

**An Roinn Oideachais agus Scileanna**

**Department of Education and Skills**

**Subject Inspection of Mathematics  
REPORT**

**Ballymahon Vocational School  
Ballymahon, County Longford  
Roll number: 71690F**

**Date of inspection: 1 March 2013**



**A N R O I N N | D E P A R T M E N T O F  
O I D E A C H A I S | E D U C A T I O N  
A G U S S C I L E A N N A | A N D S K I L L S**

**REPORT**  
**ON**  
**THE QUALITY OF LEARNING AND TEACHING IN MATHEMATICS**

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**INFORMATION ON THE INSPECTION**

<b>Dates of inspection</b>	28 <sup>th</sup> February and 1 <sup>st</sup> March 2013
<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 five 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 in the lessons observed was good to very good and included some examples of exemplary practice.
- Students' contributions indicated that good quality learning was taking place and students participated and engaged well in all classes.
- Assessment practices are very good.
- The school's policy in assigning students to classes is very effective in encouraging students to take higher-level Mathematics in the certificate examinations.
- Whole-school support for Mathematics is very good.
- The mathematics teachers have engaged very well with planning for the subject.

**MAIN RECOMMENDATIONS**

- The *Project Maths* approach that was evident in three out of the five lessons observed should be extended to all lessons.
  - Meeting time should be set aside to discuss how problem solving can be integrated into everyday classroom practice and how cross-topic links can be identified and exploited in teaching the subject.
  - Teachers, who are familiar with using the teaching and learning plans provided by the *Project Maths* development team, should share this expertise through peer observation.
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## INTRODUCTION

Ballymahon Vocational School is under the patronage of County Longford Vocational Education Committee (VEC). It has a current enrolment of 200 boys and 119 girls. The school participates in Delivering Equality of Opportunity in Schools (DEIS), the Department of Education and Skills action plan for educational inclusion and offers all the Junior Certificate and the Leaving Certificate programmes including the Junior Certificate School Programme (JCSP) and the Leaving Certificate Applied (LCA) programme. Transition Year (TY) is currently not available.

## TEACHING AND LEARNING

- The quality of teaching and learning observed in the evaluation was good to very good and included some examples of exemplary practice. All lessons were well planned and progressed at a good pace. All explanations and instructions were clear. The learning objectives of each lesson were shared with the students at the outset and in most lessons their achievement was checked at the end. This good practice should be extended to all lessons.
- There was a very strong *Project Maths* approach taken in three out of the five lessons evaluated. This was evident in the activities and materials chosen, the teachers' questioning strategies, the focus on students' understanding and the levels of student activity. In these lessons the students were encouraged to think for themselves also. It was evident that the teaching and learning plans provided by the *Project Maths* development team had positively influenced classroom practice in these lessons. A traditional approach, where a number of teacher examples were worked through on the board and students completed very similar exercises, was taken in the other two lessons. It is strongly recommended that *Project Maths* strategies be extended to all lessons.
- The variety of methodologies used included teacher led instruction and active learning through group and pair work. In order to include a greater variety of learning approaches for students it is recommended that the use of group work with a focus on facilitating investigation and discovery be extended.
- In some lessons the lesson material was linked to a number of relevant syllabus topics. For example, one lesson linked trigonometry, slope and ratio. This is excellent practice and is an example of where the concepts were taught in their appropriate mathematical context. This approach also reflected the style of *Project Maths* questions in the certificate examinations. It is very important that the subject is taught in this way and that students gain extensive experience of this nature. Therefore, further use of this integrated approach is recommended.
- In most lessons teachers gave very good attention to subject specific literacy. Best practice in this regard was noted when the meaning of the words was exploited in explanations.
- The assessment practices used are very good. There are well structured routines around the checking, correcting and giving of homework. Teachers assess students' progress very well through oral questioning and observation. Laminate boards are used in some lessons to establish the level of learning. This is all very good practice.
- Students' contributions indicated that good quality learning was taking place. Students participated and engaged well in all classes. Teachers related new material to prior learning where appropriate and made Mathematics fun for students.

- The atmosphere in each of the classrooms visited encouraged confidence with the subject. The relationships between students and their teachers were warm and respectful.

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

- Timetable provision and arrangements for level choice for Mathematics are very good. There is very good provision of resources and information and communications technology (ICT) for the subject.
- The majority of students are assigned to mixed-ability classes in first year. There is one smaller class group with students who require additional assistance. Levels are set from second year onwards. The school's policy in assigning students to classes is very effective in encouraging students to take higher-level Mathematics in the certificate examinations.
- School management actively encourages teachers to engage in continuing professional development (CPD), facilitates attendance at subject specific in-service training and organises whole-school CPD events.

#### **PLANNING AND PREPARATION**

- Planning time is provided once per term and there is much informal collaboration and sharing of resources between members of the mathematics department. The minutes of mathematics department meetings indicate that good discussion about organisational issues takes place. Meeting time is also used for promoting the school's literacy and numeracy strategy, which is valuable. It is recommended that some meeting time be set aside to discuss how problem solving can be integrated into everyday classroom practice and how cross-topic links can be identified and exploited in teaching the subject. In addition, teachers, who are familiar with using the teaching and learning plans provided by the *Project Maths* development team, should share this expertise. It is recommended that this be done through peer observation.
  - In addition to very good programmes of work, the mathematics plan comprises a very comprehensive action plan for the subject and evidence of teacher self-evaluation and review. The teaching and learning plans provided by the *Project Maths* development team and the syllabuses are used appropriately in planning for the teaching of Mathematics in the school. All of this is very good practice.
  - The mathematics plan contains a comprehensive analysis of the students' achievements in the certificate examinations in comparison with national norms and in line with good practice this is used to inform planning. It is recommended that the students' achievements be also compared to the data available from intake assessments to provide an alternative perspective.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation. The board of management 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

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

Introduce peer observations in particular with Project Maths

Cross topic links to be explored.