

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Mathematics
REPORT**

**Saint Brigid's Vocational School
Loughrea, County Galway
Roll number: 71280J**

Date of inspection: 4 April 2014



**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

INFORMATION ON THE INSPECTION

Dates of inspection	3 and 4 April 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 six class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The standard of teaching and learning ranged from good to very good in the lessons observed.
- Teachers set high expectations for students' learning and are skilled in the use of a range of assessment strategies.
- There is very good timetabling provision for senior-cycle Mathematics but the allocation for first year falls short of the recommended one lesson per day.
- Some rotation takes place in the teaching of different levels with scope for further rotation and the development of greater consistency of practice from year to year.
- Teachers of Mathematics are well qualified and are well supported by management through the facilitation of a range of continuing professional development (CPD) opportunities.
- Teachers have engaged well with subject planning, however, there is scope for greater consistency of practice in relation to planning across different year groups and different levels of study.

MAIN RECOMMENDATIONS

- Collaborative learning should be more widely utilised in lessons.
 - The amount of time allocated to the teaching of Mathematics in first year should be increased by one period per week.
 - Teachers and management should agree on a policy in relation to rotation in the teaching of different levels.
 - Teachers should agree on a common template for the further development of schemes of work.
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INTRODUCTION

St Brigid's Vocational School is a co-educational school under the auspices of the Galway Roscommon Education and Training Board (ETB). It is one of two second-level schools in Loughrea. The programmes offered are the Junior Certificate, an optional Transition Year (TY), the Leaving Certificate Vocational Programme (LCVP) and the established Leaving Certificate. The school also offers a range of adult education and Post Leaving Certificate (PLC) courses.

TEACHING AND LEARNING

- The standard of teaching and learning ranged from good to very good in the lessons observed. Teachers demonstrated high levels of subject expertise and were supportive and encouraging of students' efforts.
- Teachers set high expectations for students' learning. Questioning was used to good effect in all lessons to assess students' learning and to stimulate discussion in some cases. There was good integration of higher-order and probing style questions that required students to expand on their answers and to explain their reasoning. The use of targeted questioning ensured that questions were well distributed across the ability range.
- In some lessons teachers created opportunities for students to learn independently and in collaboration with other students while the teacher assumed the role of learning facilitator. In other lessons there was scope for the inclusion of more opportunities for students to collaborate through the use of group exercises or group discussion.
- All lessons included the use of resources to support teaching and learning. These resources were of a consistently high quality and helped to facilitate smooth transitions between classroom activities. The use of information and communication technology (ICT) was a feature of some lessons and provided good support to teachers in their presentations.
- All classrooms featured good displays of relevant resources, some of which has been produced by students.
- There was good use of topic-specific terminology in all lessons and appropriate mathematical routines were used consistently.
- An examination of students' journals indicates that homework is assigned regularly and students' written work was well presented in the sample of copybooks reviewed. Most of the lessons observed included the correction of homework and some examples of very high quality feedback to students on the accuracy and presentation of their work were noted.
- Classroom management was characterised by very good student-teacher relations and students were co-operative and attentive in most cases. Teachers circulated to observe students' work and took time to provide assistance to individual students. In some instances, this allowed teachers to identify misconceptions and to address them at whole-class level. This is good practice.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Timetabling arrangements for senior-cycle Mathematics are very good. The current provision of four periods per week in first year falls short of the one period per day recommended in Circular 0058/2011 and Circular 0025/2012. It is therefore

recommended that this provision be increased. Second and third-year provision already falls in line with this recommendation.

- First-year students are taught in a mixed-ability setting in line with best practice. From second year onwards, students are taught in level-specific classes where concurrent timetabling facilitates the movement of students between levels. Continuity of instruction is a priority in the forming of classes at senior cycle.
- Some rotation takes place in the assignment of teachers to the teaching of different levels. A policy around the rotation of levels should be agreed by teachers and management in order to ensure consistency of practice from year to year and to ensure that all teachers are facilitated in gaining a wide range of experience across different levels.
- The staff of the mathematics department have a very good qualifications profile. All teachers have attended the workshops provided as part of the national roll out of *Project Maths* and *Project Maths* facilitators have been invited to the school to provide further input on *Project Maths* methodologies. Some teachers are also currently undertaking relevant post-graduate study.
- Appropriate systems are in place to identify students who find Mathematics particularly challenging and these students are provided with supports including one-to-one withdrawal and the provision of smaller classes. It is recommended that team teaching be considered as an alternative and more inclusive form of support for these students.
- Teachers of Mathematics have access to a significant range of resources, including ICT resources, to support teaching and learning. All classrooms are equipped with a data projector and subject-specific software is available for use in lessons. A range of additional resources has also been purchased to support the teaching and learning methodologies promoted by *Project Maths*.

PLANNING AND PREPARATION

- The subject-planning folder contains teaching plans of varying levels of quality and detail. It is recommended that teachers of Mathematics, in conjunction with management, agree on a common format for the further development of schemes of work. Ideally, schemes of work should contain detailed learning outcomes for each year group and for each level. These learning outcomes should be linked to associated methodologies, resources and assessment modes.
 - The mathematics department is co-ordinated on a rotating basis in line with best practice. Meetings are held frequently throughout the year and the minutes of these meetings are retained in the subject-planning folder. It is clear from the minutes reviewed that discussions have a mainly operational focus. It is recommended that time be set aside in future meetings for the discussion of teaching and learning and the development of a common approach curricular planning.
 - An analysis of results in the certificate examinations is carried out annually by teachers. This analysis is accompanied by discussion at subject department level. Details of these discussions should be documented along with concise action plans to address any areas of concern and to build on good practices that are already in place.
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The draft findings and recommendations arising out of this evaluation were discussed with the principal 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.

Published June 2014

Appendix

SCHOOL RESPONSE TO THE REPORT

Submitted by the Board of Management

Area 1 Observations on the content of the inspection report

The Board of Management welcomes the main findings of the report and will use its recommendations to guide the future development of Mathematics in the school. The Board of Management appreciates the hard work, commitment and enthusiasm of the members of the Mathematics department in their promotion of teaching and learning as a positive and rewarding experience.

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

The Board of Management welcomes the recommendations of the report and the time allocated to first year mathematics will be increased by one period for the school year 2014/15.