



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **LMTTD6001A Research commercial development of textiles**

**Revision Number: 1**

## **LMTTD6001A Research commercial development of textiles**

### **Modification History**

Not applicable.

### **Unit Descriptor**

**Unit descriptor** This unit covers the range of skills and knowledge to research and evaluate textiles used for fashion, furnishings, accessories, and exhibition and make recommendations to guide the commercial development of textile products.

## Application of the Unit

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The unit applies to activities associated with researching and evaluating raw the quality, processing, finish, use, properties and performance of materials, partially finished and finished textile products. Findings should be used to make recommendations to guide commercial development of materials and products.

Work is performed in line with a broad plan or strategy. Significant judgement is required in planning, design, technical or supervisory activities related to research and development activities.

Work may be conducted in small to large scale enterprises and may involve individual and team-related activities.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards agreements and conditions of employment
- standard operating procedures
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control, and recycling

This unit requires the application of communication skills associated with research techniques, including information gathering, analysis and documentation. Problem solving, planning and organising skills and initiative and enterprise are also required to direct research and make recommendations.

## Licensing/Regulatory Information

Not applicable.

## Pre-Requisites

### Prerequisites

## **Employability Skills Information**

**Employability Skills** This unit contains employability skills.

## **Elements and Performance Criteria Pre-Content**

Not applicable.

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Confirm research parameters	<p>1.1 Objectives for conducting research are established in line with business goals.</p> <p>1.2 Criteria and parameters for research are established.</p> <p>1.3 Research plan is developed.</p>
2 Conduct research into textiles	<p>2.1 <b>Textile</b> properties, <b>qualities</b>, aesthetic and <b>performance characteristics</b> are researched and primary uses identified.</p> <p>2.2 New and emerging textiles and textile processing techniques are investigated.</p> <p>2.3 Global and domestic trends in use of textiles are researched.</p> <p>2.4 A range of <b>routine</b> and <b>non-routine tests</b> are used to gather data on textiles.</p>
3 Research textile products	<p>3.1 Products that incorporate textiles and their current uses in the marketplace are analysed.</p> <p>3.2 Performance characteristics of a sample range of textile products are researched and analysed to determine quality.</p> <p>3.3 A range of <b>routine</b> and <b>non-routine tests</b> is used to gather data on product quality.</p> <p>3.4 Factors influencing quality of textile products are identified.</p> <p>3.5 Product faults are identified and examined and causes determined.</p> <p>3.6 Global and domestic implications for use of textile products are researched.</p>
4 Evaluate findings	<p>4.1 Research findings are analysed and prioritised according to significance.</p> <p>4.2 Findings are analysed against research objectives and criteria.</p> <p>4.3 Methodology is reviewed to identify any potential influences on findings.</p> <p>4.4 Findings are analysed to establish ability contribute to commercial developments.</p> <p>4.4 Findings with most potential are selected for further review.</p>
5 Make recommendations	<p>5.1 Features and benefits of selected findings are analysed.</p> <p>5.2 Disadvantages or risks associated with selected findings are analysed.</p> <p>5.3 Recommendations are made on how findings are used for commercial gain.</p>
6 Prepare reports and presentations	<p>6.1 <b>Report</b> on research findings and recommendations is developed.</p> <p>6.2 Data is checked for accuracy and relevance, when required.</p> <p>6.3 <b>Reports</b> and presentations are prepared.</p>

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates knowledge of:

- sources of information
- qualities and properties of textiles
- commercial relevance or objectives for research
- research methodology
- relevant OHS legislation, codes of practice, copyright obligations, policies and procedures
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- effectively evaluate processes
- identify constraints
- determine options
- interpret findings
- test validity of information
- use research tools
- establish, analyse and interpret procedures
- determine report requirements
- read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

## Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

<b>Critical aspects of evidence to be considered</b>	Demonstrates skills and knowledge to: <ul style="list-style-type: none"><li>• plan and apply research methodology</li><li>• define research findings</li><li>• perform required tests</li><li>• form recommendations</li><li>• prepare reports and presentations</li></ul>
<b>Consistency in performance</b>	Consistently applies skills and knowledge when: <ul style="list-style-type: none"><li>• organising work</li><li>• completing tasks</li><li>• identifying improvements</li><li>• using workplace practices</li><li>• using OHS practices</li><li>• recording and reporting accidents and incidents</li><li>• assessing operational readiness of equipment used and work processes</li><li>• recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions</li><li>• completing work systematically with attention to detail and without damage to goods and equipment</li></ul>
<b>Resource implications</b>	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
<b>Context for assessment</b>	Assessment may occur on the job or in an appropriately simulated environment.
<b>Interdependent assessment</b>	This unit may be assessed independently or in combination with other relevant units.

## Range Statement

### RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Criteria may include	<ul style="list-style-type: none"> <li>• scope of research</li> <li>• required documentation</li> <li>• required research verification</li> <li>• research methodologies</li> <li>• timing</li> <li>• commercial constraints or requirements</li> </ul>
Textiles may include	<ul style="list-style-type: none"> <li>• natural fibres such as cotton, wool, silk, linen</li> <li>• synthetic fibres such as:               <ul style="list-style-type: none"> <li>• polyamide and polyester</li> <li>• acrylic</li> <li>• lycra</li> <li>• rayon</li> <li>• acetate</li> </ul> </li> <li>• natural and synthetic single-yarn fabrics and blends, including:               <ul style="list-style-type: none"> <li>• knitted fabrics such as weft knits and warp knits</li> <li>• woven fabrics such as plain, twill, satin, dobby, jacquard and pile</li> <li>• non-woven fabrics such as felts, nets, braids, bonded and composite</li> </ul> </li> <li>• emerging smart fabrics</li> <li>• raw materials</li> <li>• new and emerging textiles</li> <li>• yarn</li> </ul>
Qualities may include	<ul style="list-style-type: none"> <li>• firmness</li> <li>• softness</li> <li>• hand</li> <li>• weight</li> <li>• grain or gauge</li> <li>• drape</li> <li>• porosity</li> <li>• covering power</li> <li>• count</li> <li>• light penetration</li> </ul>



- Performance characteristics may include
- stretch
  - abrasion
  - wearability
  - absorbency
  - durability
  - elasticity
  - heat sensitivity
  - shrink resistance
  - ease of care
  - drape quality
  - colour fastness
  - strength
- Routine tests may include
- visual checking
  - colour matching
  - weighing, height
  - weight and thickness measuring
  - moisture measuring
  - measuring rubbing fastness
  - stretch
  - wear
  - cracking
  - colour
  - gloss
  - softness
  - handle
  - texture
  - light and colour fastness
  - heat fastness
  - tensile characteristics
  - flexibility
- Non-routine tests include
- tests performed in a laboratory environment to laboratory level standards
- Reports may include:
- Report structure:
  - title page
  - table of contents
  - summary
  - introduction
  - theories and hypotheses
  - body (findings and conclusions)
  - methodology
  - test results

- recommendations
- references
- appendixes
- glossary
- Report content:
  - text
  - graphs
  - charts
  - tables
  - diagrams

**OHS practices**

OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit and may include:

- manual handling techniques
- standard operating procedures
- personal protective equipment
- safe materials handling
- taking of rest breaks
- ergonomic arrangement of workplaces
- following marked walkways
- safe storage of equipment
- housekeeping
- reporting accidents and incidents
- other OHS practices relevant to the job and enterprise

**Unit Sector(s)****Sector**

Textile Design and Development