

An Roinn Oideachais agus Scileanna

Department of Education and Skills

**Subject Inspection of Metalwork and Engineering
REPORT**

**Clonaslee Vocational School
Clonaslee, Co. Laois
Roll number: 714700**

Date of inspection: 26 March 2014



**A N R O I N N | D E P A R T M E N T O F
O I D E A C H A I S | E D U C A T I O N
A G U S S C I L E A N N A | A N D S K I L L S**

**REPORT
ON
THE QUALITY OF LEARNING AND TEACHING IN METALWORK AND
ENGINEERING**

INFORMATION ON THE INSPECTION

Date of inspection	26 March 2014
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teacher• Interaction with students	<ul style="list-style-type: none">• Observation of teaching and learning during five class periods• Examination of students' work• Feedback to principal and teacher

MAIN FINDINGS

- The quality of teaching and learning was very good or good in all lessons observed.
- Practical skill development and project work was of a high quality
- All lessons observed were clearly structured and had a definite learning intention.
- Metalwork and Engineering are popular subjects in Clonaslee Vocational School
- Students choose Metalwork and Engineering from pre-designed option bands
- A balanced timetable exists for all year groups and a generous amount of time is scheduled for junior cycle groups.

MAIN RECOMMENDATIONS

- An increased focus on the assessment for learning (AfL) practices of formative written assessment and review of learning, and the further integration of literacy development is recommended.
 - The subject plan should be further advanced by developing and expanding the use of the good practice already in the plan.
 - A TY module encompassing all three of the technology subjects offered in the school should be developed.
-

INTRODUCTION

Clonaslee Vocational School is a rural co-educational post-primary school under the patronage of Laois and Offaly ETB. It has a current enrolment of 261 students. The school provides Metalwork as an optional subject in its junior cycle programme and Engineering as an optional subject in its Leaving Certificate programme. Currently, the subject is not included as part of the school's optional Transition Year (TY) programme.

TEACHING AND LEARNING

- Two double-period and one single-period lessons were observed during the course of the evaluation. The quality of teaching and learning was very good or good in all cases.
- All lessons commenced with a sharing of the lesson objectives and were characterised by student tasks which were engaging and purposeful. The lessons were very well structured in support of the learning intention. Though some review of learning was included during lesson closure, there was scope to further reinforce and assess students' achievement of the lesson's objectives. This practice should be developed and become part of all lessons.
- High expectations were set for student work and were achieved. The quality of the practical work observed was of a high order, as was the quality of the notes in some students' copybooks. Attainment in the subject is consistently high, and students are strongly encouraged to take higher level in the certificate examinations.
- A range of teaching methodologies were employed during the lessons, including teacher demonstration followed by guided independent learning, and appropriately supported pair-work. All lessons were very well resourced to support students' learning and one lesson made excellent use of ICT visual displays and a display model to guide students in building an electronic circuit.
- Very effective questioning strategies were used throughout the lessons to engage students and a characteristic of all lessons was the enthusiasm of students for the subject. Very positive teacher-student relations was in evidence. Students conducted themselves in a safe and respectful manner at all times.
- Review of prior learning was undertaken at the start of all lessons and was effectively used in most lessons to engage students and reinforce learning. In one lesson, a more judicious balance between teacher and student voice, supported by a cooperative learning task, would have enabled greater student participation and a deeper learning experience. A clarification during lesson closure on the correct selection of drilling speeds would have reinforced the guidance given to individual students during the lesson.
- Feedback and guidance in the form of individual verbal commentary was a feature of all lessons. In most lessons this was used effectively to guide and gauge learning. In one lesson, more timely intervention or the use of pair-work would have been beneficial to further support the learning experience for some students. A review of copybooks indicated an absence of formative assessment, and it is recommended that this AfL practice be implemented to further support and guide student learning.
- Students very capably used the tools and equipment associated with their tasks. They also showed initiative to direct their work and learning. Some of the marking-out exercises undertaken by students in one lesson had strong links with the graphics subject studied by most of the students. A more explicit emphasis on these cross-curricular links would further enhance the students' learning.

- In one lesson, the task of naming a machine part was used effectively to develop literacy skills. This took the form of articulating the function of the part and spelling the part name. This good practice and the implementation of the whole-school literacy strategy should become embedded in all lessons.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Metalwork is a popular subject with a full class groups in each of the junior cycle years. A taster programme during the first term in first year allows students to sample option subjects before selecting Metalwork or Home Economics from the pre-defined option band. Few girls take Metalwork.
- Almost all students who select Engineering in senior cycle have studied Metalwork in junior cycle. Option bands are also pre-defined in senior cycle. Consideration should be given to forming option bands based on student preferences, in the context of the impending junior cycle reform.
- To support students selecting Engineering without the experience of studying Metalwork, it is recommended that a design-focused TY module be created and delivered by the technology department. This would provide students with experience of Engineering, while also supporting the other technology subjects in senior cycle.
- A generous and balanced timetabled provision is in place for Metalwork and Engineering. The subjects are timetabled primarily using double class periods. This is very supportive of practical and project work.
- The metalwork and engineering room is well resourced. Student work, including subject key words, are on display. Despite efforts to maximise the use of the available space, the room size presents challenges for the subject department in accommodating a full class complement. A risk analysis for the room has been completed recently and an issue for follow-up identified. This should be addressed.
- In addition to the whole-school continuing professional development programme, the subject teacher also has opportunity to teach his second subject, Design and Communication Graphics. The use of the computer room adjacent to the engineering room has also facilitated student work in Engineering.

PLANNING AND PREPARATION

- Co-ordination of the subject department includes the recording of minutes of meetings and reflection on student attainment. Cross-subject department meetings take place, which is good practice. It is suggested that the agenda for the technology department meetings also include teaching and learning as an item, in order to further facilitate pedagogical discussion.
- The curricular plans identify select project work for each year in Metalwork with the objective of an integrated approach to theory and practice. A substantial plan has been developed for fifth year Engineering. It is recommended that this work be further developed to include related methodologies, literacy supports and the integration of the subjects' theoretical and practical element. The amended template should be used for the development of all programmes of work.

- The subject plan also features identification of students with special educational needs. The inclusion of supporting strategies specific to the Metalwork and Engineering is recommended.
- The whole-school literacy strategy has also been incorporated into the subject plan. Evidence of this was observed on the wall displays in the specialist room and the availability of a dictionary. It is recommended that the elements of the strategy be further integrated into the programmes of work.

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