An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection of Design and Communication
Graphics
REPORT

St Brigid’s Secondary School
Killarney, County Kerry
Roll number: 61340S

Date of inspection: 12 October 2009
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN DESIGN AND COMMUNICATION GRAPHICS AND TECHNICAL GRAPHICS

SUBJECT INSPECTION REPORT

This report has been written following a subject inspection in St Brigid’s Secondary School, Killarney. It presents the findings of an evaluation of the quality of teaching and learning in Design and Communication Graphics (DCG) and Technical Graphics (TG) 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 the teacher. 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

St Brigid’s is an all-girls secondary school, under the trusteeship of Catholic Education – An Irish Schools Trust (CEIST), providing a broad education for young people from Killarney and its hinterland. The technologies are represented in the curriculum of the school by DCG in senior cycle and TG in junior cycle. Materials Technology (Wood) and Construction Studies, previously on the curriculum of the school, have been phased out.

The school facilitates collaborative planning by means of subject-planning meetings held once per term. There is a common, whole-school approach to subject-department planning. Collaborative planning across subject departments is facilitated and encouraged by school management and this is of particular value in subject departments involving fewer teachers, such as the DCG and TD department. Subject co-ordination of DCG and TG is clearly defined and is very effective. The teacher of the subjects is the subject-department co-ordinator and takes charge of all aspects of subject co-ordination and development, including the writing and review of the very well-developed subject plan. The achievement of the aims and objectives of the subject department is monitored constantly by the subject-department co-ordinator who analyses the outcomes for students together with school management.

The school maintains a very active programme of continuing professional development (CPD). In addition to regular whole-school CPD, all teachers are actively encouraged to engage in further CPD, at least once annually, whether in their particular subject areas or in areas of teaching and learning in general. Teachers are also encouraged to be active in their respective teacher professional networks. The support by school management of CPD is matched by the high level of involvement by the DCG and TG department, particularly in subject-related courses, including those provided through the Technology Subjects Support Service, \( \tau \).
The amount of teaching time allocated to DCG and TG is in line with good practice. In junior cycle, all first-year classes are allocated two single periods per week for TG. This time allocation is acceptable in the context of providing all students with experience of each of the optional subjects in the junior-cycle curriculum of the school. In second year and third year, four periods are allocated to the study of TG including one double-period lesson. In senior cycle, five periods per week are allocated for DCG which include one double-period lesson. The inclusion of double-period lessons in both junior and senior cycle facilitates both the practical nature of the subjects and the completion of more extended work in one lesson. Lessons are very well distributed across the week to maintain the students’ contact with the subjects. Students following the school’s Transition Year (TY) programme study a module of DCG for five periods per week for one term.

The very well-defined process of subject-department budgeting, whereby the subject department prepares a submission to the board of management for its formal consideration, is in line with good practice and supports an effective subject-department structure. While the allocation of a definite annual budget to the subject department encourages carefully focused planning for resources, it is noted that a degree of flexibility ensures that the subjects are fully supported by school management in accessing all the resources needed for their effective teaching. This is very good practice.

The arrangements for students’ choice of subjects in junior cycle and in senior cycle are of a very high standard. In both cases the design of subject-option blocks is based on the preferences expressed by the students. Thus, the composition of the blocks varies from year to year according to the subject needs of the students. Students are met and advised by the subject teachers, and then by the Guidance Counsellor, with regard to their choices. Information evenings are provided for parents. In order to further prepare students to make informed subject choices, opportunities to experience the range of optional subjects are provided in junior cycle and in senior cycle in line with good practice. As alluded to earlier in the report, all students study TG in first year. In the TY programme, students are provided with a module of DCG for one term and they may join the fifth-year DCG class for the full year. This arrangement is in line with the organisation of the TY programme in the school and the provision made for optional subjects in general in the programme. It is reported by the school that the latter arrangement is also successful in achieving the broader aims of the TY programme.

**Planning and Preparation**

The positive effects of successful long-term planning are clearly discernable in the DCG and TG subject department. The introduction of the DCG syllabus and the attendant upgrading of the teaching facilities are clear testament to successful and sustained planning over recent years. Although the subjects are taught by the single teacher of the technologies on the staff, very good practice is followed by maintaining close collaboration, including collaborative planning, with other subject departments including Mathematics, Art and Computers. Such cross-curricular planning covers parallel areas of content represented in the syllabuses of DCG, TG and these other subjects. Examples include free-hand sketching, rendering and shading in Art and basic numeracy and geometry in Mathematics. A very clear, detailed and comprehensive written subject-department plan includes programmes of work for TG and DCG that are in line with the requirements of the respective syllabuses. Given the wide range of appropriate methodologies already being used in the teaching of DCG and TG in the school, it is urged that the section of the subject plan which deals with methodologies be expanded to reflect this. In particular, further opportunities for the use of group work and pair work should be identified and included in the plan. These should be linked, where possible, to the teaching of particular parts of the syllabuses.
The school and the subject department have engaged energetically and very successfully in the acquisition and development of appropriate teaching resources and facilities. The fitting out of the specialist room for teaching the DCG syllabus has been completed to a very high standard. This development has been facilitated by an high level of teacher involvement. The funding made available through *r* for this purpose has been effectively deployed as intended. Very good provision is made for information and communication technology (ICT) resources for learning and teaching. These resources have been integrated into the infrastructure of the DCG room, including desktop computers for students’ use, appropriate printers and scanner, and a ceiling-mounted data projector. Further ICT resources are available in the school’s ICT room and media room as well as in another classroom and in the staff room.

There is a current health and safety statement in place, which refers to the technology subjects, that is reviewed on an annual basis by the board of management. This statement is prepared in consultation with the school community which is in line with good practice.

**TEACHING AND LEARNING**

A very good standard of teaching was observed in each of the lessons observed. A suitably wide and interesting range of approaches was adopted by the teacher. These approaches were carefully chosen to appeal to the students, being topical and related to their experience. The introduction to true lengths of lines in a third-year lesson made reference to a noted rugby player and his view of the crossbar as he lined up a kick from near the sideline. A first-year lesson used the seven geometrical shapes of the tangram to introduce the students to plane figures. These approaches, among others, were very effective in engaging the students in the work of the lessons. The methodologies adopted involved skilled, varied and careful questioning which ensured that the students were fully involved in the development of the lessons. In a more formal lesson in senior cycle, students were set practical drawing tasks following appropriate introduction and preparation by the teacher. The students worked individually on solving the problems presented. The teacher carefully observed the students’ progress and provided encouragement, affirmation and help, as appropriate. It is suggested, to further improve students’ engagement and confidence, that the possibility of getting students to work in pairs or small groups be explored, particularly when the topic has been encountered previously.

At the outset, the purpose of each lesson was clarified. It is suggested that, on occasion, this very good approach to the beginning of lessons can be further enhanced by engaging the students in a process of negotiation, thereby further enriching their involvement. The lessons were very well structured. Continuity was maintained by means of homework assignments, which, on occasion, involved students in preparation for lessons, as in the case of the first-year lesson on plane figures. For this lesson students had been given the pleasant task of researching the tangram at home as preparation and were thus able to answer teacher’s questions as part of the introduction to the lesson that followed. This is good practice. The lessons were well paced and responded appropriately to the progress being made by the students.

A very good range of teaching resources was used in the lessons. These resources included photocopied materials used, to reinforce learning, as worksheets in class and for homework. PowerPoint displays and SolidWorks models were also used. SolidWorks was used very effectively to model the determining of the plane director in a lesson on structural forms in DCG, a problem solved by the students in the course of a lesson. Teaching resources made of card were used to very good effect to demonstrate the oblique plane while tangram sets were also presented.
for use by the students. Effective use was made of the chalkboard in the course of some lessons as appropriate.

The atmosphere in each of the lessons was pleasant, work-like and conducive to learning. Students were disciplined in their approach to their learning. Very good behaviour was observed throughout the inspection and this was clearly an expectation willingly accepted by all students. The code of behaviour was clearly displayed at the front of the classroom in line with good practice. Interaction between the teacher and among the students themselves was, at all times, respectful and pleasant.

The organisation of the classroom, which was of a very high standard, provided for very positive affirmation of students’ effort and achievement. Students’ work, which was of an impressive standard, was prominently displayed on the walls together with other subject-related materials including a photograph of the DCG student of the year being presented with her award. The students were presented with an attractive and visually stimulating learning environment. Further affirmation is provided through the school newsletter which refers regularly to TG and DCG, including awards to students in the subjects. These newsletters are published on the school internet web site in line with good practice.

There was clear evidence of effective learning taking place in the subjects. Students’ folders were well organised and contained well-completed drawings, safely stored in an orderly manner. Students’ project work from the previous year, viewed in the course of the inspection, displayed a high level of achievement. Students, when engaged in discussing the work in their folders, displayed a level of knowledge and understanding that was consistent with successful learning. The students also showed an active enthusiasm and curiosity for the subjects. The students’ level of competence and communication in the subjects indicated that the aims of the syllabus were being achieved.

**ASSESSMENT**

The practice regarding formal assessment in DCG and TG follows the whole-school assessment policy and this is in line with good practice. Students sit mid-term tests, Christmas tests and summer tests in addition to continual assessment, undertaken at the end of each topic. The continual assessment outcomes are presented together with the Christmas examination mark to arrive at the result that is sent home in the Christmas report. The summer report reflects an assessment of the students’ drawing folders aggregated with the summer examination result. The combination of students’ ongoing achievement with their achievement in examinations in this way is consistent with good practice and with the modes of assessment provided for in the DCG syllabuses.

In addition to these more formal modes of assessment, students are provided with ongoing feedback in the course of lessons, in line with good practice. This less-formal assessment presents opportunities for more regular assessment for learning, as does the constructive comment-based feedback given on students’ homework and class work.

Records of students’ progress and achievement are carefully and systematically maintained by the teacher and are shared appropriately with students and parents. Communication with parents with regard to students’ progress is facilitated, in addition to formal school reports, by means of the students’ journals, parent-teacher meetings and at information evenings.
SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS

The following are the main strengths identified in the evaluation:

- The school and the subject department have engaged energetically and very successfully in the acquisition and development of appropriate teaching resources and facilities.
- A very good standard of teaching was observed in each of the lessons observed.
- A very good range of teaching resources was used in the lessons.
- There was clear evidence of effective learning taking place in the subjects.

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

- The subject plan should be further expanded to reflect teaching methodologies already being used and, in particular, to include further opportunities for the use of group work and pair work.

Post-evaluation meetings were held with the teacher of Design and Communication Graphics and Technical Graphics and 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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