

Introducing and Developing Choices

Using technology to introduce and develop choices for people with physical and / or communication impairments

Introduction

In order to enable a person to interact with their environment and become an active participant in learning they will need to develop the ability to discriminate. Providing the person with opportunities to understand and communicate choices can encourage this. This requires careful consideration and analysis of that person's abilities and needs, which may inform on issues such as assessment, access methods, content of presentation, and strategies for developing their communication skills. Technology can play an effective role in supporting people to make choices with the use of low and high tech communication resources and strategies, special access devices, software and hardware.

Introducing choices

Initial considerations

In order to enable a person to make choices, there are a number of assessment issues to identify:

- Sensory abilities and preferences. Does the person have a hearing or visual impairment? Will they require auditory prompts? Do they have a tactile preference? The assessment tool *The Affective Communication Assessment* (Coupe et al. 1985) is a particularly useful process for highlighting a person's sensory awareness and responses
- Level of understanding of cause and effect. Does the person have awareness that meaning can be attributed to learning experiences in the environment? Does the individual understand object permanence and means-end relationships? Can they differentiate meaningful experiences? (See Ouvry, C. 1996)
- Appropriate method of access to resources. Consideration should be given to the person's physical abilities and any sensory impairment. Is direct access going to meet the person's long term needs, or should alternative access be considered? The most effective method of access for that person to use should inform on the identification of a method of intervention
- What methods of receptive and expressive communication does this person already have? Can these be developed and incorporated into a total communication approach?

Form of representation

There are a wide variety of resources available incorporating symbolic representations, which could be used to introduce choices. These include real objects, partial representation of objects (objects of reference), photographs, symbols, signs, text, vocalisation or speech. It may be appropriate to present a combination of resources in order to reinforce their meanings (for example, a photograph alongside the real object). In addition, the environment of the person should be taken into consideration to encourage interest, minimise distraction and ensure consistency when introducing choice making skills.

Methods of access

This can include verbal or vocal indication, gesture (such as facial expression, pointing or signing) eye pointing, or the use of an access device, such as a switch. The main principles of access are that the chosen method should be the easiest, most reliable, repeatable and efficient for the purposes of the resource in use. The person may require a number of different access methods according to the mode of presentation.

Mode of presentation

This will vary according to the type of representation being used but all of the following can incorporate sensory elements to the messages.

Communication Boards can be standardised or adapted as an insert to trays but are an ideal way of introducing choices. A standardised format will enable more choices to be introduced to the person in a consistent way.

Communication Books are in effect a presentation of the boards, offering versatility to the range of messages being used. These can be presented in photo albums, files, folders and fileboxes, offering a portable, flexible system that can be adapted and developed easily.

E-tran (eye transfer) Frames use a person's ability to eye point in order to select messages. This significantly increases the speed at which a person can indicate a choice. The skill of eye pointing can be utilised in a number of ways, including the use of velcro necklaces, tabards, or by simply holding messages in front of the person enabling them to indicate their preferred choice.

Dynamic Screens allow the person to select a message from a number of choices on screen. Software packages such as *Clicker* (switch versions), *Talking Screens* and *Speaking Dynamically Pro* allow you to develop on-screen grids from which a choice can be made using a mouse (or alternative) or switches. Grids can be linked allowing the introduction of categories. However, the perceptual and cognitive skills required to use this strategy of accessing messages are advanced. This is a complimentary strategy to the use of a communication book, and can be duplicated to provide a person with speech and alternative methods of access.

Communication Aids offer a multi-sensory approach to enabling choices, including the use of digitised (recorded human speech) or synthesised (computer-generated) speech output. There is an ever-increasing selection of communication aids being developed, offering a wide range of functions. However, for the purposes of introducing choices, the following aids would be most appropriate as they offer digitised speech output and *scanning facilities enabling switch access:

BIGMack or LITTLEMack

BIG Step-by-Step or LITTLE Step-by-Step

**4Scan4*

**TechScan8*

**Messagemate 8, 20 or 40 (the Messagemate 8 does not have a scanning option)*

(See Information Sheet Overview of *Voice Output Communication Aids*)

All of the above voice output communication aids (VOCAs) can be used alongside other communication strategies in order to indicate choice.

Content

In order to encourage a person to make a choice, careful consideration should be given to motivation. The person must want the outcome of their choice, and therefore it is worth considering their sensory preferences. For example, if shiny objects motivate them, these can be presented alongside a matt object. There has been some debate about the range of options to initiate the presentation of choices. These can be seen as:

- Two preferred options
- A known like and dislike
- A preferred option and a neutral option

Whilst two preferred options enables the person to discriminate, when introducing choices it is necessary to establish if the person is able to discriminate, or if instead this needs to be learnt.

A known like and dislike raises a number of ethical issues in that this may result in having to give the person an experience which is acknowledging their selection, and inflicting an experience on them that is going to offend them. However, consideration should also be given to the possibility of denying opportunities to a person that may, in time, come to be favourable e.g. a new food taste or experience such as the cinema.

The preferred and neutral options, however, avoid these issues and also can be seen as a vehicle for learning discrimination skills.

Research has shown that when choices are presented to people with learning disabilities they are more likely to select the second presented choice irrespective of what it is. It is therefore important to ensure choices are presented simultaneously.

Motivation can be achieved by identifying the person's known preferences. Often, activities are encouraged by sensory rewards, such as simple environmental controls enabling a light or a fan to be switched on. However, often the most motivating activity a person can engage in is to control other people. A single message such as "blow a raspberry" or "pull a funny face" can encourage understanding of a method of access, e.g. the message is recorded into a BigMack (or equivalent single message VOCA) and accessed through a switch. Encouraging the person to choose between two people as to who will blow the raspberry, for example, can then reinforce choice making.

The same strategy can then be used to establish a selection of messages, some of which may be less motivating than others. Those messages can then be presented alongside each other, for example: "Make a silly noise" and "Wave at me". Once the person has understanding of control and choice, a number of other activities can be gradually introduced. These could include:

Drinks: offering a choice of water, as the neutral option and a preferred drink, such as juice or milk.

Food: as above with a neutral option, such as bread alongside a known popular food or taste.

People: this could include choosing a person to share an activity or choosing a person to whom an instruction can be given, such as "jump up and down".

Resources: this may include a choice of a favourite toy, story, song, video or game alongside a neutral option.

Activities: this could be introduced once the person has a good conceptual understanding of making choices, as the consequence of making the choice would require a longer response, e.g. painting, music or swimming.

Developing choices

The success of the person in making choices can be developed in a number of ways, depending on their specific needs, the mode of presentation and their method of access. The introduction of the concepts "yes" and "no" will open further opportunities for the person to control their environment.

It is important to avoid assuming a person has understanding of "yes" and "no" and can apply that understanding in response to any question. It may be that they can demonstrate understanding of recognition, rather than making a choice. For instance a response of "yes" to the question "Do you want coffee?" may mean that the person simply recognises the word "coffee" rather than choosing it as a drink in preference to "tea" or any other proposed alternative. Similarly, the word "no" may indicate a rejection of a choice rather than understanding the many concepts implied with the word "no".

Direct questions such as "Do you want a..." enable the person asking the question to have complete control of the range of options offered. By allowing the person to have access to that range of options, they then have some control (albeit limited) over which decision to make. In order to develop opportunities for the person to make choices, therefore requires effective access to a wider range of messages. There are a number of strategies that can enable a person to do this:

Topic based communication boards: The person has access to a range of messages relating to a specific topic or curriculum area.

Communication Book: This is where a range of messages can be accessible. To assist effective and quick access, the messages could be stored in categories and then sub-categories. The book would have an index at the front indicating the categories.

Colour coding: This is where messages can be accessed on one page by double point selection. A number of messages are grouped in each specific area on the page. These areas are identified with a specific colour, and the corresponding messages in each group are attributed with the same colour.

Screen links: This is an extension of the principle of the communication book whereby different categories of messages can be accessed from a front page. Some VOCAs and software packages offer the facility to access other screens by selection of a category cell.

Auditory scanning: This method requires a verbal and sequential presentation of choices for selection. This can be achieved by a communication partner or through technology with speech feedback facilities. The method can be organised in the same way as screen links but an auditory prompt (usually a single word to indicate the contents of that selection) is given for each option. (See figure below)

References

Coupe, et al (1985) *The Affective Communication Assessment*

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Ouvry, C *"Pupils with Profound and Multiple Learning Difficulties"*

Carpenter, B. et al. (1996) *Enabling Access*

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Auditory Scanning

