Subject Inspection of Materials Technology (Wood) and Technical Graphics

REPORT

Gaelcholáiste Luimnigh
Sir Harry’s Mall, Limerick City
Roll number: 76101I

Date of inspection: 15 March 2010
REPORT ON THE QUALITY OF LEARNING AND TEACHING IN MATERIALS TECHNOLOGY (WOOD) AND TECHNICAL GRAPHICS

SUBJECT INSPECTION REPORT

This report has been written following a subject inspection in Gaelchláiste Luínnigh, Limerick City. It presents the findings of an evaluation of the quality of teaching and learning in Materials Technology (Wood) (MTW) and Technical Graphics (TG) and makes recommendations for the further development of the teaching of these subjects in the school. The evaluation was conducted in the course of one day during which the inspector visited classrooms and observed the teaching and learning. The inspector interacted with students and teachers, examined students’ work and had discussions with the teachers. The inspector reviewed school-planning documentation and teachers’ written preparation. Following the evaluation visit, the inspector provided oral feedback on the outcomes of the evaluation to the principal and the subject teacher. The board of management of the school 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.

SUBJECT PROVISION AND WHOLE-SCHOOL SUPPORT

Gaelchláiste Luínnigh is an Irish-medium college under the patronage of Limerick City Vocational Education Committee. The school provides a broad second-level education through the medium of Irish to the boys and girls of the city and the surrounding areas. The Gaelchláiste is a newly-established school, with the first students approaching the end of Transition Year at the time of this evaluation. The subjects inspected during this evaluation, MTW and TG, comprise the technology subjects available to the students. Good practice is followed in making an appropriate range of technology subjects available.

The state of subject-department planning in the school, planning for technology subjects included, is satisfactory. Dedicated time for subject-department planning is provided three times a year. The teacher of the technology subjects meets with teachers of other practical subjects, especially Art, at these times. This is good practice. A co-ordinator is identified for each subject department and this structure has been applied to the technology subjects also. The initiating of this structure has been an important step, which will help the development of the subject department later on, when the school is growing. Teachers also meet informally once a week throughout the year to discuss the progress of the subjects. This is good practice.

Comprehensive written plans have been developed for the two subjects. These plans are based on a consistent framework. Within each plan a scheme of work is laid out for every year together with a wide range of other elements related to planning for the subject. The thoroughness of the plans, which are rooted in the school’s own context, is another example of good practice. This is
evident in the strategy outlined to avoid gender stereotyping when students are choosing their subjects.

Teachers are given every encouragement and support to undertake continuous professional development (CPD), both development specific to their respective subjects and development related to the whole school. As part of the CPD, sessions under the auspices of the support service for technology subjects, T4, were attended which were provided through the medium of Irish.

Good practice is followed in the provision of teaching time for MTW and TG. Every class is allocated four periods per week for each of the two subjects. One double period each week is provided for each class, to facilitate practical work. Periods are well distributed over the week to promote regular student contact with the subject.

Very good provision of resources is made for the subjects. Every resource, both equipment and materials, is provided as needed, when the subject co-ordinator informs the management of the requirement. This process works well while the school is small. It is recommended, however, that a budgetary system or procedure be organised for the subject department, which will facilitate department planning later on, especially as the school gets larger and the need for maintenance of equipment and tools increases.

The school has drawn up a health and safety statement, which is revised annually. There is a reference in the statement to the technology subjects and to the rooms in which they are taught. There is an appropriate emphasis on the importance of health and safety in planning for and organising the subjects and it gets appropriate mention in the subject plans.

Very high quality information and communication technology (ICT) resources are provided for the teachers and students in the school. Every classroom has a data-projector and a computer, which the teacher of MTW and TG uses to full advantage. There are six computers for student use in the drawing room and more in the woodwork room. The students also use the computer room regularly. The school provides a memory stick for each student so that they can carry homework, documents and project work between school and home. Software is supplied free of charge to the students through a partnership arrangement between the school and a large software company. Good practice is evident in the development of the ICT resources made available in the school.

**Planning and Preparation**

Long-term planning for the two subjects is done to a high standard. The result of this planning is evident in the notable progress made so far in the development of MTW and TG in the school. The schemes of work outlined in the plans cover the respective syllabuses. Subject plans refer to some of the teaching methodologies used, especially group work, peer teaching and getting the students to use ICT to prepare presentations to their fellow students. This shows good planning practice. The subject department is encouraged to develop this area of planning further, focusing in particular on the best strategy and methodologies to get the teaching of Irish to the highest level during MTW and TG lessons. Very good reflective practice, with regard to the use of Irish in the lessons observed, was evident during the inspection. It would be well worth highlighting this practice in the subject plans, with particular emphasis on the integration of the teaching of Irish and the teaching of the syllabus matter, thus sharing the good practice with other teachers of technology subjects and with teachers in general in the school, in time to come.
In accordance with good practice, reference is made to the subject plans to special educational needs experienced by students. It is recommended that these references be developed in order to record the subject-department’s approach to the individual student’s educational needs. The approach to differentiating the work and tasks to suit individual students’ abilities should also be included in the written plans. There is an appropriate emphasis on cross-curricular planning, as good practice suggests.

The MTW and TG department is very active in selecting and providing teaching resources. Both textbooks and ICT resources are used in each of the subjects. The enthusiasm and thoroughness of the teacher in providing these resources are very impressive. These resources, which are used as teaching aids in the lessons, are available to the students on the school’s intranet. At the time of the subject evaluation, preparations were in train for hosting the resources on the school’s virtual learning environment, which will be available on the internet to the students at home. This is an invaluable project, under the aegis of Limerick City VEC, to tackle the dearth of published learning materials which is frequently cited as a barrier to learning through Irish. Significant use is made of ICT resources in MTW and TG, in accordance with good practice.

Good practice is followed in the woodwork room in relation to health and safety. Safety signs are displayed as well as the rules of the woodwork room. These rules are brought to the attention of every student from the outset and they are signed. Safe operational areas are marked on the floor of the room, an approach which helps to develop students’ awareness of safety. There was a good emphasis on health and safety in every lesson observed during the inspection. To further perfect the provision for health and safety, it is recommended that added instructional safety signs be displayed in the room. These are signs to indicate the procedures and precautions employed to ensure safety when using a machine. As part of this, it is recommended that an instructional safety sign be displayed to clarify the rationale behind safe operational areas and to communicate the implications for movement within the room.

**TEACHING AND LEARNING**

The teaching methodologies used in MTW and TG suit the ability, interests and needs of the students. Among these methods, regular use is made of teacher demonstrations of woodwork and drawing skills. The students find these demonstrations precise and interesting. There is very effective integration of practical work and theory in MTW. In one lesson, in which the students were working on a project, the teacher took the opportunity to teach a mini-lesson on the coping saw, when demonstrating how to remove the waste from a bridle joint. As part of this project also, the students were given the opportunity to design the shape of one component for themselves. It is good practice to get students to design their own projects and it is recommended that this approach be used further to develop their design competence from the start. The projects set for the students should, as often as possible, be differentiated. Such differentiated teaching facilitates the setting of challenging work for every student at their own level of ability.

At the outset of every lesson observed, the teacher made clear what the objective of that lesson was. Good use was made of questioning for this purpose, in accordance with good practice. This questioning helped to establish links between students’ prior knowledge and the work about to be undertaken in the lesson. The structure of the lessons was precise and clear. The teacher organised smooth transitions between sections of the lessons and there was an appropriate pace to the work.
Good use was made of a wide range of teaching aids and resources, including SolidWorks-generated digital models through the data projector in MTW and TG lessons, with very good use being made of ICT. Appropriate use of a TG textbook was observed, effectively integrated into the work of the lesson, representing good practice.

It was evident in the lessons observed that effective procedures are adopted in the classrooms regarding the organisation of students’ work and for the distribution and collection of tools, equipment, materials and current projects. This good organisation runs through all aspects of the work, a feature which contributes greatly to creating a calm learning environment.

Students accept the school’s practices, rules and code of conduct willingly. There was a positive, friendly atmosphere of mutual respect in every lesson observed. A pleasant, natural interaction between the students, and between them and the teacher was evident in every lesson. The students were offered every encouragement in their work and in participating in the activities involved in the lessons. The students got recognition and credit for their efforts and they were at ease and focused on work they found interesting.

The students showed an understanding and knowledge of the subjects, in keeping with their age and the duration of their study. Indications of their learning could be detected in the questions they asked and the answers they gave in class and in their interaction with the inspector. Class work was conducted in Irish only and all the students were well able to cope and at ease with the language used in the lessons. It was clear that the students were making significant progress in the medium of instruction, as well as in the content of the subjects. The integration of language and subject-matter in the approach observed in the lessons supported students’ in reaching this learning target. Some opportunities were taken to display new Irish words, terminology and phrases on the walls of the room. This good practice is commended and it should be gradually broadened, for example, by adding a title or some terminology to each poster or sketch prepared by the students which is hung on the classroom wall.

The students displayed an interest in, and enthusiasm for, the subjects in each lesson observed. They enjoyed their learning in a way that showed a lively involvement and curiosity. Their learning was at a high level.

**ASSESSMENT**

A wide range of assessment methods is used in MTW and TG. The assessment practice is in line with the comprehensive and well-developed assessment policy of the school, according to which the usual formal examinations are conducted. Also, in line with the school policy, students’ work in MTW and TG is continuously assessed, the results being taken into account in arriving at the results of the formal examinations. This is good practice which accords with the assessment methods used in the certificate examinations in these subjects.

Assessment for learning is emphasised in the assessment policies of the subject-department and of the school. This good practice is carried through into the teaching of the subjects. This was seen in the lessons observed during the inspection. In a TG lesson, the teacher took the opportunity of checking students’ homework individually while the class was working. The students were praised and encouraged for their work and the teacher had a chance to attach a short note to the homework. During classes, the teacher frequently acknowledged the merit of students’ answers and of questions they asked. This informal oral assessment represented good practice in providing feedback to the students and making them active in their own learning.
Good practice is followed with regard to keeping a record of student progress in the two subjects. Accounts of exam results, homework, practical work and class work are carefully recorded in the teacher’s diary. Also in line with good practice, parents are kept informed of students’ progress. Students’ progress is discussed at parent-teacher meetings. Official school reports are sent to students’ homes at term’s end. Student diaries are used as a link between the teacher and the parents.

**SUMMARY OF MAIN FINDINGS AND RECOMMENDATIONS**

The following are the main strengths identified in the evaluation:

- Very good provision is made for MTW and TG in the school, especially through the appropriate provision of teaching-time and resources.
- Planning on a subject-department basis has been very well developed.
- Teaching at a high level was observed.
- Very good learning was evident in the classes observed.

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

- The projects undertaken by the students should be differentiated as often as possible.
- It is recommended that planning for integration of Irish language teaching and the teaching of the subject matter prescribed in the syllabuses be further developed, in partnership with all the teachers and subject-departments in the school as appropriate.

Post-evaluation meetings were held with the teacher of Materials Technology (Wood) and Technical Graphics and 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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Appendix

School Response to the Report

Submitted by the Board of Management
Area 1  Observations on the content of the inspection report

The board of Gaelcholáiste Luinnigh welcomes this very positive inspection report on the teaching and learning of the subjects dealt with in this document. The board is extremely satisfied that comprehensive recognition is given to the high standard of teaching and learning in these subjects and to the dedication and intense teamwork of the Gaelcholáiste. This recognition affirms and supports the good practices and the high standard that continues to improve from year to year in this brand-new school.

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 board takes cognisance of the recommendation made in the report regarding increased development of planning for integrated teaching of Irish language and subject-syllabus content. Arrangements are now in place to act on this recommendation. The board is confident that these strategies are being successful.

The board would like to express its thanks to the Inspectorate for the truly professional and courteous approach of the inspector in the course of the entire process and for the significant feedback presented to the college authorities for the benefit of students and teachers in the Gaelcholáiste. The board looks forward to the next visit to review the recommendations made in the report and to evaluate the continuing advancement of the school.