

An Roinn Oideachais agus Scileanna

Department of Education and Skills

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

**Carrick Vocational School
Carrick, Co. Donegal
Roll number: 71150T**

Date of inspection: 5 May 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 | 5 May 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 four class periods• Examination of students' work• Feedback to principal and teachers |

MAIN FINDINGS

- In all lessons observed, the teaching and learning was of a high standard.
- Classroom management was effective and was conducive to an orderly and participative learning environment. Classroom discipline was supported by appropriate lesson content and pacing and by constant movement around the classroom by the teachers.
- There is continuous assessment of students' portfolio work in Technical Graphics (TG). A proportion of marks, from such continuous assessment, are allocated towards students' formal test results.
- Homework is assigned and monitored regularly by the teachers.
- Subject planning is well progressed with strong evidence of collaboration between the subject teachers. Planning for the individual lessons observed during the evaluation was good.
- A Design and Communication Graphics (DCG) class has not been formed, at senior cycle, for the past three years. A class will be formed in September 2011.

MAIN RECOMMENDATIONS

- More written developmental feedback should be provided to students on their portfolio work in keeping with assessment for learning (AfL) principles.
 - The layout of the schemes of work should be revised so as to integrate student learning outcomes, teaching and learning resources, proposed teaching methodologies and assessment methods for each topic to be studied.
 - Consideration should be given to the introduction of a graphics module into the Transition Year (TY) programme. This would help to promote the uptake of DCG at senior cycle.
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INTRODUCTION

Carrick Vocational School currently has an enrolment of 225 students, 114 boys and 111 girls. TG is offered as an optional subject in the Junior Certificate (JC). All students moving to senior cycle follow the Leaving Certificate Vocational Programme (LCVP). DCG is offered as one of the subjects on this programme. The optional TY does not contain a graphics module.

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.

TEACHING AND LEARNING

- Lessons observed had clear learning outcomes which were shared orally with the students at the outset. Teachers are encouraged to write these aims on the whiteboard where they can be referred to throughout the lesson and used again in the lesson summary.
- Continuity with previous learning was assured by means of good questioning techniques and the display of previous exercises and solutions using information and communications technology (ICT).
- Subject-specific terminology was used and emphasised during lessons. This allowed students to assimilate the language of the subject while working on their own drawings. Teachers are advised to write such terminology on the whiteboard as a support for literacy.
- 3-D models, pictorial sketches, video clips and computer generated drawings were used effectively to introduce and advance the development of TG concepts during demonstrations.
- All classes are of mixed ability with access to higher and ordinary level accommodated within class groups. In lessons observed there was good differentiation of work with tasks allocated to match students' abilities.
- Freehand and ruled whiteboard work by teachers was of a high standard. This served to model the draughting standards required in the subject.
- A module on freehand sketching is taught as part of the first-year programme. In order to build confidence in this area, it is suggested that teachers should increase the emphasis placed on freehand sketching throughout the junior-cycle programme. The development of skills in the application of shading and colour is also to be encouraged.
- A sample of students' portfolio work was examined during the evaluation. This work was of a good standard and folders were well maintained and neat. Drawing sheets are monitored regularly and initialled. A portion of students' assessment grades are based on their portfolio work which is good practice.
- Feedback on students' work is generally given orally. It is recommended that the subject department provide more regular formative written feedback on students' work. This would give recognition to students who are achieving and provide constructive feedback to those who need direction.

- Teacher-student interactions at all times were engaging, purposeful and mutually respectful.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- First-year students are given the opportunity to sample pairs of optional subjects before being asked to make their final subject choices at the end of September. As is best practice, the grouping of optional subjects is evaluated every year.
- Senior-cycle students choose their optional subjects from a list of available subjects. Arrangements for subject choice at senior cycle are fair, thorough and transparent.
- All year groups receive an appropriate time allocation for TG. The subject periods are evenly spread throughout the week with a mixture of single and double class periods.
- The room used for the teaching and learning of the subjects is neat and well organised. Good efforts have been made to create a stimulating learning environment through the display of a DCG project assignment, posters, students' work and 3-dimensional models.
- The room contains twelve computer workstations for students' use during the teaching and learning of *SolidWorks*. The school should actively seek to provide more such workstations to enable larger groups of students to learn *SolidWorks* whilst still having access to individual computers.
- Formal assessments are held at Christmas and summer. Students preparing for Certificate Examinations are provided with progress reports mid-way through the first term and also sit "mock" examinations in the spring. Reports are sent home after each assessment with parents invited to attend one parent-teacher meeting per year.
- The teachers have attended all sessions of the programme of continuing professional development (CPD) made available through the Technology Subjects Support Service (t4). In addition to this both teachers have attended further training on the use of the *SolidWorks* software. This commitment to CPD deserves acknowledgement.

PLANNING AND PREPARATION

- Currently, the role of subject coordinator is shared. Formal planning meetings are held once per term with minutes being recorded and copied to senior management. The strong collaboration evident within the subject department sees these formal meetings supplemented by frequent informal meetings.
- The planning folder is well developed and contains a range of useful documents including the syllabus, the chief advising examiner's report and past papers from house examinations.
- The schemes of work outline topics to be covered for each year group, giving some detail on class work, homework and assessment. The students' learning outcomes for each topic are listed separately. It is suggested that these two documents be integrated into one. Furthermore the resources available and the proposed teaching methodologies should also be included, on a topic-by-topic basis, in the scheme of work.
- When revising the schemes of work, it is recommended that short modules on the development of sketching skills, as well as on the teaching and learning of *SolidWorks*, be included for all year groups across the junior-cycle programme. This would help to

develop the students' spatial perception and would be of great benefit to students who progress to study DCG for the LC.

- The teachers should develop a long-term planning section within the subject plan. Some initial areas of focus might include the uptake of DCG at senior cycle and the development of a TY programme.
- As is good practice the results from state examinations are analysed and compared to national norms.

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.

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 of Coláiste na Carraige acknowledges receipt of and welcomes the Report on the Subject Inspection of Technical Graphics and Design and Communication Graphics carried out on 5 May 2011. The Board congratulates the members of staff concerned and also wishes to acknowledge the great work done by those teachers.

It also welcomes the comment on PC provision to teach larger classes. It notes comments on Freehand Sketching and Shading. Having consulted with the teachers involved it considers that the amount of time given to same is appropriate based on the content of the topics.

The Board notes that DCG has not been taken as a Leaving Certificate subject for the past three years. This was in part due to the size of the school and hence the consequent allocation and was not a reflection of the subject department or its teachers.

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 school has already taken the following actions as per the recommendations of the Report.

1. DCG is a module of the Transition Year. This will lead, hopefully, to the uptake of the subject at Senior Cycle.
2. The layout of the schemes of work has been adopted as suggested.
3. The Terminology/Learning Outcome Board is in the process of being procured and this has been integrated into the Teaching and Learning of each lesson.
4. The school is in the process of refurbishing the room to facilitate increasing the number of PCs from 12 to 18.