An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection of Mathematics

REPORT

Our Lady’s Secondary School
Belmullet, County Mayo
Roll number: 64570E

Date of inspection: 20 January 2012
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS

INFORMATION ON THE INSPECTION

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MAIN FINDINGS

- The quality of teaching and learning in Mathematics was mixed. While there were some examples of outstanding practice, featuring excellent resource integration and formative assessment, there were also cases where the lessons lacked focus and where assessment practices were poor.
- The mathematics department is very well resourced and the senior management team are committed to promoting and supporting the development of Mathematics.
- Provision for students with special educational needs or in need of additional support in Mathematics is very good.
- Subject department planning in Mathematics is well established. Planning for the integration of resources in lesson delivery is, in the majority of cases, very good.
- There is a significant fall in the number of students taking higher-level Mathematics in the Leaving Certificate compared to the uptake in the Junior Certificate.

MAIN RECOMMENDATIONS

- The very good practice in relation to lesson preparation, the integration of resources in lesson delivery and the use of assessment for learning evident in most lessons should be adopted by all members of the mathematics department.
- The scheduling of mathematics classes in fifth year should be reviewed to enable higher-level and ordinary-level students to be taught in discrete groups.
- The analysis of the outcomes of the certificate examinations should be used to inform the development of action plans, with clear targets, to address identified weaknesses.
- The arrangements for determining the mathematical capabilities of students transferring into first year should be bolstered through the use of a criterion referenced test. The outcomes of this test should be used to decide how the first-year mathematics programme is designed.
INTRODUCTION

Our Lady’s Secondary School is a co-educational school operating under the trusteeship of Ceist. It has an enrolment of 263 students at second level and provides post-Leaving Certificate courses for an additional 26 students. Its post-primary curriculum which includes a Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP) and the Leaving Certificate Applied (LCA) is designed to meet the educational needs of all its students, many of whom come from areas of significant disadvantage.

TEACHING AND LEARNING

- The quality of teaching varied from satisfactory to excellent. In the best cases, the lessons had a very good structure, proceeded at an appropriate pace and presented all of the students with an appropriate level of challenge. Resources designed to facilitate active teaching and learning and to develop the students’ understanding of the lesson content were seamlessly integrated into the lessons. There was a very good balance of teacher-led instruction and student-centred activity.

- In the lessons that were less effective, the lessons’ objectives were unclear and the structure of the lessons did not provide the students with opportunities to reflect upon their learning. The pace of these lessons was pedestrian and not all of the students were appropriately challenged.

- The vast majority of the teachers are committed to the approach to teaching and learning espoused by Project Maths. Where there were deficiencies in lesson delivery they arose from a lack of focus in implementing these approaches.

- The atmosphere in all of the lessons was of the highest quality. The students were very well behaved and collaborated with the teachers and their classmates in creating an open and enjoyable learning environment.

- There was significant variation in the effectiveness of teacher questioning and in the quality of the written and verbal feedback provided to the students. In the best cases, the students’ homework copybooks were in excellent condition and featured corrections, amendments and insightful teacher comments. Where matters were less satisfactory, the students’ copybooks were largely unsupervised and the students’ compliance in relation homework completion was poor.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- The school’s senior management team is very supportive of the development and promotion of Mathematics in the school. Timetabling provision for Mathematics is very good and the scheduling of classes from the end of first year is designed to allow students to follow higher level for as long as possible.

- The arrangement of classes in fifth year is in need of review. The prevailing situation where the higher-level mathematics students are integrated into an ordinary-level class is unsatisfactory.

- The mathematics department is very well resourced. All of the mathematics teachers have access to a laptop and data projector and many lessons featured the integration of these and other resources which served to deepen the students’ understanding and appreciation of the lesson content.
A very good homework policy is in place. To reflect the particular requirements of Mathematics, the policy should be amended to specify the need for mathematics homework to provide the students with opportunities for independent and collaborative learning, and to engage the students in problem solving and research.

The learning-support department works very closely with management and the mathematics department to ensure that students with special educational needs or requiring additional support in Mathematics are identified and are adequately catered for. In order to enhance the existing very good practice, a criterion referenced test should be included in the procedures used to determine the mathematical capabilities of the incoming first years. The analysis of the outcomes of this test should then inform the content, structure and assessment of the first-year mathematics programme.

**Planning and Preparation**

- Subject department planning is an integral part of the mathematics department’s activities. Regular formal planning meetings are held and it is evident that a great deal of collaborative informal planning also takes place. The culture of collaborative planning is evident in the subject department plan, particularly in the extensive schemes of work contained therein.

- The existing subject department plan should be reviewed to align it more closely with the Project Maths syllabuses. The schemes of work should be rewritten in terms of learning outcomes and should include the preferred teaching methods to be employed in lesson delivery and the agreed approaches to be followed when teaching the core mathematical operations.

- A separate plan for Mathematics in TY is in place. The plan reflects the principles underlying TY and contains a number of innovative elements. Given the introduction of Project Maths, the plan should be redeveloped. The plan which emerges should contain a core of material designed to underpin and develop the students’ mathematical skill set, supplemented by a number of optional topics reflecting the teachers’ interests and expertise.

- The quality of the teachers’ individual lesson planning was mixed. In the majority of cases, the planning ensured that the lessons had a clear focus, featured very good resource integration and were delivered in a manner which met the needs and abilities of all of the students. Where the planning was poor, the lessons lacked focus and were far less productive than good practice would dictate.

- Analysis of student performance in the state examinations takes place annually. The uptake of higher-level Mathematics in the Junior Certificate examination is very good. However, the number of students who decide not to take higher level in the Leaving Certificate is very high and action plans to address this should be put in place. Details of future analyses together with the targets for improvement and the action plans designed to meet these targets should be submitted to the school’s board of management each year.
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 on the findings and recommendations of the report; the board chose to accept the report without response.

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