Subject Inspection of Metalwork and Engineering
REPORT

Comeragh College
Carrick-on-Suir, County Tipperary
Roll number: 72400V

Date of inspection: 25 November 2011
REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN METALWORK AND ENGINEERING

INFORMATION ON THE INSPECTION

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MAIN FINDINGS

- Metalwork and Engineering are taught in an effective and structured manner that resulted in positive outcomes for students in the lessons observed.
- Student attainment in certificate examinations is very good.
- Metalwork and Engineering receive significant levels of support from senior management in relation to materials and resources.
- All students have the opportunity to choose Metalwork and Engineering and uptake of the subjects among all students is favourable.
- Subject planning is carried out collaboratively and effectively.

MAIN RECOMMENDATIONS

- The subject department should continue to develop the co-operative teaching and co-operative learning practices employed in order to enhance students’ experiences and maximise the potential benefits of both.
- Subject planning should now focus on developing detailed action plans for the subject department’s identified priorities.
- Teachers should continue to identify and implement literacy and numeracy development strategies in everyday classroom tasks.
**INTRODUCTION**

Comeragh College offers Metalwork and Engineering as optional subjects in its junior and leaving certificate programmes. All junior cycle students follow the Junior Certificate School Programme (JCSP). The school serves students with a wide range of educational needs from its urban and rural hinterland and has a current enrolment of 283. The school participates in the Department’s Delivering Equality of Opportunity in Schools (DEIS) initiative.

**TEACHING AND LEARNING**

- Metalwork and Engineering are taught in an effective and structured manner.

- The intended learning outcomes were outlined to students at the beginning of one lesson observed. This practice should be further developed across the subject department and incorporated into a focused summation at the end of all lessons where appropriate.

- Lessons that focused on the development of students’ practical skills were very well organised. These lessons included concise teacher demonstrations followed by student activities that reinforced the acquired theoretical learning in a practical setting. To further improve students’ engagement in the activities, teachers should increase the level of questioning during demonstrations in order to determine students’ understanding of the tasks and processes being developed.

- In one lesson observed, the teacher focused on scaffolding students’ numeracy skills through the practical reinforcement of absolute and incremental dimensioning practices. This good practice should be continued and extended to include literacy development interventions where appropriate. Common methods should be explored and implemented by all members of the subject department.

- Self and peer-assessments were incorporated into a first-year lesson observed. To increase the benefits accrued from such activities, and in order to create an environment where a truly collaborative learning experience can be achieved, teachers should plan co-operative tasks further. This could be achieved by identifying the expected learning outcomes, clarifying the preferred method of feedback to the group and identifying individual responsibility for each member of the group. This good practice could also be extended to students’ project work where applicable in order to maximise students’ reflective practices and to improve the quality of artefacts produced.

- Currently all senior cycle students manufacture card prototypes prior to the design realisation stage of their design assignments. This is very good practice as it helps students to identify possible areas of difficulty in their individual designs and proactively address them before manufacturing their project.

- Students received very good levels of individual assistance and oral formative feedback throughout the lessons observed. Teachers circulated the classroom and offered students advice and guidance particularly in relation to practical skill development.

- Information and communication and technology (ICT) resources were integrated into lessons effectively. These resources were highly visual and suitable to the topics being developed.

- All students were actively engaged in prescribed tasks throughout the lessons observed and this helped to maintain a positive learning atmosphere where classroom management issues were minimal.
• Students’ practical skills are appropriate to their levels and abilities. An appropriate culture of design is developing within the subject area and this was made apparent by students’ abilities to modify and design elements of their projects and assignments. Overall, the uptake of higher level in the subjects and student achievement in certificate examinations is very good.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

• Metalwork and Engineering receive appropriate timetable allocations at both junior and senior cycle. Scheduling is appropriate and single and double class periods are provided.

• Following a proposal from the subject department, senior management has facilitated the scheduling of co-operative teaching with one class group. The subject department is commended for its proactive role in introducing this mode of delivery to the subject area. The subject department should continue to develop its co-operative teaching practices and vary the modes of delivery employed in order to enhance students’ experiences and maximise the potential benefits.

• First-year students take part in a subject sampling programme until the October mid-term break. This system helps to ensure that students can make their optional subject choices based upon their skills and aptitudes for the various subjects provided.

• Uptake of the subject is very good with a significant proportion of girls choosing Metalwork at junior cycle. Efforts should be made to improve the suitability of project work for all students. This could be achieved easily by including decorative processes in existing project work, structured design-based projects that would allow students to build and develop their skills through the completion of individualised project work and varying the type and colour of materials used to manufacture projects.

• Facilities are maintained to a high standard. ICT resources are integrated into the Metalwork and Engineering room effectively thereby allowing electronic resources to be utilised efficiently. Tools and equipment are managed and stored appropriately and consumables and materials are readily available and prepared in advance of lessons.

PLANNING AND PREPARATION

• The role of subject co-ordinator is rotated between both members of the subject department on an annual basis. However both teachers take an active role in the day-to-day organisation and planning for the subject.

• Issues discussed at regular subject department meetings are recorded. Items discussed range from organisational tasks to the review of students’ certificate examination results. To further develop the pedagogical aspect of subject planning, the further development of co-operative teaching and co-operative learning strategies should be included on future agendas.

• Currently, there is a subject plan for Metalwork and a separate subject plan for Engineering. To eliminate repetition, these two plans should be consolidated. Additional information regarding planned project work and skill development should also be included. This planning should be structured in a similar manner to the existing plans for the teaching and learning of the theoretical aspects of the syllabuses.
• The subject department has identified a number of areas for development. These worthwhile goals, including developing electronic resources for the subject area, should now be progressed within a structured action planning format.

• Planning for the lessons observed was very good.

The draft findings and recommendations arising out of this evaluation were discussed with the principal and the 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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