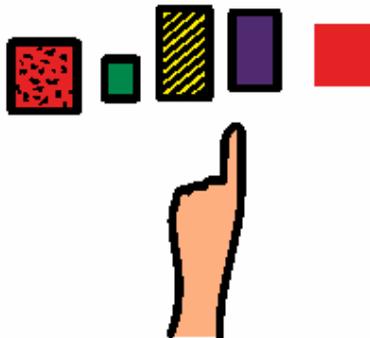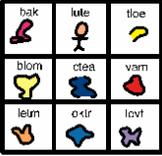# Assistive Technology Guide

Communications
and
Telecommunications

Choosing Your Device

Communication

People with speech difficulties use other communication methods such as signing, non-electronic communication aids and electronic voice output devices. These methods are called Augmentative and Alternative Communication (AAC).

Devices that help with communication could also be used as telecommunications devices.

Telecommunications

A telecommunications device is used for communication across distance. It can also help with communication in face-to-face situations where someone might have difficulties with speech.

Telecommunications Functions

Device \ Function	Calls	Video Calls	Text Messages	Instant Messages	Emails	Social Media
Landline telephones	✓					
Mobile phones	✓		✓		✓	
Smart phones	✓	✓	✓	✓	✓	✓
Tablets	✓	✓	✓		✓	✓
Desktop computers/ laptops	✓	✓		✓	✓	✓
Speech generating devices (functions vary with different devices)	✓	✓	✓	✓	✓	✓

Many of these devices can be bought from any telecommunications supplier. Other devices are specialised equipment, such as specialised telephones and speech generating devices, can only be obtained from specific suppliers.
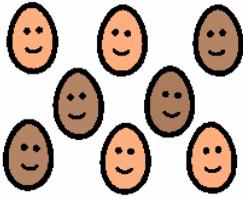
For information about suppliers, go to www.ilcnsw.asn.au

Types of Telecommunications Devices

Device	Examples
Landline telephones	
Mobile phones	
Smart phones	
Tablets	
Desktop computers/ laptops	
Speech Generating Devices	

Factors to Consider

Some things to consider to ensure the device will suit the needs of the individual.

User

- Strengths and abilities
- Physical needs, vision, hearing, and cognition
- Communication needs - language comprehension, expressive skills
- Personal preferences - likes or dislikes
- Something the person is comfortable using

Environment

- Where the device will be used - home, community, school, work
- Familiar or unfamiliar situation
- One-on-one or group setting
- What is needed in the environment so the device can be used? For example, time, physical set up, someone to assist.

Factors to Consider
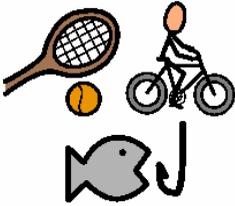
Task

- What goals will the device help achieve?

- For example, make a phone call, use the internet, send emails, send text messages, use social media.
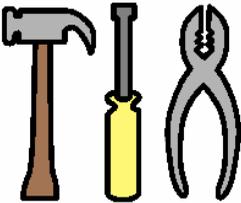
Tool

- Devices currently available

- Apps or software available

- Time needed to learn

- Ease of use

- Support available from family, carers, or suppliers

- Set up or programming of device before it can be used

- Cost and funding options

- Portability of device

- Compatibility of access methods required

- Durability of device

Access Options

Direct access

- The person needs to reach out and touch the screen or press keys on the device.
- A keyguard can make it easier to activate keys.
- A stylus can be used when it is difficult for a person to press with their finger.

Alternative access

The person is not able to point directly and uses another way of selecting a message.

For example:

- Switch scanning (may need 1 or 2 switches)
- Head tracking
- Eye-gaze
- Joystick
- Auditory scanning

Accessories

Accessories can be added on to make using a device easier:

- Tablet stands - to put device in a good viewing position
- Carry cases - to carry device around and protect it
- Speakers - to make sound output louder
- Keyboards - for people who need physical buttons

Hardware

- Hardware refers to the physical components of the device.

- Each device is made up of many small components.

- These components effect how the device will work.
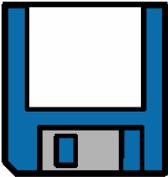
  - Each device has different storage space.

  - Think about the number of programs you want to load onto your device, then get a device with storage space to match.

  - Be sure to check that your device will work with other accessories and software you need.


Software

- Software refers to programs that run on the device.

- Each device runs on operating systems. These are also known as platforms - iOS, Android, and Windows.

- Different operating systems work with different software and apps.

- This means that only certain software and apps can be used with your device.

iOS	App Store
Android	Google Play Store
Windows	Windows Store

- Some software and apps are free, while others come at a cost.

- Apps for tablets and smart phones can be downloaded from online stores, shown in the table.

- Software for computers and laptops can be downloaded from suppliers' websites or bought in a CD.

Connectivity
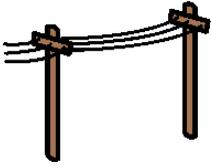
- You will need a landline to make calls on a regular telephone.

- If you have a mobile phone or smart phone, you will need a SIM card. This is so that you can make calls and send text messages.

- If you want to connect to the Internet on any of your devices, you will need a SIM card with data allowance.

- There are phone plan and pre-paid options.

- You may also connect to the Internet using Wi-Fi.

- You can get help from any telecommunications companies about connectivity for your device.

Portability

- Think about whether you will be carrying your device around with you. Also think about the weight of your device.

- You may need carry cases or satchels to make carrying your device easier.

- If you use mobility aids or wheelchairs, you may need to think about mounting.

- The position of your device is important so that you can use it easily.

- Think about how your device will be transported when traveling.

Durability
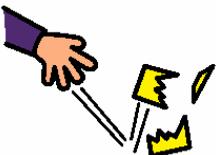
- Accidents happen, and sometimes your device may get knocked around or dropped.

- You will want a device that will not break easily and will last for a long time.

- Some cases can help protect your device.

Speech Quality

- Some devices may have speech output.

- Speech output can vary in type, quality, and volume.

- Some devices, apps or software have been designed to support both synthesised and digitised speech.

Two types of speech output:

- Synthesised speech – artificial, computer-generated speech created instantly by the device. You may be able to choose from a range male or female and adult or child voices. Sometimes it may come in different languages and accents. This depends on the settings on your device, software or app.

- Digitised speech – words and messages recorded directly into a device. It is like using a tape recorder. You can record a message and save it for later.

Visual Display
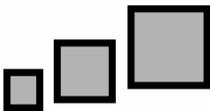
- If the device has a visual display, consider the screen size of the device.

- Screen size usually determines how large or small the text and images will be.

- If using direct access on a touchscreen, also consider the size of on-screen buttons.

- Some devices have options for making text size and images larger.

Set Up and Programming

- When you get a new device, it will need to be set up before you can use it.

- Software will need to be installed and programmed with vocabulary, so that the device will suit your needs.

- It may take time before your new device is ready to be used.

Assessment

- If you need help to find a device that will suit your needs, you can get help from a speech pathologist who has expertise in assistive technology.

- The speech pathologist may do a communication assessment to help you find a suitable device.
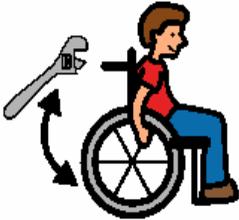
- An occupational therapist can help with choosing alternative access options.

- If you are mounting your device to a wheelchair, some changes may need to be made to the chair. This is so that you can use your device easily.

Training and Support
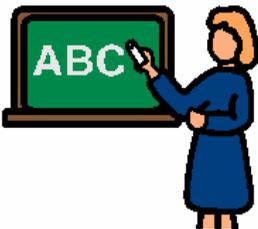
- When you get a new device, you may not know how to use it. Some suppliers give training and can help you if you have problems.

- You can also get help from a speech pathologist, an occupational therapist, or an assistive technology specialist.

Cost and Funding Support

- Telecommunications devices can cost a lot of money.

- There is funding support for some devices through funding bodies like the Telstra Disability Equipment Program.

- If you want to buy a speech generating device that costs more than $100, you can get help from Enable NSW.

- For more information, go to the Enable NSW website on www.enable.health.nsw.gov.au.

- The National Disability Insurance Scheme is being introduced.

- With this scheme, it may be easier for you to fund your own device.

Insurance
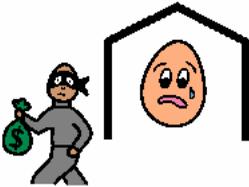
- It is important to make sure you do not suffer too much loss if your device is lost or stolen.

- Think about getting insurance that will cover the cost of your device.

Warranty

- There will be times when you may need to fix your device.

- When you buy your device, ask the supplier about warranty.

- If you need to fix your device during the warranty period, you will not need to pay extra money.

About this guide...

This Assistive Technology Guide focuses mainly on electronic communications and telecommunications devices.

For further information about other non-electronic communication systems, please contact the ILCNSW.

Disclaimer

The Independent Living Centre NSW does not sell equipment. Information is provided as a community service. The provision of this information does not constitute a recommendation. Responsibility for final selection of any item rests with the individual.

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For more information, please contact:

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17 Patrick Street, Blacktown NSW 2148

Infoline: 1300 452 679   Email: help@ilcnsw.asn.au Web: www.ilcnsw.asn.au

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