

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Pobalscoil Chorca Dhuibhne,
An Daingean, Co. Kerry.**

Roll number: 915110

Date of inspection: 12 March 2014



**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	11 and 12 March 2014
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 between good and very good in the majority of lessons, with excellent practice observed in some instances.
- Effective use of active methodologies which promoted student involvement in their own learning was observed in some lessons.
- Timetabling arrangements and support by school management for Mathematics are very good.
- Subject specific terminology and the use of the target languages was very well used and integrated effectively into lessons.
- Planning for Mathematics is well advanced and mostly very good, with further scope for some development.
- Classroom management was uniformly very good and interactions between teachers and their students were very positive and conducted through the medium of Irish.

MAIN RECOMMENDATIONS

- Teachers should include more active methodologies and questioning strategies that support further student involvement in their learning.
- Subject department planning should be reviewed to ensure that schemes of work are aligned to the various syllabus strands.

INTRODUCTION

Pobalscoil Chorca Dhuibhne is a co-educational, community secondary school situated on the edge of the Gaeltacht. The school has a total enrolment of 446 students and Irish is the medium through which the school teaches. The school offers the Junior Certificate, the established Leaving Certificate, the Leaving Certificate Vocational Programme and an optional Transition Year (TY) programme.

TEACHING AND LEARNING

- The quality of teaching and learning ranged between good and very good in the majority of lessons, with excellent practice observed in some instances.
- Subject specific terminology and the target languages were very well used and integrated effectively into lessons. Classroom management was uniformly very good. Interactions between teachers and their students were very positive and conducted through the medium of Irish. Although there were opportunities during lessons for discussion about Mathematics, many students remained quiet unless questioned directly.
- In some lessons teachers stated the learning objectives while in other cases teachers provided an overview of the lesson content. In a few instances a review of learning objectives was undertaken. All teachers are encouraged to establish clear learning objectives and to take time at the end of lessons to review them.
- In a few lessons effective use was made of group work and discovery learning activities. During a lesson on area for example, students were divided into groups, given a range of different shapes and mathematical sets and were then instructed to work collaboratively to complete the assigned task. Based on the information gathered students were then in a position to deduct the surface area of the shapes provided. The success of this method was enabled by a very good activity structure and clearly established procedures.
- Traditional whole-class teaching was the dominant method used in most classes and where it was successful it included a range of effective questioning strategies. However, to enhance this approach it is recommended that all teachers increase the use of active participation of students in their learning. Time at subject department meetings could be used for sharing methods that have proved successful in teaching various topics in mathematics.
- The questioning strategies used were very good overall. To initiate conversation teachers mostly used a global question and followed this with directed questions. In most lessons there was a good balance between recall type questions and higher-order questions. In some lessons teachers frequently used statements such as “what do you think?” and “what would happen if?”. This is very good practice and encourages students to deepen their understanding of Mathematics. There is, however, further scope for some teachers to increase the use of higher-order challenging questions.
- Many teachers circulated during the lessons and gave individual feedback or identified misconceptions. A review of students’ copybooks and journals indicated that regular homework is assigned however the frequency and detail of written formative feedback varied. This is an area that requires further development and a consistent approach could be used by all members of the department.
- Many teachers are classroom based and there were very good examples of student developed materials and a range of commercially sourced mathematical displays in many

of these rooms. Continued display of subject specific materials is encouraged to support teaching and learning in the subject.

- A range of appropriate strategies are in place to assess student progress. These included in-class questioning, oral feedback and common end of term assessments. Mock-exams are also in place for examination year groups.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling arrangements are very good and include, an appropriate allocation of time in line with the syllabus requirements, concurrent timetabling of Mathematics and the deployment of additional teachers to the subject.
- Eleven teachers are deployed to teach Mathematics many of who are graduates in the subject area. One teacher is currently undertaking a Diploma in Mathematics. However, teachers who are not graduates in the area of Mathematics are encouraged to access up skilling courses such as those offered through the Department of Education and Skills.
- There are very good opportunities for students to access a level most appropriate to their abilities. On entry to the school students are assigned to mixed ability level classes and from second year are divided into levels. In so far as possible teachers remain with the same class grouping within in each cycle.
- In line with best practice teachers rotate the teaching of levels at junior cycle and an appropriate system is in place that facilitates rotation at senior cycle. These practices support capacity building within the department.
- Management is very supportive of staff and facilitates attendance at subject-specific in-service. Requests for resources are also facilitated. The school has benefited from investment in infrastructure and all classrooms have access to information communication and technology (ICT).
- Students participate in co-curricular and extra-curricular national activities such as Maths Olympiads. Participation in additional activities such as those offered through the Irish Mathematics Teachers Association and during Maths Week should also be considered.

PLANNING AND PREPARATION

- In recent years the position of coordinator has remained with one teacher. The position should be rotated among all members of the department. In this way all teachers will have the opportunity to manage and coordinate a subject department.
- Subject department meetings take place on a regular basis, and minutes of meetings are retained. The department has developed schemes of work for each year group and within these there is considerable repetition. It is recommended that the department work towards streamlining their planning processes to allow for a succinct department plan to be developed from the materials already in place.
- Schemes of work for each year group presented include monthly topics to be studied linked to various types of suggested homework and resources. It is recommended that each of the schemes of work be reviewed to include the various strands from the relevant syllabuses on which topics are based. This review should also enable closer alignment of topics between levels.
- Recently there has been an increase in the number of students participating at higher-level in junior cycle. A review of students' attainment in state examinations is undertaken and attainment is good. It is recommended that action plans be developed as a result of this

analysis and areas of good practice and areas for development should be identified by the department.

- The TY plan is based on leaving certificate material or on the consolidation of junior cycle material. It is recommended that topics other than Leaving Certificate material be included in the TY plan.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers the conclusion of the evaluation. The board of management of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.