

An Roinn Oideachais agus Scileanna
Department of Education and Skills

Subject Inspection of Metalwork and Engineering
REPORT
Old Bawn Community School
Tallaght, Dublin 24
Roll number: 91336W

Date of inspection: 28 January 2014



AN ROINN | DEPARTMENT OF
OIDEACHAIS | EDUCATION
AGUS SCILEANNA | AND SKILLS

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

INFORMATION ON THE INSPECTION

Date of inspection	28 January 2014
Inspection activities undertaken <ul style="list-style-type: none">• Review of relevant documents• Discussion with principal and teachers• 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 teachers

MAIN FINDINGS

- The quality of teaching and learning was good or very good in the majority of lessons.
- Competent and very well planned demonstrations were used in the majority of lessons
- In the non-practical lessons, there was a marked absence or under-utilisation of student copybooks.
- Whole-school support for the provision of Metalwork and Engineering is very good.
- The existing subject plan provides a very good basis for further development.

MAIN RECOMMENDATIONS

- Lesson planning should have as its focus higher-order student learning, supported by appropriate teaching methodologies and assessment for learning (AfL) strategies.
 - Formative written assessment should be introduced to affirm and guide student learning.
 - The subject plan should be further developed to include learning outcomes, teaching methodologies, supporting resources and assessments modes.
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INTRODUCTION

Old Bawn Community School is a co-educational community school with a current enrolment of 824 students. The curricular programmes provided by the school are the Junior Certificate, an optional Transition Year (TY), the Leaving Certificate, the Leaving Certificate Vocational Programme (LCVP) and the Leaving Certificate Applied (LCA). The school offers Metalwork and Engineering as optional subjects in all its curricular programmes.

TEACHING AND LEARNING

- The quality of teaching and learning was good or very good in the majority of lessons. However, in one lesson the learning experience was less than satisfactory.
- Very competent and well planned demonstrations were a feature of the good and very good lessons. Extensive planning and appropriate resourcing underpinned the effective concept and skill development promoted in these lessons.
- The best lesson included very effective use of AfL. One example was the judicious use of ICT to demonstrate a partially completed exercise, similar to the students' task, which was used to elicit feedback from the students. The students' answers demonstrated that learning had taken place.
- In the same lesson very effective questioning was employed to access and assess prior learning, engage students in thinking and analysing, and to reinforce learning of the practical skills.
- New key terms were also identified for the students and were reinforced during lesson closure. This good integration of literacy development could be further enhanced by engaging the students in written and oral application of the key terms, and this practice should be extended to all lessons.
- Best practice observed included differentiation of learning, where multiple project tasks were simultaneously under development, enabling students to work independently. The further development of learning aids, similar to the very effective process guide developed for lathe work, should be undertaken. This would complement the individual teacher input to student work.
- One lesson consisted of the demonstration of numerous experiments. Though the experimental methods were extensive and engaging, the lesson was teacher-led and students did not have sufficient opportunities to think, analyse, explain, conclude and present their findings. Students should be provided with tasks that also engage them in higher-order learning.
- The above mentioned experiments clearly supported the subject matter recently studied by the students. However, it is recommended that such experiments be employed early in the development of the subject matter to engage students and provide a reference for related subject knowledge.
- In another lesson, students were assigned exam-style questions to be completed during the lesson and corrected by the teacher after the lesson. While this may be valid as a lesson activity, the lack of engagement of some students and the limited success with the assigned task by others led to a poor overall learning experience. It is strongly recommended that preparation for all lessons feature teaching methodologies that ensure opportunities for appropriate student learning.

- Most students in one lesson did not have their subject copybooks present, and in another lesson there was an absence of any record of student work for the first half of the year. A greater effort must be made to ensure that students understand the importance of their own work as a resource to support and direct their learning. To support the realisation of this objective, it is recommended that teachers provide written comments on student work to affirm and guide them.
- The students were very well behaved in all the lessons observed. They exhibited a very good understanding of, and familiarity with, classroom procedures and rules. The teacher's active circulation, particularly during practical lessons, ensured that students worked in a safe, orderly environment at all times.

SUBJECT PROVISION AND WHOLE SCHOOL SUPPORT

- Very good timetabling provision is made for both Metalwork and Engineering, with class periods suitably distributed throughout the week. The optimal use of double class periods greatly facilitates student project work and coursework.
- The number of first-year students selecting Metalwork has been consistent over recent years. Few girls take the subject and this is possibly due to the absence of a taster programme or the opportunity to sample the subject. Consideration should be given to addressing this issue in the context of the impending junior cycle reform.
- Due to the number of students in TY at present, the subject is not included in the programme for the present year group. The subject is included as a module in the LCA programme every second year, alternating with another technology subject.
- Option bands in senior cycle are created based on student preferences. This student-centred approach also accommodates the selection of Engineering in fifth year without prior experience of the subject.
- There are two specialist rooms. Both are well maintained and the combined facilities indicate a well-resourced department. A risk audit has been conducted recently for both rooms and issues identified have been followed-up.
- Both subject teachers are accommodated in respect of timetabling for their second subject, Technical Graphics and Design and Communication Graphics. They are also supported to pursue membership of the subject association.

PLANNING AND PREPARATION

- Co-ordination of the subject department includes the recording of minutes of meetings and reflection on student attainment. The department is currently developing a dictionary of subject terms to support the whole-school literacy strategy. A shared electronic library of multimedia material has also been established.
- Cross-subject department meetings take place, which is good practice. It is recommended that the agenda for the technology department meetings include teaching and learning as an item so as to encourage development, discussion, reflection and sharing of strategies within the department.
- The subject department's curricular plans include programmes of work presented in tabular format, which outlines the delivery of the syllabus content in both junior and

senior cycles. As a next step in their development, columns should be identified to explicitly record the learning outcomes, teaching methodologies and assessment modes specific to the content.

- A timetable for delivery and the identification of suitable resources should also be included in the subject plan. The development of this aspect of the plan should be used to identify optimised lesson structure and sequencing for deep student learning.
- The performance of students in certificate examinations is presented and analysed in terms of higher level take-up and grades achieved. Students typically perform very well at the level selected. It is recommended that strategies be developed to ensure that students are encouraged to study the subject at an appropriately high level.
- The teachers' individual planning documents include records of student attainment for most students. It is recommended that progress and achievement records be kept on file for all students' work.

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, and the response of the board will be found in the appendix of this report.

Appendix

School response to the report

Submitted by the Board of Management

Area 1: Observations on the content of the inspection report.

The Board are happy with the content of the report which affirms the excellent work that is carried out in the Metalwork/Engineering department which is confirmed each year with the excellent results obtained in these subjects. The Board reviews achievement levels in State Exams annually and appreciate the feedback from the Inspectorate which supplements the factual information available to it from State exam results.

Area 2: Follow-up actions planned or undertaken since the completion of the inspection activity to implement the findings and recommendations of the inspection

The two teachers in the Metalwork/Engineering department have endeavoured, since the report, to implement effective AFL strategies with the inclusion of additional ICT resources in the room which focus on promoting independent learning. Also efforts are ongoing to introduce a more effective method of providing formative written feedback to students while better utilising the student copybooks.