An Roinn Oideachais agus Scileanna

Department of Education and Skills

Subject Inspection of Technical Graphics and Design and Communication Graphics
REPORT

Coláiste Íosagáin,
Portarlington, County Laois
Roll number: 68068R

Date of inspection: 23 March 2015

AN ROINN OIDEACHAIS AGUS SCILEANNA | DEPARTMENT OF EDUCATION AND SKILLS

REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN TECHNICAL GRAPHICS AND DESIGN AND COMMUNICATION GRAPHICS

INFORMATION ON THE INSPECTION

Dates of inspection	23-24 March 2015
Inspection activities undertaken • Review of relevant documents • Discussion with principal and teachers • Interaction with students	• Observation of teaching and learning during seven class periods • Examination of students' work • Feedback to principal and teachers

MAIN FINDINGS

- While there was evidence of effective classroom management in all lessons observed, the quality of teaching and learning varied considerably.
- In the best lessons, student learning focused on achieving conceptual understanding supported by high-quality teacher feedback and student self-reflection.
- There was significant scope in some lessons for a more considered approach to managing and organising student learning activities.
- Graphics subjects receive good support from school management.
- Planning for the delivery of graphics subjects requires further development.

MAIN RECOMMENDATIONS

- Where student engagement and learning was identified as requiring significant improvement, strategies to address this should be identified, implemented and reviewed.
- The practice of providing students with detailed formative feedback should be extended across the subject department.
- An action plan should be developed by the subject department to address the issues of subject level take-up, student performance, and the promotion of the subjects among girls.
- Further development of the subjects' curricular plans should focus on identifying appropriate methodologies and resources to support the identified learning outcomes.

INTRODUCTION

Coláiste Íosagáin is a voluntary secondary school with a current enrolment of 893 students. The school provides Technical Graphics (TG) as an optional subject in its junior cycle programme and Design and Communication Graphics (DCG) as an optional subject in its Leaving Certificate programme. Presently, the subject is not included as part of the school's optional Transition Year (TY) programme.

TEACHING AND LEARNING

- The quality of teaching and learning varied greatly in the lessons observed. This included lessons where teaching and learning was good or very good and lessons where there were significant weaknesses in student learning. In all lessons, there was evidence of effective classroom management.
- The best lessons had a clear focus on student learning and in particular on fostering conceptual understanding. This was achieved by appropriate reference to prior learning, engaging contextualisation of the new learning and use of real examples and graphical supports to aid visualisation and understanding. Very good student learning and progress was clearly evident.
- The implementation of assessment for learning (AfL) practice with significant time invested in providing quality feedback to students was also a feature of the good and very good lessons. In one lesson, more differentiated support should have been provided to students who were following the ordinary level syllabus as most of the feedback was directed to students undertaking higher-level.
- In one lesson, students were asked to annotate the rationale for the solution to the given problem. This excellent practice supported students by reinforcing their learning, developing their subject-specific language and creating an effective revision resource. The lesson also proceeded at a very suitable pace with scaffolded tasks to guide student progress and deepen their learning.
- In the lessons which had scope or significant scope for improvement, very little progress was made by students and students became demotivated. There was a need to prioritise a conceptual approach to learning and to ensure an appropriately differentiated approach to engage all students and support their understanding of the lesson material. Students were very passive and there was a need for more active student engagement.
- In one lesson, student understanding of the lesson content would have been greatly enhanced through use of the available parametric solid modelling software and the visualiser to demonstrate the spatial relationships underpinning the concept being addressed. Their absence resulted in an over-reliance on abstract presentation which proved very challenging for many students.
- In another lesson, though good use was made of the board to sketch the solution to a problem and some good questioning was employed to engage students, the pace was overly challenging for most of them. The quality and depth of learning could have been improved by employing a more considered approach to managing and organising student learning activities.
- Teachers circulated during all lessons and students demonstrated very good adherence to room procedures.

- The good practice observed in respect of feedback to students and student annotated work should be further developed throughout the subject department by using students portfolios as a key revision resource.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Technical Graphics (TG) and Design and Communication Graphics (DCG) are established subjects on the school's junior cycle and senior cycle programmes, respectively. Whole school support for both subjects is good and both subjects are popular option subjects.
- There is one specialist graphics room at present. A second room has been included in the school extension plan presently at design stage. The realisation of a second graphics room should alleviate the difficulties encountered presently when timetabling graphics lessons. Where it is not possible to timetable graphics classes in the graphics room, consideration should be given to accommodating classes in the other technology rooms.
- The scheduling of class periods is good with four periods allocated per week for junior cycle classes and five in senior cycle. First-year students express preferences for subjects within pre-determined junior-cycle subject option bands, and have a taster day to assist them in completing their preference list. Option bands for fifth-year students are designed to best accommodate student preferences. The subject department, working with senior management should regularly review the suitability of the chosen option band for TG.
- Students may choose DCG without having studied TG. At present there is no graphics related module in TY. It is recommended that consideration be given to inclusion of a design-focused module in TY, when resources allow. In addition to supporting all the technology subjects, such a module would provide students with an opportunity to sample graphics who have not done so in junior cycle.
- The dedicated graphics room is well resourced and supports the use of parametric modelling software by teachers and students. The school's board of management have greatly supported this provision with a substantial financial contribution.

PLANNING AND PREPARATION

- A subject plan is in place and the subject department has a co-ordinator. There is scope for further development of subject planning to enhance the delivery of TG and DCG.
- Though only two of the technology teachers are presently timetabled for graphics classes, subject department meetings include all technology teachers. Some minutes have been recorded. It is recommended that all meetings have minutes to track the development of issues and initiatives and make full use of the recording template in the subject plan. Minutes of meetings should also be shared with senior management.
- Analysis of certificate examination results has taken place and a commentary has been provided which is very useful. This should now be used to inform an action plan to address identified issues, including the level of uptake at higher level, and the performance of a significant cohort of students in TG, in the Junior Certificate. The action plan should also identify initiatives to promote the subjects among girls who are underrepresented in the subject.

- Schemes of work for all year groups are included in the subject plan and include a learning outcomes approach. These should be reviewed as necessary to ensure consistency between the documented delivery schedule and actual practice. Further development should be undertaken to include appropriate methodologies to support student learning with a concentration on a conceptual approach.
- A 'review' template and a 'provisions and performance' checklist have been included in the subject department plan. These excellent templates should now be utilised to guide reflection and create a developmental agenda for the subject department.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and subject teachers at the conclusion of the evaluation. 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.

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