



Australian Government

Department of Education, Employment and Workplace Relations

HLTART404B Install and maintain augmentative and alternative communication (AAC) devices

Release: 1

HLTART404B Install and maintain augmentative and alternative communication (AAC) devices

Modification History

Not Applicable

Unit Descriptor

Descriptor

This unit of competency describes the skills and knowledge required to install and maintain augmentative and alternative communication devices using a therapist's prescription

Application of the Unit

Application

This unit applies to workers within a rehabilitative environment requiring a broad knowledge base in assistive technology and the ability to apply solutions to a defined range of typical problems

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills

This unit contains Employability Skills

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Determine the client's communication aid requirements using a Therapist's prescription

- 1.1 Using the Therapist's *prescription* confirm that all required information has been provided
- 1.2 Discuss requirements with client and where possible the relevant *health professional*
- 1.3 Ensure familiarity with software setups for commonly used assistive technology systems
- 1.4 Ensure familiarity with hardware/firmware setups for commonly used assistive technology

2. Select communication aid

- 2.1 Use *approved selection criteria* to select *communication aid*
- 2.2 Manufacture and/or modify *communication aid* to meet client requirements
- 2.3 Assess *communication aid* for *operational competency*
- 2.4 Document specifications for *modification, installation and maintenance* in accordance with organisation policies and procedures

ELEMENT

3. Install communication aid

PERFORMANCE CRITERIA

- 3.1 Select appropriate materials and/or components for the installation and/or modification of the *communication aid*
- 3.2 Install *communication aid using hand tools* and/or machinery in accordance with occupational health and safety requirements, relevant standards and manufacturers' specifications.
- 3.3 Arrange to trial the *communication aid* with the client in accordance with organisation policies and procedures
- 3.4 Program the *communication aid* to client's requirements in consultation with therapist and according to manufacturer's instructions
- 3.5 Mount the aid using appropriate supports.
- 3.6 Provide power supply adaptations
- 3.7 Give client clear and precise information about proper use, maintenance and function of the device and/or its modifications

ELEMENT

PERFORMANCE CRITERIA

4. Maintain communication devices

- 4.1 Diagnose *communication aid* and computer faults at user level
- 4.2 Diagnose AAC device faults using appropriate diagnostic tools
- 4.3 Identify AAC system faults and rectify at a module level

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Essential knowledge:

The candidate must be able to demonstrate essential knowledge required to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes knowledge of:

- AAC device standards, terminology and troubleshooting requirements
- Appropriate practices to ensure efficient use of resources
- Installation requirements of commercially available AAC devices
- Prevention of electrical overload in powered wheelchair circuitry
- Procedures to install an appropriate AAC device
- Safety and environmental aspects of relevant organisation activities
- Workplace procedures, recording and documentation processes
- Awareness of relevant standards, regulatory requirements, legislation and codes of practice
- Awareness of funding policies
- Awareness of appropriate range and application of input devices
- Awareness of the roles other practitioners in the field and in related fields
- Awareness of risks of electrical fires in powered wheelchairs

Essential skills:

It is critical that the candidate demonstrate the ability to:

- Communicate effectively with clients and other relevant people
- Evaluate, problem solve and address a variety of commercially available AAC device

REQUIRED SKILLS AND KNOWLEDGE

mounting and installation problems

- Identify AAC faults and rectify at a module level
- Identify design or performance problems and bring them to the attention of the appropriate person
- Maintain accurate records
- Make mounting and installation adjustments
- Manage time allocated for workload effectively
- Measure fundamental angles, masses and lengths
- Mount AAC device as directed by the therapist
- Read and make engineering drawings or sketches
- Select appropriate materials and techniques
- Select/mount ACC mounting device in conjunction with the therapist or rehabilitation engineer
- Use design skills in the appropriate selection of materials for mounting system manufacture and/or modification
- Use electrical/electronic measurement tools to diagnose external faults
- Use hand tools and machinery to undertake adjustments and modifications as required

In addition, the candidate must be able to effectively do the task outlined in elements and performance criteria of this unit, manage the task and manage contingencies in the context of the identified work role

This includes the ability to:

- Apply policies and procedures including reporting requirements
- Communicate and work effectively with work colleagues, associates and clients encompassing teamwork, client confidentiality
- Communicate effectively with clients to give clear and precise information about proper use, maintenance and function of the device and/or its modifications
- Use literacy competence required to fulfil job requirements
- Use oral communication skills required to fulfil job roles

Evidence Guide

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 this Training Package.

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate this competency unit:

- The individual being assessed must provide evidence of specified essential knowledge as well as skills
- Observation of workplace performance is essential for assessment of this unit
- Consistency of performance should be demonstrated over the required range of situations relevant to the workplace
- Where, for reasons of safety, space, or access to equipment and resources, assessment takes place away from the workplace, the assessment environment should represent workplace conditions as closely as possible

Access and equity considerations:

- All workers in the health industry should be aware of access and equity issues in relation to their own area of work
- All workers should develop their ability to work in a culturally diverse environment
- In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people
- Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

EVIDENCE GUIDE

Context of and specific resources for assessment:

- Assessment should replicate workplace conditions as far as possible
- Simulations may be used to represent workplace conditions as closely as possible
- Where, for reasons of safety, access to equipment and resources and space, assessment takes place away from the workplace, simulations should be used to represent workplace conditions as closely as possible
- Resources essential for assessment include:
 - Access to appropriate workplace where assessment can occur
 - Access to supporting departments and professions

Method of assessment

- Observation in the work place
- Written assignments/projects
- Case study and scenario as a basis for discussion of issues and strategies to contribute to best practice.
- Questioning
- Role play simulation

Related units:

The following units should be undertaken before or in conjunction with this unit:

- MEM10002B Terminate and connect electrical wiring
- MEM18030B Diagnose and rectify low voltage electrical systems

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. 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.

A communication device may include:

- Human/Technology interface:
 - Control interface (hardware by which the client may access the device)
 - Selection technique (interpretation of the access act)
 - Selection method (direct or indirect coded access)
 - Selection set (the language code)
 - Users visual display
- Processor:
 - Rate enhancement and vocabulary expansion including codes, predication and levels
 - Vocabulary storage
 - Text editing
 - Output control
- Outputs including:
 - To partner: visual, voice, print
 - To external device: serial, parallel, USB
- Physical construction:
- Physical construction
 - Size
 - Portability
 - Ease of mounting
- Mounting hardware

RANGE STATEMENT

Appropriate health professionals may include:

- Rehabilitation engineer
- Medical practitioner
- Special education teacher
- Speech pathologist
- Occupational therapist
- Social worker/psychologist
- Orthotist
- Physiotherapist
- Prosthetist

Prescription information sources may include:

- Speech pathology assessments
- Occupational therapy assessment
- Social work/psychology assessment
- Education requirements

Approved selection criteria may include:

- Client's ability to use the communication device
- Functional posture and ability of the client
- Communication device cost benefit
- Ability to service and maintain the communication device
- Quality of supplier response and support for a particular device

Operational competency means:

- Optimisation of ergonomics of the client interface with respect to the client's residual function

RANGE STATEMENT

Modification, installation and maintenance may include:

- Adaptation of commercially available components for use with the AAC device
- Design and manufacture of unique components and/or devices for use with the AAC device
- Adaptation of alternative manufacturer's components to provide an effective AAC system
- Selection and installation of commercially available mounting systems
- Identification of AAC systems faults and rectify at a module level
- Record system settings (software/hardware)
- Maintain cabling and connectors, switches and other interfaces including mounting systems
- Replacing and maintaining batteries
- Cleaning of equipment including keyboards
- Infection control and universal precautions

RANGE STATEMENT

Hand tools, measuring instruments and machinery may include:

- Hand tools
 - general maintenance tools,
 - general metal and plastic cutting tools,
 - general metal and plastic forming tools,
 - general soldering tools
- Measuring instruments
 - Multimeter
 - Oscilloscope
 - Logic probe
 - Continuity tester
 - Dial callipers
- Power tools
 - Drill
 - Angle grinder
 - Jig saw
 - Linisher
 - Grinder
 - Guillotine
 - Lathe
 - Drill/mill
 - Power hacksaw
 - Bandsaw
 - Router
 - Planner
 - Power saw

Unit Sector(s)

Not Applicable