

An Roinn Oideachais agus Scileanna

Department of Education and Skills

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

**Saint Mac Dara's Community College
Templeogue, Dublin 6W
Roll number: 70260V**

Date of inspection: 18 March 2010



**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 TECHNICAL GRAPHICS AND
DESIGN AND COMMUNICATION GRAPHICS**

SUBJECT INSPECTION REPORT

This report has been written following a subject inspection in Saint Mac Dara's Community College. It presents the findings of an evaluation of the quality of teaching and learning in Technical Graphics (TG) and Design and Communication Graphics (DCG) and makes recommendations for the further development of the teaching of these subjects in the school. The evaluation was conducted over one day, during which the inspector visited classrooms and observed teaching and learning. The inspector interacted with students and the teachers and examined students' work. The inspector reviewed school planning documentation and the teachers' written preparation. Following the evaluation visit, the inspector provided oral feedback on the outcomes of the evaluation to the principal. The board of management of the school was given an opportunity to comment on the findings and recommendations of the report; the board chose to accept the report without response.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

Saint Mac Dara's Community College offers TG and DCG as optional subjects in its junior and senior cycle programmes. Currently, there is no opportunity for Transition Year (TY) students to study a graphics subject. In order to further promote the subject and to help students to bridge the gap between junior and senior cycle, school management should consider introducing an appropriate graphics module to the school's TY programme.

The facilities and resources allocated to the subject department to support the teaching and learning of graphics subjects in the school are very good. These include the appropriate information and communication technology (ICT) resources and two specialist graphics classrooms.

Senior management and the subject department are commended for their ongoing commitment to continuing professional development (CPD). All members of the subject department have participated in the recent programme of CPD provided by the Technology Subjects Support Service (t⁴). The participation of department members in these courses is most valuable especially in light of the recent syllabus change at senior cycle.

Graphics subjects receive appropriate allocations of time throughout the week. These allocations include two class periods per week during the first-year sampling programme, four class periods per week in second and third year and five class periods per week in fifth and sixth year. These class periods are well dispersed throughout the week and divided into both single and double class periods, as is common practice.

At junior cycle, following the initial sampling period in first year, the deployment of teachers to class groups is based on continuity. This is good practice. At senior cycle, efforts should be made to build capacity within the subject department by involving all members of the graphics teaching team in the delivery of DCG. This is essential, as collaboration and the sharing of expertise between subject department members would help to further strengthen and develop the subject department's skill sets.

At both junior and senior cycle, optional subject bands are devised based on students' preferences, resulting in option bands that maximise student choice. Before making these choices, a variety of interventions occur throughout the year to inform students about their optional subjects. These include: an open evening for parents and students, a year-long sampling programme in first year and the provision of ongoing support from the guidance team. While these are all worthy interventions, a relatively low proportion of the student cohort chooses TG and DCG. Improving student uptake of graphics subjects should therefore be seen as a definite priority for both senior management and for the subject department.

PLANNING AND PREPARATION

Subject department planning meetings are facilitated by senior management every term. At these meetings relevant topics are discussed and the outcomes of these discussions are recorded in line with best practice. To further develop subject department planning and to encourage a more collaborative approach to planning, the subject department should appoint a subject co-ordinator to lead the planning and organisation of the subjects in the school. This role could be then be rotated among all members of the subject department over time.

The fundamental constituents of a good quality subject plan have been developed. The organisation and collation of these separate planning documents into one distinct graphics plan should be seen as a key priority for the subject department. To achieve this, the subject department should work together in a collaborative manner to develop this plan.

Common curricular plans have been developed at junior cycle and these plans are implemented by all teachers delivering the TG syllabus. At senior cycle, considerable planning has taken place pertaining to the sequencing and delivery of the DCG syllabus, including the content and timing of the coursework elements of the syllabus. In addition to this curricular planning, the subject department has identified the learning outcomes required of students at the end of first year. This very good practice should be extended to all year groups. The subject department should utilise the DCG syllabus document to support the development of these curricular plans at senior cycle and continue to develop the junior cycle plans in line with the first-year planning documentation.

The subject department has identified a number of strategic plans to promote the development of the subjects within the school. This reflective and proactive measure is commended. The subject department should also consider improving student uptake of TG in second year as a key developmental priority for the subject area. As with all strategic plans, clear and concise timeframes and responsibilities should be identified along with success criteria in order to ascertain the level of achievement of each goal.

Teachers' preparation was very good in all lessons observed. A wide variety of online resources, models and overhead transparencies were prepared in advance and introduced to lessons to supplement teaching and learning. This level of individual planning is commended.

TEACHING AND LEARNING

In each lesson observed a desired learning outcome was apparent and all teachers delivered appropriate lesson content to achieve these outcomes. By introducing the practice of sharing the expected learning outcomes with students at the beginning of lessons, the subject department should help students to assess their own learning and to identify areas that require additional attention.

Programmes of work were structured according to common agreed curricular plans. This helps to ensure continuity of learning, especially with the second-year class groups that contain students drawn from a number of first-year sampling groups.

Lessons were generally well-structured and were characterised by a brief introduction followed by teacher demonstrations and student activities supported by teachers' advice and guidance. In almost all instances, lessons would have benefitted from a brief recapitulation of the key points in order to further reinforce students' understanding.

A variety of demonstration media were utilised during the lessons observed. Blackboard constructions were used to very good effect with particular attention given to colour coding and line types. Transparency overlays were utilised appropriately to demonstrate the correct sequencing of construction and to reiterate key constructions for particular individuals. A model of the principal planes of reference was utilised in one lesson to help students understand the concepts associated with first-angle projection and a wide variety of pictures were used to develop students' awareness of the various applications of polygons. These strategies were most successful. In a few instances a small minority of students were inattentive during teacher-led explanations and demonstrations. To avoid this, teachers should insist on full attention, especially during important explanations or constructions.

The quantity and quality of the questioning techniques employed in lessons varied considerably. Best practice was observed where: questions were differentiated according to students' abilities, students were questioned individually, prompts and hints were utilised to encourage students to offer answers and where each student was given ample time to develop and structure his or her response. These techniques, aimed at determining students' understanding and involving them in the learning process, should be extended by all members of the subject department.

In most cases, students received very good instruction and were fully involved in the lesson. This was apparent through their engagement in the various strategies employed to assist learning, their contributions to discussions and their participation in problem-solving exercises. In one lesson however, a number of students following the ordinary-level syllabus received little tuition and this resulted in their partial disengagement. Bearing in mind that all students are entitled to tuition, every effort should be made to fully include all students in all teaching and learning activities.

ICT was incorporated into most lessons and good quality electronic resources were introduced to lessons to help students to develop their understanding. To maximise the benefits of this useful display technique, all teachers should ensure that the projection is suitably sized to provide all students with a clear unrestricted view.

In most cases, student behaviour was very good. This helped to create a positive and supportive atmosphere that was conducive to graphics education.

Students demonstrated a good level of learning. This was evident from their portfolios, class work and coursework. In some cases, students enhanced their drawings with additional explanatory notes and the careful application of colour to various lines and surfaces. These enhancements help students when revising and the promotion of these techniques should be extended to all members of the subject department. The quality of students' drafting varied. To improve drafting throughout the subject department, specific initiatives such as competitions and awards should be piloted, particularly with first-year groups, aimed at encouraging all students to improve the presentation and layout of their drawings. A good proportion of students choose higher level in the certificate examinations and these students generally achieve quite well. By increasing the number of students choosing TG, a larger sample of students should then choose DCG at senior cycle. This increase in students should then help to improve the proportion of students choosing higher level at senior cycle.

ASSESSMENT

It was reported during the inspection that homework is prescribed to students regularly in line with the homework policy developed by the subject department. However there is considerable room for development within this policy. One possibility would be to link prescribed homework tasks with specific learning activities based on the proposed common learning outcomes for all year groups. In doing so, homework could be used to develop, support and supplement class work and not just provide students with additional time to complete unfinished class work.

The assessment section of the subject plan states that various forms of continuous assessment are implemented with all year groups. While students' work is monitored regularly, and some formative feedback is given in relation to the students' progress and any perceived areas for development, portfolio work does not form part of all students' end-of-term grades. The subject department should formalise its policy in this regard and apply a common strategy.

To build upon the proposed developments regarding curricular planning, the subject department should develop assessment practices in line with the principles of assessment for learning (AfL). To achieve this goal, more regular assessments should be introduced and these assessments should be used to inform teaching practices and strategies particularly in relation to individual students' strengths and the areas in need of development.

SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS

The following are the main strengths identified in the evaluation:

- The facilities and resources at the subject department's disposal are very good.
- Senior management and the subject department are commended for their facilitation of and engagement in CPD.
- The supports provided and interventions made to support students prior to making their optional subject choices are commended.
- Teachers' individual planning and preparation for lessons was very good.

- The methods employed to demonstrate key concepts and principles are particularly suited to the teaching of graphics.
- A good level of student understanding and learning was evident during the inspection.

As a means of building on these strengths and to address areas for development, the following key recommendations are made:

- Senior management should endeavour to include an appropriate graphics module in the school's TY programme.
- Every effort should be made to provide all suitably qualified teachers with the opportunity to teach DCG.
- The further development of subject planning should be prioritised by the subject department with areas such as curricular planning and strategic planning highlighted as in need of particular attention.
- Students of all abilities and levels should be fully included in all lessons.
- To build upon the proposed developments regarding curricular planning, the subject department should develop its assessment policy and practices in line with the principles of assessment for learning.

A post-evaluation meeting was held with the principal at the conclusion of the evaluation when the draft findings and recommendations of the evaluation were presented and discussed.

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