



**Coimisiún na Scrúduithe Stáit
State Examinations Commission**

JUNIOR CERTIFICATE EXAMINATION 2009

MATERIALS TECHNOLOGY WOOD

ORDINARY LEVEL CHIEF EXAMINER'S REPORT

HIGHER LEVEL CHIEF EXAMINER'S REPORT

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1. INTRODUCTION

The Junior Certificate syllabus in Materials Technology Wood (MTW) was introduced in 1992 and was examined for the first time in 1994. Materials Technology Wood is examined at two levels – Ordinary Level and Higher Level.

The examination at both levels comprises two components:

- 1) Coursework (200 marks – 66.6%)
- 2) Written Examination (100 marks – 33.3%)

A candidate's final result is determined by combining the results obtained on the practical coursework (project) and the terminal examination with equal weightings. Therefore, the total mark for the overall examination is 300. The mark allocation is outlined in Table 1.

	Practical Coursework	Examination Paper	Total
Ordinary Level	200 marks	100 marks	300 marks
Higher Level	200 marks	100 marks	300 marks

Table 1: Allocation of marks

Both examination components are marked separately by different examining teams who are appointed by the State Examinations Commission.

The level at which candidates present for the examination paper is determined by the level at which they present for the Coursework. Candidates select one Design Brief, either at Ordinary Level or at Higher Level, usually in early November, and candidates are then required to sit the theory paper at the same level as that of the chosen Design Brief.

1.1 Candidature

In 2009, 15,254 candidates sat the Junior Certificate MTW. This figure represented a slight decrease on the 15,676 candidates who sat the MTW examination in 2002, when the last Chief Examiner's Report was published. However, the overall number sitting the Junior Certificate has fallen since 2002 and as a result the actual percentage of the Junior Certificate cohort sitting MTW has actually increased from 26.1% to 27.5%.

1.2 Choice of Level

When the previous report was published in 2002, 68.8% of the cohort opted for Higher Level. This percentage gradually rose to 75.5% in 2007. At that juncture it was reported by examiners that many candidates who had entered for Higher Level appeared to have difficulty with certain aspects of the examination. The written component was most frequently noted in this regard. The percentage attempting Higher Level has since reduced somewhat to 72% and it would appear that

that candidates are now presenting for examination at a level more commensurate with their ability. The Higher and Ordinary Level breakdown is outlined in Table 2 and the percentage opting for Higher Level is shown in graphic format in Chart 1.

Year	Total	Higher Level		Ordinary Level	
		Numbers	%	Numbers	%
2002	15675	10781	68.8%	4894	31.2%
2003	15902	11290	71.0%	4612	29.0%
2004	15424	10888	70.6%	4536	29.4%
2005	15284	10864	71.1%	4420	28.9%
2006	15853	11416	72.0%	4437	28.0%
2007	15804	11928	75.5%	3876	24.5%
2008	15609	11732	75.2%	3877	24.8%
2009	15254	10979	72.0%	4275	28.0%

Table 2: Choice of Level (2002 – 2009).

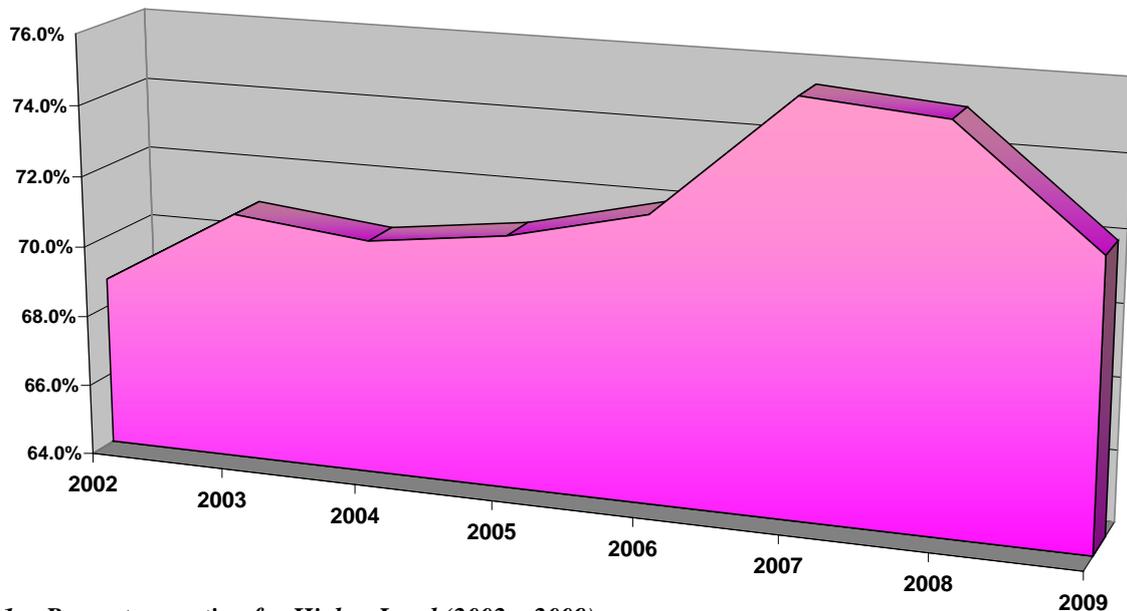


Chart 1: Percentage opting for Higher Level (2002 – 2009).

1.3 Gender Balance

The number of males sitting the subject continues to significantly outweigh the number of females and the percentages in this regard are similar to 2002. In both years, females represented 12% of the cohort. However, there is an indication that female participation at Higher Level is increasing. In 2002, females represented 8% of the Higher Level cohort. This year that figure had increased marginally to 9%. Table 3 outlines the gender balance at each level in 2009.

	Ordinary Level		Higher Level		Total	
Female	786	18%	1034	9%	1820	12%
Male	3489	82%	9945	91%	13434	88%
Total	4275		10979		15254	

Table 3: Gender balance - 2009

2. PERFORMANCE OF CANDIDATES

2.1 Ordinary Level

This year’s overall distribution of grades at Ordinary Level is outlined in Table 4.

	A	B	C	D	E	F	NG	TOTAL
Number	200	1452	1559	680	153	174	57	4275
%	4.7%	34.0%	36.5%	15.9%	3.6%	4.1%	1.3%	
Number	3211			680	384			4275
%	75.1%			15.9%	9.0%			

Table 4: Ordinary Level – Grade Distribution 2009.

This year’s Ordinary Level grade distribution is outlined in pictorial format in Chart 2.

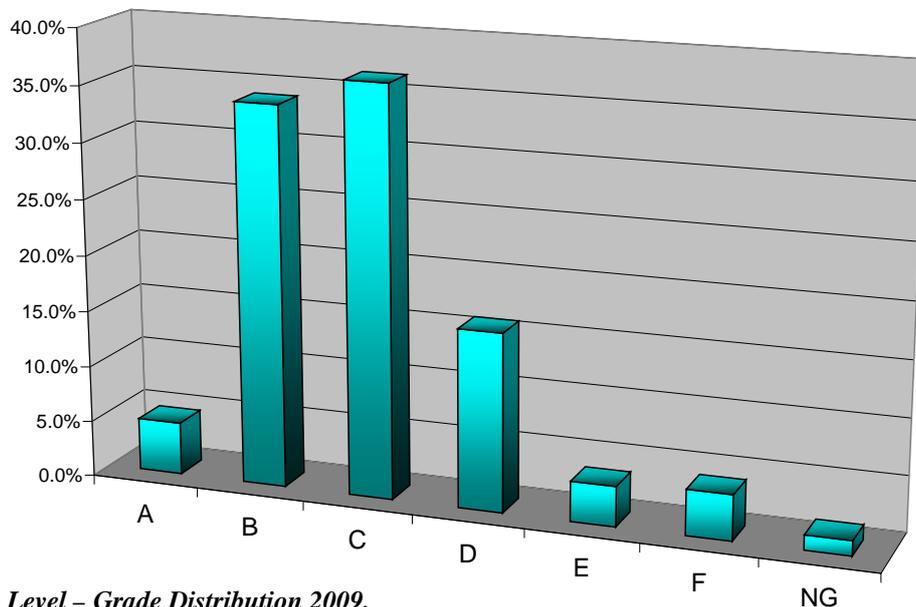


Chart 2: Ordinary Level – Grade Distribution 2009.

Table 5 compares the Ordinary Level grade distribution for the past three years.

Year	A	B	C	D	E	F	NG
2007	4.5%	33.4%	37.0%	16.2%	3.9%	4.1%	0.8%
	74.9%			16.2%	8.8%		
2008	4.4%	33.7%	36.9%	16.4%	3.0%	4.1%	1.5%
	75.0%			16.4%	8.6%		
2009	4.7%	34.0%	36.5%	15.9%	3.6%	4.1%	1.3%
	75.2%			15.9%	9.0%		

Table 5: Ordinary Level – Grade Comparisons 2007 - 2009.

The overall performance at Ordinary Level indicates that three out of every four candidates achieved a grade C or higher. The E+F+NG rate, however, remains high at 9%. This is primarily attributed to candidates either not submitting coursework or not completing all required sections in the written examination.

2.2 Higher Level

This year's overall distribution of grades at Higher Level is outlined in Table 6.

	A	B	C	D	E	F	NG	TOTAL
Number	1026	4731	3675	1253	179	87	28	10979
%	9.3%	43.1%	33.5%	11.4%	1.6%	0.8%	0.3%	
Number	9432			1253	294			10979
%	85.9%			11.4%	2.7%			

Table 6: Higher Level – Grade Distribution 2009.

This year's grade distribution is outlined in pictorial format in Chart 3.

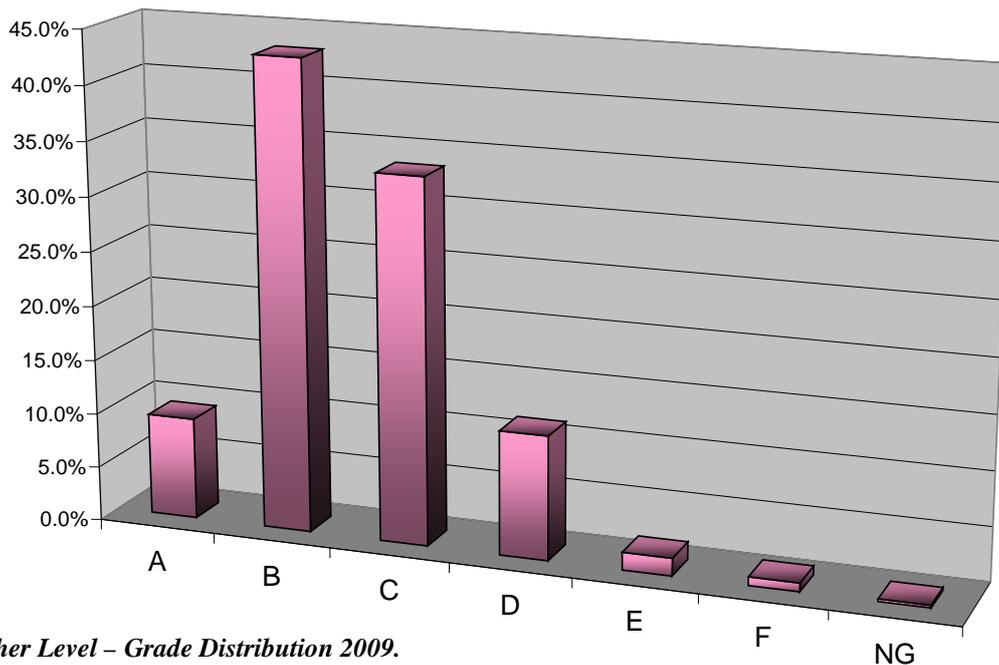


Chart 3: Higher Level – Grade Distribution 2009.

Table 7 compares the Higher Level grade distribution for the past three years.

Year	A	B	C	D	E	F	NG
2007	9.8%	41.2%	35.3%	11.5%	1.4%	0.6%	0.3%
	86.3%			11.5%	2.3%		
2008	10.8%	42.2%	33.0%	11.3%	1.5%	0.9%	0.3%
	86.0%			11.3%	2.7%		
2009	9.3%	43.1%	33.5%	11.4%	1.6%	0.8%	0.3%
	85.9%			11.4%	2.7%		

Table 7: Higher Level – Grade Comparisons 2007 - 2009.

As can be seen from the above table, there is very little variation in the distribution of grades across the three years at Higher Level. Approximately one in every ten candidates achieves an A grade at Higher Level while more than five out of every six candidates achieves a grade C or higher. At the other end of the spectrum, the EFNG rate remains low and this is largely attributed to candidate performance on the coursework which accounts for two-thirds of the available marks.

3. COURSEWORK

3.1 Introduction

The coursework component in Materials Technology Wood represents 66.6 % (200marks) of the total marks for the subject. Coursework comprises two components:

- A design folio
- An artefact

A list of six Design Briefs - three at Ordinary Level and three at Higher Level - is issued by the State Examinations Commission (SEC) in early November of year three of the Junior Certificate programme with a completion date at the end of the following April. Each candidate is required to complete coursework - both design folio and artefact – in response to one of the Design Briefs. The coursework is assessed in June in the schools by examiners appointed and trained by the SEC.

As can be seen from the following table, there are different weightings for the Design Folio and the Artefact at each level.

Distribution of marks	Design Folio	Artefact	Total
Ordinary Level	50 marks	150 marks	200 marks
Higher Level	70 marks	130 marks	200 marks

Table 8: Weightings – Design folio and artefact – Ordinary Level and Higher Level

Table 9 below shows the outline marking scheme and distribution of marks for both the design folio and the artefact at both Ordinary Level and Higher Level.

Marking Headings	Ordinary Level	Higher Level
Analysis of brief	10	10
Investigation/Research	10	10
Design Ideas/Solutions	10	20
Sketches/Working Drawings	10	20
Final Evaluation	10	10
Folio Total	50	70
Fitness for Purpose	20	20
Appropriate Use of Materials	10	10
Creativity	20	20
Demonstration of skills	60	40
Quality of Finish	20	20
Overall Appearance	20	20
Artefact Total	150	130
TOTAL	200	200

Table 9: Distribution of marks – Design Folio and Artefact

3.1.1 Candidature

This year 14,945 candidates submitted coursework for assessment in Materials Technology Wood. Thus, a total of 309 candidates who sat the written examination, did not submit any coursework. As coursework accounts for 66.6% of the total marks for the subject, candidates who do not submit coursework are severely disadvantaged as they can only be marked out of one third of the marks available for the subject. Teachers are advised to encourage all candidates to submit coursework – both artefact and design folio.

3.1.2 Authenticity of Coursework Work

Each year the SEC issues, along with the design briefs, *Instructions to Candidates* outlining the regulations to be followed for the practical coursework element of the Junior Certificate Materials Technology Wood when presenting coursework for assessment.

These instructions require that:

1. *The coursework submitted for assessment must be the candidate's own individual work.*
2. *It must be executed in the school under the supervision of the teacher.*
3. *When using research sources, including the Internet, the sources must be acknowledged.*
4. *Each candidate must submit separate, distinct coursework – artefact and design folio.*

Teachers are required to verify that each candidate has fulfilled the requirements for the submission of valid coursework as outlined. The co-operation of teachers is essential in maintaining the integrity of the assessment process and the cooperation of teachers in this regard is greatly appreciated by the SEC. The vast majority of candidates submitted coursework in accordance with the regulations of the Commission. However, in the case of a small number of candidates, further investigation was necessary to determine the authenticity of the work submitted. Penalties were applied where, on investigation, there was evidence that the work submitted was not in compliance with the regulations of the Commission. In 2009, a total of five candidates did not receive any marks for the coursework component of Materials Technology Wood, as such coursework did not accord with the regulations of the Commission for the submission of authentic coursework.

3.2 Overview of Candidate Performance

The following commentary, which is based on the reports of the examiners, is intended to aid teachers and candidates in preparation for future examinations. This section should be read in conjunction with the relevant examination papers and marking schemes, which are available on www.examinations.ie.

The overall standard of coursework presented for assessment was satisfactory and this was reflected in the results obtained by candidates at both Ordinary Level and Higher Level. Many candidates produced excellent ideas which were very well developed and then produced artefacts which were skilfully and carefully completed. This reflects the dedication of both candidates and teachers and such excellence is commended.

Similarity of Coursework

It is expected that candidates will respond to the chosen Design Brief in their own unique way, reflecting their own research, ideas and creativity. In most centres this happens and examiners see a wide range of coursework, reflecting the diversity of the individual candidate's creativity, skills, flair and dedication. It is acknowledged that there may be some similarities between the coursework of candidates but that in such instances both folio and artefact contain sufficient individual input to allow the examiner to conclude that the work submitted is the individual work of the candidate.

However, in a small number of examination centres the coursework presented by some candidates was close to, if not completely identical. In many such instances candidates, or groups of candidates, followed the same pattern and thus disregarded the design content of the briefs.

Such group coursework does not express the research, ideas and creativity of the individual candidate. In many instances, in both design folio and artefact, the design was often the same, the overall dimensions of the artefact were the same, the sizes, materials and jointing techniques used were the same. Such derivative work cannot merit the same marks as that which is clearly the individual work of each candidate.

Where similar, derivative coursework is submitted candidates may lose marks under a number of relevant headings in the marking scheme.

Time Management

Coursework management in Materials Technology Wood provides candidates with an ideal opportunity to develop time management skills so that both the design folio and artefact can be submitted by the closing date issued by the Commission. As time is a limited and valuable resource, candidates should be encouraged to manage their time carefully. It is recommended that candidates prepare a time schedule for the design and manufacturing processes. The schedule should tabulate the time allocation for each element of the design component and manufacture component. Teachers are advised to check that candidates adhere to the time schedule, thus ensuring that coursework is completed by the appointed closing date.

Design Folio

The design folios presented in 2009 were, generally, of a high standard. To gain maximum marks, candidates are advised to follow the outline of a design process included with the design briefs and to study the distribution of marks under the various headings as outlined. It is recommended that the design folio be developed in tandem with the development of the artefact and that the folio includes a record of all processes from investigation and research to final evaluation.

Investigation/Research

In this section candidates are required to analyse the various possibilities of the design briefs, to conduct research relevant and appropriate to the chosen brief, and to show evidence of same. Investigation is a key element in a design process. Investigation which is not specific to the candidate's own design is of little value in helping the candidate develop a specific solution. In 2009, there was much evidence of research done with the aid of ICT and the Internet. Many candidates demonstrated good use of ICT by integrating examples from the Internet into their own design folio. Candidates who put effort into investigation and research and generated a range of possible solutions were well rewarded. However, the simple printing of pages from the Internet, without relating them to the chosen brief, is often of little value.

Design Ideas/Solutions

Most candidates showed a number of different ideas of their own which they evaluated and developed into a chosen solution. Examiners noted that in some centres candidates just inserted images from the Internet as their design ideas, often unrelated and without note or comment. The quality of the design ideas at this stage frequently reflects the quality of the finished artefact. Good design ideas lead to good quality artefacts. Examiners noted that, in this section, candidates' own artwork and quality of sketching was most evident and, where well done, was rewarded. In some centres candidates prepared prototypes / models to show overall shape and size. Such preplanning of coursework is highly recommended as it saves time and mistakes later in the manufacturing process.

Sketches/Working drawings

The ability to convey design ideas by means of freehand sketches is an essential competence in the study of Materials Technology Wood. Examiners noted a general improvement in the quality of sketching. Teachers are encouraged to place particular emphasis on the development of freehand sketching as the ability to produce competent freehand sketches takes time and practice to perfect. Well executed and properly proportioned freehand sketches should be shaded, rendered and coloured as appropriate and candidates are well rewarded for such work. Candidates are advised to

prepare simple measured drawings showing overall size and proportion of the artefact and to also include the relevant jointing details and cutting list of materials.

Information and Communications Technology

The design folio provides an ideal context for the expression of candidates' ICT competencies. Candidates are encouraged to demonstrate their ICT capabilities, not only in word processing but in areas such as CAD, image scanning, image editing and the use of the digital camera. Examiners reported an increase in the use of SolidWorks by candidates in the folio. Such developments are welcomed.

Evaluation

Some candidates produced very good work in this section and showed what they had learned during the process and what could be improved. This reflection on learning is challenging and many candidates have difficulty with evaluation. Many evaluations consisted of general statements about how the coursework progressed and how they regard the finished product. Candidates are encouraged to reflect on what they have learned and to include a critical reflection of their learning journey while engaged with the coursework.

Artefacts

Overall Size of Artefact

Candidates are advised to read the design briefs carefully and to pay attention to the overall dimensions of the artefact being designed. This requires careful thought at the Investigation/Research stage. Small, well-designed artefacts are more appropriate responses to the design briefs, obtain higher marks than large poorly designed ones, are eco - friendly in the use of materials and are also easy to store.

Fitness for Purpose

The vast majority of candidates fulfilled the requirements of the brief and presented realisations that achieved well under this heading. Artefacts that are well designed, appropriately sized and that use material economically are generally a more appropriate response to the design brief than large, cumbersome and poorly designed artefacts.

Appropriate use of Materials

Examiners remarked that candidates paid careful attention to the selection of a variety of suitable woods for their artefacts. The use of other materials to enhance the appearance of the artefact and the choice of appropriate finishes and fittings, generally, resulted in candidates achieving well in this section.

Creativity

Many candidates displayed inventiveness, resourcefulness and creativity in achieving a solution to their chosen brief. It was noted that candidates who presented the most creative and individual realisations had invariably completed an in-depth analysis and had done comprehensive investigation and research.

Demonstration of skills

The overall standard of work presented was generally satisfactory, with some exceptional work presented in many instances. Candidates displayed aptitudes in a wide variety of processing skills. The accuracy, neatness and attention to detail were generally commendable. Traditional jointing techniques were much in evidence and candidates displayed aptitudes in a wide variety of woodworking skills such as; carving, laminating, turning, veneering and scroll-saw work.

Quality of Finish

The vast majority of candidates had undertaken surface preparation and had applied an appropriate finish. Examiners noted that in a minority of cases the surface preparation and the quality of application often did not reflect the same attention to detail evident in the making of the artefact. Candidates need to allow sufficient time to apply an appropriate finish to the artefact

Overall appearance

Candidates who achieved well in this section had designed suitably sized, aesthetically pleasing solutions to the brief and had demonstrated high quality processing skills. Some teachers took great care when presenting the candidates' finished work. Often the work was presented in separate, specially prepared rooms where the work could be displayed to its best advantage. As well as showcasing the work of the candidates, it facilitates the process of marking and is highly recommended. Teachers should encourage candidates to value the final display of their coursework and to give thoughtful consideration to how coursework can best be displayed to achieve maximum visual impact.

3.3. Coursework - Ordinary Level

3.3.1 Performance of Candidates

As can be seen from the accompanying table and chart, the overall grade distribution for coursework at Ordinary Level over the past three years shows a very similar pattern. In 2009 a total of 10.9% of candidates achieved an A grade and this shows an increase of 1.3% on 2008. A total of 81.9% of candidates achieved a C grade or higher in 2009, showing a slight decrease of

0.8% on 2008. Again, the D grade has remained very constant across the three years and is identical, at 13.4% for 2009 and 2007. The E+F+NG grade remains very constant at 4.7% in 2009 and 4.4% in 2008. Examiners reported that many of the candidates who did not achieve a D grade did not submit a design folio. Such candidates are severely disadvantaged as they lose 50 marks and can therefore only be marked out of the remaining 150 marks available for the artefact. Teachers are advised to encourage students to complete a design folio as they develop the artefact and to have it completed by the closing date for the submission of coursework.

Table 10 and chart 5 below show the grade distribution at Ordinary Level for the coursework component for 2007 - 2009.

Year	A	B	C	ABC	D	E	F	NG	EFNG
2007	10.5	39.8	31.7	82.1	13.4	2.7	1.1	0.7	4.6
2008	9.6	40.4	32.7	82.7	13	2.6	1	0.7	4.4
2009	10.9	37.2	33.8	81.9	13.4	2.8	1.3	0.6	4.7

Table 10: Distribution of grades for coursework at Ordinary Level 2007 - 2009

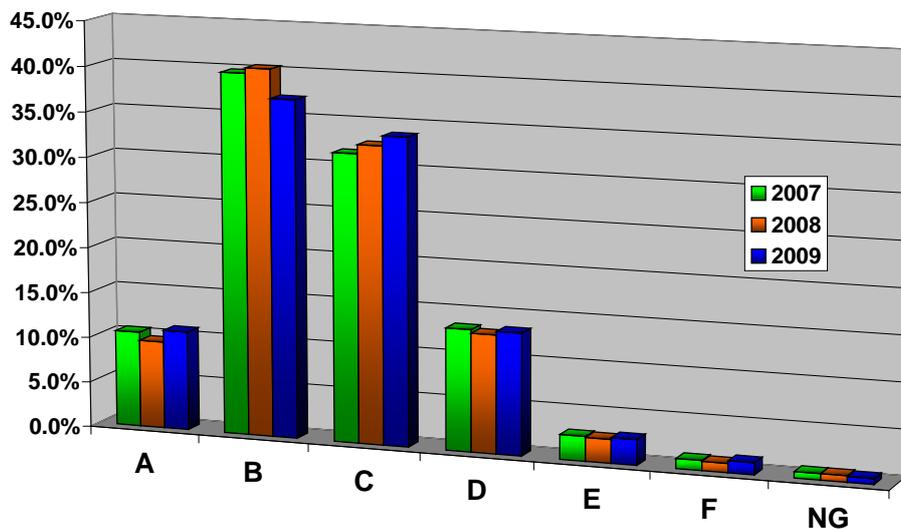


Chart 5: Distribution of grades for coursework at Ordinary Level 2007 - 2009.

3.3.2 Choice of Design Brief at Ordinary Level

Candidates at Ordinary Level are issued three design briefs from which they are required to select one. Chart 7 shows the popularity of each design brief at Ordinary Level. As can be seen from the chart, almost two out of every three candidates (60%) chose the decorative mirror. The wind direction indicator was chosen by only 4.0% of candidates. Examiners suggested that the decorative mirror was an artefact that candidates could use every day, they could personalise the

decoration to reflect personal preferences, and that these factors were important in candidate selection of this design brief.

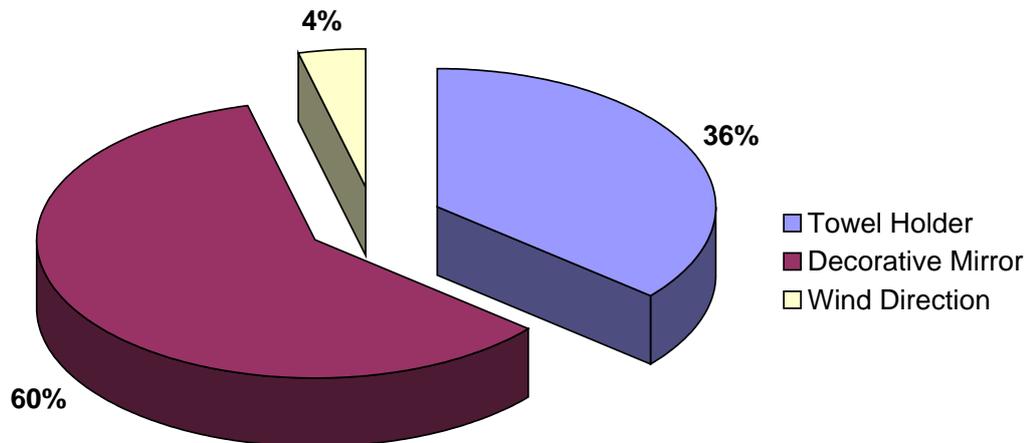


Chart 7: Popularity of coursework briefs at Ordinary Level - 2009

The following graph shows coursework selection by gender.

Of note is the fact that more females chose the decorative mirror (69.0%) than males (57.9%), while more males chose both the wind direction indicator and the towel holder than did females.

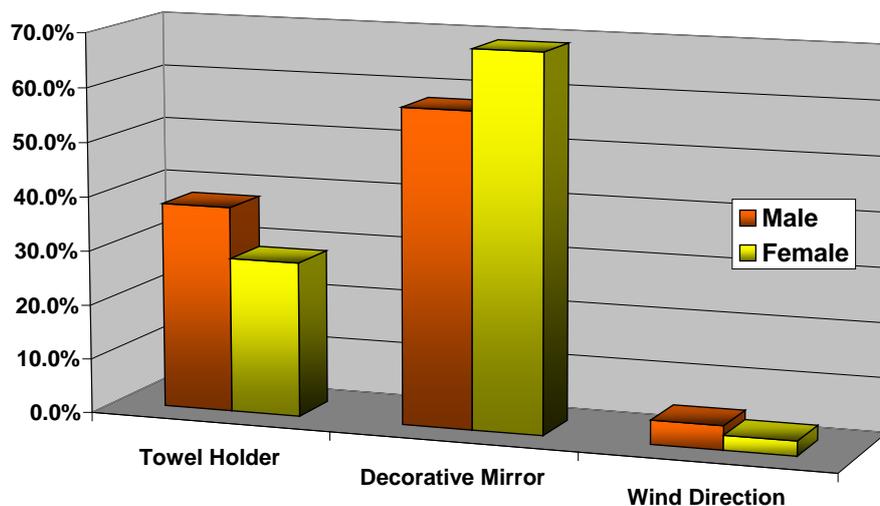


Chart 8: Choice of coursework by gender Ordinary Level - 2009

3.3.3 Analysis of Candidate Performance

Design Brief 1 (Towel Holder)

Candidates were required in this brief to design and make a decorative artefact of elegant proportions to display a bathroom towel and having an aquatic theme.

A total of 36% of candidates selected this design brief. Some very innovative solutions to the brief were presented, expressing high levels of skill both at design and realisation stages. Examiners

remarked that many candidates reported that they chose this design brief because they saw this artefact as being functional in their own home.

The coursework allowed candidates to express themselves in both conventional woodworking techniques – using traditional jointing systems such as mortise and tenon, dovetail and finger joints as well as modern jointing methods, using sheet material - particularly laminated pine board.

The aquatic theme was incorporated in the vast majority of the coursework with plant-on carvings being the most common decoration. Some candidates painted on an aquatic decoration while others used pyrography to etch particular designs on the surface of the materials used. Some of the more able candidates integrated the aquatic theme into the overall design and presented interesting and beautiful designs as a solution to the given brief. Such candidates scored very well.

Design Brief 2 (Decorative Mirror)

This design brief required candidates to design and make an elegant and attractive mirror with storage for small personal items and incorporating pastimes as a theme. This design brief, which was attempted by 57.9% of male candidates and 69% of female candidates, was the most popular choice of coursework brief. Many varied solutions were presented. Candidates generally constructed a frame and this allowed for the use of traditional jointing techniques, with the haunched mortice and tenon joint being the most frequently used joint. In most cases this was well executed and in such instances candidates scored high marks. Some candidates, who demonstrated high levels of skills, encountered difficulty in incorporating the theme of pastimes. Many ignored the theme altogether or drew a shape on to the frame to indicate a pastime. Some candidates used innovative and simple solutions incorporating the theme as an integral element of the design. Such candidates showed that they had read the brief carefully and designed an artefact to respond precisely to the theme and, consequently, these candidates scored very well.

Design Brief 3 (Wind Direction Indicator)

In this design brief candidates were required to design and make a small decorative garden ornament to indicate wind direction and incorporating a theme based on Irish wildlife.

This design brief was the least popular and was attempted by only 4% of the candidates. Most candidates, who undertook this design brief, conducted the necessary research and were able to achieve a design to indicate wind direction. Some incorporated bearings to allow the indicator to change direction easily and scored high marks. A small number of candidates ignored the wildlife

theme and thus lost marks. Though not a popular design brief, it was generally well designed and executed by the candidates who chose this option.

3.3.4 Conclusions

The vast majority of candidates adhered to the instructions of the SEC and presented authentic coursework which was clearly their own unique responses to the chosen briefs. Such work is commended and candidates were adequately rewarded. In a small number of Centres, candidates presented coursework for assessment which was similar in size and shape and design and did not reflect the creativity and problem solving skills of the individual candidate. In many such instances the same cutting list was used by all candidates, the work was almost identical and the coursework of different candidates differed only in the embellishment applied. Such coursework cannot command the same marks as work which expresses the unique creativity and design ideas of the individual candidate. Similar and derivative coursework - both artefact and design folio – loses marks under the relevant headings in the marking scheme. However, the vast majority of coursework presented expressed the individual design ideas and design solutions of each candidate, and candidates were credited accordingly.

3.3.5 Recommendations

It is recommended that teachers:

- only validate coursework completed in school under their direct supervision and according to the instructions issued by the SEC. This is to ensure the integrity of the coursework being assessed and upholds the principle of inter-candidate equity. The SEC policy and practice for the acceptance of practical coursework for assessment are outlined in circulars S68/04 and S69/04. Copies of these circulars are available on the SEC website (www.examinations.ie)
- ensure that all candidates have a full copy of the Coursework –Design Briefs issued to schools. Teachers should also ensure that candidates fully understand the *Notice to each Candidate* and the *Instructions to Candidates* outlined with the design briefs
- ensure that all candidates undertake separate and distinct coursework
- check that candidates make out and adhere to a time schedule - thus ensuring that coursework is completed by the appointed closing date
- encourage candidates to plan their work to allow for revision of the theory components of the Materials Technology Wood course

- encourage candidates to display their coursework in an attractive manner, preferably in a specially designated room for the display of coursework, and to arrange the work in accordance with the instructions from the State Examinations Commission
- ensure that all candidates have completed and signed the necessary documentation relating to the coursework before the end of the school year.

It is recommended that students:

- plan their time carefully, giving due consideration to the time allocation for both the coursework and the theory components
- prepare and follow a time schedule for the design component and the manufacture component of the coursework. The schedule should tabulate the time allocation for each component of both the design folio and the artefact
- pay attention to the size of the artefact at the design stage. It is recommended that all artefacts be small, well designed, economical in the use of materials and easy to store
- develop the design folio in tandem with the development of the artefact and ensure that the design folio includes a record of all processes from investigation and research to final evaluation
- pay particular attention to the development of freehand sketching. Sketches should be shaded, rendered and coloured, as appropriate
- use the design folio to express their aptitudes, not only in word processing, but in areas such as CAD, image scanning, image editing and the use of the digital camera
- should acknowledge the sources of all research, particularly work sourced from the Internet. Such research should be relevant to the chosen brief and should be placed in its proper context
- leave adequate time for the surface preparation and proper finishing of the artefact
- use neat freehand sketches to convey technological data clearly and accurately. Students should pay particular attention to the development of sketching abilities. Sketches should be shaded, rendered and coloured, as appropriate.

3.4 Coursework - Higher Level

3.4.1 Performance of Candidates

The table and graph below indicate the grade distribution at Higher Level for the coursework component for 2007 - 2009.

Year	A	B	C	ABC	D	E	F	NG	EFNG
2007	18.2	45.1	26.8	90.1	8.2	1.2	0.4	0.2	1.7
2008	19.1	44.3	25.7	89.1	8.6	1.6	0.5	0.2	2.4
2009	18.8	44.5	25.5	88.8	8.9	1.6	0.6	0.1	2.3

Table 12: Distribution of grades for coursework at Higher Level - 2007 2009

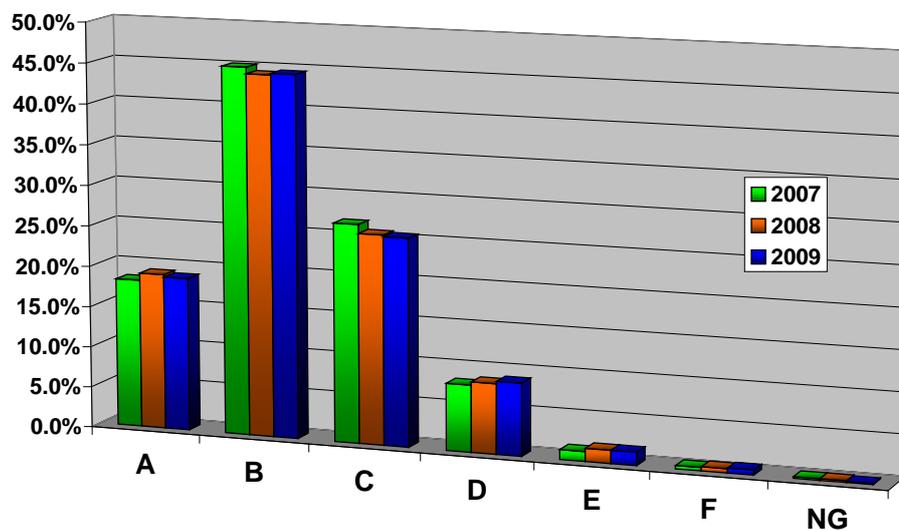


Chart 9: Distribution of grades for coursework at Higher Level - 2007 2009

The results show that many candidates did very well in the coursework component at Higher Level in 2009. This is reflected in the fact that 88.8% of candidates achieved a grade C or higher in the coursework. It was evident that many candidates made considerable effort and presented excellent work for assessment. Such candidates are to be complimented for their diligence and attention to detail in producing coursework of such a standard.

3.4.2 Choice of Design Brief at Higher Level

Chart 11 shows the popularity of each design brief at Higher Level.

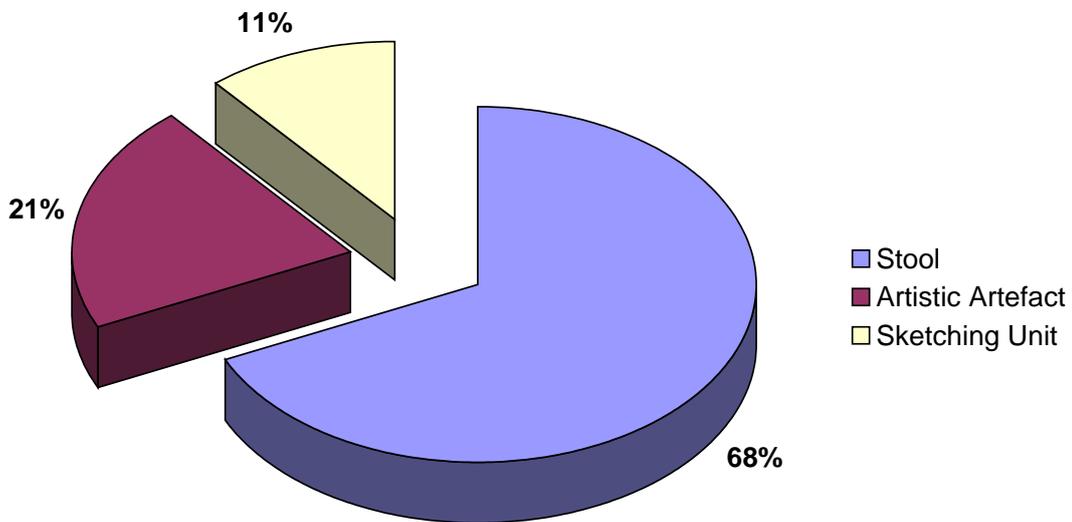


Chart 11: Popularity of design briefs at Higher Level 2009.

As can be seen from the chart, the stool was the most popular brief selected by candidates. More than two out of three (68%) candidates selected the stool, slightly more than one in five (21%) candidates selected the artistic artefact and the least popular was the sketching unit, which was selected by 11% of candidates.

Chart 12 shows the popularity of design briefs at Higher Level by gender. It is noted that fewer females (53.2%) selected the stool than males and more females selected the artistic artefact than males; a total of 20.0% of males and 30.5% of females selected the artistic artefact. A total of 16.3% of females and 10.7% of males selected the sketching unit.

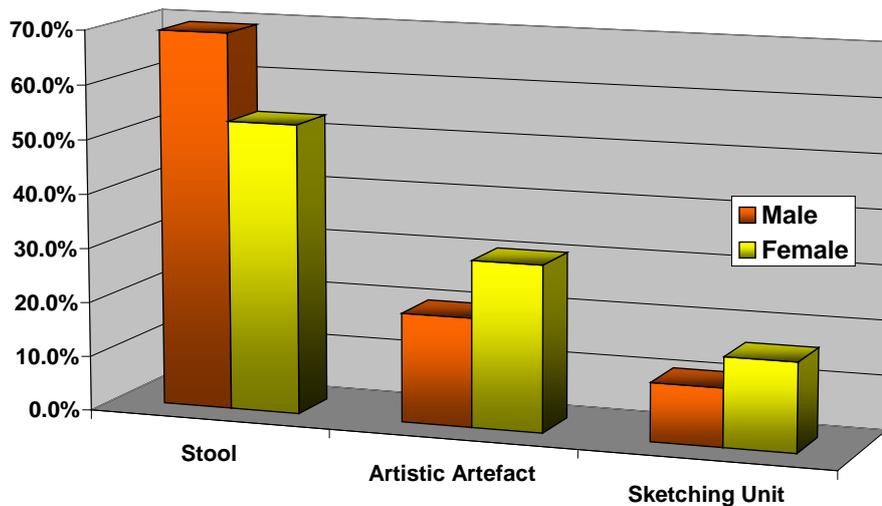


Chart 12: Popularity of design briefs by gender at Higher Level - 2009

3.4.3 Analysis of Candidate Performance – Higher Level

Design Brief 1 (Stool)

In this design brief, candidates were required to design and make a sturdy and elegant stool having a secondary function. Candidates were also asked to consider their carbon footprint in the design, selection of materials and in the processes used in the manufacture of the stool.

This was by far the most popular coursework choice among the candidates and was selected by 68% of candidates at Higher Level. The work presented was in general of a high standard. The use of well-selected joints, in particular mortice and tenon joints, was much in evidence in the constructions and this ensured that the artefacts were sturdy. Dowel jointing and biscuit jointing were also in evidence.

The vast majority of candidates incorporated a specific secondary function often resulting in unique, innovative and well-executed solutions. The most successful solutions resulted from close reading of the design brief, followed by detailed analysis and investigation in the folio accompanied by sketches of possible solutions and refinement of one particular solution. Teachers are advised to encourage students to analyse the briefs carefully, to investigate and refine possible solutions and to proceed to manufacturing only when the above steps have been carefully considered.

Analysing their carbon footprint was a new dimension to the 2009 design briefs. Examiners noted that most candidates had included evidence showing how they considered their carbon footprint. This often consisted of research in the folios with candidates showing evidence of how it influenced their selection of material. There was less evidence to show how their carbon footprint influenced the manufacturing process and use of energy and machinery in the realisation of the artefact. Few candidates demonstrated how they considered their carbon footprint in all three as outlined in the brief – the design, materials and processes used to manufacture the stool.

Design Brief 2 (Artistic Artefact)

In this design brief candidates were required to design and make a decorative artefact to reflect a particular artistic or craft activity. The design was to be inspired by the intrinsic beauty of wood. The artistic artefact was chosen by just over one in five candidates (21%). However, many of these candidates displayed a flair for both design and artistic expression.

Examiners reported that candidates presented a wide variety of excellent design solutions. Many candidates made a good effort to show an appreciation for the intrinsic beauty of the wood, both in the selection of woods with interesting grain patterns and in the shapes they selected for their designs. In many cases the use of materials, other than wood, to enhance the coursework added considerably to the elegance of the overall appearance of the artefact. Many candidates demonstrated skills in turning, carving, veneering, laminating, and jointing.

Design Brief 3 (Sketching Unit)

Although the uptake of this design brief was relatively low at 11%, the realisations were in most instances very good. The designs presented were very varied and many included innovative solutions to incorporate storage and ergonomically suitable work surfaces.

Some of the designs were based on a briefcase type solution and many included corner joints as appropriate including box dovetails. Many other varied and innovative solutions were also evident; some candidates used the concept of a portable easel as an inspiration for their designs and designed sturdy lightweight and elegant solutions. These candidates achieved high marks for such work.

Again, candidates who put a lot of thought into the research and design ideas succeeded in designing solutions that responded to the brief and were both innovative and attractive in appearance. Such work highlights the importance of good quality research and sketching in the initial stages of design and such work helped candidates produce unique and attractive solutions.

3.4.4 Conclusions

As was the case at Ordinary Level, the vast majority of candidates adhered to the instructions of the Commission and presented authentic coursework which was clearly their own unique responses to the chosen briefs. Such work is commended and candidates were adequately rewarded. In a small number of examination centres, candidates presented coursework for assessment which was similar in size and shape and design and did not reflect the creativity and problem solving skills of the individual candidate. In many such instances the same cutting list was used by all candidates, the work was almost identical, and the coursework of different candidates differed only in the embellishment applied. Such coursework cannot command the same marks as work which expresses the unique creativity and design ideas of the individual candidate. Similar and derivative coursework - both artefact and design folio – loses marks under the relevant headings in the marking scheme. However, the vast majority of coursework presented expressed the individual design ideas and design solutions of each candidate, and candidates were credited accordingly.

3.4.5 Recommendations

It is recommended that teachers:

- only validate coursework completed in school under their direct supervision and according to the instructions issued by the SEC. This is to ensure the integrity of the coursework being assessed and upholds the principle of inter-candidate equity. The SEC policy and practice for the acceptance of practical coursework for assessment are outlined in circulars S68/04

and S69/04. Copies of these circulars are available on the SEC website

(www.examinations.ie)

- ensure that all candidates have a full copy of the Coursework –Design Briefs issued to schools. Teachers should also ensure that candidates fully understand the Notice to each Candidate and the Instructions to Candidates outlined with the design briefs
- ensure that all candidates undertake separate and distinct coursework
- check that candidates make out and adhere to a time schedule - thus ensuring that coursework is completed by the appointed closing date
- encourage students to analyse the briefs carefully, to investigate and refine possible solutions and to proceed to manufacturing only when the above steps have been carefully considered
- encourage students to plan their work to allow for revision of the theory components of the Materials Technology Wood course
- encourage students to display their coursework in an attractive manner, preferably in a specially designated room for the display of coursework and to arrange the work in accordance with the instructions from the State Examinations Commission
- ensure that all students have completed and signed the necessary documentation relating to the coursework before the end of the school year

It is recommended that students:

- plan their time carefully, giving due consideration to the time allocation for both the coursework and the theory components
- prepare and follow a time schedule for the design component and the manufacture component of the coursework. The schedule should tabulate the time allocation for each component of both the design folio and the artefact
- analyse the briefs carefully, to investigate and refine possible solutions and to proceed to manufacturing only when the above steps have been carefully considered
- pay attention to the size of the artefact at the design stage. It is recommended that all artefacts be small, well designed, economical in the use of materials and easy to store
- develop the design folio in tandem with the development of the artefact and ensure that the

design folio includes a record of all processes from investigation and research to final evaluation

- pay particular attention to the development of freehand sketching. Sketches should be shaded, rendered and coloured, as appropriate
- use the design folio to express their aptitudes, not only in word processing, but in areas such as CAD, image scanning, image editing and the use of the digital camera
- should acknowledge the sources of all research, particularly work sourced from the Internet. Such research should be relevant to the chosen brief and should be placed in its proper context
- leave adequate time for the surface preparation and proper finishing of the artefact
- use neat freehand sketches to convey technological data clearly and accurately. Students should pay particular attention to the development of sketching abilities. Sketches should be shaded, rendered and coloured, as appropriate

4. Written Examination

4.1. Introduction

The written examination in MTW, at both levels, is of two hours duration and comprises two sections - Section A and Section B.

Section A

This section consists of twenty short answer style questions and candidates are required to answer any sixteen. Candidates complete the answers on the actual examination paper and this section of the paper is handed up at the end of the examination. A total of 40 marks (40%) are available for this section and each question is worth 2.5 marks.

Section B

This section consists of five long answer type questions from which candidates are required to answer any three questions. In Question 4, candidates have the choice of either Question 4A or 4B. This choice is designed to reflect the diversity in craft skills being taught in various schools. A total of 60 marks (60%) are available for this section and each question is worth 20 marks.

4.2 Written Examination - Ordinary Level

4.2.1 Performance of Candidates

The distribution of Ordinary Level grades on the examination paper is indicated in Table 14 and chart 13.

Year	A	B	C	D	E	F	NG
2007	13.7%	29.3%	28.6%	19.5%	6.7%	2.0%	0.1%
2008	14.4%	29.7%	28.1%	17.6%	6.3%	3.5%	0.4%
2009	13.9%	31.0%	27.3%	18.7%	6.1%	2.7%	0.4%

Table 14: Ordinary Level – Distribution of grades by percentage 2007 - 2009

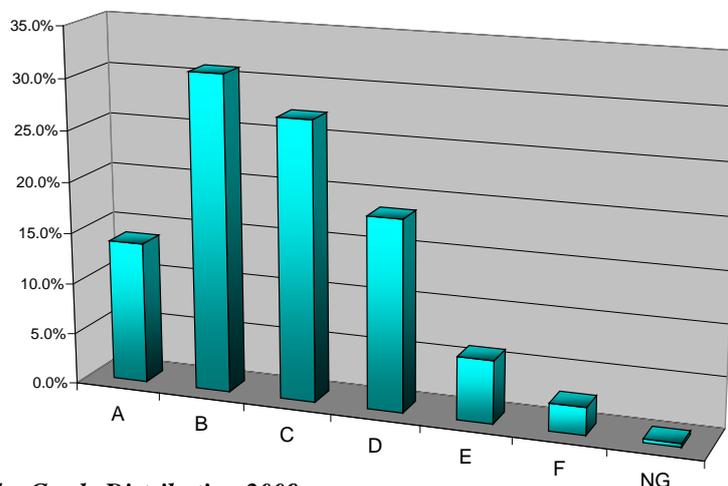


Chart 13: Ordinary Level – Grade Distribution 2009

An analysis of the grade distribution for 2009 shows that over 72% of candidates achieved a grade C or higher while over 90% achieved at least a grade D. The 9.2% of candidates who did not achieve a D grade, or higher, is largely accounted for by candidates not attempting the required number of sections and questions. In this context it should be noted that a small but ultimately significant percentage of candidates attempt Section A only and leave the examination without answering the longer style questions in Section B. Inevitably these candidates do not reach a grade D for this component, given that Section B is worth 60% of the available marks.

The A rate, at 13.9%, is a reflection of the efforts of those candidates who presented an excellent standard of answering throughout the examination paper. This percentage is similar to previous years.

4.2.2 Analysis of Candidate Performance

The following commentary, which is based on the reports of examiners, should be read in conjunction with the relevant examination papers and marking schemes, which are available on www.examinations.ie

Section A

The standard of answering on this section was generally very good and the following outlines how the candidates performed in these short answer type questions:

- 24.4% of candidates scored 34 marks, or higher, out of a total of 40 marks
- 38.0% of candidates scored between 28 marks and 33 marks
- 27.8% of candidates scored between 22 marks and 27 marks
- 5.8% of candidates scored between 16 marks and 21 marks
- 4.0% of candidates scored below 16 marks

The questions in this section are short and specific, usually requiring single word or one sentence answers. They are based on knowledge that the candidate will have gained through everyday practical work in the classroom. The wide use of diagrams helps to make this section of the paper more candidate friendly. As can be seen from the statistics above, Section A was well answered by candidates and this was frequently of benefit in compensating for some less successful answering in Section B.

Candidates are marked on their best sixteen answers in this section and should be encouraged to attempt all twenty questions in order to maximise their scoring opportunity.

An analysis of the individual questions, as reported by examiners, is outlined below. While frequent errors are identified in the following analysis, these are not included by way of criticism. They are referred to in order to further improve on what was a very good overall performance by candidates on this examination.

Question 1 (Round Head Screw)

This question was almost always attempted. Candidates were required to select the correct screw name from a list of three. The most common incorrect choice was the raised head screw.

Question 2 (Tools)

Parts A and B were attempted by almost all candidates.

Tool A (Measuring tape)

This was very well answered with both the name and the use being given.

Tool B (Mallet)

This part was also well answered.

Question 3 (Face Edge mark)

This was attempted by most candidates but scoring was low – possibly reflecting the fact that the emphasis on the skill of planing is changing in the classroom.

Question 4 (Strap Hinge)

The full name “Strap Hinge” was very rarely given with “Hinge” being a more common answer. The candidates were generally able to give the use of the hinge.

Question 5 (Identification of tree leaves)

This question had a high attempt rate but some guesswork was evident.

Question 6 (Cordless drill)

This question was almost always attempted and the standard of answering was generally very good.

Question 7 (Safety)

This question was extremely well answered and is always a popular choice with candidates.

Question 8 (Parts of a plane)

This was not a popular question and candidates invariably did not give the correct answer. Again this may be a reflection of the changing emphasis on this skill. “Angle of the blade” was the most common answer and candidates were awarded most of the marks for this attempt. “The cap iron” was only identified in a minority of cases.

Question 9 (Cambium layer)

Very few candidates gave the correct answer here. “Sap” was the most common answer. “Bast” was accepted for full marks.

Question 10 (Coniferous/Deciduous Trees)

This question had a high attempt rate with candidates scoring well.

Question 11 (Finger Joint)

This question was attempted by almost all candidates. “Dovetail Joint” and “Mortise and Tenon Joint” were common errors.

Question 12 (Through and through sawing)

This question was not popular and the answers were generally not of a high standard.

Question 13 (Turning tools)

This was a multi-choice question and yet the scoring was poor. Examiners reported that candidates appeared to have incorrectly guessed the answer in a significant number of instances.

Question 14 (Photosynthesis)

This question, which had cross curricular links with Science, was well answered. “Transpiration” was occasionally given as an answer and was awarded full marks.

Question 15 (Manufactured boards)

There was a high attempt rate on this question. Most candidates were only able to name one manufactured board. “Hardwood” and “Softwood” were common incorrect answers.

Question 16 (Sharpening)

This question was attempted by one third of the candidates and approximately half of the answers were correct.

Question 17 (Mortice and Tenon joint sketch)

This question was popular and was reasonably well answered and a significant percentage of candidates were awarded full marks. Some candidates drew a separate diagram of the assembled joint.

Question 18 (Cleaning a brush)

This was attempted by most candidates. “Water” and “Soapy water” were frequent incorrect answers.

Question 19 (Nailing)

There was a high attempt rate on this question and most candidates displayed a good standard of knowledge in their answering.

Question 20 (CAD related I.T. Equipment)

The standard of answering on this contemporary question was generally good.

Section B**Question 1** (Flowerpot stand)

This was the second most popular question in Section B with 62.5% of candidates attempting it. Part (i) was generally well answered. Candidates lost some marks by suggesting nails and glue instead of a conventional joint. Part (ii) was not as well answered with insufficient detail being provided in some instances. The drilling of a pilot hole to allow the jigsaw or coping saw through at the start of the process was omitted by most candidates. Part (iii) was well answered with most candidates achieving full marks.

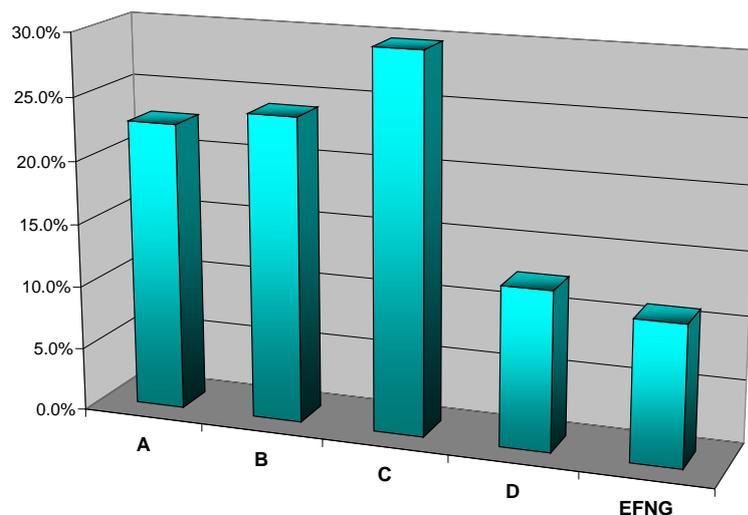


Chart 14: Ordinary Level - Section B, Question 1 - Candidate Performance

Question 2 (Orthographic projection)

This question was the fifth most popular question in Section B and was attempted by approximately 33.5% of candidates. Over one third of candidates scored 17 marks or over, out of a total of 20 marks. However, over four out of every ten candidates scored less than 8 marks. Therefore, this question tended to be answered either very well or poorly. Examiners expressed a view that those candidates who were also studying Technical Graphics benefited from the cross curricular link with this question. Many of the candidates who performed less well opted to sketch the answer. If

candidates are to attempt this question it is vital that they are properly prepared for it and bring the required drawing equipment into the examination with them.

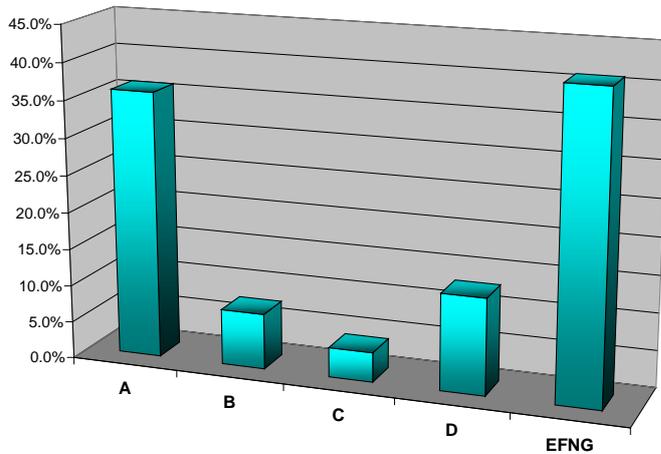


Chart 15: Ordinary Level - Section B, Question 2 - Candidate Performance

Question 3 (Seasoning)

This was the fourth most popular question with 48.3% of candidates attempting it. The sketch proved very beneficial to candidates in part (i) of the question which was well answered. Part (ii) was less well answered with candidates tending to give the advantages of air seasoning rather than the advantages of seasoning. The last part of the question, part (iii), was well answered.

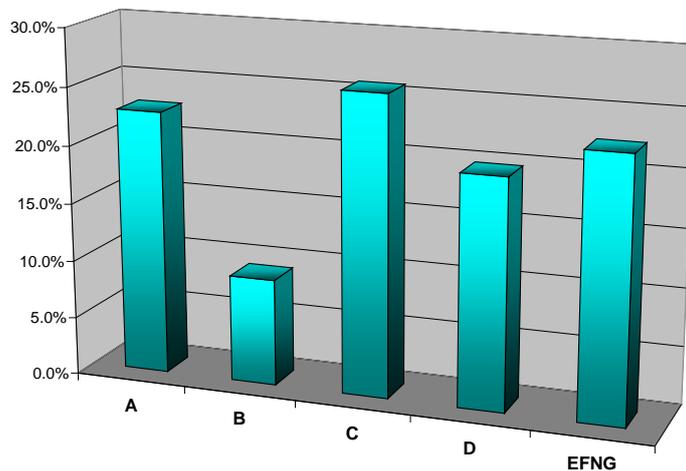


Chart 16: Ordinary Level - Section B, Question 3 - Candidate Performance

Question 4A (Turning)

This was the third most popular question in Section B, being attempted by 60.3% of candidates. Part (i) was reasonably well answered. Some candidates misinterpreted the question and referred to the advantages of having a split cue when storing it or carrying it rather than the advantage of being able to make the cue in two halves. Part (ii) was not as well answered with candidates losing marks

for their description of how to apply the finish. Part (iii) on safety was well answered by all candidates.

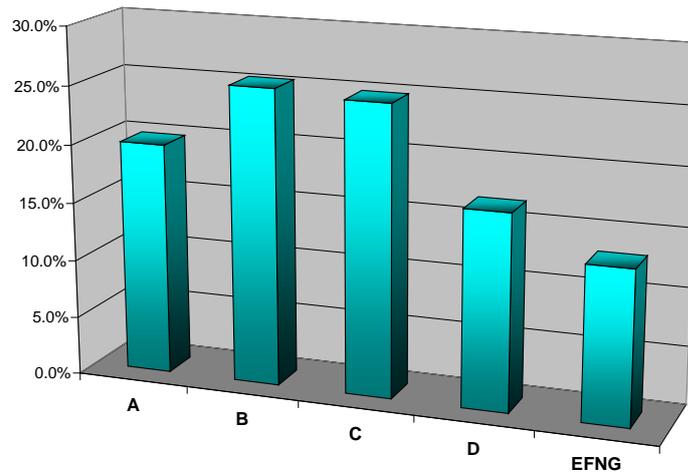


Chart 17: Ordinary Level - Section B, Question 4A - Candidate Performance

Question 4B (Carving)

This was the least popular question being attempted by only 23.3% of candidates. The answers were frequently very short and lacking in sufficient detail. For part (i) carbon paper was frequently given as a correct answer and was often accompanied by good sketching. For Part (ii) a chisel was the most commonly suggested tool for carving, with a Stanley knife also proving quite popular. It was very rare to encounter answers such as v-tool, veiner or carving gouge. Part (iii) was the least well answered part of the question with the candidates displaying little knowledge of the various types of carving.

It should be noted that a small number of candidates answered both 4A and 4B as two of their three questions in Section B. These candidates were disadvantaged as they could receive credit for only the better of those two answers.

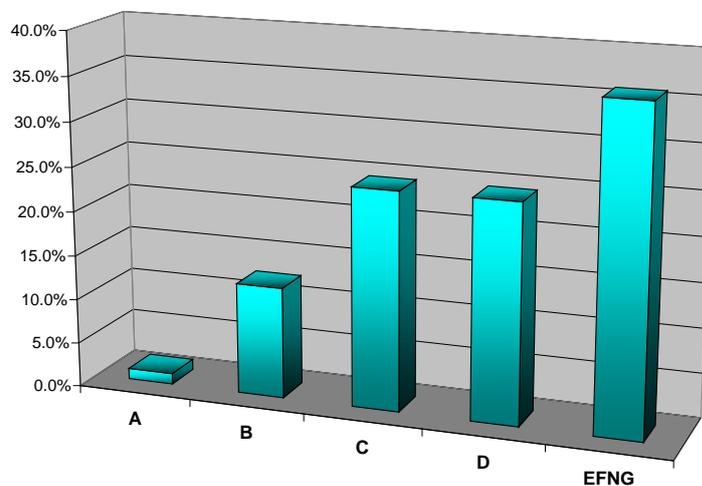


Chart 18: Ordinary Level - Section B, Question 4B - Candidate Performance

Question 5 (Dog kennel)

This was the most popular question with 63% of candidates attempting it. Part (i) of the question was extremely well answered with the candidates producing good design solutions to the problem posed. The sketching was also clear and relevant. The second part of the question was also well answered. Again, the candidates understood the problem and came up with clear, achievable solutions. The last part of the question was not as well answered as the first two parts and a less than satisfactory knowledge of the properties of manufactured boards was evident.

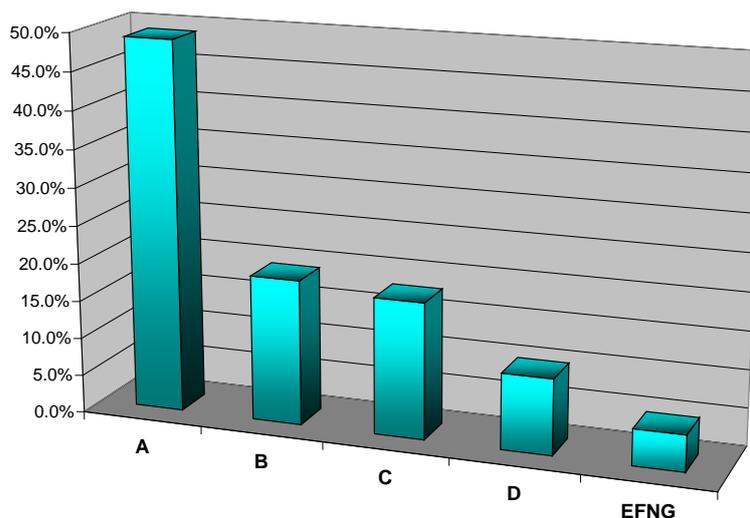


Chart 19: Ordinary Level - Section B, Question 5 - Candidate Performance

4.2.3 Conclusions

Examiners reported that the 2009 Ordinary Level written examination in MTW were generally well received. The examination paper was perceived by candidates, teachers and examiners as being fair both in terms of format and content.

From an analysis of the results attained, it would appear that candidates continue to devote significant amounts of class time to coursework and this is often to the detriment of the written examination. Time management is of vital importance in the subject and candidates should be encouraged to manage their time resources carefully in order to achieve the optimum balance between both components.

Examiners reported freehand sketching as an area where candidates generally underperformed. Sketching is identified as a key skill in the MTW syllabus and needs to be the focus of greater attention in the classroom.

From a general observation of the examination scripts, the professionalism of teachers who prepared the candidates for the examination is evident and commendable.

4.2.4 Recommendations

It is recommended that students:

- develop their examination technique. In particular, students should be encouraged to attempt the required number of questions in each section. Students should be encouraged to answer all parts of the attempted questions. No marks can be awarded if a particular part is not attempted
- be thoroughly familiar with the overall structure and layout of the paper. This is of particular importance at Ordinary Level
- read the examination paper carefully and use the full time allocation when sitting the examination
- focus, in particular, on words that are highlighted in bold or italics on the examination paper. These emphases are designed to guide candidates toward the required response(s)
- pay attention to presentation and clarity of answers. Again this is of particular importance at Ordinary Level. Correct grade sharp pencils for sketching are important in this regard
- use neat freehand sketches to convey technological data clearly and accurately. Such sketches are frequently required on the examination paper and a greater classroom emphasis on the development of freehand sketching would lead to improved candidate performance.

4.3 Written Examination - Higher Level

4.3.1 Performance of Candidates

The grade distribution on the Higher Level examination paper is indicated in Table 15 and chart 20.

Year	A	B	C	D	E	F	NG
2007	10.1%	28.6%	30.4%	21.0%	7.8%	2.1%	0.1%
2008	10.2%	30.1%	29.9%	19.9%	7.7%	2.1%	0.1%
2009	8.8%	29.2%	33.2%	19.6%	7.1%	1.9%	0.2%

Table 15: Higher Level – Distribution of grades by percentage 2007 - 2009

An analysis of the grade distribution shows that 71.2% of candidates achieved a grade C or higher and this figure is marginally up on previous years. The percentage achieving an A grade, however, has dropped slightly during the same period. There has also been a marginal increase in the percentage of candidates who failed to achieve a D grade or higher from 8.5% to 9.2%. This is thought to be attributable to a shift in candidature from Ordinary Level to Higher Level. While this gradual movement towards Higher Level has abated somewhat in the past two years, the percentage opting for Higher Level remains somewhat greater than what candidate performance on this component would suggest it should be. It is essential that, at the time of choosing coursework, candidates opt for the appropriate level. This should be done in consultation with their class teacher.

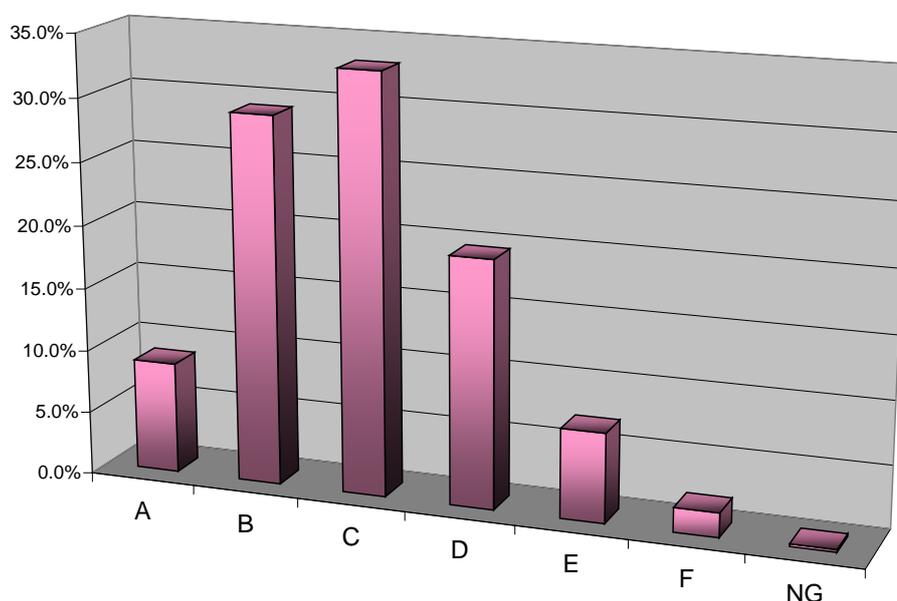


Chart 20: Higher Level – Grade Distribution

4.3.2 Analysis of Candidate Performance

The following commentary, which is based on the reports of examiners, should be read in conjunction with the relevant examination papers and marking schemes, which are available on www.examinations.ie

Section A

The standard of answering on this section was generally very good and the following outlines how the candidates performed in these short answer type questions:

- 20.0% of candidates scored 34 marks or higher
- 34.6% of candidates scored between 28 marks and 33 marks
- 30.6% of candidates scored between 22 marks and 27 marks
- 11.4% of candidates scored between 16 marks and 21 marks
- 3.3% of candidates scored below 16 marks

Section A tested candidates on a broad variety of topics across the range of the syllabus, seeking both written and sketched answers. An analysis of the individual questions, as reported by examiners, is outlined below. While frequent errors are identified in the following analysis, these are not included by way of criticism. They are referred to in order to further improve on what was a very good overall performance by candidates on this examination.

Question 1 (Identification of tools)

The woodworking tool was generally well-identified by most candidates but some merely identified it as a hammer without specifying the type. The use of the claw portion was well answered.

Question 2 (Name of defect)

This question was frequently attempted but full marks were achieved in only a minority of cases. “Shake” was frequently given as an answer without specifying the type.

Question 3 (Moulding)

This question was very well answered and most candidates achieved full marks.

Question 4 (Plug terminals)

This question was frequently attempted but, in some, cases the terminals were mixed up. The function of the fuse was correctly answered by approximately 50% of candidates.

Question 5 (Tree identification)

There was a high attempt rate on this question and the majority of candidates correctly identified two of the trees. Only a minority of candidates correctly identified all three trees.

Question 6 (Woodworking Tools)

The carving tool was identified by most candidates who were aided by the multiple choice options. The function was frequently unknown.

Question 7 (Categories of plastic)

This question was well answered and approximately fifty percent of candidates received full marks.

Question 8 (Applied finishes)

In general, both parts of this question were well answered.

Question 9 (Tenon Saw)

The correct answer, “Set”, was rarely given with “Kerf” being a frequent incorrect answer. This might indicate an over-reliance on past examination papers. Most candidates correctly identified the reason for the feature.

Question 10 (Identifying force)

This question was attempted by almost all candidates and the standard of answering was high.

Question 11 (Metals)

This was a popular question and most candidates correctly categorised at least three of the five metals.

Question 12 (Workshop Safety features)

While this was a popular question, it was not well answered. Candidates frequently listed safety rules instead of identifying safety features.

Question 13 (Freehand sketching and rendering)

This was a very popular question. While most candidates included the grain, the shading and the required symbols were frequently omitted.

Question 14 (Woodturning Equipment)

This was also a very popular question. The visor was frequently not given its correct name and was referred to as a “Face Mask”. A good knowledge of safety precautions was evident in the second part of the question.

Question 15 (Advantages of CNC)

This question was frequently attempted and candidates often achieved full marks.

Question 16 (Hinge identification)

This was a popular question, but candidates were generally unable to identify the specific hinge type. In the second part of the question, candidates, generally, correctly identified an appropriate use.

Question 17 (Woodworking joints)

The answering and standard of sketching was good, with the majority of candidates achieving full marks for this question.

Question 18 (Freehand sketching)

This question was attempted by approximately fifty percent of candidates. Very few candidates were awarded full marks as the standard of sketching, in many cases, fell short of what was required.

Question 19 (Design defect)

This was a very popular question. Most candidates recognised the defect but were unable to identify an appropriate remedy. “Cupping” was frequently given as an incorrect answer to the first part of the question.

Question 20 (Cutting List)

This was a very popular question with candidates, and the majority of them got it fully correct.

Section B**Question 1** (Orthographic Projection of Fire Screen)

As in previous years, this question was both popular and very well answered. It was attempted by 53% of candidates, and 29% achieved very high marks. Most candidates correctly presented the required views, used the proper scale and presented an acceptable quality orthographic projection. Marks were lost where candidates omitted hidden detail and dimensions and failed to locate the centres for the curves. Part (ii) was quite well answered although some candidates had difficulty in describing how to fit a panel into the frame.

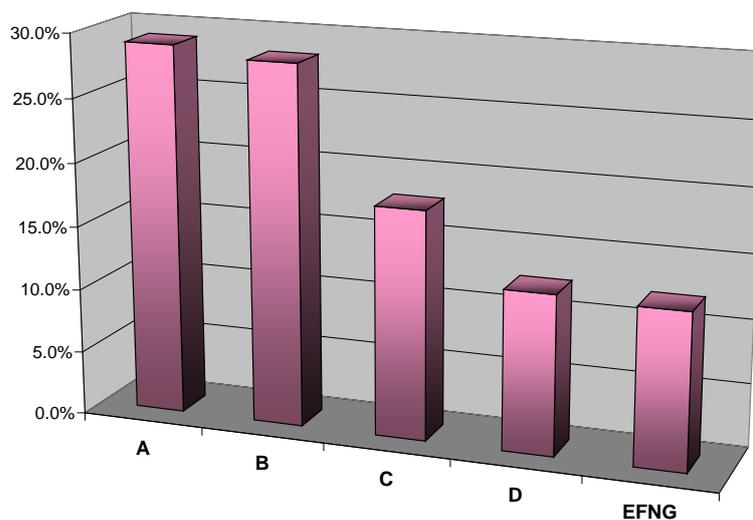


Chart 21: Higher Level - Section B, Question 1 - Candidate Performance

Question 2 (Artefact Design)

The vast majority of candidates (79%) attempted this question which focuses on elements of the design process in a given context. Creativity and innovation, together with an ability to produce high quality freehand sketches are required in the answering of this question.

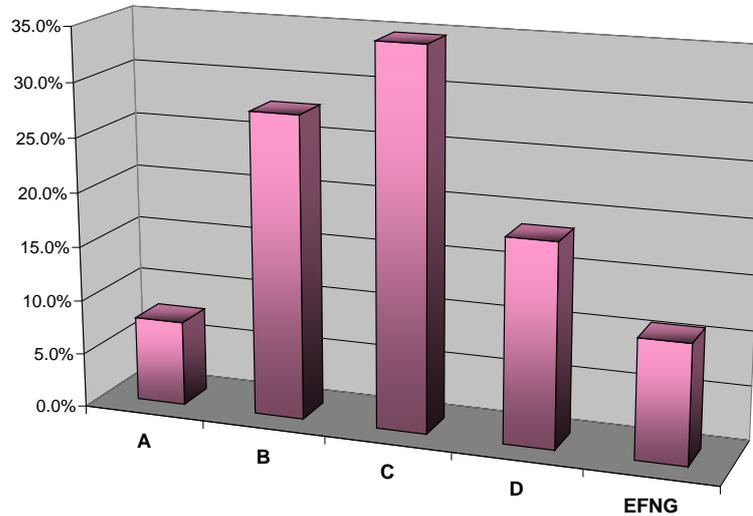


Chart 22: Higher Level - Section B, Question 2 - Candidate Performance

Only a small percentage of candidates achieved maximum marks on this question. In many instances the standard of freehand sketching fell short of what was required in Parts (i) and (ii) and marks were lost as a result. By contrast, Parts (iii) and (iv) of the question were well answered. If candidates are to attempt this particular topic, it is vital that they practise their sketching skills by way of preparation for the examination.

Question 3 (Conversion)

59% of candidates attempted this question and the majority of answers were of grade C or grade B standard. In Part (i) of the question, most candidates correctly named the first conversion method, but were unable to identify “Tangential Sawing” as the second method. The required advantages and disadvantages were generally given in Part (ii) of the question, while Part (iii) proved to be the most difficult in terms of answering. Candidates, generally, scored well in Part (iv) and made pertinent points.

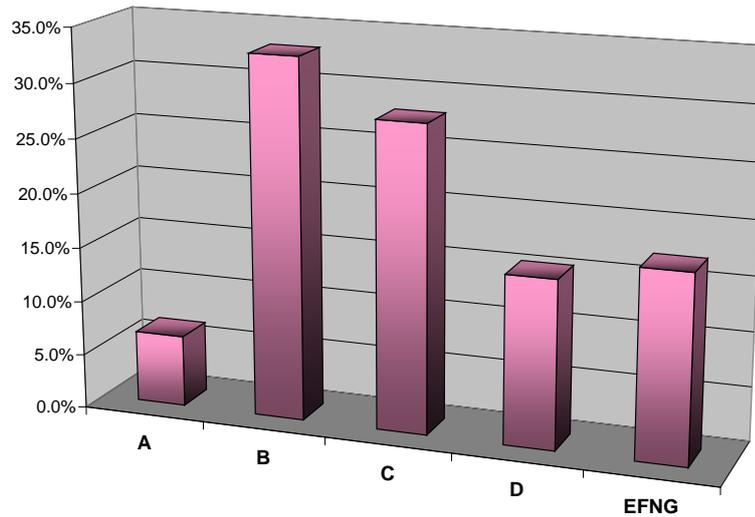


Chart 23: Higher Level - Section B, Question 3 - Candidate Performance

Question 4A (Blanket Box)

This was the more popular option within Question 4 with an attempt rate of 56%. In Part (i), where the candidates were required to describe the processing of the handle, good written descriptions were frequently accompanied by sketching of a lesser quality and marks were lost as a result. In Part (ii), a good level of knowledge was evident in relation to the application of clear finishes. In some cases, however, application was confused with preparation. By way of revision for the examination, candidates should be taught to focus, in particular, on words that are highlighted in bold or italics on the examination paper. In the last part of the question, concealing was sometimes confused with countersinking and the use of filler was a common incorrect answer.

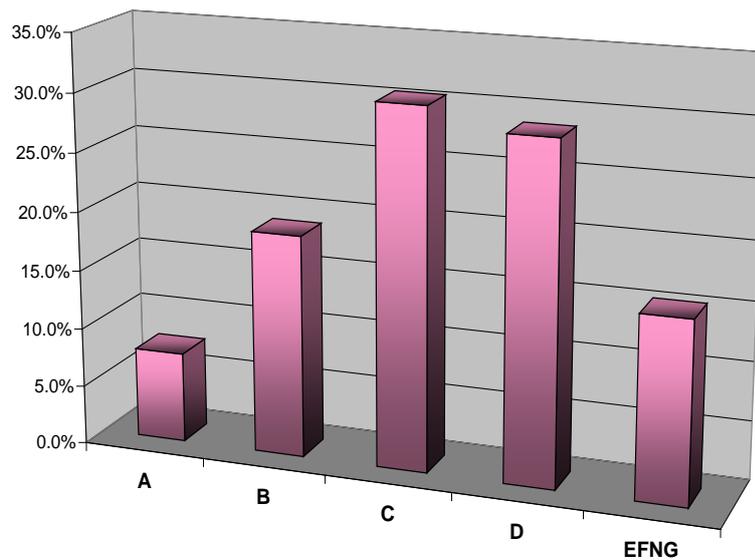


Chart 24: Higher Level - Section B, Question 4A - Candidate Performance

Question 4B (Veneering)

This was the least popular question on the examination paper with an attempt rate of 5% (Just over 500 candidates). It would appear that the majority of candidates who opted for this question did so with little or no preparation for this topic in advance of the examination. The low attempt rate would suggest that the craft of veneering is not being taught in the majority of schools. Of the four sections in the question, the final one, which dealt with veneer manufacture, attracted the best responses.

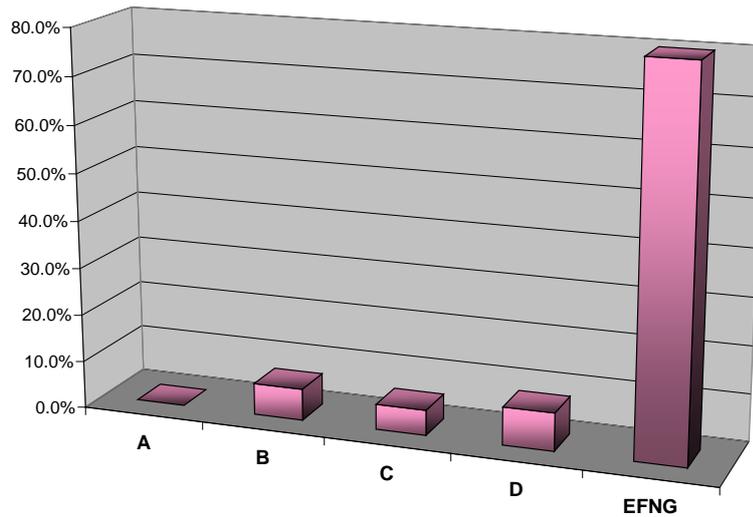


Chart 25: Higher Level - Section B, Question 4B - Candidate Performance

As also happened at Ordinary Level, a small number of candidates answered both 4A and 4B as two of their three questions in Section B. These candidates were disadvantaged as they could receive credit for only the better of those two answers.

Question 5 (Saws)

This was a popular question with an attempt rate of 53%. Candidates scored very well on this question with just under 20% achieving a grade A standard. While candidates scored well in Part (i), very few correctly identified all three saws. The scroll saw was often not recognised. Parts (ii) and (iii) on specific uses and safety precautions were well answered. The part indicated in the last section was frequently confused with the blade tensioner. The required sketches to accompany the description were frequently not of the required standard.

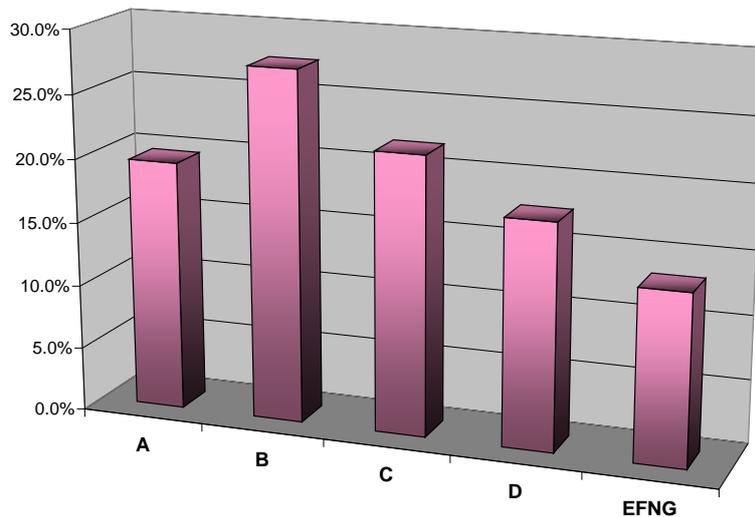


Chart 26: Higher Level - Section B, Question 5 - Candidate Performance

4.3.3 Conclusions

Examiners reported that the 2009 Higher Level written examination in MTW was generally well received. The examination paper was perceived by candidates, teachers and examiners as being fair both in terms of format and content.

It would appear that candidates continue to devote significant amounts of class time to coursework and this is often to the detriment of the written examination. Time management is of vital importance in the subject and candidates should be encouraged to manage their time resources carefully in order to achieve the optimum balance between both components.

Examiners reported freehand sketching as an area where candidates generally underperformed. Sketching is identified as a key skill in the MTW syllabus and needs to be the focus of greater attention in the classroom.

From a general observation of the examination scripts, the professionalism of teachers who prepared the candidates for the examination is evident and commendable.

4.3.4 Recommendations

It is recommended that students:

- develop their examination technique. In particular, students should be encouraged to attempt the required number of questions in each section. Students should be encouraged to answer all parts of the attempted questions. No marks can be awarded if a particular part is not attempted
- be thoroughly familiar with the overall structure and layout of the paper

- read the examination paper carefully and use the full time allocation when sitting the examination
- focus, in particular, on words that are highlighted in bold or italics on the examination paper. These emphases are designed to guide candidates toward the required response(s)
- pay attention to presentation and clarity of answers. Correct grade sharp pencils for sketching are important in this regard
- use neat freehand sketches to convey technological data clearly and accurately. Such sketches are frequently required on the examination paper and a greater classroom emphasis on the development of freehand sketching would lead to improved candidate performance.