An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

Abbey Community College
Boyle, County Roscommon
Roll number: 76072E

Date of inspection: 18 January 2012
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS

INFORMATION ON THE INSPECTION

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MAIN FINDINGS

- The majority of the mathematics teachers have yet to embrace the teaching practices promoted by Project Maths and while they are very committed and have high expectations of student attainment there is an over reliance on traditional teaching methods and on the use of the textbook as the primary teaching resource.

- There is considerable scope to ensure that the best practice in relation to resource integration, innovative questioning and teaching for understanding evident in some lessons is adopted by all members of the mathematics department.

- The quality of student learning as evidenced by the quality of the work in their copybooks and their performance in the Certificate examinations is very good.

- The mathematics department is very well resourced, is strongly supported by management and actively engages in continuing professional development.

- Subject department planning in Mathematics is well established, is supported by effective planning structures and is very well co-ordinated. Individual teacher lesson planning, however, is in need of substantial further development.

- Practices in relation to the assessment of student progress in Mathematics are very good.

MAIN RECOMMENDATIONS

- Subject department planning in Mathematics should focus on ensuring that active teaching and learning and resource integration become an integral part of how mathematics lessons are delivered.

- The mathematics department should agree, as standard practice, that the intended learning outcomes are presented to students at the outset of each lesson and that time is set aside prior to the lesson’s conclusion to determine the degree to which they have been achieved.

- As part of the reorganisation of the learning-support provision, a criterion referenced test should be included in the procedures designed to establish the mathematical capabilities of the students entering first year.
INTRODUCTION

Abbey Community College is a co-educational, non-denomination school operating under the aegis of County Roscommon Vocational Education Committee. It caters for the educational and other needs of 394 mainstream students and also provides Post-Leaving Certificate courses on a separate campus. Upon completion of the junior cycle, students can opt to take Transition Year (TY) or go straight into fifth year. At the time of the inspection there were no students in TY.

TEACHING AND LEARNING

- The quality of teaching varied from poor to very good, with good practice or better evident in the majority of lessons. In the best taught lessons, very good links were made with the students’ prior learning and the material being covered was given a very clear context. These lessons also featured very good teacher questioning, which served to deepen the students’ understanding of the material being covered and to engage them in higher-order thinking.

- Where the quality of teaching was poor, there was an over reliance on the textbook, the learning intention was unclear and many of the students were not appropriately challenged.

- Traditional teaching, involving teacher exposition at the board followed by the students working individually on assigned tasks, was the most commonly used teaching method. In all but a minority of cases, the integration of information and communication technology (ICT) and other resources espoused by Project Maths was entirely absent.

- Classroom management was, in the vast majority of cases, very good. The interactions between teachers and students were courteous and respectful and, in some instances, the students’ enthusiasm for the subject was palpable.

- Overall the quality of learning was very good. Where student learning was high the teachers had high expectations of student engagement and attainment, the lessons were pitched at a correspondingly high level and the quality of the work in the students’ copybooks was very good. The high quality of student learning is reflected in the very good performance of the students in the Certificate examinations in Mathematics.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The mathematics department is very strongly supported by the school’s senior management team. Timetabling provision is very good, the department is very well resourced and teacher professional development is encouraged and facilitated. The department should conduct an audit of its existing resources and identify any additional materials that may be required to facilitate active teaching and learning. When the opportunity presents, sufficient resources, to create one class set for each member of the department, should then be acquired.

- The school’s ICT infrastructure has undergone recent development. All of the mathematics teachers have access to a computer and a data projector in their classrooms and have received training provided in partnership with the local education centre. In a small number of lessons, this technology was used very effectively to enhance the students’ appreciation and understanding of Mathematics. This good practice should be adopted by all of the members of the department.
• The qualifications profile of the mathematics department is very good; all but one of the mathematics teachers have a specialist qualification in Mathematics and all of the department’s members attended the workshops provided as part of the national rollout of Project Maths. There is considerable scope, however, for the teachers to more fully integrate the teaching methods promoted by Project Maths into their lesson planning and delivery.

• The school’s learning-support department has recently been restructured and the arrangements for assessing the mathematical capabilities of students entering first year are under review. In conducting the review, serious consideration should be given to the use of a criterion referenced test in Mathematics as part of the transfer programme. The outcomes of the test should then inform the delivery and ongoing assessment of the first-year mathematics programme.

PLANNING AND PREPARATION

• Very good subject department planning structures are in place. The department meets regularly, engages in collaborative planning and benefits from strong and dynamic leadership.

• The mathematics department’s planning documentation is comprehensive and reflects the philosophy underpinning Project Maths. The very detailed schemes of work contained in the department plan are written in terms of learning outcomes, are very well structured and clear. The structure of the schemes of work was not reflected in the teachers’ lesson planning and no mention was made of the intended learning outcomes at the outset of the lessons.

• In almost all cases, individual lesson planning did not take into account the need to engage the students in active learning or to integrate resources other than the textbook in facilitating lesson delivery. In addition, no consideration was given to the value of conducting a review of the lesson prior to its conclusion.

• Formal assessment practices in Mathematics are very good. The members of the department collaborate effectively in creating common assessments for all formal examinations. These assessment materials are of a very high standard and model the Certificate examination in content and style. Homework is regularly assigned and corrected, although the amount of time spent correcting homework at the board should be kept under review. The teachers approach to recording and reporting student attendance and performance in class and formal tests is very good.

• Student performance in the Certificate examinations is analysed annually by a member of the mathematics department. The outcomes of the analysis are submitted to the school’s board of management and are discussed at departmental meetings. In order that maximum benefit accrues from this process, the department should develop action plans to address the weaknesses and build on the strengths identified by the analysis. These should be submitted, with the analysis, to the board.
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
Area 1  Observations on the content of the inspection report

The board are of the view that the report is not sufficiently sensitive to the transition in curriculum currently underway in this subject especially when viewed in the context of the state examination results being achieved by students in this school.

Area 2  Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection.

- A review of individual teacher plans is currently underway to ensure that the Project Maths methodologies are integrated into these plans and lessons.
- Each teacher in the Maths Department will ensure that as standard practice that the intended learning outcomes are presented to students at the outset of each lesson and that time is set aside prior to the lesson conclusion to determine the degree to which they have been achieved.
- The Maths Dept. in consultation with the Learning Support Dept have started to produce a Criterion Referenced Test. This will be ready for September 2012.
- Class sets of resources for each Maths teacher are now available.