An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection of Technical Graphics and Design and Communication Graphics
REPORT

Coláiste Eoin
Hacketstown, County Carlow
Roll number: 70410O

Date of inspection: 3 November 2010
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 Coláiste Eoin, Hacketstown. 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 teacher, examined students’ work, and had discussions with the teacher. The inspector reviewed school planning documentation and the teacher’s written preparation. Following the evaluation visit, the inspector provided oral feedback on the outcomes of the evaluation to the principal and subject teacher. The board of management was given an opportunity to comment in writing on the findings and recommendations of the evaluation; the board chose to accept the report without response.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

Coláiste Eoin is a co-educational vocational school under the trusteeship of County Carlow Vocational Education Committee. TG and DCG are offered as optional subjects in the school’s junior and senior-cycle programmes. During the school’s optional Transition Year (TY), DCG is offered to the two TY class groups on a modular basis before and after Christmas. The allocation of class periods to graphics subjects is adequate with junior-cycle and TY classes receiving four thirty-five minute periods per week and the current fifth-year class group receiving five thirty-five minute periods per week. Graphics lessons are generally well distributed throughout the week and are made up of both single and double lessons.

The uptake of the subject among both girls and boys is good at junior cycle; however, few girls choose DCG upon entry to fifth year. To address this situation, school management and the subject department should ensure that both boys and girls receive equal opportunities in their sampling of DCG during TY. This could be achieved by reorganising the delivery of the TY module in order to minimise the impact of the school’s annual theatrical show on girls’ participation in the TY DCG module.

Students’ optional subject preferences are determined prior to their entry into first year. Optional subject bands are then created based upon a best-fit model. To facilitate prospective students and their parents, an open evening is held in the school enabling them to visit optional subject classrooms and to find out more about the subject and have their queries answered in discussion with the subject teachers. In the absence of a subject sampling programme, this helps to inform parents and students before important choices are made. In senior cycle, students who choose the optional TY programme are given the opportunity to sample a variety of subjects including DCG. This provision helps them to select their optional subject choices based upon their interests, skills
and aptitude for the subject. This method of informing students prior to them making their optional subject choices is commended.

The resources and facilities available to the subject department are good. Good quality data projection equipment is fully integrated into the graphics room. ICT resources supplied for the introduction of DCG under circular letter 0056/2006 have been installed in an adjacent ICT room. While the school currently timetables both rooms simultaneously for all fifth-year DCG classes, instances may arise where students have limited access to ICT resources during lessons. This can inhibit students’ application and development of learning through the use of parametric modelling software. To remedy this situation, the full integration of electronic resources into the teaching and learning of graphics subjects, especially DCG should be seen as a priority for the subject department.

Continuing professional development (CPD) is both encouraged and facilitated by senior management. The subject department has attended a variety of CPD events including the courses provided by the Technology Subjects Support Service (t4) and additional ICT courses provided by the relevant Teachers’ Professional Network (TPN). This commitment to CPD is commended.

**PLANNING AND PREPARATION**

Subject planning for TG and DCG is ongoing in Coláiste Eoin. A succinct plan has been developed for the teaching and learning of graphics subjects in the school. The plan outlines some of the subject department’s policies and strategies to address the key contextual factors that affect the teaching and learning of the subjects, including the subject department’s approach to educational inclusion. To improve subject planning, key areas such as the planned educational interventions for individual students in need of additional support and the use of assessment to promote students’ learning should be further developed.

Curricular plans have been developed to complement the overall subject plan for graphics. They outline the planned sequence of delivery of specific topics over the course of the relevant programme. To further improve these plans, the subject department should begin the process of identifying suitable teaching aids, electronic resources and appropriate assessment techniques for each element of the syllabus.

A good quality plan has been developed for the delivery of the DCG TY module. This module contains a number of leaving certificate topics and also includes a project that encourages students to independently research and develop architectural designs for a residential dwelling. Students’ parametric modelling skills are developed in this module and a good balance is maintained between conventional and innovative teaching and learning methodologies. The use of pair work, group work, independent research, case studies and student oral and audiovisual presentations should be explored to further diversify and enrich students’ experiences during TY.

Considerable planning and preparation took place in advance of each lesson observed. Examples of prepared resources included worksheets, models and teaching aids that helped students to visualise complex concepts. The model that incorporated the principal planes of reference and accompanying laminae was particularly appropriate to the planned lesson and students benefitted considerably from its use.
TEACHING AND LEARNING

All lessons observed began with the proposed content of the lesson being outlined to students. Generally, lessons were delivered in a sequential manner that supported student learning and encouraged full participation. However, in one instance the inappropriate sequencing and structure of the lesson caused some students to lose focus. This resulted in minor levels of ill-discipline. To minimise this, the subject department should plan for the effective introduction, development and recapitulation of subject matter. Another possible strategy is to consider utilising additional differentiated tasks for students. In doing so, students who have completed their assigned work will be suitably challenged thereby reducing their propensity to misbehave.

A variety of effective methodologies were employed in the lessons observed. These methodologies included teacher demonstrations using the blackboard, the use of models to help students to visualise two-dimensional representations of planes in space and supporting worksheets that helped to develop students’ understanding of class work. Sketching was also used to good effect. This methodology enabled the modelling of good practice and encouraged students to use sketching while problem-solving. The further use of colour and increased indexing of points in constructions and developments should be incorporated into lessons where deemed appropriate.

Questioning was used effectively. Care was taken to ensure that all students were fully involved in the lessons. Students’ responses and contributions were valued and affirmed by their teacher. Student involvement and active participation were particularly evident in a senior-cycle lesson where a number of opportunities were taken to involve students in demonstrations and learning activities. This good practice is commended.

Now that ICT has been integrated into the graphics specialist room, the subject department should make a concerted effort to utilise appropriate electronic resources to support the teaching and learning of the subjects. A wide variety of resources is readily available online at www.t4.ie.

Most students were proficient in draughting and demonstrated a good level of understanding when questioned by their teacher and the inspector. Students’ course work varied considerably in relation to the quality and completeness of portfolios. Over the past number of years the majority of students have chosen ordinary level at junior cycle. However, almost all of the current fifth-year group are studying the higher-level course. This is a most welcome trend.

ASSESSMENT

Formal examinations are held for non-examination year students in October and February and prior to the Christmas, Easter and summer holidays. Examination-year students also sit ‘mocks’ prior to their junior and leaving certificate examinations. This level of formal assessment helps the subject department, students and parents monitor progress effectively.

Students received very good levels of individual and group formative feedback during lessons. Summative and formative assessment of students’ portfolio work should be a priority for the subject department. Increased levels of assessment and feedback to students can only help them to improve their levels of skill, knowledge and understanding. To achieve this goal over a reasonable period of time, the subject department should consider the introduction of an
assessment policy aimed at incentivising the completion of prescribed tasks. This could be achieved by listing essential drawings and allocating a percentage of their terminal examinations to satisfactorily completed portfolios.

The subject plan outlines the subject department’s procedures relating to the allocation and correction of homework tasks. These procedures should be fully implemented. Students should also be encouraged to record all homework assignments into their journals along with the proposed date of correction.

**SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS**

The following are the main strengths identified in the evaluation:

- Graphics subjects in Coláiste Eoin receive very good levels of support from senior management.
- There was evidence of a considerable level of planning and preparation for the lessons observed.
- A good variety of inclusive and active strategies was observed during the senior-cycle lessons observed.
- The effective use of teaching resources and active teaching and learning strategies helped to enhance students’ experiences in some lessons.

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

- The subject department should ensure that topics are introduced effectively, developed collaboratively and recapitulated at the end of lessons.
- The levels of written formative feedback to students should be increased, particularly in relation to portfolio work.
- The subject department’s homework policy should be implemented fully for all year groups.

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

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