

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Technical Graphics and Design
and Communication Graphics
REPORT**

**St Columba's College
Stranorlar, Co. Donegal
Roll number: 62861F**

Date of inspection: 13 October 2011



**AN ROINN | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS**

REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN TECHNICAL GRAPHICS AND
DESIGN AND COMMUNICATION GRAPHICS

INFORMATION ON THE INSPECTION

Date of inspection	13 October 2011
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

- In all the lessons observed the quality of teaching and learning was good.
- There were variations found in the amount of homework being allocated and in the monitoring of students' portfolio work.
- The subject department has good whole-school support through timetabling allocation and the provision of resources and equipment.
- Teachers have engaged in continuing professional development (CPD).
- Good structures are in place to develop subject department planning. Preparation by the teachers for individual lessons was of a high quality.
- Students were well supported in their learning through the use of information and communication technology (ICT), the whiteboard and three-dimensional models.

MAIN RECOMMENDATIONS

- Homework should be allocated more regularly and students should receive more developmental comments on their work.
 - A clear transparent system should be developed to integrate the marks awarded to students from continuous assessment of their portfolio work and graphics assignments, with results awarded for end-of-term examinations.
 - The schemes of work need further development to include details for each topic on student learning outcomes, teaching methodologies, teaching resources and methods of assessment.
 - As part of the planning process long-term goals and priorities should be identified to further develop the subjects in the school.
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INTRODUCTION

St Columba's College currently caters for 861 students: 432 boys and 429 girls. Technical Graphics (TG) is offered as an optional subject in the Junior Certificate programme and DCG is offered as an optional subject in both the Leaving Certificate programme and the Leaving Certificate Vocational Programme (LCVP). The Transition Year (TY) programme is optional in the school and all TY students complete a graphics module.

TEACHING AND LEARNING

- The lessons observed had clear aims and these were shared orally with students at the outset. Best practice saw the proposed learning outcomes displayed on the whiteboard and revisited at the end of the lesson to assist reflection on the progress made.
- In all the lessons observed, teaching and learning was of a high quality.
- Questioning techniques were used effectively to revise previous learning and to determine students' level of understanding of the material. A combination of global and individual questions encouraged participation in these question-and-answer sessions. Students were well affirmed and showed great confidence during these interactions.
- Good routines were evident at the start and end of lessons. Students were quick to get organised for their lessons and to tidy away at the end.
- The terminology associated with the subjects was well integrated into lessons.
- Teachers used ICT well to link the content of the lesson to students' everyday experiences. The use of the *SolidWorks* software was very well demonstrated in senior-cycle lessons observed.
- In one TG lesson observed, students were well supported by the use of the whiteboard. The solution to an exercise was built up incrementally with great care taken by the teacher to ensure that students followed the steps involved.
- At the time of the inspection Leaving Certificate students were engaged in the completion of the DCG project work associated with the certificate examinations. Teachers' organisation and management of this complex task is highly commended.
- A variety of models and teaching aids was incorporated into lessons observed. These resources were highly suitable for the lesson content and greatly assisted students with their understanding of specific concepts such as scaled drawings and the development of surfaces.
- The TY module places a strong emphasis on the development of freehand sketching and rendering techniques and there was also evidence of these skills being developed with other year groups. This is commended as sketching is an important element of the DCG syllabus.
- From an examination of students' journals it was clear that the amount of homework allocated by teachers varies considerably. It is recommended that regular homework be assigned to include full drawing problems, worksheets and sketching exercises.
- There were good levels of work contained in the portfolios examined. The monitoring of this work varied considerably across the year groups. It is recommended that a regular and consistent approach to the monitoring of portfolios be established with more

feedback provided to students, in the form of written developmental comments, on their drawing sheets.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Incoming first-year students choose their option subjects from set bands of subjects. The switching of an option subject is possible up to the mid-term break in October. Students moving to senior cycle choose their optional subjects from a list of available subjects. Option bands are then designed based on students' preferences. These practices are commendable as they prioritise the needs of students.
- The subject department is well resourced and is provided with an annual budget.
- Lessons are well distributed across the week with sufficient time allocated to the subjects for the completion of the respective syllabuses.
- The subject department has availed of subject-specific training provided by the Technology Subjects Support Service (t4). Three of the teachers have attended additional training on the use of the *SolidWorks* software. The school has also recently held a number of whole-school professional development events. This in-career development of the teaching team is commended.
- The rooms available for the teaching and learning of the subject have some very good displays of student work. The school corridor has also been used to display students' work and this helps to raise the profile of the subjects amongst the whole-school population.

PLANNING AND PREPARATION

- The role of subject coordinator is shared, with one teacher responsible for TG and another responsible for DCG. Planning is well progressed with separate planning folders developed for the two subjects.
- The schemes of work within the planning folders are content focused and need restructuring. It is recommended that they be developed to include, for each topic, student learning outcomes, teaching resources available, details on effective teaching methodologies and proposed methods of assessment.
- It is recommended that a common practice be developed regarding the integration of marks from the assessment of portfolios and assignments, with marks awarded for Christmas and summer examinations. Students should be kept aware of the marks they have accumulated as the year progresses. Such a system rewards sustained effort throughout the year.
- During the first year of the Leaving Certificate programme, students are assigned a project which includes freehand sketching and the use of *SolidWorks*. This is very good practice. To further build on this good practice the subject department is urged to develop this task to more closely reflect the requirements set down by the State Examinations Commission (SEC), for the DCG assignment.
- To further improve on subject planning, it is recommended that long term goals be identified for the future development of the subjects within the school. Priorities could include: increasing the numbers of female students opting to study DCG and increasing

student uptake at higher level. Once identified, time-bound strategies should be put in place to help achieve these goals.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and the 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; a response was not received from the board.