Use of Symbol Software

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Over the past 25 years a number of symbol systems have been developed to substitute for speech, or to provide additional support for people who have poorly intelligible speech. The use of these systems spread within the non-speaking, non-reading, physically disabled population and has been developed to encompass the needs of many people with severe learning difficulties. The emergence and use of symbol systems is described in more detail in *Symbol Systems* by Alison MacDonald in Chapter 3 of this book.

This paper provides practical information on the use of symbols, specifically using the available symbol software to produce material with a computer.

	Rebus	**PCS**	**Blissymbols**
Software	*GridMaker + Writing with Symbols*	*Boardmaker*	*Blissymbols for Windows* (export version)
Available for	PC, Acorn Archimedes	PC, Apple Macintosh	PC
System Requirements	PC – 4 megs RAM, 6 megs on hard drive for symbols, Windows 3.1 or above Acorn – Risc OS 3.1	PC – Windows 3.1, or above, 6 megs on hard disk for b/w symbols, 8 megs for colour Mac – System 7, or above, hard disk with 6 megs for b/w symbols, 16 megs for colour	PC – Windows 3.1, or above
Description	*Writing with Symbols* allows words to be typed in from the keyboard. Each time a space is entered, the program tries to match the completed word to a Rebus symbol. (Latest PC version can also be used with PCS, Makaton and Compic symbols) *Gridmaker* allows you to use the same symbols to prepare overlays for concept keyboards and communication aids, as well as communication charts and books. *The Symbol Collection* has 1,600 symbols, with the option to purchase extra symbols taking the total to over 2,500.	A graphics database containing over 3,000 Picture Communication Symbols. The program allows you to make professional looking communication boards or overlays in minutes, using either b/w or colour symbols. Any size of spacing of symbol cells can be used. Ten languages are available. It includes a range of pre-made grids for communication aid overlays and it is easy to make your own grids.	This is a Blissymbol library program, which provides the symbols in Bitmap and Metafile graphic formats, allowing them to be used with any other Windows program. In conjunction with *GridMaker*, it can be used to produce communication boards and overlays.
Cost	*Gridmaker* – £30 + VAT *Writing with Symbols* – £85 + VAT	£239 + VAT	Blissymbols for Windows – £60 + VAT
Suppliers	Widgit Software 102 Radford Road Leamington Spa CU31 1LF Tel: 01926 885303 Fax: 01926 885293	Don Johnston Special Needs 18 Clarendon Court Calver Road Winwick Quay Warrington WA2 8QP Tel: 01925 241642 Fax: 01925 241745	Handicom Orangelaan 29 Harderwijk Netherlands Fax: +31341 430602

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Several symbol sets were described in Alison MacDonald's paper. Software programs are readily available for producing Rebus symbols, Picture Communication Symbols (PCS) and Blissymbols.

Computer software for symbols makes a great difference in the quality and quantity of displays that can be provided, in comparison with the traditional draw or photocopy / cut and stick method. There are advantages of:

- **Time**: Although there is an initial requirement of time to learn how to use the program (approx. two hours, minimum), the experienced user can produce communication boards / overlays in just a few minutes.
- **Quality:** The finished product often looks more professional than the manual cut and stick version. For many clients the coloured symbols are more recognisable and more motivating to use. Other clients prefer black and white symbols. It is easy to tailor the communication board to the precise needs of the user.
- **Quantity:** Increases productivity and spontaneity. The symbols are readily accessible, therefore it is easy to be creative. More boards are likely to be created and more vocabulary made available to the user.
- **Flexibility**: As the grids can be saved as computer files, they can easily be updated i.e. symbols discarded or added.
- **Cost:** Although the initial outlay is greater than the cut and stick version of the symbols sets, the programs eventually save money because they save *time*.
- **Effectiveness:** If used creatively, symbol software can provide a gain of communication effectiveness to the client.

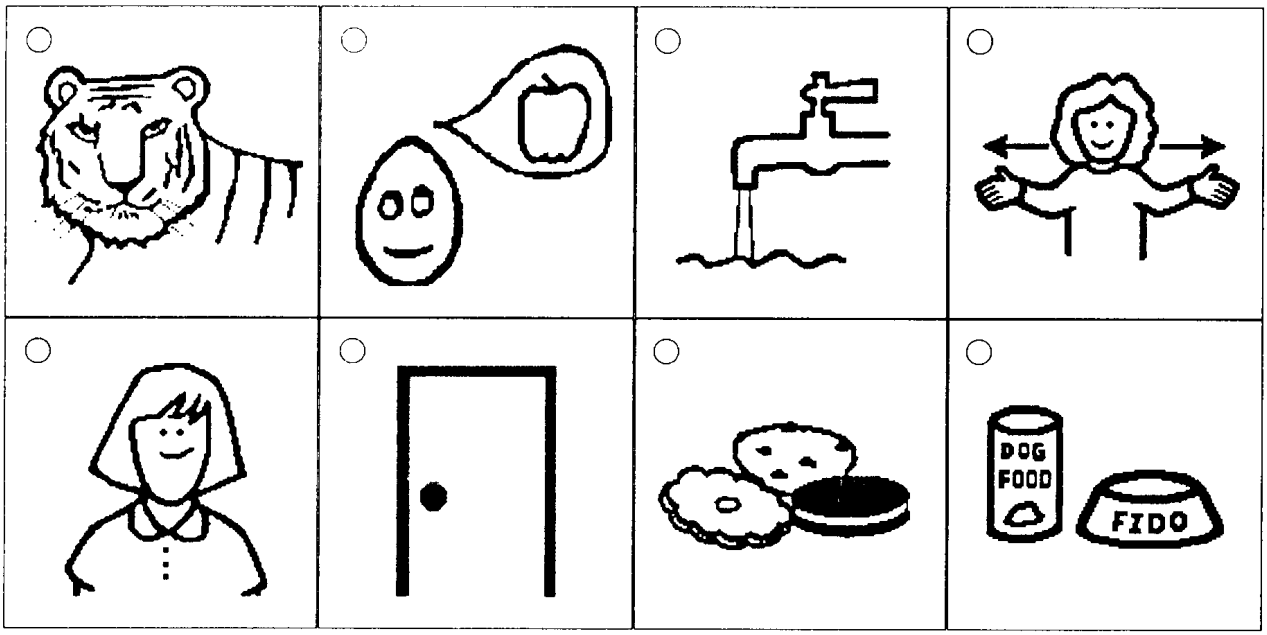
Using Symbol Software

No matter which symbol set the software represents, what is important is what you *do* with it. Here are some examples of the uses we have put the programs to:-

1. Communication Aid Overlays

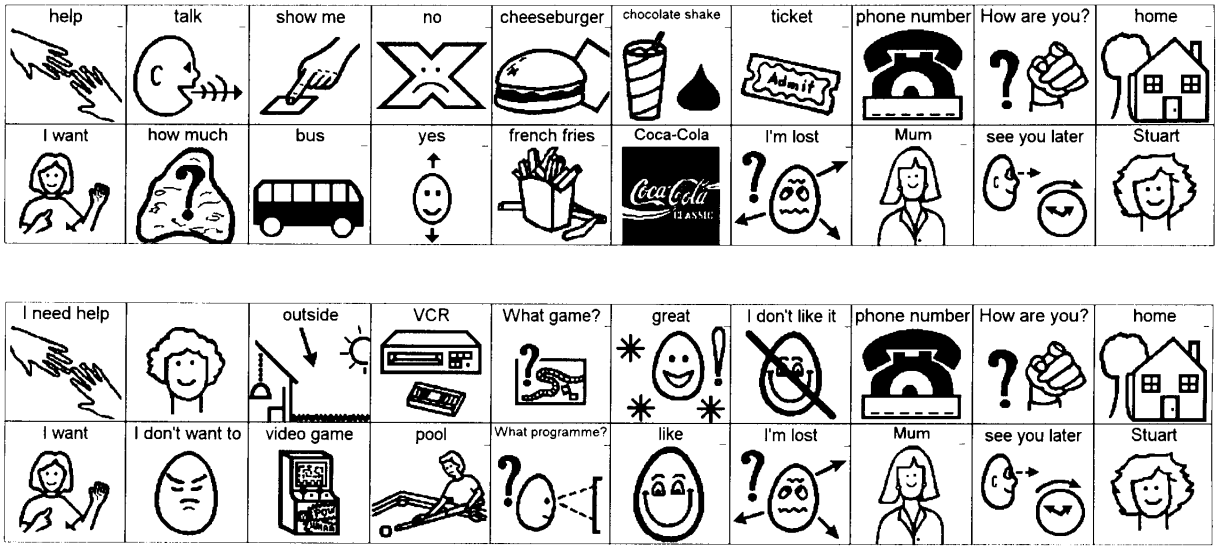
Both *GridMaker* and *Boardmaker* contain pre-made overlay templates for some of the communication aids currently in use (e.g. 8, 32, or 128 location grids, correctly sized). Using either program, overlays can be made up to suit any aid.

8 location AlphaTalker overlay for the children's storybook, 'The Tiger Who Came to Tea'



Made with Boardmaker & the Picture Communication Symbols - Mayer-Johnson Company
P.O. Box 1579, Solana Beach, CA 92075 U.S.A
Phone (619) 550-0084

MessageMate overlays for a visit to MacDonald's, and for youth club



Clients who are just beginning to use a high-tech system may need lots of activity overlays to maintain motivation and provide the experience of the power of communication.

Some communication devices, such as the MessageMate, can be used as a portable high tech system, and may need several overlay changes per day/week, according to the situation.

2. Making Low-tech Communication Boards / Books

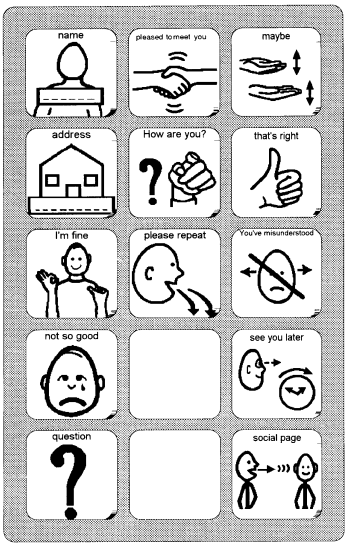
Boardmaker and *GridMaker* may be used to produce communication layouts of any size for non-electronic displays, or boards, or books. Grids may be saved, hence necessary changes are easy to do, i.e. updating symbols and discarding unwanted symbols.

The option of 10 languages in the Boardmaker program is useful for bilingual clients, or for foreign language tuition, although Gaelic and Asian languages are omitted, unfortunately.

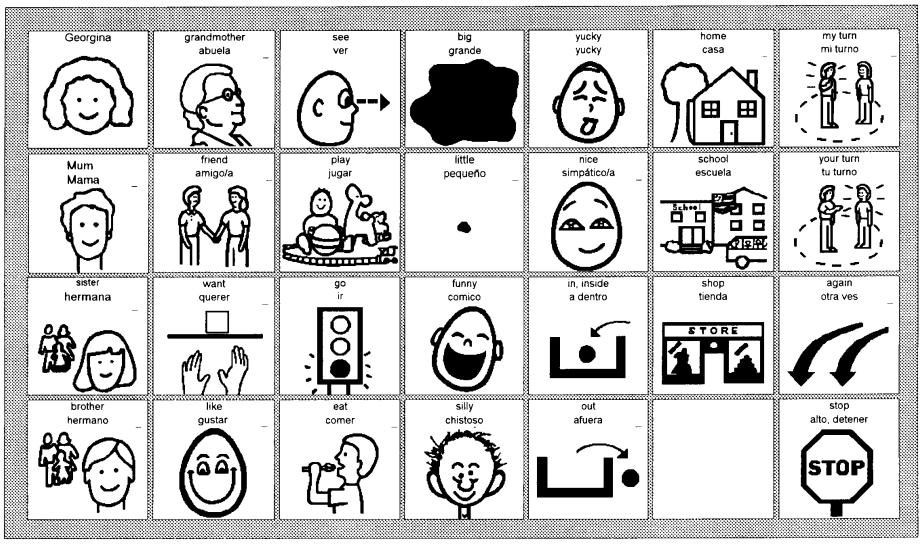
3. Access to Information

Symbols may be imported into other documents, giving clients with literacy difficulties access to information.

Topic Page from a Communication Book



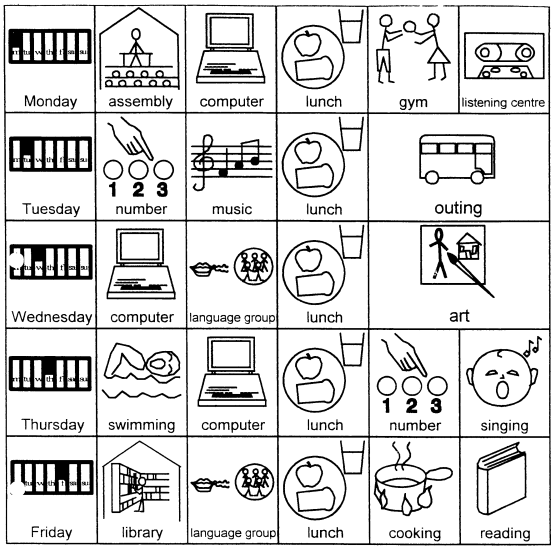
Core vocabulary page for 10 year old bi-lingual girl

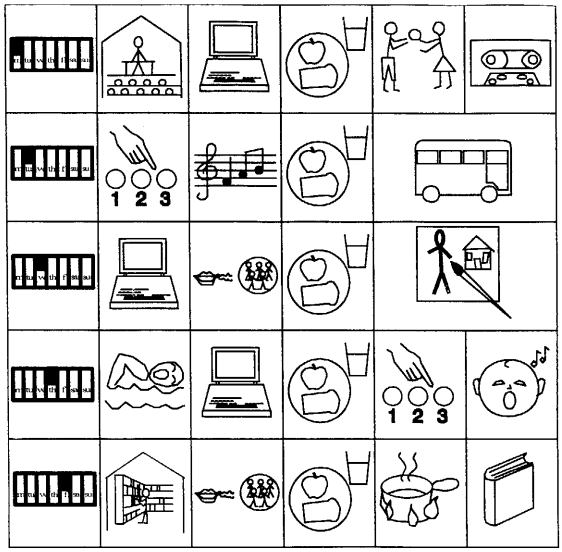


Symbol Timetables

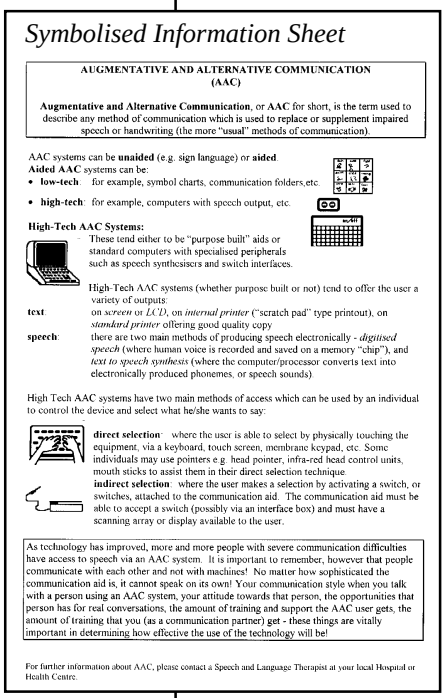
Some children may be able to read the words and so do not require symbols. Some children may use symbols to help their understanding of the written word and others may rely completely on the symbols.

Monday	Assembly	Computer	Lunch	Gym	Listening
Tuesday	Number	Music	Lunch	Outing	
Wednesday	Computer	Language	Lunch	Art	
Thursday	Swimming	Computer	Lunch	Number	Singing
Friday	Library	Language	Lunch	Cooking	Reading





Symbolised Information Sheet



AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC)

Augmentative and Alternative Communication, or **AAC** for short, is the term used to describe any method of communication which is used to replace or supplement impaired speech or handwriting (the more "usual" methods of communication).

AAC systems can be **unaided** (e.g. sign language) or **aided**.
Aided AAC systems can be:

- **low-tech**: for example, symbol charts, communication folders,etc.
- **high-tech**: for example, computers with speech output, etc.

High-Tech AAC Systems:
These tend either to be "purpose built" aids or standard computers with specialised peripherals such as speech synthesisers and switch interfaces.

High-Tech AAC systems (whether purpose built or not) tend to offer the user a variety of outputs:

text: on *screen* or *LCD*, on *internal printer* ("scratch pad" type printout), on *standard printer* offering good quality copy

speech: there are two main methods of producing speech electronically - *digitised speech* (where human voice is recorded and saved on a memory "chip"), and *text to speech synthesis* (where the computer/processor converts text into electronically produced phonemes, or speech sounds).

High Tech AAC systems have two main methods of access which can be used by an individual to control the device and select what he/she wants to say:

direct selection: where the user is able to select by physically touching the equipment, via a keyboard, touch screen, membrane keypad, etc. Some individuals may use pointers e.g. head pointer, infra-red head control units, mouth sticks to assist them in their direct selection technique.
indirect selection: where the user makes a selection by activating a switch, or switches, attached to the communication aid. The communication aid must be able to accept a switch (possibly via an interface box) and must have a scanning array or display available to the user.

As technology has improved, more and more people with severe communication difficulties have access to speech via an AAC system. It is important to remember, however that people communicate with each other and not with machines! No matter how sophisticated the communication aid is, it cannot speak on its own! Your communication style when you talk with a person using an AAC system, your attitude towards that person, the opportunities that person has for real conversations, the amount of training and support the AAC user gets, the amount of training that you (as a communication partner) get - these things are vitally important in determining how effective the use of the technology will be!

For further information about AAC, please contact a Speech and Language Therapist at your local Hospital or Health Centre.

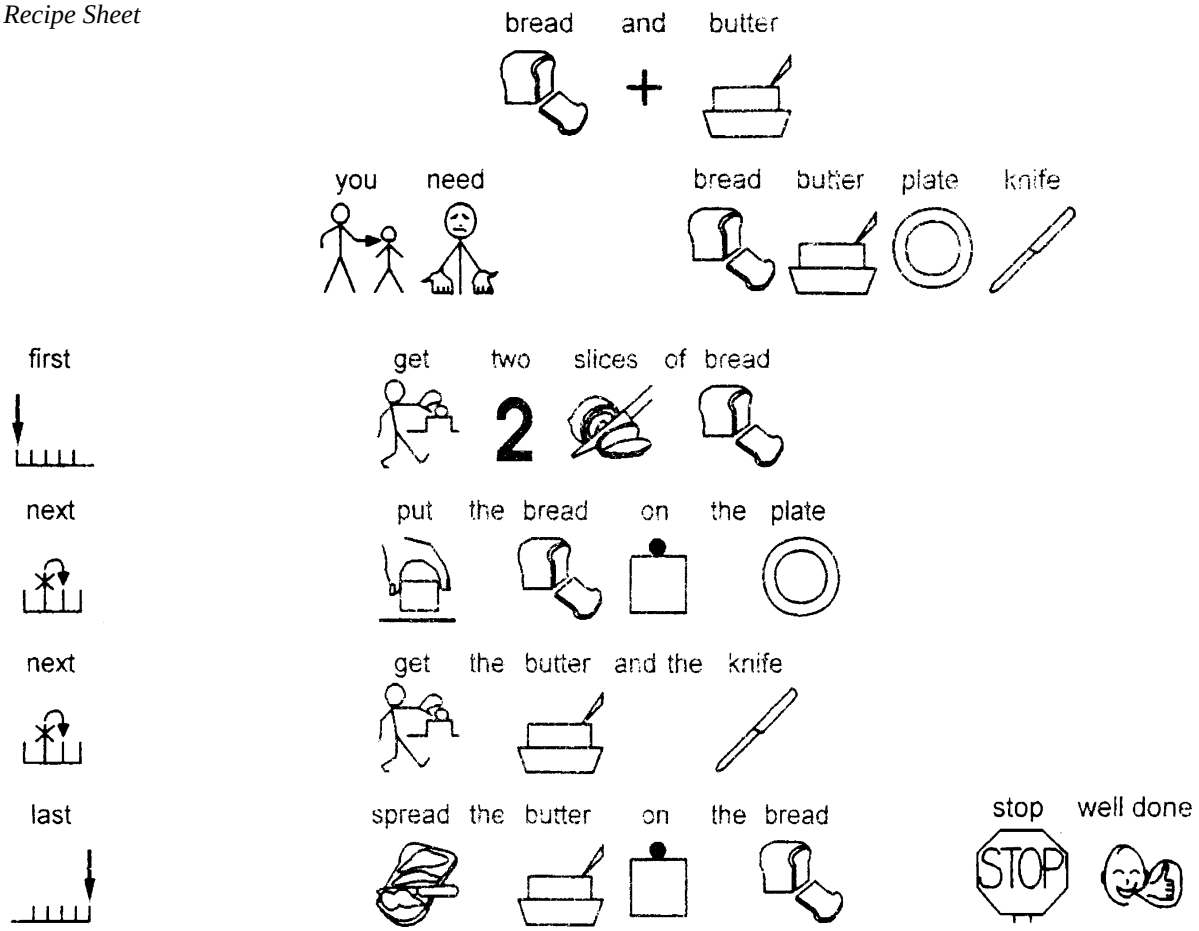
In addition to being used to prepare overlays for VOCAs (**v**oice **o**utput **c**ommunication **a**ids) and symbol charts, symbol software can be used in other ways to promote independence. Some simple ideas are described here as a starting point.

Children can be given equal access to timetables and class routines if they are provided in symbol format. This helps children with literacy problems to make their way around school without having to rely on others to decipher their written timetable for them. For children who remain with one class group throughout the day, a time table helps them to know where they are in the day, what has been done and what they will be doing next. This idea has also been adapted and used successfully in centres for adults with learning disabilities.

Producing symbol timetables on computer is quick and easy. The timetable can be saved so that if alterations are needed, they can be made without starting again from scratch. This allows variations of the same timetable to be produced to meet the needs of different children in a class. Some children may be able to read the words and so do not require symbols. Some children may use symbols to help their understanding of the written word and others may rely completely on the symbols.

They will all be able to use the information in whichever format is most suitable for them.

Recipe Sheet

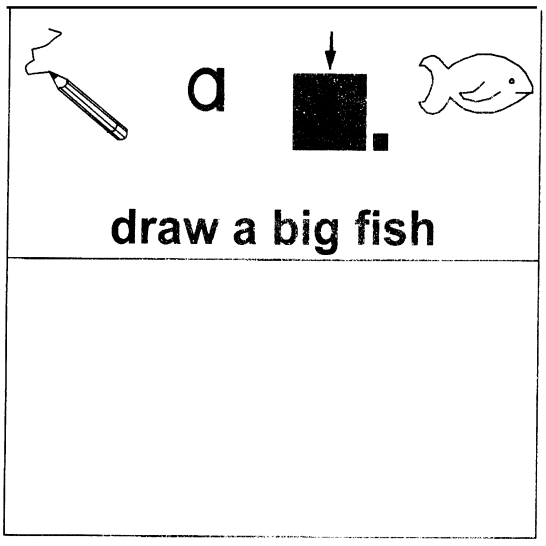


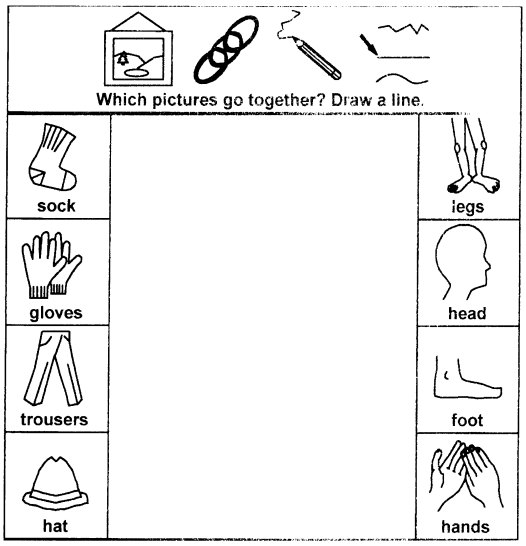
Using symbol software for recipes or worksheets and diaries can promote independence.

Symbol recipes / worksheets give the symbol user access to longer, more complicated information or instructions. The 'recipe' below helps a child to complete a simple task without prompting from adults or other children.

Worksheets can also be prepared to let children who use symbols take part in the same classwork as others without having to rely on the written word.

Sample Worksheets





Children who use symbols can be helped to keep a diary as a record of their activities. This can be taken home to facilitate a conversation about what happened at school. A skeleton diary can be prepared quickly and easily and can be updated as often as necessary. The child can then add in symbols to represent the activities they took part in. Diaries can be made simple or complex to meet the needs of the symbol user.

Clicker Plus

Other Software

In addition to the software described for producing symbols, other software exists which can integrate and utilise these symbols.

Writing With Symbols can be used with the *Clicker* programmes from Crick Software. *Clicker Two* is like an on-screen concept keyboard with speech. Rebus symbols can be dropped into a Clicker grid where they can act as a valuable support for clients with literacy difficulties. *Writing With Symbols*, being a symbol processor, allows the symbols to appear in the client's work. The *Clicker* programs are available from: Crick Computing, 1 The Avenue, Spinney Hill, Northampton NN3 6BA. Tel. 01604 671691.

Symbols To Sentences can also be used with *Writing with Symbols* to assist the development of spelling, reading and writing with symbols to support the written word. The teacher can prepare exercises and save them for individual children to use. Some activities which are suggested include: spelling from an anagram; spelling by copying; initial letter matching and completing simple sentences. The symbols act as a prompt for the word the child has to spell.

Symbols to Sentences

In conclusion, for many non-speaking people, graphic symbols are a vital medium for the development of appropriate communication systems. They can be used to prepare materials for many purposes including overlays for VOCAs, communication books and boards, wall charts and timetables.

In addition to allowing interactive communication, symbols are powerful learning tools playing an important role in the support and development of language and literacy skills. The lives of busy speech and language therapists, teachers and others are being made easier by the availability of computer software packages to help produce these symbol resources.

In this paper we have described the programs and given some ideas as an introduction to their many possible applications.

References

Kerr, J. (1968) *The Tiger who came to Tea*. William Collins Sons and Co. Ltd.

MacDonald, A. (1994) *Symbol Systems* in **Augmentative Communication in Practice: An Introduction**. CALL Centre.

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