

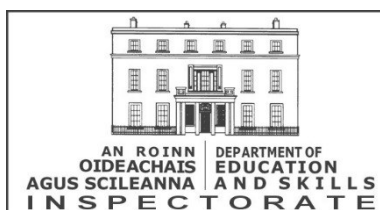
**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Coláiste Pobail Osraí  
Bóthar Urmhumhan, Cill Chainnigh  
Roll number: 70641K**

**Date of inspection: 12 May 2016**



# REPORT ON THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS

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## INFORMATION ON THE INSPECTION

<b>Dates of inspection</b>	11 & 12 May 2016
<b>Inspection activities undertaken</b> <ul style="list-style-type: none"><li>• Review of relevant documents</li><li>• Discussion with principal and teachers</li><li>• Interaction with students</li></ul>	<ul style="list-style-type: none"><li>• Observation of teaching and learning during six class periods</li><li>• Examination of students' work</li><li>• Feedback to principal and teachers</li></ul>

## MAIN FINDINGS

- 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 very good and interactions were conducted in a positive atmosphere and through the medium of Irish.
- A range of mostly very successful methodologies was used in lessons with some scope for alternative approaches in a small number of lessons.
- Overall structures and practices of the subject department are very good.
- Individual planning for lessons was uniformly very good and there were examples of individual self-reflection being used to support subject department planning.
- Students are given opportunities to participate in a significant range of co-curricular and extra-curricular activities.

## MAIN RECOMMENDATIONS

- Strategies that encourage greater opportunities for students to be more actively involved in their learning should be utilised more in some lessons.
- The mathematics department should discuss and agree strategies to increase the frequency of formative feedback on students' written work.

## INTRODUCTION

Established in 1991, Coláiste Pobail Osraí operates under the auspices of Kilkenny and Carlow Education and Training Board. The co-educational Irish medium school has a current enrolment of 209 students. The school offers the Junior Certificate, the established Leaving Certificate and a compulsory Transition (TY) programme.

## 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 uniformly very good. All lessons were conducted in a positive atmosphere. Interactions between the teachers and students were very positive and the target language was used effectively in all lessons. Teachers and their students conducted all of their discussions through the medium of Irish.
- Learning intentions were shared with students in all lessons. Very good practice was noted where teachers reviewed learning intentions either at the end of the lesson or during the lesson thereby providing a very good structure to the lesson.
- A range of mostly very effective methodologies was observed in the majority of lessons. Successful methodologies included paired activity and discovery learning. Learning was most successful when students had opportunities to be actively involved in their learning. For example, during the teaching of Algebra in a first-year lesson, a paired activity was used to allow students to discuss their answers and share procedures for their answers.
- There was a tendency in a small number of lessons for teacher-led traditional whole-class teaching to prevail. The balance between teacher-led instruction and active learning in the lesson is an area that requires attention in those lessons. Greater use of student-centred active learning approaches is recommended in such instances.
- In most lessons very good use was made of questioning strategies. In such lessons, students had opportunities to deepen their understanding of the topic and provide justification for their answers. Frequent use was made of the phrase “why”. During the teaching of trigonometry in a fifth-year lesson the teacher scaffolded the questions to allow the students to arrive at the correct conclusion rather than providing the solution to their questions.
- Very effective use was made of a student’s question as a whole-class learning experience in a sixth-year lesson. In this lesson, the teacher redirected student questions to the class group to ascertain their understanding and to allow students to justify their answer. This is a very successful strategy that encouraged all students to be active in their learning and a strategy that could be utilised more often where appropriate.
- Resources were very effectively integrated into the majority of lessons. These included white boards, tarsia puzzles and information communication technology (ICT). In each lesson the resource supported the teaching and learning of the topic. A visualiser was very effectively used to display student prior work and to use this work to develop the learning in the lesson.
- Student tablets were used to consolidate learning in one lesson and in another to ascertain misconceptions. For example, the use of interactive software *Kahoot* allowed for immediate feedback to be given on how students were performing and to identify areas for further learning.

- A review of student examination papers and copybooks indicates that teachers are monitoring students' work. However, it is recommended that teachers provide formative written feedback on a more regular basis offering guidance on areas for improvement.

#### **SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT**

- There is very good support from management for Mathematics with mostly good time provision to the subject and the deployment of additional teachers for some year groups. Commendably, management is committed to increasing time allocated to both second and third-year Mathematics in the next academic year. This is welcomed as daily contact with the subject promotes continuity in learning.
- Concurrent timetabling of Mathematics is facilitated from second year onwards and students are encouraged to remain with the highest level for as long as possible. Commendably, this results in a very good uptake of higher level at both junior and senior cycle with good attainment at this level.
- The school is involved in a significant range of continuing professional development courses and initiatives which are impacting positively on the quality of teaching and learning.
- A significant range of co-curricular and extra-curricular events is organised and offers students an opportunity to experience Mathematics outside the classroom context. Students participate in events such as Maths Week, the MATHletes Challenge and in events organised by the Irish Mathematics Teachers Association.
- Additional support is offered to students who find Mathematics challenging through the deployment of additional teachers to the subject and when necessary providing additional support on a one-to-one basis or in small groups withdrawal.

#### **PLANNING AND PREPARATION**

- The co-ordination of Mathematics is very good with the position of co-ordinator rotated among members of the department.
- Individual planning for lessons was uniformly very good, with all materials and ICT resources available to use in lessons. There was some very good evidence of individual self-reflection practices observed during the evaluation. Commendably, these reflections are then used to update the various subject schemes of work.
- Time for subject planning has been made available and minutes of meetings are very informative. Overall planning for Mathematics is very good and the plan includes both organisational details and yearly schemes of work. Subject department planning materials and resources are updated onto a shared drive where all teachers have opportunities to access subject department materials and resources.
- Schemes of work are updated based on classroom practice and individual observations and reflections. A small number of schemes will soon be updated using the agreed department template. The mathematics department in consultation with school management undertakes monitors attainment in state examinations. A more in-depth analysis of such attainment data in conjunction with other relevant diagnostic results should be used by the subject department to identify areas for improvement. Action plans should be developed to progress these areas.

- The current TY plan provides students with an opportunity to consolidate prior learning and to experience some Leaving Certificate material. Consideration should be given to updating the TY plan and allowing for the mathematics element of the programme to be taught in a modular form, allowing teachers to teach areas of specific interest to them.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal, deputy principal and subject teachers 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**

### **Part A Observations on the content of the inspection report**

We welcome with enthusiasm the recent Mathematics inspection report. We have a strong Mathematics department in the school who are constantly working on improvement and development. The school has experienced significant changes with a growing number of students in recent years. We welcome the main findings and the associated recommendations, in particular the confirmation of exemplary practice in the department.

Congratulations to the teachers and work is in progress across the school in using new teaching and learning strategies.

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

The department will be discussing the implementation of formative feedback.

It is intended that the subject department will continue progressing:

- Promoting group/pair work in classes to support the development of answers.

- Reviewing the Transition Year plan.

- Sharing and reviewing good practice and classroom strategies.

*(This is a translation of the school response submitted by the board of management.)*