Subject Inspection of Mathematics
REPORT

Coláiste Abbain
Adamstown, County Wexford
Roll number: 71600B

Date of inspection: 13 October 2011
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS

INFORMATION ON THE INSPECTION

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<td><strong>Inspection activities undertaken</strong></td>
<td>• Observation of teaching and learning during four class periods</td>
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MAIN FINDINGS

• The quality of teaching was of a very good standard but there was scope for teachers to use more active methodologies with students.

• The quality of students learning was good.

• Teachers accessed and effectively used a wide range of resources that supported the teaching and learning of Mathematics.

• Students have opportunities to participate in co-curricular and extracurricular mathematics activities.

• Individual and departmental planning was of a very high standard.

• Absenteeism among some students is a cause of concern.

MAIN RECOMMENDATIONS

• Teachers should continually review teaching methodologies and utilised those encountered during national in-service more frequently in lessons.

• Subject department discussions should focus on questioning strategies, styles and techniques with particular emphasis on approaches to increase higher-order questioning.
INTRODUCTION

Coláiste Abbain is a co-educational school with an enrolment of 132 mainstream students. The school offers the Junior Certificate (JC), Junior Certificate Schools Programme (JCSP), the established Leaving Certificate the Leaving Certificate Vocational Programme. The school does not provide the Transition Year programme. In addition to mainstream second level, the school provides a number of Post Leaving Certificate courses. The board of management was given an opportunity to comment in writing on the findings and recommendations of the inspection, and the response of the board will be found in the appendix to this report.

TEACHING AND LEARNING

• In all lessons observed teaching was of a very good standard. The main methodology observed was whole-class teaching which was characterised by the teacher demonstrating a technique followed by students completing the set of tasks. While this approach has merits, at times a greater variety of more active learning methodologies should be included in lessons. The inclusion of a range of methods should cater for a diverse range of student learning abilities in all classes.

• Teachers began lessons with the stating of clear learning objectives. In all lessons, good use was made of the available time and a very good pace was established. Effective use was made of students’ prior learning to advance lessons, and in Leaving Certificate classes very good links were made between junior cycle material and current material.

• Questioning of students took the form of recall-type questions. In some instances, very effective use was made of higher-order questioning that challenged students understanding and developed higher-order thinking. Teachers should strive to create opportunities to increase the range of questioning styles and techniques.

• The quality of learning was good in lessons observed and students presented as being interested about Mathematics. In all lessons students’ used appropriate subject terminology.

• A range of resources was very effectively integrated into all lessons. These included the use of a short internet clip to consolidate teaching of arithmetic and the use of differentiated worksheets during the teaching of the number system and trigonometry.

• Teachers are classroom-based and many rooms have a vast array of subject specific materials on display including students’ work and commercially sourced learning aids. In all lessons, reference to such displays supported learning. In line with best practice, JCSP keyword posters were prominent in all classrooms and these were also effectively used. Information and communication technology equipment is available in most classrooms and was effectively used to support learning.

• There is effective monitoring of students’ attainment and attendance. It was noted that some students have very poor attendance and this is affecting student learning and overall mathematics education.

• Homework was assigned in all lessons observed during the evaluation and was appropriate in terms of the quantity and relevance to the topic studied in the lesson. In some instances, some students are more diligent than others when recording homework. This requires greater care on a whole-school basis with due cognisance to the school’s homework policy.
• There is evidence that formative assessment practices are very supportive and many homework copies, subject folders and test copies were marked with written feedback and guidance from teachers.

• A range of suitable mechanisms are in place to inform parents regarding students’ attainment and progress.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

• The overall timetabling and organisation of Mathematics is very good. This includes appropriate time allocated to the subject and daily contact with Mathematics for the students. In addition, good practice in teacher deployment includes the rotation of levels among members of the department and the continuity from year to year with the same class.

• The mathematics department comprises three teachers, two of whom are subject specialists. Management should continually review the availability of teachers to ensure that there is sufficient capacity within the department to facilitate deployment to teach Mathematics to the highest level possible.

• One class is formed in each year group. A small learning-support class is concurrently timetabled with the main mathematics class. Unfortunately, daily contact with this support structure is only possible for examination-year groups and is resulting in students returning to their base Mathematics class on some days of the week. This is not an ideal support mechanism. Ongoing monitoring of this support is recommended with the aim to provide consistent support for all year groups.

• The majority of students choose to study Mathematics at ordinary or foundation level. However, higher level is also facilitated with additional lesson periods provided by the mathematics teacher.

• The mathematics department is well resourced and very well supported by management. In addition to resources retained within teachers’ classrooms, a central location for departmental resources is also provided. Management is commended for facilitating attendance at subject-specific in-service, the procurement of mathematical resources and funding membership of the Irish Mathematics Teachers Association.

• Students have access to co-curricular activities and participate in activities organised during national events such as Maths Week and school-based competitions.

PLANNING AND PREPARATION

• Effective practices and procedures have been established which is resulting in the successful organisation of the mathematics department. There are many examples of collaborative practices that have allowed for very good progress to be made within the department.

• Effective strategic planning within the mathematics department has facilitated the discussion and agreement in relation to, for example, the identification of common strategies for the teaching mathematics topics. Current strategic planning is focusing on the introduction of a Maths Laboratory, a JCSP initiative, which should enhance numeracy within the school.
• Work to date on curriculum planning is very good; however, the consolidation of existing documentation into a more manageable format should be undertaken.

• In line with best practice, the mathematics department analyse results from state examinations and compare them to the national norms.

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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Appendix

School response to the report

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report

We are very encouraged by the many positive findings in this report.

- In relation to active learning methodologies the maths department have encountered and explored a variety of methodologies at recent in-service courses. They have already been implementing many of these in the classroom and have purchased new equipment and resources. They will continue to strengthen and develop this area.

- Absenteeism among some students is certainly a concern. This issue presents challenges for the school on a variety of fronts especially as regards attendance and retention. The School Completion Programme provides funding for an Attendance and Tracking Programme in the school.

Likewise, the ‘In-Squad’ meets monthly to deal with absenteeism. This compromises of Principal, Deputy Principal, HSCL Officer, School Completion Programme Co-ordinator, Attendance Tracking and Monitoring Officer and NEWB representative. Progress in this area is slow but the school is committed to addressing as a priority.