



Australian Government

Department of Education, Employment and Workplace Relations

TAELED802A Investigate the application of ICT content knowledge

Release 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>TAE10 Training and Education Training Package version 3.0</i> .

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to analyse and apply effective ICT solutions and practices to meet the needs of various educational institutions.

Application of the Unit

This unit applies to practitioners working to develop and apply a wide range of ICT knowledge. It equips educators to knowledgeably analyse and apply various technologies in an educational setting.

Educators may need to seek the assistance of an ICT technical specialist, depending on the limitations of their own technical skills and knowledge.

Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

Element	Performance Criteria
1. Identify ICT standards and trends for an educational context	1.1 Identify hardware and software standards currently in use 1.2 Identify and analyse network technology standards currently in use 1.3 Analyse trends in deployment of ICT in education and learning
2. Analyse competing new technology solutions	2.1 Identify specific educational requirement that can be met by technology 2.2 Identify range of functions and capabilities supplied by benchmarking competing technologies 2.3 Select critical features of competing technologies for analysis 2.4 Conduct an analysis of technologies using various performance indicators 2.5 Select and report on appropriate new technology by considering the analysis of critical features
3. Develop a strategy to optimise current technology	3.1 Identify unused capacity in existing technology 3.2 Identify applications for unused capacity appropriate to educational outcomes 3.3 Develop, and present where required, a strategy for exploiting additional capacity 3.4 Assess the cost and efficiency of the strategy against available resources and budgets 3.5 Recommend a course of action in line with the assessment

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- cognitive skills to:
 - review, analyse, consolidate and synthesise knowledge about current ICT-related technologies relating to education
 - think critically and generate and evaluate complex technical ideas
 - identify and provide complex solutions to ICT-related issues relating to education
- communication skills to:
 - collaborate and work with vendors, consultants and peers
 - conduct project-based activities
 - demonstrate and model varied delivery and facilitation methods and techniques
 - give presentations
 - initiate and facilitate group discussions in seeking feedback on applications for unused capacity
 - research suitability of learning content for electronic development
 - share ideas and information
- learning skills to:
 - analyse new areas of learning
 - evaluate effectiveness of learning practice, and analyse and identify suitable learning practice and learning strategies for groups and individual learners
- literacy skills to:
 - articulate ideas and information effectively
 - develop reports that deal with complex ideas and concepts
- numeracy skills to analyse, manipulate and validate data, specifications and reports
- planning and organising skills to:
 - anticipate or predict risks
 - develop a learning strategy for an organisation
 - plan for contingencies
- teamwork skills to:
 - monitor group and individual interactions when seeking feedback
 - respond to feedback to improve educational solutions
- research skills to ensure that all options are explored and recommendations are comprehensive and balanced
- technology skills to:
 - complete electronic research
 - confirm the technology to be used for different modes of teaching and learning
 - review and discuss learning styles and practice involving ICT
 - understand current ICT standards.

Required knowledge

- benchmarking principles to assess technologies
- budgeting and cost-benefit analysis principles
- contemporary policy and approaches to learning and assessment
- content and requirements of the relevant delivery and assessment strategies
- how to create an effective learning experience using electronic technology
- information technology principles and terminology, particularly those related to:
 - using the internet
 - reviewing technology capabilities
 - describing e-learning methodologies and using related vocabulary.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential: • knowledge of contemporary ICT issues in an educational environment • documented review, analysis and recommendation of complex ICT solutions for an educational environment • research on theory and practice in relation to advanced learning practice, especially where these are enabled by new content solutions; and vocational education and training approaches or technologies.
Context of and specific resources for assessment	Assessment must ensure: • competence is consistently demonstrated over time, and over a range and variety of complex situations • access to required assessment facilities and resources.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance by the candidate • review of applied projects or learning activities, relating to the research • direct observation of contextual application of skills • oral or written questioning to assess knowledge of constructing and implementing advanced vocational education and training learning practice.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

	• TAEDEL801A Evaluate, implement and use ICT-based educational platforms • TAELED704A Review enterprise e-learning systems and solutions implementation.
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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. 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) may also be included.

Hardware and software may include:	• application: • database • internet browser • spreadsheet • word-processing • cloud-based solution • commercial • content management systems • customised • development tools • in-house • laptop • learning management systems • notebook • other mobile devices • peripheral devices • personal computer (Mac or PC) • personal digital assistant (PDA) • server • smartphone • student management systems • system: • computer security • device drivers • operating system • tablet (iPad or similar) • workstation.
Network technology may include:	• cabling infrastructure • internet • internet access • modems, routers and other connectivity devices • networks

	• remote sites • servers • virtual private network (VPN) • voice network • wide area network (WAN) • wireless networks.
<i>Benchmarking competing technologies</i> may include:	• assessment based on specifications and information presented by potential vendors • identifying organisations using different brands or versions of technology and comparing performance and functionality of other options • using operating data and direct testing to compare the performance of two or more competing technology products.
<i>Critical features</i> may include:	• capacity • compatibility with existing systems • cost of implementation • ease of implementation • end user friendliness • future expansion of the connection • speed of operation • training and support requirements.

Unit Sector(s)

Learning and development