

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Mathematics
REPORT

De La Salle College,
Newtown, County Waterford
Roll number: 649500

Date of inspection: 7 February 2012



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	6 and 7 February 2012
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 ten class periods• Examination of students' work• Feedback to principal and teachers

MAIN FINDINGS

- The quality of teaching and learning observed ranged from fair to very good, with some examples of very good innovative practices.
- Individual planning for the subject was mostly good or very good.
- Overall time allocated to Mathematics is good, with the exception of the provision for Junior Certificate Schools Programme (JCSP) Mathematics.
- In almost all lessons, the available resources were used well. In some lessons, information and communication technology (ICT) was an effective learning tool; however in others the use of ICT needs further development.
- Classroom management was very good. Teachers have developed good rapport with their students. Teachers were affirming, encouraging and supportive of students' efforts.

MAIN RECOMMENDATIONS

- Fundamental weaknesses in teacher deployment to Mathematics should be addressed as a matter of priority, in particular the deficit of registered qualified teachers of Mathematics.
 - Teachers should avail of the opportunity at mathematics planning meetings to share best practice in the use of teaching strategies and questioning styles that challenge and encourage greater student engagement in their own learning.
 - Teachers should ensure that questioning strategies that develop students' thinking skills become a regular feature in all lessons and should provide students with more opportunities to verbalise their skills, competencies and understanding of Mathematics.
 - Learning opportunities that challenge students should become a feature in all lessons.
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INTRODUCTION

De La Salle College is a voluntary secondary school with a current enrolment of 1174 students. The school provides the Junior Certificate, the Junior Certificate School Programme (JCSP), an optional Transition Year programme (TY), the Leaving Certificate Applied Programme (LCA) and the established Leaving Certificate.

TEACHING AND LEARNING

- The quality of teaching and learning observed ranged from fair to very good. Very good lessons were characterised by strategies that were engaging and offered students opportunities to participate in their own learning.
- In effective lessons, innovative methodologies such as discovery learning and higher-order questioning strategies allowed students to deepen their understanding and challenged their competencies. However, in some instances, where a more teacher-led traditional approach was adopted, lessons were not effective as students were insufficiently challenged and in some instances became passive during the lesson. Planning meetings should include the discussion and development of strategies for the teaching of common topics, and the sharing of best practice in teaching strategies and questioning styles.
- In some lessons, teachers effectively encouraged students to attempt mathematical problems independently and provided prompts at key stages to allow students progress and come to a determination. This approach allows students to develop skills to think through a mathematical idea and to practise the competencies necessary to interpret questions. This practice should be extended to all lessons.
- In almost all lessons, the available resources were used well. In some lessons, information and communication technology (ICT) was an effective learning tool; however in others the use of ICT needs further development. Teacher-developed materials should be further refined as there is a need to provide greater differentiation that will sufficiently challenge students. Such practices should allow students an opportunity to work at a pace appropriate to their level.
- Student participation and engagement with lessons varied. In many lessons, students were positive about their learning and demonstrated very good mathematics competencies. However, there were some students, particularly in lower ability groupings, who were disengaged.
- In some lessons, clear learning objectives were shared with students at the beginning of the lesson and revisited at the end. This practice should be extended to all lessons, as it allows students to participate more fully in and reflect on their own learning.
- Classroom management was very good. Teachers have developed good rapport with their students. Teachers were affirming, encouraging and supportive of students' efforts. Homework assigned in lessons was in line with department policy. However, the regular monitoring and feedback procedures to students varied from class to class. It is recommended that mathematics teachers review their homework policy and include common strategies for the annotation of student work.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Overall the time allocated to Mathematics is good. However, time allocated to JCSP Mathematics is not adequate and should be increased.
- There is a discrete JCSP class group in each year of junior cycle, timetabled independently of the remaining junior cycle students. It can happen therefore that JCSP students are taught in mixed-level settings whereas all others are assigned to level-specific classes. It is recommended that JCSP classes be co-timetabled with other classes for Mathematics so that JCSP students can also access a level commensurate with their ability.
- In the past three years, more than twenty-one teachers have been deployed to teach Mathematics. This year eighteen teachers are timetabled for Mathematics, a significant number of whom are neither qualified nor registered to teach the subject. This pattern of deployment does not support the best delivery of the mathematics curriculum. Practices and procedures in relation to the assignment of teachers to Mathematics should be prioritised for review. This review should focus on establishing a core team of mathematics teachers, each of whom is allocated significant contact time with the subject. This would also begin to address the need to build capacity within the department.
- School management facilitates attendance at subject-specific in-service and provides an annual budget for Mathematics. Teachers should collaborate to identify a range of resources that will support teaching and learning in the classroom. Furthermore, a central storage area to retain subject-specific resources should be created.
- Opportunities for students to access and participate in co-curricular and extracurricular Mathematics activities have lapsed in recent years. To promote Mathematics within the school, students should be encouraged to participate in Mathematics competitions such as those arranged through the Irish Mathematics Teachers Association and Math Week.

PLANNING AND PREPARATION

- Practices and procedures in relation to the overall organisation of the mathematics department are poor. Owing to the large number of teachers and, in the case of many, their relatively limited contact with Mathematics within the school, the department does not operate effectively. This is impacting negatively on many aspects of planning for Mathematics and causing a lack of shared vision for the subject.
- It is recommended that the mathematics department agree the duties associated with the position of subject coordinator. This position should also be rotated among members of the department for an agreed timeframe.
- Planning for Mathematics requires significant development. For example collaborative planning should be undertaken to develop one succinct plan for the continuum of learning for students in Mathematics. This plan should include timeframes for topics and subtopics which are accompanied by learning outcomes to be achieved by students and the linking of resources and methodologies to these outcomes. The electronic retention of all subject documentation and associated material should be undertaken for ease of access for all members of the department.
- The uptake of levels in state examinations is good and student attainment at Leaving Certificate higher level is also good. However, regular and on-going monitoring of all

student performance should identify and support subject review and planning to address areas of concern that may arise from such an analysis.

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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