Summary report of the 2019 ATAR course examination: 
Materials Design and Technology

<table>
<thead>
<tr>
<th>Year</th>
<th>Number who sat all examination components</th>
<th>Number of absentees from all examination components</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>151</td>
<td>1</td>
</tr>
<tr>
<td>2018</td>
<td>165</td>
<td>0</td>
</tr>
<tr>
<td>2017</td>
<td>200</td>
<td>0</td>
</tr>
<tr>
<td>2016</td>
<td>213</td>
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</tr>
</tbody>
</table>

**Examination score distribution–Practical**

**Examination score distribution–Written**

**Summary**

**Practical examination**
- Attempted by 152 candidates
- Mean 70.00%  Max 92.11%  Min 2.63%

Section means were:
- Practical Portfolio (Wood) Attempted by 63 candidates
  - Mean 66.67%  Max 92.11%  Min 36.84
- Practical Portfolio (Metal) Attempted by 19 candidates
  - Mean 70.50%  Max 84.21  Min 57.89
- Practical Portfolio (Textiles) Attempted by 70 candidates
  - Mean 72.86%  Max 92.11  Min 2.63
Written examination

Attempted by 151 candidates
Mean 64.91%  Max 91.33%  Min 9.47%

Section means were:
Section One: Short answer
Mean 70.76%
Attempted by 151 candidates
Mean 10.61(15.00)  Max 15.00  Min 0.00
Section Two: Extended answer
Mean 66.38%
Attempted by 151 candidates
Mean 16.59(25.00)  Max 23.99  Min 3.38
Section Three: Wood
Mean 69.07%
Attempted by 62 candidates
Mean 41.44(60.00)  Max 53.91  Min 13.04
Section Three: Metal
Mean 71.01%
Attempted by 19 candidates
Mean 42.61(60.00)  Max 54.35  Min 23.04
Section Three: Textiles
Mean 55.08%
Attempted by 70 candidates
Mean 33.05(60.00)  Max 49.13  Min 6.09

General comments

While the mean for the practical portfolio was 70.00%, a lot of material was included that was not completely relevant. For example, some candidates produced pages with just four or five lines of text, with the remainder being ‘padding’. This is not a good use of the space and candidates should let their work speak for itself. Candidates also need to develop a better understanding of design fundamentals and ensure that they are referring to them throughout the research and design sections of the portfolio.

The written examination was well balanced, with a good range of scaffolded and more challenging questions. In Section One and Two, candidates demonstrated a strong understanding of the common content. Some candidates had difficulty with questions in Section Three that required sketching and/or annotation. Candidates either did not produce detailed or accurate sketches and/or did not provide adequate detail in their annotations.

Practical examination

Advice for candidates

• You must include adequate detail, especially in your annotations and justifications.
• Your design development needs to be progressive and developmental. You should frequently refer to design fundamentals and your statement of intent. Make sure that you justify your final choices.
• You should remove all coloured and patterned backgrounds. They distract from the work and also slow the access by markers to the USB.

Advice for teachers

• As the practical portfolios are marked on computer screens, candidates should layout the pages in landscape as this fits better on the screen.
• Encourage students to choose projects that are realistic and manageable in the time frame.
• Many candidates appear to confuse design fundamentals with elements and principles of design. Spend time revising these concepts.

Written examination

Advice for candidates

• Make sure that you read questions carefully.
• Ensure that you address all parts of a question in your written response.
Advice for teachers

- Ensure that students understand different types of advancements in manufacturing methods.
- Provide students with opportunities to practise their interpretation of questions.
- Students need more exposure to creating jigs or patterns.

Comments on specific sections and questions

Practical examination

Practical portfolio (Wood/Metal/Textiles) (38 marks)
Across all three contexts the statement of intent was completed competently by candidates. However, some candidates wrote excessively and in later questions did not relate their choices back to their statement of intent. This was also the case in relating information about sustainability and green principles. The quality of sketches was in some instances poor and many candidates did not include statements about safety procedures. Photographic evidence however, was thorough and detailed.

Written examination

Section One: Short answer (27 Marks)
Candidate performance indicated a strong understanding of the common content that was examined in Section One. The mean for this section was 70.76%.

Section Two: Extended answer (37 Marks)
Candidates performed very well in this section, with the mean score for Section Two: Extended answer being 66.38%. However, an area that showed a need for improvement was candidates’ understanding of different types of advancements in manufacturing method.

Section Three: Wood (69 Marks)
The addition of some of the more complex syllabus content meant parts of the paper were more challenging than in the recent past, resulting in clearer discrimination of candidates of different abilities.

Section Three: Metal (69 Marks)
The addition of some of the more complex syllabus content meant parts of the paper were more challenging than in the recent past, resulting in clearer discrimination of candidates of different abilities.

Section Three: Textiles (69 Marks)
The addition of some of the more complex syllabus content meant parts of the paper were more challenging than in the recent past, resulting in clearer discrimination of candidates of different abilities.