish Mathematical Olympiads.

PLANNING AND PREPARATION

- The position of co-ordinator of the mathematics department is rotated among its members. The overall co-ordination of the department is very effective and good progress has been made in the development of the subject-department plan. The subject plan is available to all through the shared drive and teachers share a range of resources and materials through this online facility.
- The subject plan includes organisational details and schemes of work for each year group and level; however, the inclusion of the various syllabus strands should be integrated in further revisions of these schemes.

- Regular meetings of the mathematics department take place and minutes are retained. Future planning meetings should include time for the sharing of effective teaching strategies.
- The TY scheme of work provides good opportunities for students to consolidate their learning. The plan also affords students with an opportunity to participate in project work and to plan and deliver mathematics lessons to students in first year. To further enhance the mathematics programme in TY, consideration could be given to a modular approach to the teaching of Mathematics.

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.