Subject Inspection of Technical Graphics and Design and Communication Graphics

REPORT

Grennan College
Thomastown, County Kilkenny
Roll number: 70640I

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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 Grennan 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 and subject teachers. 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.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

TG and DCG are offered as optional subjects in all of the school’s curricular programmes. The time allocated to these subjects is good, with junior cycle groups receiving four class periods, the Transition Year (TY) group receiving three class periods and Leaving Certificate groups receiving five class periods per week. These allocations are divided into both single and double periods and are dispersed appropriately throughout the week.

Three teachers in the school hold qualifications recognised by the Department of Education and Skills to teach the subjects to the highest level. Two of these teachers are currently deployed to teach graphics subjects. In order to build capacity within the subject department, every effort should be made to involve all three teachers in the delivery of both TG and DCG, particularly at this time of significant syllabus change at senior cycle.

The supports that have been put in place to assist students when making their optional subject choices are very good. First year students are given the opportunity to sample optional subjects prior to making their final decisions. In addition to this intervention, parents of incoming students are invited to an open evening where optional subjects are showcased and teachers are available to offer advice and guidance. At senior cycle, students who take part in the optional TY are also given the opportunity to sample DCG during the year-long graphics and construction module. These strategies help to ensure that almost all students are given the opportunity to choose their optional subjects based on their experiences, aptitudes and talents. Student uptake of graphics subjects is quite high and the subjects are popular among both boys and girls. This is a most welcome trend.
There is one specialist room available for the teaching and learning of graphics subjects. This room is well equipped with the appropriate information and communication technology (ICT) resources, making it easy to integrate them into lessons. Students’ drawing equipment is well organised and there is ample room for the storage of folders and project work. On occasion, a woodwork room is used for the teaching and learning of TG. While this is acceptable, every effort should be made to timetable all graphics lessons in the appropriate specialist room.

Senior management personnel are commended for their willingness to facilitate the subject department’s engagement in all rounds of the recent continuing professional development (CPD) courses provided by the Technology Subjects Support Service (t4). The subject department members have benefited from their participation in the courses and regularly utilise resources developed by t4 in lessons.

PLANNING AND PREPARATION

The subject department meets formally on an annual basis and quite often informally throughout the year. Currently, the subject co-ordinator takes responsibility for the compilation of the subject plan; however it was reported during the evaluation that a team approach is taken to the completion of all planning duties. Further collaboration would be necessary when the subject department is enlarged and when all teachers are responsible for teaching both TG and DCG.

Subject plans have been developed for TG and DCG. These plans exhibit many of the hallmarks of good quality planning documents. To further improve subject planning, the subject department should consolidate the junior and senior cycle plans into one cohesive document in order to eliminate repetition. The existing curricular plans should then be further developed to identify common learning outcomes for all students in an effort to focus on students’ learning as opposed to focusing on the delivery of curricular content within specified timeframes.

The subject department has identified long-term goals for the further development of the subjects within the school. This very good practice is commended. In addition to the goals identified by the subject department, the improvement of student attainment in certificate examinations should also be addressed and strategic plans to achieve this goal should be identified and implemented without delay.

A good quality TY graphics plan has been developed. This plan details a variety of interesting topics and activities including: architectural cross-curricular elements, design appreciation, parametric modelling and sketching. This module is diverse enough to provide students with an interesting and different approach to graphics and construction but is also rooted in many of the core values of DCG, thereby helping students to make fully informed optional subject choices prior to entering fifth year.

All lessons observed were well prepared and teachers’ individual planning for lessons was good. This included the preparation of parametric and geometric models for demonstration purposes, the preparation of worksheets and visual displays to assist in the development and explanation of concepts and constructions, and the preparation of notes and worksheets to facilitate and structure students’ learning.
TEACHING AND LEARNING

All lessons observed had clear objectives. These objectives should be communicated to students at the beginning thereby enabling them to evaluate their learning more effectively. This practice could also support the recapitulation of key learning outcomes at the end of lessons and the evaluation of students’ learning in order to inform future teaching practices.

The structure and tempo of lessons observed was very good. Students were encouraged to become involved in discussions and made many contributions during lessons. Questioning was utilised in some lessons to determine individual students’ understanding and to involve them in the completion of constructions. Global questioning was used excessively in some instances; this practice should be reduced in favour of more specific questioning techniques to ensure that all students are given adequate time to formulate their answers.

Very clear methods of teacher demonstration were utilised throughout the evaluation. These included good quality blackboard construction, good use of digital projection and personal demonstrations at students’ desks. When good practices were modelled at students’ desks, students were able to view complex constructions clearly, thereby helping them to internalise the various procedures. In most cases students were attentive during demonstrations; however there were a number of occasions when students continued to work on their drawings while teachers were demonstrating or giving instructions. To avoid this, teachers should insist on full attention, especially during the demonstration of key principles.

Specific techniques such as indexing and crating were used to good effect by teachers and promoted when appropriate. The use of colour and shade, as an aid to teaching and learning, is a useful tool and should be utilised whenever possible.

ICT was used to support teaching and learning throughout the evaluation. The further development of ICT should be promoted, especially to enhance students’ knowledge and comprehension of more complex concepts and constructions. By maximising the benefits of ICT and the various software supports available, the subject department could further develop this powerful teaching tool in lessons.

Students’ behaviour during lessons observed was very good. In all lessons a positive learning atmosphere was apparent and a mutual respect was evident between teachers and students. This was achieved through the creation of a collaborative approach to teaching and learning and through the positive affirmation given primarily to junior cycle students. The pleasant working environment of the specialist graphics room also contributed to this and was supplemented by the variety of posters, projects and students’ drawings on display.

Students’ drafting skills were generally good. The quality, presentation and completion of students portfolio work varied. The examples of students’ project work presented during the evaluation were of a good standard and were well presented. In some instances, students’ understanding of key concepts was limited. One example included students’ partial knowledge of the principles governing the conventions associated with orthographic projection. It is imperative that students are given every opportunity to develop their understanding and should be extended to achieve their individual potential by encouraging them to question why particular conventions are adhered to in an effort to further develop their understanding of the topic.
In recent years the majority of students have chosen ordinary level at both junior and senior cycle. It was reported that this trend is beginning to reverse with a significant number of students choosing to attempt higher level. This is most welcome and deserves to be encouraged further.

**ASSESSMENT**

Formal examinations are held twice a year with some additional informal assessments held throughout the year. Where there are two class groups in any year group, efforts should be made to plan collaboratively for their assessment. By identifying learning outcomes for all year groups, common assessments could easily be developed and administered to class groups where relevant.

In some lessons students received very good constructive and formative feedback. This helped students to identify their strengths and the areas that required further attention. By introducing similar assessment-for-learning (AfL) strategies, the subject department could further improve the quality of students’ work and students’ appreciation and understanding of the standards expected of them. In some instances there was no evidence of correction or monitoring of students’ portfolio work. This is an area for development and should be incorporated into the assessment policy and implemented by all members of the subject department.

Parents are kept informed of students’ progress through the biannual reports sent home at Christmas and summer and through their attendance at yearly parent teacher meetings.

**SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS**

The following are the main strengths identified in the evaluation:

- All students receive very good support when choosing optional subjects.
- Student uptake of graphics subjects is very good.
- The subject department is very well resourced.
- Many elements of good planning have been developed.
- All lessons observed were well planned and delivered in a professional manner.
- Clear methods of demonstration were employed during all lessons observed.
- Student behaviour was exemplary.

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

- Every effort should be made to deploy all suitably qualified teachers to both junior and senior cycle programmes.
- The subject plans should be consolidated into one document and curricular plans should be reviewed with a focus placed on students’ learning.
- A strategic plan should be developed to improve the number of students who choose higher level in the certificate examinations.
- The subject department should implement a policy based on the regular and structured assessment of students’ work.

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