Putting the Jigsaw Together

Practical strategies for assisting apprentices with numeracy issues

Literacy Indicator Tool
A resource for vocational trainers
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Purpose of indicator tools

This tool should be used in conjunction with the guidance provided in the Trainer's Guide.

To successfully complete an apprenticeship, an apprentice needs to be able to read and interpret documents, such as job sheets, specifications and standard operating procedures (SOPs). Even tasks that predominantly involve numeracy skills require some literacy skills. In some cases, an apprentice may appear to be having difficulties with numeracy when the underpinning issue may relate to literacy (or there may be a vision impairment). It is important that as a trainer, you approach providing support from a holistic perspective.

The purpose of the indicator tool is to assist you to identify apprentices' strengths and gaps so that you can plan and deliver training and assessment that explicitly addresses the literacy and numeracy skills gaps as part of the achievement of vocational competency.

If individual apprentices have significant gaps, you may need to provide additional support for them to develop the foundation skills required or involve a language, literacy, numeracy (LLN) specialist.

If a large number of the apprentice group have significant gaps, you may like to consider sourcing additional support for the group from a LLN specialist or other relevant specialist trainer.

What are literacy and numeracy indicator tools?

Literacy and numeracy (L&N) indicator tools are used to identify whether apprentices have the essential reading, writing and numeracy skills at course entry to manage the demands of their training program.

To achieve this purpose, indicator tools need contextualisation to the particular industry sector area, such as carpentry, electro technology, business administration, and so on.
**Indicator tool, skills check or screening?**

The terms indicator tool and skills check support the idea that the process provides an overall check of the L&N required for a qualification rather than a detailed pre-assessment. It can also be called a screening tool, but the term screening can have negative connotations, suggesting apprentices who perform poorly on the screen will be excluded from the training.

**Purpose of L&N indicator tools**

L&N indicator tools can serve a number of purposes. They can:

- identify apprentices' existing L&N skills, including their confidence in using those skills
- identify apprentices at risk – do their identified L&N skills match the underpinning skills needed to undertake the qualification?
- establish apprentices' particular core needs (e.g. numeracy, reading and/or writing) and the level of support required
- assist trainers to identify which apprentices will most likely need assistance during the training, thereby improving retention rates by providing a means for early targeting of apprentices who are at risk of withdrawing or failing
- give apprentices an opportunity to request assistance.

**Why use L&N indicator tools?**

Many apprentices are reluctant to disclose their LLN problems to trainers or management. Many will not seek assistance and may have developed masking strategies to hide their lack of skills. This can be for various reasons, including personal embarrassment of disclosure or fear of losing their job. This is particularly the case for apprentices at lower AQF qualification levels.

L&N indicator tools can be used by trainers to identify apprentices who may potentially benefit from assistance with the L&N demands of the qualification. Once identified, targeted assistance can be planned by the trainer and the LLN specialist as needed.
Limitations

Indicator tools cannot predict apprentices’ success. They cannot measure critical factors, such as motivation. Therefore they should not be used as a tool to determine an apprentices’ place in a specific training program.

L&N indicator tools should only be used to assess L&N skills appropriate to the level of the unit of competency or qualification the apprentice is undertaking.

Features of L&N indicator tools

Trainers need to identify the underpinning L&N in the units of competency when developing L&N indicator tools.

As a reminder, L&N indicator tools need to:

- be developed in consultation with vocational trainers
- be contextualised to the industry for authenticity, including text types and graphics or visual clues (e.g. graphs, charts and photos) relevant to the industry
- reflect the specific type of L&N required for the qualification – reading, writing and/or numeracy skills
- be mapped to the Australian Core Skills Framework (ACSF).

What about self-assessment indicator tools?

While self-assessment indicator tools are relatively easy to administer and mark, their main disadvantage is the potential for measurement error. Research shows apprentices tend to either overrate or understate their skills when completing self-assessments in order to appear ‘normal’.

Other sources of error occur because there is no objective scale for people to rate themselves against. Rating your literacy as poor, average or high could be based on people’s backgrounds, experiences or literacy requirements.

(Source: Links between Literacy and Numeracy Skills and Labour Market Outcomes, Shomos. 2010)

In addition, apprentices are less likely to admit to core skill deficits and are more likely to provide responses they think will please a trainer or an employer.
Literacy indicator tool

There are two sections in the indicator tool:

- Section A: For the trainer
- Section B: For the apprentice

Section A: For the trainer

Literacy indicator tool feedback sheet

This section includes a ‘Literacy indicator tool feedback sheet’ showing answers to literacy questions and guide points to evaluate apprentices’ writing sample provided in the apprentice section of the document.

Section B: For the apprentice

For the apprentice

The apprentice section is the literacy indicator tool that apprentices will complete. It comprises reading comprehension, vocabulary and writing questions. It should take approximately 30 minutes for the apprentice to complete. However, the time limit is a guide only. Apprentices who take significantly longer than the recommended time are more likely to have literacy issues.
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## Section A: For the trainer

### Literacy indicator tool feedback sheet

<table>
<thead>
<tr>
<th>Task</th>
<th>ACS F level</th>
<th>Question</th>
<th>Expected response</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Comprehension</td>
<td>3</td>
<td>1.</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2a.</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2b.</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2c.</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2d.</td>
<td>T</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3a.</td>
<td>Long and loose hair must be contained</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3b.</td>
<td>Hair could be caught in the machine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.</td>
<td>Secure and support the work piece using clamps, bench vices etc.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.</td>
<td>Allow angle grinder to reach operating speed</td>
<td></td>
</tr>
</tbody>
</table>
|                    |             | 6.       | • Never make adjustments; or
• Do not switch off when it is under load |        |
|                    |             | 7.       | It may be extremely hot |        |
|                    |             | 8.       | Returned to the storage area |        |
|                    |             | 9.       | Various, including:
• draws attention to important safety aspects
• assists people with poor English skills
• the visual symbols support the text |        |

Name: ..........................................
Date: ..........................................
Group: ...........................................

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<table>
<thead>
<tr>
<th>Task</th>
<th>ACSF level</th>
<th>Question</th>
<th>Expected response</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabulary</td>
<td>3</td>
<td>10.</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11.</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12.</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>13.</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>14.</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>
Writing

Apprentices require ACSF writing levels of 2–3, depending on the unit, to meet the writing requirements of the MEM30305 Certificate III in Engineering – Fabrication Trade and MEM30205 Certificate III in Engineering – Mechanical Trade.

Use these guide points to evaluate the apprentice’s writing sample:

<table>
<thead>
<tr>
<th>ACSF level</th>
<th>Writing features</th>
</tr>
</thead>
</table>
| ACSF 2     | • Sentences are simple  
• Punctuation is simple, limited to capital letters and full stops  
• Vocabulary is limited to personal experiences, lacking technical wording  
• Uses simple cohesive devices, such as but, and, then  
• Spelling has errors but does not interfere with overall meaning  
• Handwriting is quite legible with consistent script |
| ACSF 3     | • Sentences show some degree of complexity with a range of tenses, with some degree of detail in the response  
• Punctuation is correctly used with a range, such as question marks, commas and apostrophes  
• Vocabulary is reasonably broad; uses acronyms and abbreviations  
• Uses joining words such as although, when, while, if  
• Uses adjectives and adverbs to show shades of meaning (e.g. hardly, greatly, almost)  
• Spelling is reasonably accurate  
• Handwriting is clearly legible with consistent script |

ACSF Writing level (circle one):

Below ACSF 2  ACSF 2  ACSF 3  Above ACSF 3  

Comments:

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________

___________________________________________________________________________________________
<table>
<thead>
<tr>
<th>Task</th>
<th>ACSF level</th>
<th>ACSF performance features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Read text ‘Standard Operating Procedures – Angle Grinder’</strong></td>
<td>3</td>
<td>• Comprehends longer texts with limited complexity which require a number of ideas and pieces of information</td>
</tr>
</tbody>
</table>
| **Comprehension questions (9) – short answers**               | 3         | • Identifies explicit and implicit meaning within a text  
• Identifies some explicit questions to be answered by reading  
• Skims and scans to locate content |
| **Vocabulary questions (6)**                                  | 3         | • Recognises that words and grammatical choices may carry particular shades of meaning in different contexts  
• Predicts the meaning of unknown words by considering surrounding words, phrases and sentences |
| **Writing task – ‘Write your opinion about the importance of workplace safety’** | 2, 3      | • **Sentences** are simple  
• **Punctuation** is simple, limited to capital letters and full stops  
• **Vocabulary** is limited to personal experiences, lacking technical wording  
• Uses simple cohesive devices, such as *but, and, then*  
• **Spelling** has errors but does not interfere with overall meaning  
• **Handwriting** is quite legible with consistent script  
• **Sentences** show some degree of complexity with a range of tenses, with some degree of detail in the response  
• **Punctuation** is correctly used with a range, such as question marks, commas and apostrophes  
• **Vocabulary** is reasonably broad; uses acronyms and abbreviations  
• Uses joining words, such as *although, when, while, if*  
• Uses adjectives and adverbs to show shades of meaning (e.g. *hardly, greatly, almost*)  
• **Spelling** is reasonably accurate  
• **Handwriting** is clearly legible with consistent script |
Section B: For the apprentice

Literacy indicator tool

Instructions

- Read the article ‘Standard Operating Procedures – Angle Grinder’.
- Circle the correct answer to the questions or write your answers in the spaces provided.
- Don’t worry if you can’t complete all the questions. Do as much as you can.

Note: This is not an assessment or test. It is a skills check to indicate your literacy skills in relation to this qualification. It will help to identify strengths and skills gaps you may have. It is only an indicator tool.
STANDARD OPERATING PROCEDURES
Angle Grinder

DO NOT use this power tool unless you have been instructed in its safe use and operation

- Safety glasses must be worn at all times in work areas.
- Long and loose hair must be contained.
- Appropriate footwear with substantial uppers must be worn.
- Close fitting/protective clothing must be worn.
- Rings and jewellery must not be worn.
- Hearing protection must be worn when using this machine.

PRE-OPERATIONAL SAFETY CHECKS
1. Check area is clear – erect screens if necessary.
2. Check the power cord, extension lead, plugs, sockets and power outlet for damage.
3. Check that the grinding disc, guard and attachments (including handle) are secure and correctly fitted.
4. Inspect the grinding disc for damage. Do not use damaged grinding disc.
5. Always check the work piece to make sure that there aren’t any items which might damage the grinding wheel or cause injury.
6. Secure and support the work piece using clamps, bench vices, etc.

OPERATIONAL SAFETY CHECKS
1. Check all people are clear of the immediate work area.
2. Keep fingers and hands and power cords clear of the grinding disc.
3. Never make adjustments while the angle grinder is running.
4. Do not switch off the angle grinder when it is under load, except in an emergency.
5. Allow angle grinder to reach operating speed before applying to work piece and increase load gradually.
6. Do not lift or drag angle grinders by the cord.
8. Be aware of flying sparks. Hold grinder so that sparks fly away from you, other people and flammable materials.
9. Do not leave the angle grinder running and only use the grinder when hand held.
10. Do not touch the work piece immediately after grinding operation as it may be extremely hot.

HOUSEKEEPING
1. Avoid trip hazards and prevent damage to electrical cord/s.
2. Do not walk on, wheel objects over, or drop materials/tools on flexible electrical cords.
3. Clean bench and work area and place all waste material in bin.
4. Return angle grinder and rolled up extension leads to storage area.

POTENTIAL RISKS AND HAZARDS
- Moving and rotating parts
- Movement of work piece
- Inhalation of fumes and dust particles
- Burns from hot materials or friction
- Electrocution from power faults, faulty equipment or incorrect use
Comprehension questions

Standard Operating Procedures – Angle Grinder

1. The main purpose of the Standard Operating Procedures Angle Grinder text is to (circle one letter):
   - Tell workers which safety gear to use when using an angle grinder. A
   - Ensure workers don’t cut off too many fingers when using an angle grinder. B
   - Provide workers with a step by step procedure for safely using an angle grinder. C
   - Tell workers what to do when something goes wrong with an angle grinder. D

2. Are these statements true or false? Circle T if True, F if False.
   - a. You must wear tight fitting gloves when using an angle grinder. T F
   - b. Flying sparks are a danger when using an angle grinder. T F
   - c. Workers using an angle grinder must have short hair. T F
   - d. The materials being worked on can become very hot T F

3. The text contains a warning for workers about their hair.
   - 3a. What is the warning?
   - 3b. What injury could happen to workers who ignore this warning?

4. How should the work piece be secured before starting the job?

5. After the angle grinder is switched on, when is it safe
6. What is one thing you must not do when the angle grinder is running?

7. What is the danger if you pick up the work piece straight after using the angle grinder on it?

8. Where should the angle grinder be put after the job is finished?

9. How do you think the symbols at the top of the SOP help employees?
**Vocabulary questions**

**Standard Operating Procedures – Angle Grinder**

For each question, circle the letter to show the answer that best matches the meaning of the word in **bold** type, as used in the text ‘Standard Operating Procedures – Angle Grinder’.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. PRE-OPERATIONAL SAFETY CHECKS</td>
<td>A. During the use of</td>
</tr>
<tr>
<td>The term <strong>pre-operational</strong> means:</td>
<td>B. After the use of</td>
</tr>
<tr>
<td></td>
<td>C. Before the use of</td>
</tr>
<tr>
<td>11. Check area is clear - <strong>erect</strong> screens if necessary.</td>
<td>A. To stand up tall</td>
</tr>
<tr>
<td>In this sentence, the word <strong>erect</strong> means:</td>
<td>B. To place into an upright position</td>
</tr>
<tr>
<td></td>
<td>C. To build</td>
</tr>
<tr>
<td>12. Check the power cord, extension lead, plugs, <strong>sockets</strong> and power outlet for damage.</td>
<td>A. Type of power cable</td>
</tr>
<tr>
<td>The word <strong>socket</strong> means:</td>
<td>B. A tool used by a tradesperson</td>
</tr>
<tr>
<td></td>
<td>C. Device into which an electric plug can be inserted</td>
</tr>
<tr>
<td>13. Hold grinder so that sparks fly away from you, other people and <strong>flammable</strong> materials.</td>
<td>A. Easily explodes</td>
</tr>
<tr>
<td>The word <strong>flammable</strong> means:</td>
<td>B. Easily catches on fire</td>
</tr>
<tr>
<td></td>
<td>C. Easily damaged</td>
</tr>
<tr>
<td>14. Do not walk on, <strong>wheel</strong> objects over…</td>
<td>A. The act of rolling over a surface</td>
</tr>
<tr>
<td>In this sentence, the word <strong>wheel</strong> means:</td>
<td>B. A round disc</td>
</tr>
<tr>
<td></td>
<td>C. To run over</td>
</tr>
<tr>
<td>15. One of the potential risks is ‘<strong>inhalation</strong> of fumes’’.</td>
<td>A. To breathe out</td>
</tr>
<tr>
<td>The word <strong>inhalation</strong> means:</td>
<td>B. To create</td>
</tr>
<tr>
<td></td>
<td>C. To breathe in</td>
</tr>
</tbody>
</table>
Writing task

- This is not a test. It is to see if you might need help with writing in your course.
- Use sentences and punctuation.
- If you are not sure about spelling, just have a try.

Write your opinion about the importance of workplace safety. You could write about:

- what causes workplace accidents
- the effect of a workplace accident you have seen
- who is responsible for workplace safety
- how workers can help to reduce workplace accidents.

Try to write at least half a page. If you use more paper attach it to these pages.