

An Roinn Oideachais agus Scileanna

Department of Education and Skills

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

**Rosses Community School
Dungloe, Co. Donegal
Roll number: 91407T**

Date of inspection: 12 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

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| Date of inspection | 12 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 five class periods• Examination of students' work• Feedback to principal and teachers |

MAIN FINDINGS

- A good standard of teaching and learning was observed during the course of the evaluation.
- The subject department is well resourced.
- There was a good rapport evident between the students and teachers.
- The teachers have engaged in continuing professional development (CPD).
- The arrangements in place for the selection of subjects for junior and senior cycle are good with students well supported at times of subject choice.
- Across the year groups, there were variations in the amount of homework being allocated and in the monitoring of students' portfolio work.

MAIN RECOMMENDATIONS

- Homework in the form of full drawing problems, worksheets and sketching exercises should be given on a more regular basis to all year groups.
- As part of continuous assessment, a proportion of the marks awarded to students at Christmas and summer should be derived from their portfolio work. These portfolios should be monitored more regularly with written developmental feedback provided to students on their drawing sheets.
- A Design and Communication Graphics (DCG) module should form part of the Transition Year (TY) programme.
- Schemes of work should be modified to include details on the proposed learning outcomes, the teaching methodologies, the resources available and the proposed methods of assessment for each topic.

INTRODUCTION

Rosses Community School participates in the Delivering Equality of Opportunity in Schools (DEIS) action plan. It currently caters for 503 students: 271 boys and 232 girls. Technical Graphics (TG) is offered as an optional subject in the Junior Certificate (JC) programme and DCG is offered as an optional subject in both the Leaving Certificate (LC) and the Leaving Certificate Vocational Programme (LCVP). The TY programme is optional in the school and does not contain a technical drawing module.

TEACHING AND LEARNING

- All lessons observed had clear learning intentions and these were communicated to students at the outset. Teachers are encouraged to write the intended learning outcomes on the chalkboard where they can be revisited throughout the lesson and used to assess and reinforce learning.
- Students had established routines with regard to entering the room and setting up for their drawing lessons. This resulted in very little teaching time being lost.
- Questioning techniques were good with teachers using a combination of global and individual questions to aid the recall process and to reinforce and advance learning.
- Teachers' explanations were appropriately paced and the language of instruction used was pitched at a suitable level. Subject-specific terminology was well integrated through the lessons. Teachers are advised to write such terminology on the chalkboard as a support for literacy.
- The chalkboard, which is still central to the teaching of graphics, was used effectively in some lessons observed. The step-by-step construction of the drawing, the use of coloured chalk to highlight different line types and the modelling of drawing methods, all contributed greatly to the learning experience of students.
- In the main, information and communications technology (ICT) was used in lessons to present questions and to display solutions to these questions. Teachers should seek more innovative ways to use this technology to support student learning. For example, the modelling of solutions to questions using *SolidWorks* and the display of digital photographs to link class work to real life objects would greatly improve the presentation of lessons.
- The subject teachers should create more opportunities to promote sketching and the development of freehand drawing techniques as they are an important element of the DCG syllabus. The use of freehand drawings as a quick means of deciding on sheet layout, or as an aid to the visualisation of a solution, should be encouraged from the beginning of first year.
- From an examination of students' journals it was evident that the frequency of homework being assigned to students varies across the year groups. It is recommended that homework, in the form of full drawing problems, worksheets and sketching exercises be assigned to students on a regular basis.
- It is recommended that a proportion of the marks awarded for end-of-term tests be based on students' portfolio work, thereby giving students credit for the work carried out during the term and providing an incentive for students to maintain their portfolios.

- A sample of students' portfolio work was examined and good levels of work were evident. There was limited written feedback given on this work. It is recommended that there be an increase in the quantity and quality of written developmental feedback given on students' drawing sheets.
- Teacher movement around the classroom ensured that students were on task and engaged in lesson activities. Individual support and direction was provided by teachers as students completed their assigned tasks.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Students are given an open choice of optional subjects for both junior and senior cycles with subject bands generated based on students' choices. This is good practice.
- It is recommended that a DCG module be introduced as part of the TY programme. Such a module would provide continuity for some students and an opportunity to experience the subject for others. It is suggested that when compiling the module, a strong emphasis should be placed on *SolidWorks*, freehand sketching and basic drawing skills.
- Students are well supported when making their subject choices. In addition to well-presented printed documentation from the school, information and advice is provided by subject teachers and the guidance counsellor.
- Time provision for the subjects is good with class periods well distributed across the week.
- Teachers have availed of subject-specific training provided by the Technology Subjects Support Service (t4). This in-career development of the teaching team is commended.
- Outside one of the classrooms, the display of students' work helps to raise the profile of the subjects among the whole school cohort. To further improve on this good work, consideration should be given to the display of a full DCG project at both higher and ordinary level.
- The room used for the teaching of DCG contains sixteen computer workstations for the teaching and learning of *SolidWorks*. The school should actively seek to provide more workstations to enable larger groups of students to learn *SolidWorks* whilst still having access to individual computers.

PLANNING AND PREPARATION

- A subject coordinator is in place with formal planning meetings held once per term. Minutes of the most recent meetings are retained in the planning folder.
- To improve the schemes of work within the subject plans, it is recommended that each topic be examined to establish the exact learning outcomes to be achieved by students from that unit of study. The methodologies used to deliver the topic, the resources needed and the proposed method of assessment should also be included.
- Whilst reviewing the programme of work for fifth-year students, the subject department should consider the introduction of a project assignment in line with the format set down for the Leaving Certificate DCG assignment.

- The subject department should develop a long-term planning section within the subject plan. Priorities should include the development of a module for TY and increasing student uptake at higher level.

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.