

# COMMUNICATION *MATTERS*

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Cover: Fun with LLL and pink pig at Saxon Wood School  
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# Partner Assisted Communication Systems: Let me show you how I communicate

**JULIA HAMPSON**

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## INTRODUCTION

Low-tech AAC users may use a range of types of systems including symbol boards, and multi-level symbol books or letter and word charts. The communication partner will have a shared understanding of the system if they are literate or have knowledge of the symbol system in use.

However, the method of access of the chosen communication system needs also to be established, this may be by direct pointing, eye-pointing, a coded system or a partner assisted system using visual or auditory scanning. The communication partner may find the method of accessing the system difficult to use, due to a lack of shared knowledge of the method of accessing the system.

Where there is a breakdown in communication, this may not be due to a lack of vocabulary, as is often the focus of development in an alternative communication system, but due to a lack of understanding of the method of using the system, causing the communication partner to use the system incorrectly, leading to confusion for the user, or not using the system at all because the person does not know how to use it.

## SCANNING SYSTEMS

Where a user is accessing a computer or communication aid with switch scanning, the communication aid will consistently scan in the same chosen sequence at the

set speed, enabling the user to become expert at the scanning system and the switch access. As the user's knowledge of the system increase and the scanning skills develop, they are able to use the predictability of the system to possibly increase their speed of scanning, if their switching skills allow.

There are several methods of scanning and the specific method needs to be established for the individual user.

Where switch access is difficult for a user, then they may still be able to use a scanning system using a communication partner to do the scanning for them, in a similar way to a communication aid.

## NEEDS AND PROBLEMS OF A PARTNER ASSISTED SYSTEM

Where a partner assisted scanning system is used, there are specific needs which need to be fulfilled to ensure its success.

- The partner must understand the system and use it consistently.
- The partner must time the scanning appropriately, adjusting the pace to the user's needs.
- The partner must read the users signals to indicate choices accurately.
- The partner must interpret the user's choice of symbols appropriately.
- The partner must observe the user carefully to note indications of incorrect communications and repair the breakdown.

## PROBLEMS

- The partner may not use the system in a consistent way.
- There may be inconsistency between partners.
- The partner may not get the speed of scanning correct for the user.
- The partner may predict the user's responses.
- The partner may misread the user's responses.

## PROVIDING INFORMATION ON PARTNER ASSISTED SYSTEMS

It is therefore very important to get information on how a communication partner needs to assist the user in accessing their system. The user is unlikely to be able to give the information independently and therefore will need an advocate to assist in this.

There are a variety of ways to give information and a range of methods may need to be used to target a range of communication partners.

## Written instructions

Written instructions should always be used to describe access to a system. However these can have limitations due to:

- The need to be short and concise to encourage partners to read them.
- It may be difficult to describe *exactly* how to use the system.

- They may not be accessible to all communication partners who have visual or literacy limitations.
- Communication partners may not take the time to read instructions and may use strategies they have used with other AAC users.

### Real Time Demonstration

Demonstrating can be very useful to show partners how to use the system and to show how to read the user's signals.

The limitations of this method are:

- It is time consuming demonstrating to several different communication partners.
- The need for the user to "perform" for people.
- Partners may not recognise the significance of elements of the system and may not replicate precisely.

### Video Recording

A further way to provide information is to produce a video or DVD of a verbal explanation of the system and a demonstration of its use. The advantages to using a video recording are:

- The DVD can be copied and shared with all carers, friends and communication partners.
- The same information is received by all communication partners.
- The user can take part in the production, contributing to the editing and titles.
- Editing can ensure the video is a clear demonstration and performance by both the user and communication partner.
- The description of the system can be done verbally so it is accessible to people with visual or literacy difficulties.
- The DVD can be watched several times and reinforced with discussion if necessary.

Recognising the strengths and weaknesses of the above methods of providing information, made me look at the users with whom I was working. Some students used partner assisted systems which they were able to use very successfully with their speech and language therapist, and with one or two other communication partners, who had several opportunities to observe demonstrations and had feedback from the speech and language therapist. However, where only written instructions were available, the use of the system by the communication partner was not always accurate and therefore the likelihood of communication breakdown occurring was increased.

Therefore it was decided to make video recordings to provide increased opportunities for communication partners to understand the partner assisted systems.

### CASE STUDY 1

Ruby-Mae is seven years old and has cerebral palsy. She is highly communicative but has severe physical limitations and so uses a partner assisted system to access her multi-level communication book.

She uses yes/no signals to indicate her choices to a communication partner, who scans her pages using a row-column scanning system (see Figures 1 & 2).

Ruby-Mae learns the position of symbols on a page and therefore can anticipate the response she needs to make to access a symbol. For efficient use of the system, this requires the communication partner to access the system in the set way, and any deviation from this puts additional requirements on Ruby-Mae.

An example of an unpredictable deviation was observed, when a carer was assisting Ruby-Mae to access her system and began by using the row selection as the set system demands. But then the partner did not use the systematic scanning of the columns, but moved along the row at random, choosing a symbol to ask, "Is this the one?" After several choices the symbol Ruby-Mae wanted was chosen and she selected it.

When asked why the partner had done this rather than sticking to the system she replied, "I thought she would say 'Daddy' but as it was the first one in the row, I thought I would test her out to see if she would choose it eventually."

This clearly must have been very frustrating to Ruby-Mae, as she would have anticipated she was almost at her target symbol using her system. But then the partner changed the system with no warning and demanded that Ruby-Mae paid visual attention to recognise the symbol the partner pointed to, and made several additional responses before she reached her target symbol. This is putting additional stress and need for effort onto someone



Figure 1 Ruby-Mae first selects the topic she needs by indicating first the row it is on and then the item on that row

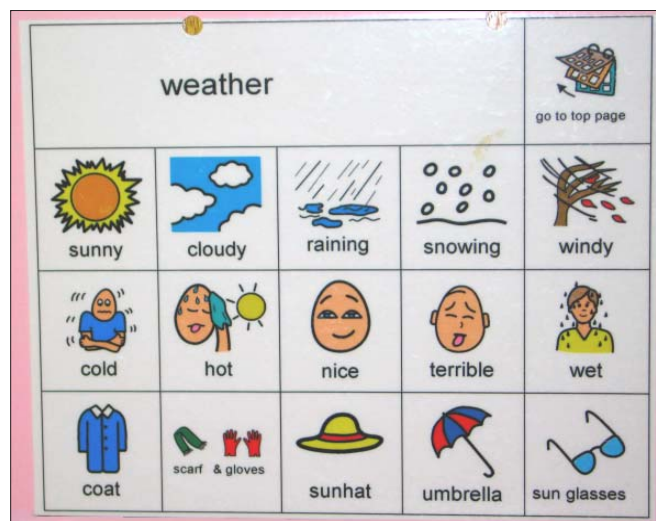


Figure 2 'Weather' is one of the many topic pages

who is already working very hard to communicate.

A DVD has now been made to share with all carers and communication partners. This has ensured consistency of use of the system by communication partners and between partners, enabling Ruby-Mae to use her system more efficiently and therefore have more positive communication encounters.

### CASE STUDY 2

Michael is a 17 year old young man with cerebral palsy, who has severe physical limitations.

He finds it difficult to initiate communication and relies heavily on his communication partner to support his communication. He and his carers often experience communication breakdown.

Michael has a multi-level communication book containing 4 symbols to a page, which he accesses by eye-pointing or by partner assisted scanning. However, this is only

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used by a few people, and most of his carers don't use it giving the following reasons:

- I don't understand how to use the book.
- It is very slow to use.
- Michael won't use it.
- I don't understand what the symbols mean.
- I can't follow Michael's signals.

We made a DVD explaining the communication system and demonstrating its use. Michael contributed to the creation of the story board pre-recording and to the editing and title production by indicating his choices. This was done as part of ASDAN accredited course work and also ensured Michael was engaged in the process to motivate him to use his communication system more.

The completed DVD was shared with carers, to develop their skills and confidence in using the system to communicate with Michael.

### CASE STUDY 3

Ben is an 18 year old young man with cerebral palsy, visual difficulties and learning disabilities. He enjoys interacting with others and responds with facial expression, vocalisations and head movements to indicate yes and no.

Ben uses an auditory scanning system, based on offering him three choices at a time, to which he responds yes or no.

He has set choices in a communication book, which he is familiar with, but he can also respond to simple choices offered in other situations, if his system is used.

The communication book offers Ben choices for specific activities, personal needs and topics to talk about. These choices are symbolised but this is for the benefit of the communication partner rather than Ben, who relies more on the verbal choices offer by his partner. This would enable a non literate partner to use the system with Ben, when they are familiar with the symbols.

Ben's DVD was made as a means of providing information to new communication partners on his transition to residential college.

### SUMMARY

Using a partner assisted communication system is often a successful way of communicating for AAC users who have limited physical control. It also allows for the communication partner to be supportive in the communication interaction by being flexible in the pace and responsive in the interpretation of the user's indications, to reduce communication breakdown. However, consistent use of the access system by the communication partner is important, to allow the user to be able to predict the system and so use it efficiently.

There are several ways to give communication partners information on how to assist accessing a system, by written information, by demonstration and recording this information on DVD is another useful method of spreading the information wider. \*

Julia Hampson, Speech & Language Therapist



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# Sharlene's Speech

## SHARLENE FERGUSON

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In March 2006 Sharlene Ferguson was invited to give a presentation at a study day in Stirling. The Scottish Head Injury Forum and Scottish Society for Rehabilitation had organised a study day for health professionals around the use of technology in rehabilitation. They wanted someone who uses a communication aid to talk about their experience with technology following a brain injury. Sharlene is a fantastic Dynavox user, so she put together a presentation with some help from speech and language therapists from the Centre for Brain Injury Rehabilitation in Dundee. On the day, Sharlene added a comment to each of her presentation slides using her Dynavox. Her talk was very well received and gave the audience an excellent insight into her experience. Below is a summary of the presentation given by Sharlene.

"I had never done anything like this before and felt a bit nervous on the day, especially when I walked into a room and saw 80 faces looking my way! I started by telling everyone a bit about myself then explained what had happened to me. I don't remember much about my life before my brain injury and this really annoys me. I know that I lived in my own house. I was hit on the head in March 2002. I don't remember it happening. Then I spent eight months in a neurosurgery ward. In October 2002 I moved to a rehabilitation ward where I stayed until I moved to a nursing home in August 2004. I was in hospital for two years and five months but I thought that it was only two years because I don't remember all of it. There were some photos on the slides for people to see where I live now, and an old one of me that I didn't like very much!

After my brain injury I could not speak and found it very difficult to communicate with people. I have made lots of progress since then and have used a few different communication aids. At first I used eye pointing to make choices. Then in September 2002 I used a Go Talk Aid. By October 2002 I was able to use an alphabet chart to spell words and in February 2003 I began using a Dynavox communication aid and now I am a brilliant user. Then in March 2004 I began to be able to make some speech sounds.

The first word I said after that was 'Mum' and this made me feel happy when I said it. By late summer in 2004 I was able to

say a few more words and this year I have been talking more and people are able to understand me. This makes me feel good.

I have a pretty busy schedule these days too. I go to a skill centre in Dundee where I am learning to cook, to use computers and go to a communication group. I do these on different days of the week. My mum visits me in the afternoon some days and on a Wednesday afternoon I go home to my mum's house. At night I like watching TV and listening to music. After such a busy week the weekends seem a bit boring!

Since my brain injury I have used lots of different bits of equipment for communication and mobility. I don't use as many now. I am walking, talking, eating and drinking and taking care of myself now. You can see from my photo how well I am doing!

I still use my communication aid, especially for big words or long sentences. Before I could speak it helped me say what I needed how I felt and what I wanted. I think the voice on it is good and it has helped me practise my own speech. However, I don't want to use it forever. It is a bit big and heavy for me to carry around now that I am walking and I can't take it shopping! My perfect communication aid would be small, like a mobile phone, so that I could take it everywhere with me. It would expand at the touch of a button and would have phone, Internet, and DVD player built in! The voice would sound like my own voice that I hear when I talk in my dreams. Oh, and it would never break down! The most



important thing really would be that I could take it everywhere I go.

In the future, I would like to learn to drive so that I could drive around town to remember where I used to live. I'd like to walk and talk better and eventually go home to live with my mum."

*Sharlene then invited members of the audience to ask questions. People wanted to know a bit more about the communication aid and how she became to be such a brilliant user. Afterwards, Sharlene received many positive comments and congratulations from everyone. \**

*This article was submitted by speech & language therapists, Lesley Smith & Laorag Hunter, Royal Victoria Hospital, Dundee.*

# The Acute Hospital Experience for Adults with Complex Communication Needs

JOAN MURPHY & LOIS CAMERON

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## INTRODUCTION

It is widely recognised that communication disability causes particular problems in health care and that this issue has not yet been adequately addressed (Costello, 2000; Robillard, 1994).

Unsatisfactory communication can result in wrong diagnosis, inappropriate medication and can prevent a person's access to proper assessment and treatment necessary for receiving health care services (Fox & Wilson 1999; Buzio, A., Morgan, J., & Blount, D. (2002).

Moreover, it can cause distress to patients, carers and health care staff (Balandin et al., 2001; Hemsley & Balandin 2004). Good communication is fundamental to quality care.

This paper summarises a study funded by Forth Valley and Ayrshire and Arran Primary Care NHS Trusts. It highlights the communication experience of eight people with Complex Communication Needs<sup>1</sup> (CNN) who were admitted to an acute hospital ward.

## AIMS OF THE STUDY

1. To obtain the views of people with CCN of their stay in an acute hospital.

2. To obtain the views of acute staff about their support for people with CCN when they are admitted to hospital.

3. To obtain the views of carers about the person with CCN's stay in hospital.

4. To explore ways of improving the hospital experience.

## METHODOLOGY

The methodologies used were different for people with CCN and for the carers and staff:

- For the former group individual interviews were conducted with eight people with CCN using Talking Mats, a low tech communication framework. This method was chosen to allow people with communication disability to express their views on a particular topic. All interviews were video recorded and photos taken of the completed mats.

- For the latter group, four focus groups were conducted in two health board areas - two with acute staff and two with carers.

All participants, patients, carers and staff were asked to consider the acute hospital

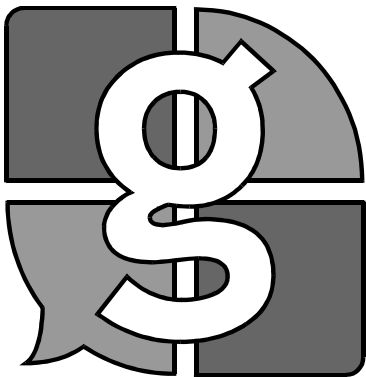
experience under the following main topics:

- Communication supports
- Personal care
- Information and knowledge
- Discharge
- Ways to improve the experience

Figure 1 overleaf shows the issues that were explored in all the interviews. For the people with CCN the issues were converted into symbols using Boardmaker™ software. An 'other' category was available for participants to add any extra issues.

## <sup>1</sup> Complex Communication Needs

"Some people have complex communication needs associated with a wide range of physical, sensory and environmental causes which restrict/limit their ability to participate independently in society. They and their communication partners may benefit from using Alternative or Augmentative Communication (AAC) methods either temporarily or permanently." (Balandin 2002)



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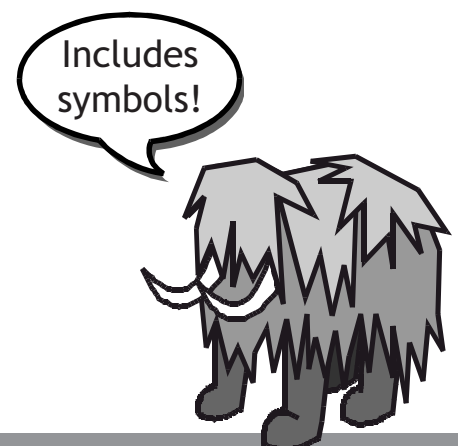


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## RESULTS

## 1. Views of people with CCN

- satisfied with 'being listened to', 'attracting attention', 'understanding what was said to him', 'communicating with doctors, nurses, family and visitors'. However, he was unhappy about communicating 'pain' and 'being able to ask questions'.

*"Some doctors did spoke to my Mum without communicating with me eye to eye."*  
Participant 6

- They all felt that the most important communication resource was carers.
- They said they would use any communication resource that was brought in.
- They recognised that it must be a terrifying ordeal for person with complex



communication needs to be admitted to hospital.

- They felt frustrated about their own lack of knowledge and experience of working with people with CCN.
- They enjoyed being able to banter with patients and were keen to learn how to communicate with them.
- They acknowledged the importance of context and non verbal communication.

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The following comments were representative of the staff who were interviewed:

*"The family are able to tell you the do's and don'ts - you're taking on board their advice."* Staff 5

*"Even an information leaflet coming in with the patient describing his routines, likes and dislikes would be really helpful to us."* Staff 2

### 3. Views of carers

- The main issue for carers was a fear of what would happen if they were not there and able to speak for the person with CCN.
- Three carers took responsibility for the majority of personal care - one stayed 24 hours/day.
- There appeared to be reluctance from staff to recognise the support of *paid* carers even when they knew person's communication system well.
- They all commented that there were no communication resources provided on ward.
- They acknowledged that individual communication aids (high or low tech) were daunting for staff without training.

The following comment illustrates the impact and gravity of having a communication difficulty:

*"If I hadn't been there I'm 100% sure she wouldn't have had the operation - all because of the communication, not because of the physical side of things."* Carer 5

This comment illustrates the frustration experienced by a paid carer who felt her knowledge was ignored:

*"We have a condensed information sheet for emergencies that says how people communicate and their routines. We had that with us but I don't think they even looked at it as all the questions they asked - the information was on the sheet".* Carer 1

There were additional individual issues raised by the carers which are important to note as they all caused distress and some were considered by carers to be life threatening:

- Essential medication was removed from one person who was unable to indicate that it was needed.
- Medical information from a video fluoroscopy report was not communicated to staff members at a change of shift and drinks were left out on the locker of a person who was nil by mouth.
- One person was left lying in her own urine and was unable to tell staff.

- One person was not offered drinks and was unable to say she was thirsty.
- One person had a catheter inserted without explanation.
- Another person was removed to different ward without explanation.

### PRIORITIES FROM FINDINGS

This study has identified some of the problems that occur when people with CCN are admitted to an acute hospital and has made suggestions for improving communication including the following:

- Better preparation before planned admissions could make a hospital stay easier. For example visiting the ward and discussing the person's needs, likes and dislikes, communication methods, awareness of individual communication aids, arrangements for visiting, etc.
- Provision of resources on wards such as simple, easy to use communication aids with relevant vocabulary and/or symbols for a hospital stay.
- Provision of accessible information to patients, not only in written form, but also in symbol format for those who have difficulty reading.
- Genuine cooperation between family and carers, paid and unpaid, and making use of carers' knowledge and skills.
- Increased attention to existing information such as medical notes, reports, communication passports etc.
- Communication training for ward staff.
- Specialist nurses trained in communication who could carry out a link role between people with CCN and ward staff.
- Closer working between ward staff and Speech and Language Therapy Departments.
- Improved discharge procedures and better links with social services.

### CONCLUSION

This study is unique in that it has included the views of people with CCN and provides a model of research to ensure that people with communication difficulties are not excluded from research. It has identified a number of priorities which could improve the situation for all three groups - people with CCN, staff and carers.

Finally, improving communication should result in more effective health care for *all* patients, not only those with communication difficulties. \*

Joan Murphy  
Senior Clinical Research Fellow &  
Senior Specialist Speech and Language Therapist  
Lois Cameron  
Research Speech and Language Therapist

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TIP: Please note that with the current version, to 'find' the Bliss symbols in BoardMaker you have to have Category 28 ticked, and use 'English US' as the search language rather than 'English UK'.

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Sally Millar

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The words 'in' and 'on' are in the category of BRIDGE words representing prepositions. 'In' is stored under BRIDGE and PIG, and 'on' is stored under BRIDGE and CLOWN.

C. struggled to balance the coin 'on' the clown's hat but stuffed them happily 'in' the pink piggy bank. A fun session which really will embed the location of those two words in her memory (I hope!)

Jane MacKenzie  
Communication Support Teacher  
jane.mackenzie@saxonwood.hants.sch.uk

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# Identifying, Recording and Measuring Outcomes — A Pilot Project

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## INTRODUCTION

Regional communication aid centres assess children and adults and often make recommendations concerning the augmentative and alternative communication (AAC) to be used. This is usually a team decision with the user and their carers involved.

Yet how do we know if these recommendations are effective and meet the needs of the user in promoting communication and interaction? Recommendations agreed at the end of an assessment session lasting all morning/day may become diluted as the local team move away from the focused activity into the local setting where there are so many demands on people's time. Are the recommendations targeting the real issues for that user, and hence addressing the initial pitfalls identified as the reason for the referral in the first place? Is everyone involved in the user's immediate environment, including the user himself/herself singing from the same hymn sheet, or are there different hidden agendas?

## OUTCOME MEASUREMENT

As a profession, speech and language therapists (SLTs) are being urged to measure the effectiveness of their input.

*"Outcome measurement should be consumer driven, flexible & enduring.* The result of AAC interventions should be an improved quality of life for people who use AAC. The results of outcomes measurement also should be used to improve cost-effectiveness & to improve the quality of equipment & services." (Blackstone & Pressman, 1995) Hence, the outcomes to be determined need to be individualised and pertinent to the user. They should take into account

the support and expectations of the immediate environment, but particularly the functionality of the recommended system for the individual. It is the latter that will prove to be the driving force of successful implementation.

Granlund & Blackstone (1999) continue by describing the domains of outcome measurement as follows:

1. *Functional status* – measurement of functional status & consumer satisfaction, accounts for most of focus on AAC outcomes.
2. *Clinical status* – outcome measurement of clinical status/results reflects changes in an individual's level of impairment
3. *Quality of Life* – measures changes in the ability to participate in social, educational, community, vocational & family activities.
4. *Satisfaction* – with AAC services & devices.
5. *Cost* – associated with AAC intervention, cost benefit, cost utility & cost effectiveness.

*The functional status measurement tools* focus on mobility, activities of daily living, and communication. Each particular domain for outcome measurement consists of three levels: individual, programme and system. It is the individual level that we need to consider for the purposes of this project.

An outcome-driven model of service delivery is supported by the following:

1. Contemporary models of decision-making support an *outcome-driven system*. Such a system involves the development of intervention strategies to promote the attainment of the desired outcome and maximise the skills of the individual (Cook & Hussey, 2002).
2. Providers making recommendations for AT based on what the child/client, family & team would like to accomplish within a set amount of time. To accomplish out-

comes, teams must design service plans that address the (a) barriers preventing, and (b) opportunities promoting, the achievement of the desired outcomes (Long et al, 2003).

3. Outcome measures should concentrate on what needs to be measured rather than what can be measured easily (Enderby & John, 1999).

## THE TREATMENT PLAN

Having established the need for an outcome-driven model, we then looked around for existing models.

*The East Kent Outcome Scheme (EKOS)* (Johnson, M. 1997) had been adopted by several therapy departments as a means of evaluating input on an individual basis.

The EKOS form appeared to replicate what we wanted to look at – overall aim of the intervention, objectives with baseline measurement and the outcomes. It was important that the completion of these forms for individual users did not generate extra work, but supported existing requirements. Hence, for those with a paediatric caseload, the form could be used to set and record relevant communication IEP targets. The term 'medium term aim' was replaced by 'long term aim', to refer to the annual target to be set at the time of the annual review. The objectives would then refer to the medium or short-term IEP targets. It is appreciated that terminology does vary between differing local education authorities.

The forms also included the Health Benefits (based on the WHO Guidelines). These benefits refer to the gain for the user, and in some cases may be relevant in describing outcomes of speech and language therapy input within the NHS. The health benefits identified as applicable to AAC are:

## Health Benefits – Long-term Aims (based on WHO guidelines)

### Restoring

To restore the functional use of language after loss of skills.  
Teaching a client to use Alternative and Augmentative Communication (AAC) devices or strategies.

### Facilitating

To facilitate delayed or disordered development and exploit an individual's potential for functional communication.  
Providing an AAC device to assist teaching and learning patterns for clients with cerebral palsy/learning difficulties and staff.

### Preserving

To prevent or slow down loss of normal functions.  
Using an AAC device or strategy with individuals who have degenerative neurological conditions.

### Modifying

To make social, physical or behavioural modifications to compensate for a permanent or long-term absence or reduction in normal functioning, thus reducing the handicapping effects of the disability or maintaining the status quo.  
Modifying linguistic input for individuals with Learning difficulties who have poor concentration and attention. Increasing success of individual's verbal interaction by providing interaction and cueing strategies.

### Avoiding

To reduce the risk of individual's harming themselves or causing harm to others.  
Providing AAC strategies and devices for use in reducing challenging behaviour.

### Informing

To provide a specialist opinion or assessment that will inform the decisions of other professionals about the individual.  
Advising a speech and language therapist or other professional on the level of skills necessary to achieve better communication via AAC.

### Supporting

Supporting clients and their families through natural processes resulting in pain, grief, anger or guilt.  
Helping clients come to terms with their disability.

## Areas for Objectives based on Janice Light's Model of Communicative Competence

### Operational – Operating the communication system

#### Physical

- ## Ability to access device: pointing, switching, eye pointing, head pointing, turning pages, etc.
- ## Ability to operate device features, e.g. on/off buttons, volume, etc.
- ## Care of aid – cleaning and decontamination; preventing damage through dropping, throwing, etc.; charging and battery care.
- ## Mounting / storage of device.

#### Cognitive

- ## Ability to retrieve stored messages.
- ## Knowledge of device layout eg keyboard access, page layout, how device uses categories, etc.
- ## Ability to use any coding system of device, eg memory encoding on Lightwriters.
- ## Ability to operate scan pattern correctly.
- ## Font / symbol size.
- ## Number of items on a page.
- ## Sensory skills necessary to use device, e.g. hearing, vision, touch, use of colour coding and colour contrasts. Use of auditory scanning.

### Linguistic – Language skills needed to communicate

- ## Literacy skills.
- ## Use of predictive features.
- ## Knowledge of shared language within family and community eg regional dialect variations, family names for items.
- ## Language skills e.g. symbol recognition, syntax, semantics.
- ## Cognitive skills e.g. memory, choice making, sequencing skills.
- ## Knowledge of vocabulary organisation and any categorisation used.
- ## Developing intentional communication.

### Social

#### Sociolinguistic – Pragmatic skills

- ## Knowledge of discourse strategies eg turn taking, initiating, maintaining and repairing a conversation, etc.
- ## Ability to use device to form relationships or maintain social closeness.
- ## Ability to use device to perform specific communication acts in real situations – what to talk about, when, how, where and with whom to do it.
- ## Appropriate use of device eg the user knowing not to use E-Tran with small, non-literate child.
- ## Developing effective use of device.

#### Sociorelational – Knowledge of how people interact

- ## Develop positive self-image / self confidence.
- ## Show an interest in others.
- ## Develop active communication ie desire to communicate, responsive to communication partner, putting partners at ease, etc.
- ## Instructing others about how to communicate with user.
- ## Promoting acceptance of device within users environments.
- ## Increase awareness of benefits of using AAC for an individual.

### Strategic – Compensating for device limitations or users' skill level

- ## Providing instructions about how to use device.
- ## Developing strategies to use if language not in device eg message asking listener to guess, message saying vocabulary not there, message asking partner to ask yes/no questions, etc.
- ## Use of telegraphic speech, shared codes, abbreviations, etc to compensate for slow speed of device.
- ## Strategies to get over temporary lack of language in device ie while user is learning system.
- ## Strategies to get over long term or permanent lack of language.
- ## Strategies to use in new or unexpected situations.
- ## Ability to compensate for differing skills and knowledge of communication partners.
- ## Use of low tech alternative if high tech device not available.
- ## Knowledge of adapting methods of communication to suit different environments e.g. pub, clubs, swimming pool, etc.

Figure 1 Descriptors of Health Benefits and Communicative Competences (Light 1999)

restoring, facilitating, preserving, modifying, avoiding, informing and supporting. Brief descriptions of each benefit are given on the back of the treatment plans (Figure 1).

The EKOS form was further adapted to include Janice Light's competences in relation to AAC (Figure 2): (a) operational, (b) linguistic, (c) social, and (d) strategic. A description of the competencies is included on the back of the form (Figure 1). This was to ensure that those setting and agreeing the objectives were made aware of the different components involved in using AAC, and hence the need for due regard of each area.

### THE PILOT STAGE

Having devised the form, which subsequently will be referred to as the *Treatment Plan*, we then needed to pilot it in order to make initial and preliminary evaluation of its use. We used the treatment plan as part of our assessment sessions; the objectives were agreed with the carers and the local team, as well as the user, if appropriate. Involvement at this stage was felt to promote joint responsibility and commitment to the achievement of the objectives. The Treatment Plan was distributed with the report within two weeks of the assessment. The initial pilot involved 12 assessments, 6 adults and 6 children. At that stage, amendments were made to the original treatment plans: the final version is the one included in this article.

There has been very good initial feedback, based on anecdotal evidence, of the use of the treatment plans. To ascertain the usefulness of the agreed objectives, questionnaires (Figure 3) have been sent to all referrers of those users within the pilot project. The responses are yet to be collated.

### SO WHERE DO WE GO FROM HERE?

1. Evaluate the use of the Treatment Plans using the questionnaires.
  2. Modify and review the content and use of the Treatment Plans in response to the evaluation.
  3. Develop some standard aims (overall and long term) and objectives for AAC.
  4. Include the above in an outcome package.
- These Treatment Plans are merely a method of measuring the difference between the baseline assessment and the outcome.

It is anticipated that the objectives will refer to improving the user's interaction and/or communication skills, and not just merely the use of a recommended communication aid. The outcomes will therefore provide the evidence for AAC intervention in promoting communication skills. \*

Judith de Ste Croix, Speech & Language Therapist  
Sally Chan, Speech & Language Therapist

NORTH BRISTOL NHS TRUST COMMUNICATION AID CENTRES TREATMENT PLAN						
HEALTH BENEFIT:					DATE:	
Name:	Date of Birth:	Age:	Location: CAC Frenchay			
Overall Aim: To establish whether Alternative and Augmentative Communication will enable client to achieve their communication potential.						
Long term aim:						
Baseline (initial observation/assessment)	Objective(s)	Competence	Intervention Who/Where?	Resources	✓/x	Actual Outcome
Evaluation date:		Comments:				
Speech and Language Therapist: Based on East Kent Outcome System				Signed:		

Figure 2 Adaptation of the EKOS form for the two assessment centres

Communication Aid Centre Frenchay Hospital Bristol		Paediatric Communication Aids Service Clarendon School, Henricus Park, Westbury-on-Trym, Bristol BS9 4JB Tel: (0117) 954 7527 Fax: (0117) 942 0942	
<b>QUESTIONNAIRE AAC TREATMENT PLAN</b>			
We are evaluating the use of treatment plans as a way of measuring the effectiveness of the assessment process for AAC. At your last appointment you were given a copy of the treatment plan relating to your client. We would appreciate it if you could answer the following questions. This will help us to evaluate the form as part of our assessment procedure.			
1. Was the treatment plan helpful	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Please give reasons for your answer			
2. Were all relevant people associated with the client aware of the objectives to be worked on?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If not, why not?			
3. Were the objectives appropriate?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
4. Were the objectives achievable?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
5. Were there any additional people who should have received a copy of the treatment plan?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If you answered yes, who were the people?			
6. Would you use the same format for devising treatment plans in the future?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If your client is at school please answer this additional question			
7. Were you able to use these objectives when setting IEP targets?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	
If not, please give reasons why not.			
Thank you for taking the time to complete this questionnaire Sally Chan Clinical Manager Paediatric Communication Aids Service Judith de Ste Croix Manager Communication Aid Centre			

Figure 3 Questionnaire: Treatment Plan

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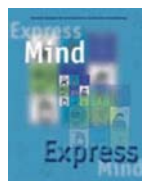
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## TRUSTEES' NEWS

**I am writing this** just before I head off on holiday – and I must admit it is a lovely thought! I hope that by the time you read this Journal you will have had a chance to relax a bit and enjoy the summer.

### CAP & FUNDING ISSUES

This has been a year of many changes – not least the ending of CAP. For many of you, I know, this brings a real feeling of uncertainty and anxiety.

Those of you who have had a communication aid funded through CAP will be seriously wondering what will happen when it needs to be repaired or replaced, those of you with children/working with children about to become eligible for CAP funding will be cursing – and those of you who developed business plans on the basis of CAP funding will also be wondering what the future holds for you. Although the CAP funding was only for *children* living in *England*, and Communication Matters is a UK-wide organisation concerned with the needs of people of *all* ages who may benefit from AAC approaches, this is obviously a real concern for all of us.

The end of CAP has reminded us that funding for communication aids, funding for assessment and support, for therapy and skilled teaching are very vulnerable to political pressures and whims – that there is no real stability and security in this area. This is the same for all of us, no matter where we live or what our involvement with AAC is.

Communication Matters is not primarily a lobbying organisation, but we do support and contribute to lobbying activities when they are in accordance with and/or help us to deliver our mission statement and primary aims. Communication Matters members have been – and continue to be – very active in raising awareness about the need for proper funding for AAC equipment and services, a funding procedure that is not time limited, age restricted, diagnosis specific or postcode dependent. Hopefully, by the time we meet in Leicester there will be some good news, or at least something tangible to be working on.

### CM2006 NATIONAL SYMPOSIUM

The Symposium in September is getting really close, all the papers have been sifted through and a really full programme (including the exhibition and social events!) has been developed. Hopefully there will be something of interest to everyone who attends. If this is your first year of coming to the conference I hope you enjoy it, have some fun and make new friends in the AAC world. Also don't forget about the Study Day to be held by Tracy Kovach on 27 September. This promises to be a really good day with lots of information and ideas about supporting and enabling children who use AAC.

## TRUSTEES' NEWS

### GOVERNANCE REVIEW

Communication Matters is growing up – the organisation will have been around for 21 years this November. Just as for a person, habits and behaviours that were acceptable for a 4 year old or a 10 year old become outdated, inappropriate and NOT acceptable for a 21 year old – so for an organisation like Communication Matters it is really time that we take stock and think about what the organisation is, what we would like it to be in, say, 10 years time.

As 'guardians' of the organisation, the Trustees are looking at the running of the organisation, what aspects of our original constitution are still valid and which aspects need to be changed to meet our current and future needs. We have just started out on a challenging and exciting 'governance review' which will hopefully be complete by September 2007 – when we will be asking the membership of Communication Matters (that means YOU!) for your approval of a new governing document ... our Constitution.

The Trustees want to make sure that our ideas reflect what, you, the membership feels, we want to find out what you feel should be the priorities for Communication Matters, we want to get your feedback on our proposals before they get to the final stages of writing.

This is YOUR opportunity to take part in an exciting period of growth for the organisation. Would you like to join a Membership Guidance Group? There will be opportunities to join a Listserve to comment on the proposed governing documents as they progress. If this group is oversubscribed then we will be asking for representatives of each stakeholder group.

There is to be a new section on our website (password protected for the membership) which includes the terms of reference for the governance group and the membership guidance group, the brief to our lawyers, our communications plan and our, growing, list of best practice documents, some of which in time will be operational procedures.

This seems like a lot of information but we do want everyone to be fully aware of our progress and the work that is needed to make this happen. If you are unable to come to Leicester but want to input to the process please email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

### FINALLY...

Have a lovely summer; think about joining us in Leicester in September ... and what about volunteering for some governance fun and games? I promise that we will try to include some laughter as well as all the serious stuff.

**Janet Scott**, Chair of Communication Matters  
Email: [sctci@sgh.scot.nhs.uk](mailto:sctci@sgh.scot.nhs.uk) Tel: 0141 201 2619



## eCAT NEWS

### BHTA: eCAT GROUP FORMED

It is now official: the new 'section' of BHTA (British Healthcare Trade Association) called eCAT (electronic Communication and Assistive Technology) started on 1 April 2006, and has met twice since.

There were initially 10 members (all the really active members of the old CASC), being DynaVox, Liberator, Madhouse Software, Mounts and More (Techcess), Possum, PRI, QED, Sensory Software, Toby Churchill and Widgeit. An eleventh (Richard Hill and Associates) has since joined.

We would still like to see the remaining ex members of CASC join BHTA, but there seems to be little interest at present.

One of the first things we had to do was to elect the 'officers'. Unlike CASC, which just had a Chairperson, BHTA sections have a Chairperson, Vice Chairperson and 'Alternate' – an apt yet strange title for someone who is, in effect, a Deputy Vice Chairperson! Like CASC the BHTA Chair is elected for a three year term, but there are differences in that there is a maximum of 2 terms in office (6 years) and the Chair does have to be formally confirmed annually, which gives them chance to step down mid term, if required, or the members a chance not to confirm the position, if there is an issue with the individual.

The elected officers are - Chairperson: David Morgan (DynaVox); Vice Chairperson: David Weatherburn (PRI); Alternate: Ian Bullock (Mounts and More).

I have stated that I do not intend to stand for two terms as Chair of the BHTA section, as with the 3 years I have just completed as CASC Chairman, one term in the 'hot seat' will be a total of six years and I agree that is enough for anyone! But I am pleased to be continuing, at least for the time being, so I can ensure a smooth transition from CASC to BHTA.

### COMMUNICATION AID FUNDING ACTION GROUP

So, onto what we've been discussing and doing! Main discussion point has obviously surrounded the funding changes (e.g. post CAP) and what the group can do about it. Out of this has really arisen a new group of suppliers, professionals, carers and users, called CAFAG (Communication Aid Funding Action Group).

CAFAG started as myself plus 3 other representatives from eCAT, Anna Rourke and Caroline Gray from the Ace Centres and Sylvia Taylor-Goh representing the need for adult funding, meeting in Oxford to decide what we could do about the funding issue. We agreed that the major objectives of us, as a group was:

- To push for LEA funding.
- To pressurise Government to DO something in respect of funding.
- To create public awareness of the situation (this may influence Government).
- To consider what legal challenge, if any, would be appropriate or possible.

The group has been expanded to include people who use AAC devices, carers and representatives from other

## eCAT NEWS

organisations to really review what we can do and how to go about doing it. After only two meetings there are a lot of things happening, including:

- Two or three members are working on a questionnaire to ascertain the unmet need.
- The ACE Centres are trying to identify the current status of the 182 children left without equipment after the ending of CAP.
- Sharon Lloyd (DoH) has joined the group to help support us.
- SCOPE (whose lobbying campaign has ground to a bit of a halt due to lack of funds) have added their weight to our group.
- I have set up initial discussions with a lawyer who specialises in legal challenges for people with disabilities to obtain their rights, to understand our legal opportunities.

Aside from CAFAG, other BHTA items include:

- Statistics – the BHTA has a methodology for accumulating trade statistics and we have agreed to participate by each company providing three different stats: Quantity of speech aids sold with a value under £750, ditto with a value over £750 and annual turnover for speech aids and related accessories. This information will be for the last 3 trading years and for UK only. Once all the data is in, BHTA will release totals only. This should be a valuable piece of information especially relating to funding issues and how the market changes.
- Market need – eCAT have been in discussion with Janice Murray at Manchester Metropolitan University to look at the possibility of students carrying out research on behalf of the industry with regard to how many people in the UK need speech aids but cannot get them, or have speech aids. The discussion is still in its infancy and the project isn't likely to start before the autumn at the earliest, but could provide yet more valuable information if it goes ahead.
- VAT on extended warranties – although this was reported as a final decision by Customs and Excise a few months ago, BHTA have agreed to follow it through using their government lobbyists to try and change the ridiculous rule that states repairs to a product designed for someone who is disabled can be VAT exempt (when the person themselves or a registered charity is paying) but extended warranty on the same product cannot be.
- The group has discussed a leaflet, handed out in Belfast (at the RCSLT event) that stated, "*There are high-tech solutions in the form of electronic talkers, but these are not appropriate for the majority and in any case are of little or no assistance with comprehension...*" which we felt was inflammatory – so the BHTA have agreed to write to the authors and ask for an immediate withdrawal or rewrite or both!

So, there are lots of things going on. Hopefully, as time goes by, we will see more and more how the move to BHTA is benefiting the industry.

**Dave Morgan**, Chair of eCAT  
Email: david.morgan@dynavox.co.uk



## JOINING COMMUNICATION MATTERS & ISAAC

**Communication Matters** is the UK Chapter of ISAAC (International Society for Augmentative and Alternative Communication), so members of Communication Matters are automatically members of ISAAC.

### What are the benefits of Membership?

Members of Communication Matters receive this Journal three times a year, reduced delegate rate at the Annual CM National Symposium, and all the benefits of ISAAC membership, including ISAAC publications at substantially reduced rates (AAC Journal, ISAAC-Israel Newsletter, AGOSCI News), and special delegate rates for the Biennial ISAAC International Conference. You also receive quarterly issues of the ISAAC Bulletin (via download) and, if you join early in the year, the ISAAC Membership Directory.

### What is ISAAC?

Formed in 1983, ISAAC is a multidisciplinary organization devoted to advancing the field of augmentative and alternative communication. ISAAC has over 3,000 members in more than 50 countries, including 15 national chapters in Australia, Canada, Denmark, Finland, French speaking countries, German speaking countries, Ireland, Israel, Italy, Netherlands-Flanders, Norway, Spain, Sweden, United Kingdom and the USA.

The Mission of ISAAC is to promote the best possible communication for people with complex communication needs. The vision of ISAAC is that AAC will be recognized, valued and used throughout the world.

### How do I become a Member?

If you live in the UK, you can become a member of Communication Matters (and therefore of ISAAC) by contacting:

Communication Matters  
c/o The ACE Centre  
92 Windmill Road  
Oxford OX3 7DR  
Tel & Fax: 0845 456 8211  
admin@communicationmatters.org.uk  
www.communicationmatters.org.uk

If you are outside the UK, you can become a member of ISAAC or subscribe to this Journal by contacting:

ISAAC  
49 The Donway West, Suite 308  
Toronto, Ontario M3C 3M9  
Canada  
Tel: +1 416 385 0351  
info@isaac-online.org  
www.isaac-online.org

## NEWS

## UPDATE

### 'USING WORDS, PHOTOS AND SYMBOLS' BOOKLET

This useful, practical booklet was designed to give families tips on making useful communication tools for their children. The downloadable booklet and a series of templates and training handbooks are available completely FREE from The Clear Communication People. Visit: [www.communicationpeople.co.uk](http://www.communicationpeople.co.uk)

### GAMEON PROJECT SCOOPS AWARD

A pioneering new website from the ACE Centre in Oxford has scooped a top award at the annual *eWell-Being* Awards held in London this March. *GameOn* is all about enabling young people with disabilities to play computer games and leisure software in the same way that their able-bodied friends do. When it goes live later this year, the website will contain an extensive database of accessible PC computer games. Visit: [www.ace-centre.org.uk](http://www.ace-centre.org.uk)

### CURRICULUM SYMBOLS FOR INCLUSION

Widgit Software is offering products to support struggling learners, pupils with SEN and children new to English, to improve their literacy skills, grow in confidence and develop a love of reading. As well as providing children who use AAC with the resources needed to allow them to be actively involved in the curriculum. The growing bank of curriculum products and resources and recent additions include a FREE Summer Pack, low-cost Widgit Rebus Symbol Update and FREE inclusion booklet. Visit: [www.widgit.com](http://www.widgit.com)

### WEBSITE OFFERS OATS

A consortium headed by The ACE Centre has launched a website that will be a world's first in meeting the technology needs of the disabled. OATS (Open Source Assistive Technology Software) will be the first free online 'one-stop shop' of open source software that enables those with disabilities to access computers. Visit: [www.oatsoft.org](http://www.oatsoft.org)

### 'PARENT POINT' & 'TALKING LINKS'

'Parent Point' and 'Talking Links' are two new developments on the *Talking Point* web site which has been developed by I CAN. Parent Point has several resources including an interactive message board, downloadable songs and nursery rhymes, factsheets and information from other charities for families of children with a communication disability. Talking Links is a unique database that enables parents to search by postcode and find vital information about local speech and language, education and voluntary sector services available to support their child's communication disability. Visit: [www.talkingpoint.org.uk](http://www.talkingpoint.org.uk)

### BOB THE BUILDER TO RAISE MONEY

Inclusive Technology and Bob the Builder™ are to team up to help raise at least £50,000 for The New Children's Hospital Appeal. The Appeal aims to raise £20 million to ensure that, when it opens in 2009, Manchester and the North West's new children's hospital will be the very best it can be. Visit: [www.inclusive.co.uk](http://www.inclusive.co.uk)



## DIARY DATES

25-26 August 2006 University of Dundee  
**Language, Play and Computers**

FREE standup-project@inf.ed.ac.uk Web: groups.inf.ed.ac.uk/standup

14 September 2006 Oxford  
**Making Software Inclusive & Publications Accessible**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

21 September 2006 Oxford  
**Vocabulary Selection and Implementation**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

21, 22, 27 & 29 Sept Rotherham, Peterborough, Newcastle, Alton  
**AAC Results You can Count On!**  
Contact PRI: 01733 374992 www.prentkeromich.com

24-26 September 2006 University of Leicester  
**CM2006 National Symposium**  
Tel: 0845 456 8211 www.communicationmatters.org.uk

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27 September 2006 University of Leicester  
**CM Study Day - Continuum of Learning**  
Tel: 0845 456 8211 www.communicationmatters.org.uk

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4 October 2006 Oxford  
**Special Access to Windows (SAW5) - Designers**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

10 October 2006 Oldham  
**BoardMaker**  
Contact ACE Centre North: 01457 829444 www.ace-centre.org.uk

11 October 2006 Oxford  
**Moving on from PECS**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

19 October 2006 Oxford  
**AccessMaths 4**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

19 October 2006 Oldham  
**Prepare to Play**  
Contact ACE Centre North: 01457 829444 www.ace-centre.org.uk

30 October 2006 London  
**Play & Humour: 'A Funny Thing Happened...'**  
Tel: 0845 456 8211 www.communicationmatters.org.uk

COMMUNICATION  
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## DIARY DATES

2 November 2006 Oxford  
**An Introduction to BoardMaker 5**

Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

7 November 2006 University of Stirling  
**ACIP: Scotland 16th Annual Study Day**  
Tel: 0131 651 6068 www.acipscotland.org.uk

7 November 2006 Oldham  
**Clicker 5**  
Contact ACE Centre North: 01457 829444 www.ace-centre.org.uk

8 November 2006 Newcastle upon Tyne  
**CM Road Show at The CastleGate, Turbine Hall**  
FREE Tel: 0845 456 8211 www.communicationmatters.org.uk

CM  
ROAD SHOW

9 November 2006 Oxford  
**Alternative Pointer Control and Keyboard Access**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

9 November 2006 Edinburgh  
**ICT in SQA Assessments & Exams**  
CALL Centre: 0131 651 6235 www.callcentrescotland.org.uk

16 & 17 November 2006 Worcester  
**Listening to Children (16<sup>th</sup>) / Making it Happen (17<sup>th</sup>)**  
Contact Jane Farrell: 01905 337330 jfarrell@worcestershire.gov.uk

21 November 2006 Sheffield  
**CM Road Show at Woolley Wood School**  
FREE Tel: 0845 456 8211 www.communicationmatters.org.uk

CM  
ROAD SHOW

22 November 2006 Scarborough  
**CM Road Show at the Scarborough Spa Complex**  
FREE Tel: 0845 456 8211 www.communicationmatters.org.uk

CM  
ROAD SHOW

27-28 November 2006 Edgbaston, Birmingham  
**RAATE 2006 Conference**  
Tel: 01904 610821 www.raate.org.uk

30 November 2006 Oxford  
**Assessment for Communication and Learning**  
Contact ACE Centre: 01865 759800 www.ace-centre.org.uk

7 December 2006 Edinburgh  
**Interactive Whiteboards**  
CALL Centre: 0131 651 6235 www.callcentrescotland.org.uk

## INTERESTED IN HOSTING A COMMUNICATION MATTERS ROAD SHOW IN YOUR AREA?

**The Communication Matters Road Shows** are great opportunities to learn all about the latest communication aids and software from some of the UK's leading AAC suppliers. About 10-15 CM Road Shows are held every year at various locations in the UK and often in Ireland as well - and they are free! At each Road Show, there are usually 10 or so companies presenting workshops.

The workshops are given in parallel and are repeated six times during the day - participants choose which of the six companies they wish to hear during the day. Registration is

9.00-9.30am; the day begins at 9.30am with a short introduction from each company, followed by three sessions in the morning and three in the afternoon, and finishing at 3pm. Lunch and refreshments are sponsored by the suppliers.

We are always looking for new venues to hold CM Road Shows. If you are interested in hosting one in your area or would like to talk over possibilities, please contact Patrick Poon at Communication Matters who will be delighted to hear from you and provide you with further information: Tel. **0845 456 8211** [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

# Blissymbols and Manual Signing — A Combined Approach

**ALISON MACDONALD**

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## Introduction by Sally Millar, CM Journal Editor

This article was first presented at the International Association of Logopaedics and Phoniatrics Congress in Edinburgh, August 1983 and was first published in *Communicating Together* Vol 2 No 4, December 1984, and is reprinted here with permission.

A couple of things have stimulated reprinting of this article. Firstly, it is just a really nice little study which exemplifies – very appropriately in today's 'evidence based practice' climate – how simple but effective it can be for AAC practitioners 'on the ground' to carry out valuable research. Secondly, in researching the 'History of Communication Matters' for the 21 years Anniversary speech (Janet Scott, Chair of CM) at the CM2006 Symposium it was striking how much was going on in the AAC world long before 1985 – and this article is a good example! The Bliss symbol related findings here are likely to be valid for other symbol systems in use today.

Thirdly, for me, this article underlines something that is today still sometimes forgotten – the importance of users having open-ended access to more powerful systems. Makaton users may need access to the full BSL vocabulary, and symbol users may need access to a system that allows for innovative and unique combinations of symbol meanings, and grammatical strategies, as Bliss does, rather than a closed pre-printed picture set. Lastly, as the short column on page

11 informs, Bliss could be set to make a comeback, now that the symbols can be easily displayed and printed out in BoardMaker software that so many of us already own and use. Also, a new Bliss symbol library will soon be available for use with Widgit software.

Younger AAC practitioners may not realise what a powerful system Bliss is. BCI still exists ([www.blissymbolics.org](http://www.blissymbolics.org)), as does Blissymbols UK ([www.blissymbols.co.uk](http://www.blissymbols.co.uk)) and indeed sister Bliss organisations all over the world. Bliss is particularly strong in Scandinavia, Eastern & Central Europe and in developing countries where resources are limited and an AAC system that can be easily hand-drawn (though that is not Bliss's only advantage!) is of great value. ISAAC's website pages are summarised in Bliss: [www.isaac-online.org](http://www.isaac-online.org) Blissymbols UK will provide information and/or training Bliss, tailored to your particular requirements. For further information contact: Gillian Hazell [gillian@gmhazell.fsnet.co.uk](mailto:gillian@gmhazell.fsnet.co.uk) or Sally Millar [sally.millar@ed.ac.uk](mailto:sally.millar@ed.ac.uk)

At the time of the original presentation and article, Alison MacDonald was Chief Speech Therapist with the Scottish Council for Spastics (now Capability Scotland) in Edinburgh, Scotland (my boss - and a great boss, too!). She was also a Senior Presenter for Blissymbolics Communication International (BCI). Alison currently works part-time as a lecturer (in CP and AAC) at Queen Margaret University College, Edinburgh.

**Throughout the 1970s**, there has been increasing awareness of the benefits of the various systems of non-vocal communication. Such systems are now being applied with more confidence and consequently more flexibility, so that the combined use of signs, symbols, words or pictures is becoming more widespread. Many clients now have relatively equal facility in two or more different modes of communication.

We at the Edinburgh-based Speech Therapy Team of the Scottish Council for Spastics (now Capability Scotland) have been running Blissymbol programs for the last nine years. Since all our non-vocal communicators are physically disabled, Bliss seems to be the most useful method of communication for the majority. Where signing has been introduced, it is usually for one of the following reasons:

- It is more immediate for the user with severe learning disability.
- The person with cerebral palsy and additional deafness requires a quick and spontaneous input medium, regardless of his or her own ability to execute signs.

- Most non-speaking people are bound by the professional's choice of vocabulary and method of communication, regardless of their own preferences. A multi-media approach seems to be one way of offering the disabled person more freedom of choice.

In most cases, manual signing has been taught initially through the Makaton Vocabulary® stages, progressing to a wider selection of vocabulary from British Sign Language where appropriate.

In many cases the system of preference is governed by factors such as hand function, mobility or preference of peers and family. Out of our eight dual system users, only one can truly be described as using both systems with relatively equal fluency and equal preference. He has a sign vocabulary of well over 350 signs and uses a 400 vocabulary Blissymbol board. He is a 12-year old with athetoid cerebral palsy, but mobile and with fairly good manual dexterity. He has severe sensori-neural deafness with possible congenital auditory imperception and still has no understanding of the spoken word. His comprehension of language

therefore is purely through signing or Blissymbols, both of which he started learning at the age of seven years. He now uses both systems spontaneously, but with disordered syntax, and will switch from one to the other to accommodate the receiver, frequently backing one system up with the other to ensure that his meaning is conveyed.

In order to analyse samples of conversation a communication profile of this boy was compiled. Conversation samples were recorded under the following headings: Repetition, Social Responses, Answering Questions (same medium/other medium), Naming, Picture Description, Requesting, Disagreement, Questioning (implied/question words), Spontaneous Comments, Joking. The findings are an analysis of 13 of these samples of communicative interaction, spread over a period of 15 months, and in circumstances where the child had equal opportunity to select either system of communication. He knew that the receiver could interpret both his communication modes and had no declared preference. His Blissymbol board was always present if required. The profiles were then analysed to see if the following three questions could be answered.

#### IS ONE TYPE OF UTTERANCE PRODUCED MORE IN ONE SYSTEM THAN THE OTHER?

The results in the Table 1 show a remarkably balanced spread between the two systems. Social Responses are infrequent and entirely restricted to signing (4:0). Requests are usually signed (20:4). Question words are not used in either system, despite considerable teaching input. Spontaneous Comments and Reporting are almost twice as frequent in Bliss (55:30).

One might conjecture that signing is selected for requests so that they can be signalled quickly while the receiver's attention is held. However, the more complex information conveyed in spontaneous reporting may be easier in Blissymbols where the vocabulary is recognized rather than recalled.

The profile also highlighted the number of times that the user alternated between two mediums within one utterance. These seemed to sub-divide into confirming (repeating an item in the alternative mode) and mixed medium (where units of an utterance alternated between the two systems). Further analysis showed that there was a considerably higher incidence of moving from sign into Bliss than vice versa (16:9).

#### WHAT PARTS OF SPEECH ARE USED IN THE TWO SYSTEMS, AND ARE THE USAGES PARALLEL?

One problem here is that a sign or symbol may not always be used according to the classification under which it was taught. For example, the symbol 'snow' from the noun portion of the Bliss board was used in one instance to mean 'cold'. As might be expected the largest group in both systems were nouns, followed by adjectives and then verbs (Table 2). The more permanent visual system, Blissymbols, was preferred for the more static visual concepts, nouns (146:58) and adjectives (78:39), while the dynamic system, signing, was preferred for verbs (20:6).

This seems to give useful pointers for teaching purposes. Some of the more pictorial Blissymbol nouns facilitate the teaching of manually signed nouns, while signed verbs facilitate the teaching of Bliss action symbols.

#### HOW MANY SIGNS OR SYMBOLS ARE BEING STRUNG TOGETHER?

Here again there is a clear difference. Manual signing was preferred for short spontaneous remarks and Blissymbols for longer more complex utterances (Figure 1).

There were 81 single sign utterances and the maximum number of signs strung together was four. In Bliss, there was a much larger number of multiple symbol utterances, the longest utter-

	Manual Signing	Bliss
Repetition	8	4
Social Responses	4	-
Answering Questions – same medium – other medium	14 1	7 14
Naming	2	3
Picture Description	10	12
Requesting	20	4
Disagreement	1	-
Questioning – implied – question words	2 -	1 -
Spontaneous Comments/Reporting	30	55
Joking/Teasing	3	1
Total Number of Utterances	95	101

Table 1 Number of utterances of each type

	Sign	Bliss
Nouns	58	146
Adjectives	39	78
Verbs	20	6
Pronouns	4	2
Prepositions	2	5
Question Words	-	-
Connectives	-	26 ('and')
Other	8	5

Table 2 Vocabulary categories

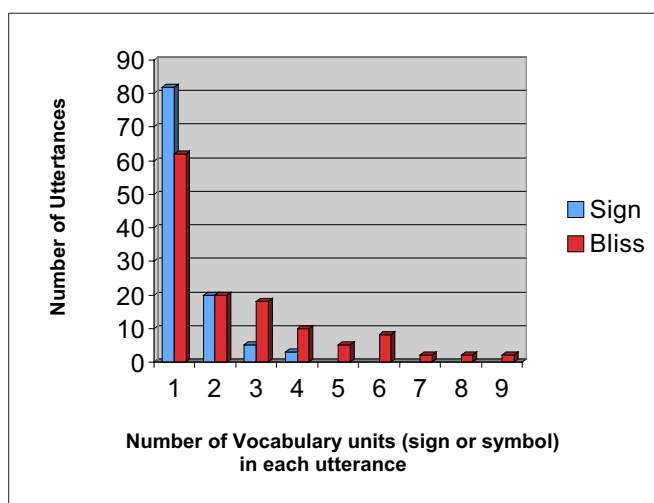


Figure 1 Length of utterances

ance containing nine symbols. The nature of the communication mode seems to be important here. The permanently displayed vocabulary on the Blissymbol board made it easier to compose longer word strings. Another factor to be considered is that it is often possible to convey two or more words with one sign.

It is not possible to make direct comparison between aspects of the two systems and it is certainly not wise to draw conclusions from the findings of one particular case. The profiles do however serve to highlight certain points that have been useful in the teaching of a combined sign and symbol program. \*

Alison MacDonald, Speech & Language Therapist

# Observation of Learning and Learning Style as an Assessment Technique in Augmentative and Alternative Communication

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## A NEW FRAMEWORK FOR AAC ASSESSMENT

It is difficult to assess the communication skills and needs of children and adults with significant speech and multiple impairments. New procedures are especially critical for learners with physical and communication limitations. Traditional methods often underestimate growth and development potential for people who could benefit from augmentative communication. Many current approaches are not helpful in developing intervention strategies. Documenting progress is often difficult in current standardized tests because of high basal criteria. Also, adaptations for physical disabilities invalidate standardization.

The criticisms of formal testing for learners, particularly those with physical and communication limitations, is well documented in the literature and fall into three general categories (Cullen & Pratt, 1992). First, standardized tests tend to give false information regarding the status of learning. Second, standardized tests are biased against some students. Third, standardized tests examine simple skills that are easily tested and overlook more complex thinking processes.

This paper is going to propose a new framework for testing in AAC. The framework can generally be described as the observation of learning and learning style. It may provide greater insights into the real current status of an augmented communicator as well as a delineation of a potential next steps in the therapeutic and educational process. The following is a comparison of a traditional baseline status study versus an assessment of learning study.

## TRADITIONAL BASELINE STATUS STUDY OF AMY AND ITS RESULTS

Amy was referred at the age of 13 years 10 months. Her diagnoses included severe mental retardation, microcephaly, seizure disorder and cerebral palsy. Amy was ambulatory and functionally non-verbal. She had received speech, physical, and occupational therapies since the age of three. She was medicated with Tegretol for seizures and Cogentin for drooling. Her mother sought the least restrictive educational placement for her.

Amy's education profile is described in terms of mental age versus chronological

age (Figure 1). These examples are taken from a presentation at the Minspeak Conference in Birmingham, Alabama, USA (Clippard & Rice, 1993). The scales and tests are typical of those given in the United States. Current examples are easy to find on the Internet.

Additional anecdotal information from school records suggested that Amy did not know colours consistently, had few if any number concepts, could not sequence, and had difficulty following directions. Her sentence structure was incomplete and she did not identify the concepts of 'blond' and 'brunette'. Amy brought a language board

Age:	13 years, 8 months
Vision and Hearing:	Could not screen
<i>Bayley Scales of Infant Development:</i>	M.A. (Mental Age) 27-30 months
<i>Developmental Test of Visual-Motor Integration:</i>	VMI 4.3 years
<i>Goodenough Draw-A-Person Test:</i>	3 years 9 months
Oral Motor:	Vowels only – mostly distorted Tongue movement - "Totally Inadequate" No palate movement
<i>Peabody Picture Vocabulary Test:</i>	Age Equivalent 5.11
<b>Test of Auditory Comprehension of Language - Revised</b>	<b>Age in Months</b>
Word Classes	43-46
Grammatical Morphemes	28-30
Elaborated Sentences	36-39
Total Score	37-38
<i>Brigance Diagnostic Inventory of Early Development:</i>	Estimated Development Age 4.3 - 4.4 years
<b>Vineland Adaptive Behavior Scales:</b>	<b>Standard Score 25</b>
Domain	Age Equivalent (years)
Communications	2.11
Daily Living Skills	3.1
Socialization	2.2
<i>Leiter International Performance Scale:</i>	IQ 26-31 M.A. 4.2 - 4.3 years

Figure 1 Amy's profile

used in some fashion at a previous school. She reportedly used it appropriately for 1 of 8 responses during school assessment. She was very social. Her academic skills suggested she had not benefitted from previous years of traditional developmental instruction. The school district recommended placement in the state school (which is now closed) for individuals with severe mental retardation.

#### ASSESSMENT OF AMY'S LEARNING AND LEARNING STYLE

Clippard & Rice (1993), at the Rush Rehabilitation Center in Missouri, were asked to do an assessment of Amy's current status and her potential for growth. The method they adopted was different from the Alabama school district. Rather than test Amy on a mental age versus chronological age baseline study, they decided to work with her for two days and observe how she performed in instructional tasks based on learning in augmentative communication. The language system selected was a 128-location Words Strategy® software with their own customizations for Amy's age and experience level. Rather than use her previous standardized test scores or re-administer them, they watched closely what Amy did whilst they interacted with her in teaching the language software.

The procedures for learning evaluation extended over a multi-day period. Amy was given a 128-location Prentke Romich Company (PRC) device without icon prediction. A Qwerty overlay was used and some vocabulary was stored. The vocabulary included nouns, names, a protest, judgments, descriptors, and emotional statements. Access to some of this vocabulary required symbol sequencing. Amy was engaged in both conversation and in structured interactions. Clippard & Rice closely observed Amy's social, linguistic, and learning behaviours during this multi-day assessment. They found Amy to be very social and used this aspect of her personality to drive their teaching interactions. The results of Amy's second assessment reveals a significantly different child (Figure 2).

#### ASSESSMENT OF ACTUAL LEARNING VS. BASELINE STATUS STUDY: WHY THE DIFFERENCE?

To the outside observer, the Alabama evaluation seems to be focusing on a different child from the Missouri evaluation. The first assessment gives us a child with severe disabilities who had benefitted little from years of clinical intervention and teaching. Her oral motor skills were "totally inadequate," her chronological age, when measured against her skills indicated a child at the lower end of severe cognitive disability in several domains. At the age of 13, her auditory comprehension skills were

approximately 25 percent of her chronological age.

The second assessment used different procedures and painted a different picture. How does a clinician use these disparate results? Was one (or perhaps both?) assessment simply wrong? Do we merge their different data? But, how?

I contend that both assessments can be reconciled and employed clinically by two methods. The first is not to look toward the mental age/chronological ages ratios but rather focus on actual skill levels established by the tests. For instance, in the test of *Auditory Comprehension*, Amy's ability to use grammatical morphemes was between 28 to 30 months. On the Brown's Stages, this would put her between Stages II and III. This would imply the ability to understand subject, verb, object word order and to process grammatical morphemes to modulate meaning. She would be comprehending different modalities of the simple sentence – yes/no questions, wh- questions, negatives, etc. Her overall score placed her at 37 to 38 months – the beginning of Brown's Stage IV. Rather than compare these skills to the skills deemed appropriate, why not start Amy with the developmental issues of Stages II and III – generating her own two and three word

utterances, grammatical morphemes, and sentence modalities.

In second language acquisition, one often sees the phenomenon of a learner who is able to understand utterances in the target language and yet be unable to produce them. Amy seems to be at the "understanding" level. Now she needs access to simple words, so she can build her own utterances. Her social skills and interest will help her fit these utterances into the information flow. As Amy builds her own short utterances and fits them into the information flow, she will be able to test and compare her language output with that of other people.

The three foregoing activities – putting utterances together (synthesis), fitting them into the information flow (embedding), and testing against target performance (matching) are the three classic activities of second language learning (Klein, 1994).

So, one way to use the results of the baseline study was to focus on skill level rather than chronological/mental age ratios. The second method is then to focus on interpersonal language use in playful discourse. Amy's social skills helped her in the playful discourse and kept her involved in the language activity.

Inferences About	Markers
<b>Cognitive/Linguistic Ability</b>	<b>Which Support</b>
Attention	<ul style="list-style-type: none"> <li>Visual attention was adequate to work with a 128 location overlay</li> <li>Worked for periods of 45 minutes with verbal redirection</li> </ul>
Learning Curve	<ul style="list-style-type: none"> <li>Used Clear and Speak Display with single demonstrations of each</li> <li>Evidenced incidental learning</li> </ul>
Memory	<ul style="list-style-type: none"> <li>Recalled 28 symbol sequences</li> <li>No evidence of proactive or retroactive interference</li> <li>Recalled symbol sequences with greater than a 24 hour delay</li> </ul>
Prediction	<ul style="list-style-type: none"> <li>Made logical icon choices based on language function &amp; meaning</li> </ul>
Flexibility	<ul style="list-style-type: none"> <li>Used one icon to represent several concepts</li> <li>Used several icons to represent one concept</li> <li>Switched from one vocabulary set to another as contexts were changed</li> </ul>
Sequencing	<ul style="list-style-type: none"> <li>Used two symbol sequences across categories with prompts for order</li> </ul>
Pragmatics	<ul style="list-style-type: none"> <li>Established eye contact after accessing Speak Display</li> <li>Took turns in conversation</li> <li>Maintained topic</li> <li>Sustained conversation</li> <li>Used age appropriate language via the voice output device</li> <li>Exhibited sense and appreciation of humor</li> </ul>
Problem Solving	<ul style="list-style-type: none"> <li>Created new sequences by combining previously used icons with other logical icons</li> <li>Applied previously learned information to a novel context</li> </ul>
Self Evaluation	<ul style="list-style-type: none"> <li>Recognized and repaired access errors</li> <li>Requested assistance appropriately</li> <li>Self-reinforced successes</li> </ul>

Figure 2 Assessment of Amy's actual learning

Thus baseline studies on standardized tests can be exploited for their skill-based material and observation of learning style can be used as a tool for focusing on language. A more complete picture of Amy can be derived by focusing on her actual skills rather than by focusing on mental age/cognitive age ratios. These skills can supply a starting place for language intervention. Observation of learning and learning style as an assessment technique in augmentative and alternative communication will show how and why an 'engaged' Amy can learn.

There are other problems with standardized tests beyond focusing on past learning rather than the ability to learn. At least in the United States, standardized tests in the field of speech and language exert pressure on professionals to emphasize nouns. Tests for young children focus on noun identification. Basal or entry scores often require five or more consecutive noun identifications. Functional core vocabulary accounts for 75 percent of what children and adults actually utter. This functional core of approximately 300 to 400 words is not noun rich, yet it is the backbone of language. It is composed of pronouns, determiners, prepositions, conjunctions, simple verbs, helping verbs, *etc.* Clinicians are systematically directed toward noun teaching as opposed to language teaching to prepare students for success on standardized tests. Core words are rarely used as stimuli or responses. A noun focus may be appropriate for typically developing children but may ignore the language needs and abilities of augmented communicators.

Analysis of toddler and preschool language reveals that 80 percent of a child's speech is made up of core vocabulary. This vocabulary has limited noun usage. Pronouns (I, me, mine, you, your, it) and demonstratives (this, that) perform diverse pragmatic and semantic functions including social control, affirmation, and establishing joint attention. Over 90 percent of toddler vocabulary is represented by fewer than 30 core words (Banajee, 2003). One hundred core functional words comprise 73 percent of preschool language usage (Beukelman, 1989). Recorded conversations of adolescents about food use only 2.2 percent unique fringe vocabulary (Balandin, 1997). Speech Pathologists (SLPs) are trained to work with individuals who demonstrate a delay in language development or disorders of language. Depending on the work environment, an SLP can work with a variety of clients from young age to older clients, from developing language skills to traumatic brain injuries to stroke patients. In working with preschool children, many SLPs might work in tandem with a school

or early start program, utilizing vocabulary and concepts directed by the teaching staff.

Typically, standardized assessments are used not only to qualify a student or client for therapy, but to direct therapeutic intervention and goal areas. Again, a review of standardized assessments in the field of speech and language reveal that there is a strong emphasis on noun labelling as an early stage of language development, *e.g.*, *Peabody Picture Vocabulary Test* (Dunn, 1997) and *Preschool Language Scale* (Zimmerman, 2002). Despite the fact that core vocabulary often comprises a large portion of a pre-schooler's vocabulary, many commonly used assessment tools for young children focus almost exclusively on noun identification and labelling. The references contain many other commonly used standardized tests which exhibit a strong emphasis on nouns. Core words are rarely used as stimuli or responses. In fact, use of circumlocution and describing a noun – important language skills – often results in a decrease in a student's test score.

The noun emphasis in standardized tests does more than fail to measure the language skills of an augmented communicator. It also directs the attention of clinicians and teachers toward noun instruction and away from core vocabulary. Core words are essential in the mastery of semantic roles, early syntax (1 and 2 word phrases), basic morphemes, and question structures — Brown's Stages I through III (Brown, 1973).

A clinician working with an augmented communicator must be aware that assessments may not reveal a student's full language potential and instead may misdirect instructional goals toward context-specific nouns. Noun development cannot be ignored, but it is crucial to address a student's need for core vocabulary, an area that may not be reflected in commonly used assessment batteries. \*

Bruce R Baker, *Linguist & inventor of Minspeak®*

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# Developing and Using a Communication Book with Eye Pointing Children

CLARE LATHAM & KATHARINE BUCKLEY

The ACE Centre, 92 Windmill Road, Oxford OX3 7DR, UK Email: latham@ace-centre.org.uk

## INTRODUCTION

This paper presents one approach being developed at the ACE Centre in Oxford to planning and using an eye pointing communication book. It is based on a desire to take forward the principles of developing and using a communication book described by Clare and make them relevant for children who communicate using their eyes. Like Clare's original guide, it is designed to be practical and easy to use by both parents and professionals. It is currently at a trial stage, and we are applying for funding to research its effectiveness with a small group of families.

The approach is broadly based on methods of developing communication skills that have emerged from two theories of language acquisition, as described by O'Kane & Goldbart (1998): the psycholinguistic theory that acknowledges language is based, at least in part, on cognitive development; and the sociolinguistic theory that emphasises the child as an active participant in learning language and communication. The methods that we have highlighted as being crucial include, responding to all communication attempts, restructuring interactions to give control to the child, and engineering situations to enable the child to affect their environment. In short, we have stressed the importance of approaches that are child centred as opposed to teacher led. The approach grew from the recognition that children developing eye pointing have additional needs to those who can access symbols through finger pointing. It is based around six key principles, which are described below.

## KEY PRINCIPLES

**1. When developing a communication book, a skilled communication partner and a communicative environment are vital.**

'Aided language stimulation' (e.g. Goossens, 1989) and 'augmented input' (e.g. Ronski &

Sevcik, 1988) are well known approaches in the AAC literature. Binger (2004) investigated the impact of modelling on the linking of symbols by preschool children, and found that 'aided AAC modelling' encouraged the use of linking by four of the five preschool children in her cohort. We believe that modelling is so important that the first step in our approach to developing and using a communication book, is for the communication partner to make use of photographs and symbols themselves, and to ensure that these are present throughout the child's environment. When the child does come to use a communication book, at all stages it is advocated that a communication partner continues to model use of the book.

In addition, the communication partner is helped to give the child control over activities through both the selection of appropriate vocabulary and in the engineering of situations. Play is key to this, and we try to encourage the use of play in building both eye pointing and language skills. Play is also important as it takes a little pressure off the child. Figure 1 shows a page of symbols for use in a bubble

game. The child is enabled to direct, take part in and comment on a bubble blowing game (Figure 1).

## 2. A communication book should be developed over time.

In our experience, being presented with a complex communication book and being expected to get on with using it can put children off this means of communication. Our guide makes use of a staged approach, with the book increasing in complexity and content over time. There are five stages outlined with several sub-stages. Each of these stages begins with a "Learning Readiness" guide, to help the communication partner to judge when and if it is appropriate to move on.

## 3. A communication book should contain core vocabulary that is easily accessible.

We have proposed a core language that increases in complexity through five broad stages. The choice of words is based on language functions. These language functions come from work by O'Kane & Goldbart (1998), Harris (1992), and Curriculum guidance for the foundation stage (DfEE). For example, at the very first stage,

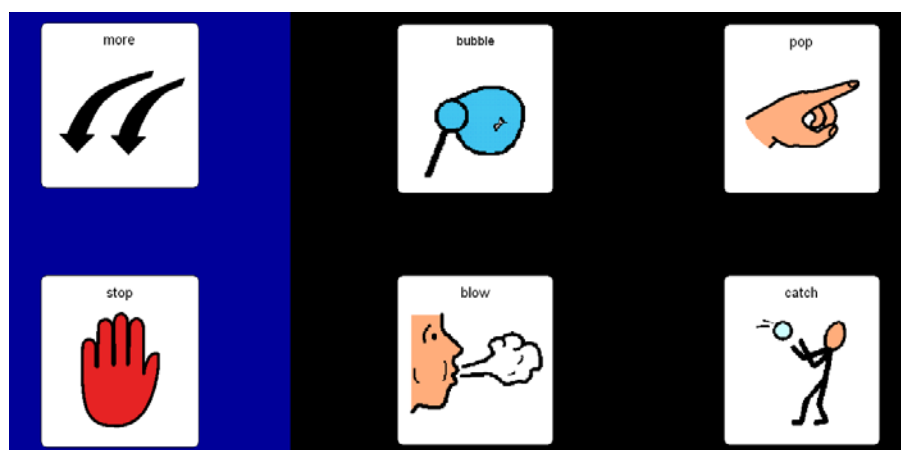


Figure 1 Bubble Play Page at 'Stage 2'

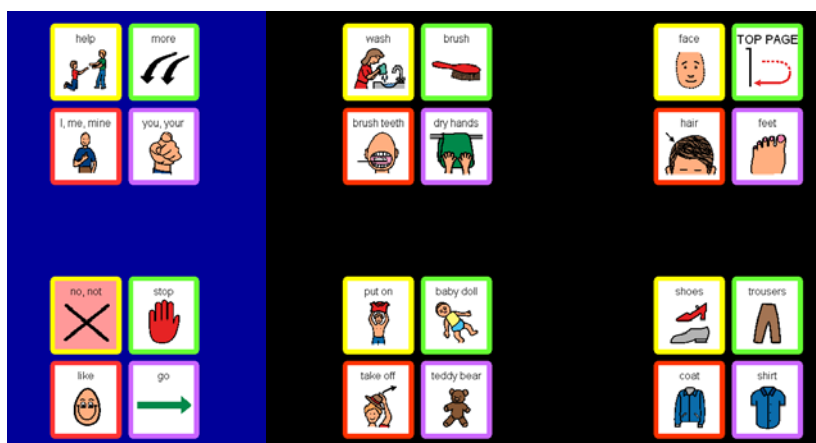


Figure 2 Core vocabulary flap and fringe topic page at 'Stage 3'

the core language words suggested are designed to achieve the early language functions of recurrence, rejection, action and object.

Of course there are a wide range of core vocabularies suggested by researchers and practitioners (e.g. <http://aac.unl.edu/vocabulary.html>). What is key to this approach however, is that the core vocabulary suggested relates to the function of language, rather than to syntax, and that it is presented in a readily accessible manner.

We propose placing this crucial core vocabulary on a flap next to the topic vocabulary page so that it is always visible and available for modelling and/or use. The use of a flap means that as topic pages are changed, this important core vocabulary remains static and always available.

Figure 2 illustrates the presence of the core vocabulary flap to the side of a 'teddy play' topic page at stage three of our approach. In our examples, the background colour of the core vocabulary flap is dark blue, and the background colour of the topic vocabulary pages is black. The language functions available in this example include directing others, requesting, give information, and describing.

#### 4. Core vocabulary should take educational needs into account.

The English National Curriculum has specific speaking and listening requirements. We have sought to identify core vocabulary that helps children to meet these requirements at the different stages. At each stage there are links made to the National Curriculum P levels. For example, working at P7 involves "communicating ideas about present past and future events and experiences." ([www.qca.org.uk/8798\\_7666.html#speaking](http://www.qca.org.uk/8798_7666.html#speaking)) Thus core vocabulary at this stage includes past and future symbols.

#### 5. As a communication book develops, vocabulary layout should be as consistent as possible.

Throughout the different stages of our approach, core language retains its original position on the page as much as possible. This is intended to enable children to build on skills developed at earlier stages.

For example, Figure 3 illustrates the core vocabulary flaps at Stage 3 and Stage 4 in our approach. Along the top line, the 'help' and 'more' symbols have retained their position on the page.

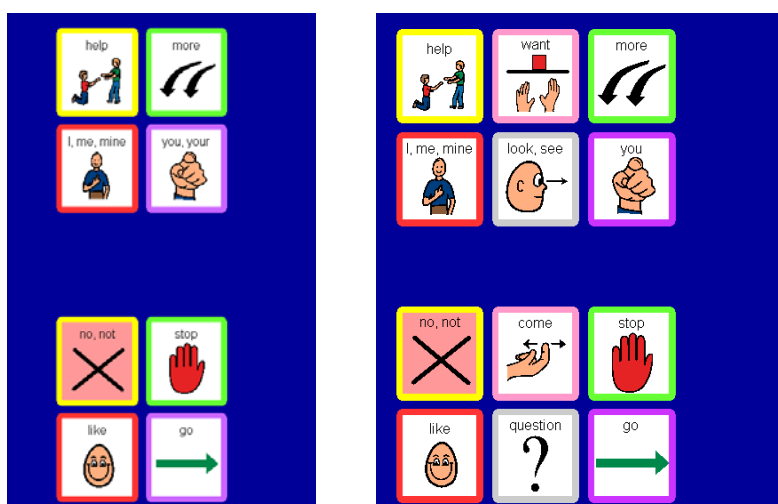


Figure 3 Core vocabulary flaps at 'Stage 3' & 'Stage 4'

#### 6. Systematic introduction of encoding

In our experience, encoding can be one of the most efficient ways of accessing a number of symbols on a page for eye pointing communicators. Whilst we have made use of 'colour encoding', other forms of encoding have been developed and are discussed in the appendix to our guide. Whilst some children acquire this skill very quickly, others benefit from a gradual introduction. Janet Scott has put together a wonderful range of games and activities to encourage the development of these skills, and this was presented at ISAAC in 2004. With her kind permission, we have included many of these ideas within an appendix in our guide. This includes games to introduce encoding, while the accompanying text provides examples of how the partner can model encoding and engineer situations to make the encoding powerful for the learner. As with the core vocabulary, throughout the developing guide, the increased coding is done systematically so that what has been learnt at an earlier stage remains constant.

#### CONCLUSION

The danger of producing such a guide is that people will think that we are being prescriptive and are presenting 'the one way' of developing and using an eye pointing book. This is not the intention at all, and we recognise that there are many different ways of supporting low tech communication through eye pointing. Our aim in presenting the set of principles underlying the book in this article is to give practitioners ideas and principles that they can consider when creating such an eye pointing communication book. The guide is, however, intended for those looking for ideas and support. Above all, its aim is to give people a vision of a functional language that can be learnt actively, and used productively, within the communicative context. \*

Clare Latham, *Speech & Language Therapist*  
Katharine Buckley, *Speech & Language Therapist*

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# Standardising A Wheelchair Mounting Procedure: A Multi-Agency Approach

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## INTRODUCTION

The Risk Assessment Project was initiated by The Communication Aid Centre at Frenchay Hospital Bristol. They provide an assessment service for people with severe communication difficulties who may benefit from Alternative and Augmentative Communication solutions. As part of this service they have been mounting equipment on to wheelchairs for some years now. In 2000 they developed their own risk assessment that they used whenever mounting of equipment was carried out.

This work was presented at Communication Matters and at national Specific Interest Groups. The presentations provoked a great deal of interest from professionals and companies within the field of Electronic Assistive Technology. It became evident that Risk Assessment for mounting devices onto wheelchairs was a grey area, with no agreed standards to work from.

More and more establishments were becoming increasingly reluctant to mount devices without clear guidelines. This appeared to be becoming a problem for AAC users, in particular, who needed the communication equipment attached to their wheelchairs to enable them to make use of their aids effectively.

The Communication Aid Centre decided to contact a number of centres, organisations

and companies to see if they would be interested in forming a multi agency group to look at risk assessment for mounting Electronic Assistive Technology to wheelchairs and to develop a standardised package. Those that showed an interest formed the group now known as W.R.A.M.P. (Wheelchair Risk Assessment Mounting Procedure group). The members of the group are the Frenchay Communication Aid Centre, Compass Electronic Assistive Technology Services, Treloar School, Toby Churchill Ltd., ACE Centre Advisory Trust, and Access to Communication and Technology.

In 2003, the first meeting of WRAMP took place at the Communication Aid Centre, Frenchay, and it was agreed that a form would be produced to enable people to consider the risks associated with mounting devices on to wheelchairs. One of the major discussion points was whether the form should be for general use or for use by competent persons. Indeed there has been a great deal of debate about what constitutes competency for mounting as there are no clear guidelines or national standards for this.

After several lengthy meetings a risk assessment form was produced, which took into account the MHRA Device Bulletin DB2004(02) Guidance on the Stability of Wheelchairs, it was just four pages long.

After initial trials within the group and more meetings, the current draft evolved and now contains many more pages and identifies the most common, general considerations and risks involved with mounting devices to wheelchairs. There is also space to add specific risks not already identified on the form. It is now being trialled by various independent organisations.

## THE WORKING DRAFT

The document now consists of:

1. Guidance Notes – this provides advice on how to use the document.
2. Client information and equipment details – this provides personal details of the client, the wheelchair, equipment to be mounted, type of mounting system used and other relevant biographical information.
3. Mounting Assessment Check List – these are a list of questions that deal with factors pertinent to the client, equipment, carer and environment. These factors will help determine the type of system and position most appropriate for the device.
4. Risk Analysis – this consists of fifteen identified risks that are common when mounting devices. This list is not exhaustive and allows space for additional risks that have been identified. Risks are scored with a standard score matrix taking into consideration the likelihood and the sever-

*continued on page 32...*

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## Singapore Conference Report

# 'Building Bridges to Effective Communication' Conference 2006

**ANNA ROURKE**

ACE Centre North, Units 11 & 12, Gatehead Business Park, Delph, Saddleworth OL3 5DE, UK  
Tel: 01457 829444 Email: arourke@ace-north.org.uk

Sat on a number 48 bus in Manchester, I received one of those phone calls I usually only dream of: "Would you be interested in giving a talk at a conference in Singapore next month? We would like to sponsor you to be an invited speaker".

One nano-second later I had agreed to talk on 'Introducing AAC to adults with lifelong disabilities' courtesy of DynaVox Systems at the 'Building Bridges to Effective Communication' Conference, organized by Bridge School, California, with assistance from ISAAC.

Bridge School is an internationally recognized specialist provision for pupils who use AAC and offers intensive assessment, intervention, outreach and research in AAC. It was founded by two parents in 1986 – one being the wife of the singer, Neil Young. Every year his record company organizes the Bridge School Benefit Concert with an amazing array of stars who have performed at this event – including Elton John, Paul McCartney and Norah Jones to name a few. The funds raised are used to run the school and its programmes, including the sponsorship of a teacher or therapist from a country with emerging use of AAC to work at the school for a year.



This conference was the dissemination of good practice in AAC resulting from Sarah Yong's time at Bridge School in 2003.

Sarah is a speech & language therapist based in the Ability Centre at the Society for the Physically Disabled (SPD) in Singapore. Sarah conducted a survey and the programme was designed to meet the needs expressed by the respondents. As a consequence, the conference was struc-

tured to provide information for everyone, regardless of their experience in the field of augmentative communication. In addition to therapists, teachers and parents from Singapore, the conference included participants from Malaysia, Hong Kong, Thailand and the Philippines.

The identified areas requested by attendees included: an introduction to AAC, its relation to emerging language develop-

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ment, the importance of social networks in AAC assessment and intervention, literacy development, introducing AAC to adults with congenital and acquired disabilities, assistive technology challenges, AAC teaching and material resources for the home and classroom. Sessions were interactive and encouraged the participants to develop a professional working relationship through the shared experiences.

Conference speakers included: Dr Vicki Casella – Executive Director of Bridge School, Dr Sarah Blackstone – President of Augmentative Communication, Inc., (or “Blackstone comma S” as she became affectionately known), Kristen Gray – teacher and outreach coordinator from Bridge School, Anne Warrick – author of ‘Communication without speech’, and Yours Truly – Manager of the ACE Centre-North. I can assure you this was a scary line up of people to talk alongside!

The commitment by the conference delegates was admirable in their determination to absorb every piece of information possible in order to inform on their practice in their home countries. Attendees came with a wide variety of experience and knowledge – from zilch to high level understanding of AAC uses and applications.

There were also a number of attendees who used AAC or whose families were looking to introduce AAC to a family member. Representatives from Hong Kong, for example, had established an AAC service several years ago and have made remarkable progress in delivering services, whilst attendees from Malaysia were seeking to establish a web-based Information Net-

work on disability and technology, but had no information at all on AAC.

There were many highlights, one of the most memorable being a Town Hall meeting for people who use AAC. The participants included school aged pupils, adults based at SPD and a business executive, all of whom are clients of Sarah’s centre. The meeting, facilitated by Dr Sarah Blackstone, encouraged each person to think of a dream, to identify steps needed to achieve the dream, decide on resources they would need, and then come up with a first step toward realizing it. The outcomes included: “to open a shop”, “to have my own communication device”, “to read more”, “to walk again”. The meeting inspired attendees from other countries to consider facilitating a similar event in their own countries.

For the last afternoon, attendees met to articulate their plans for moving forward with AAC programs in their respective locations. Hong Kong plans to have a full time AAC Centre, Thailand is aiming to establish an Assistive Technology Centre, Singapore will improve the quality of life for people with complex communication needs and Malaysia will develop an extensive information service for people with disabilities with links to government and non-government organizations.



ISAAC Emerging Nations AAC Committee (Sarah is co-chair) has agreed to re-establish a list serve for interested parties and many conference attendees have signed up. The team from Malaysia has also since formed MINAAC – Malaysian Information Network on AAC and I have sent the “Focus On” series leaflets to them, with the kind permission of Communication Matters.

For more information on Bridge School, its outreach programme and the conference visit [www.bridgeschool.org](http://www.bridgeschool.org) For further information on the Society for Physically Disabled in Singapore visit: [www.spd.org.sg](http://www.spd.org.sg) and information on the Malaysian Information Network on disabilities at: [www.mind.org.my](http://www.mind.org.my)

Finally, I would like to express my thanks to DynaVox for giving me this wonderful opportunity to raise the profile of some of the many remarkable people who use AAC in the UK. \*

Anna Rourke, Manager ACE-Centre North

...continued from page 29 *Standardising A Wheelchair Mounting Procedure*

ity of events happening, and how to manage that occurrence ranging from no action required, because considered safe, to, do not mount as this could result in a fatal incident.

#### 5. Other information

- Tilt testing: there is a form and space provided for information to be recorded if a tilt test is carried out.
- Client Handover Forms: these summarise the Do’s and Don’ts and any further information that has arisen during the assessment process, this form is done in duplicate, one for the client and one for the professional’s records.

#### BACK TO CM

Once the group had developed what we considered to be a reasonable working document it was presented at CM 2005, where it was received with great enthusiasm and interest. Once again the audience

shared with us their experiences with the problems and issues that they had encountered due to the lack information for mounting devices. People came forward willing to trial the document to enable the group to gain feedback in how the document is working, what could be changed, what was missing, etc.

#### TRIALS

Extensive trials are now underway with professionals from different backgrounds using the form with their own clients. Although some feedback is filtering through to the group, we consider that we need more trials and feedback before conclusions are made about the form.

#### THE FUTURE

- Revised formats are planned to make the document easier to work with and easier to understand.

- We would like to discuss the document with the MHRA and we hope to get it endorsed by them so that it can be referred to as a recognised guide for risk assessing when mounting EATs to wheelchairs.

- We aim to eventually have the Risk Assessment document on a website so that it is available for all individuals, organisations, etc. to make use of or to refer to for guidance.

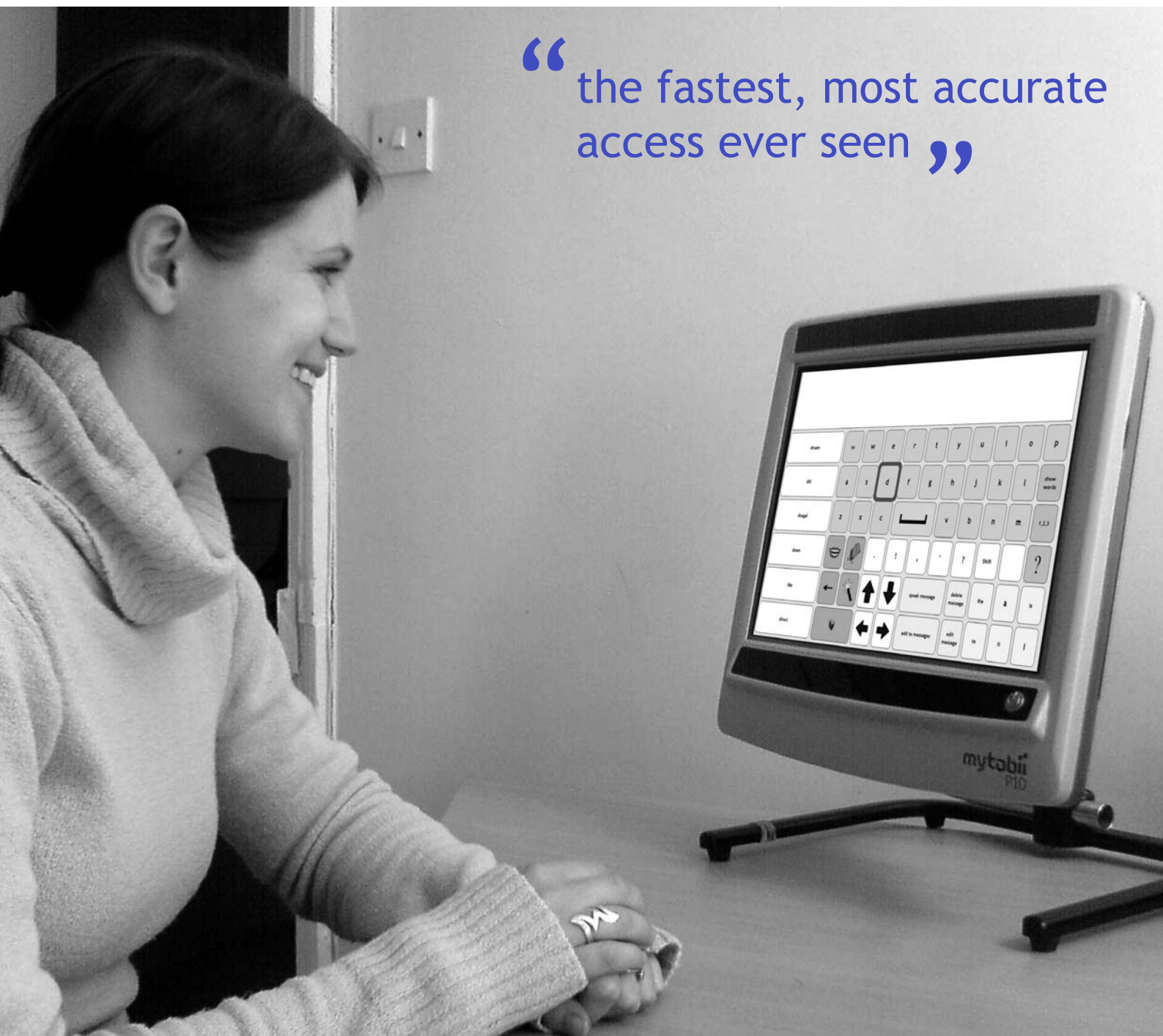
- To produce supplementary material such as safety guidance leaflets and instructions when a mounting system is attached to a wheelchair. Maybe to have these leaflets translated into other languages so that non English speaking patients of carers can understand the procedure and safety implications when having a device mounted onto a chair. \*

Alison Teague, Speech & Language Therapist  
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# VIVOCA: A Voice Input, Voice Output Communication Aid

## What do communication aid users think?

REBECCA PALMER

Email: r.l.palmer@sheffield.ac.uk

Barnsley District General hospital and the University of Sheffield have been funded by the New and Emerging Technologies program (NEAT) to design and develop a communication aid that allows the user to speak the message using their own speech, however unintelligible. The idea of using speech to get around the problem of not being able to speak very well in the first place might sound rather odd, but here's how it is intended to work...

Using speech recognition technology, the communication aid will translate the speech of the user and speak the message out clearly to the communication partner.

As this is such a new concept with considerable potential for users of AAC, we needed to find out what people experienced in using communication aids thought of the idea, and what these people consider would be important features of such a device to make sure it is useful to them.

Thanks to all who completed questionnaires

We advertised questionnaires to obtain information on the use of AAC users' current communication aids and their thoughts about using a Voice Input, Voice Output Communication Aid. Twenty people requested questionnaires. With twelve returned questionnaires a 60 percent response rate was achieved.

### WHEN ARE COMMUNICATION AIDS NORMALLY USED?

It was clear from the responses that some communication aid users use their aids in

everyday conversation while others prefer not to use it as their main means of communication, relying on it only when listeners do not understand their speech. This was also found in a study which used conversational analysis to establish how communication aids were actually used in conversation (Bloch & Wilkinson 2004).

### ARE THERE ANY DRAWBACKS TO USING COMMUNICATION AIDS?

Effects of using a communication aid on the normal act of communication were elicited from the questionnaires. Some users found them difficult to use in group conversations and in situations where a novel utterance is required. Situations which require speed of response can also be difficult when using a communication aid. One of the respondents with disordered speech as a result of a brain tumour illustrated both difficulties with speed and producing novel utterances:

*"It is difficult when the conversation is unpredictable because I have to spell out words longhand. I have many pre-prepared phrases in the machine but they often do not fit the situation."*

Another respondent reported:

*"I get left behind in conversation."*

Difficulty with keyboard use was reported and this could be a reason for slow responses. For example, in a study of communication aid users with Motor Neuron Disease, the issue of speed of response was also highlighted, 'If you're in a strange place and you want to ask to go somewhere, will people all wait in a

queue 'til you spell it out?' (Murphy 2004), p265. Further drawbacks of using communication aids to the act of communication were noted. A respondent with dysarthria who has tried communication aids in the past but decided not to use them reported that:

*"People talk to the aid and not to me."*

This may be a similar experience to a communication partner talking to a familiar listener rather than directly to the person with speech impairment, accentuating the difficulty. Another respondent with progressive apraxia and aphasia who has tried to use an aid with synthesised speech output found that he and his elderly mother found it difficult to understand. This is supported by findings in the literature that the elderly find listening to synthetic speech difficult in reverberant conditions and when their attention is divided (Drager & Reichle 2001; Venkatagiri 2004), and that those with intellectual or language impairments experience increased difficulty in processing synthetic speech (Koul 2003).

Environmental drawbacks of communication aids were reported including being hard to use them in noisy environments. Respondents who use Lightwriters commented:

*"You can't use it in a crowd, people won't hear it."*

*"You need silence."*

Communication aids were also reported to be difficult to use on the move because of the need for a flat surface and the fact that if they are big and bulky they are difficult to carry around.

For example:

*"You can't drive and use a keyboard."*

Finally, battery life and time spent away for repair were also reported as drawbacks of some communication aids.

Information provided by the respondents about what makes communication aids difficult to use can be collated to indicate design features that may improve devices for communication aid users. These are suggested in Table 1 and will be used to guide the development of new communication aids.

Ability to respond quickly
Ability to create novel utterances quickly
Volume control
Light and easy to carry
Something that does not require a table
Long battery life
Reduced reliance on synthesised speech
Easy/quick to repair

Table 1 Features of communication aids that may improve their acceptability

#### WOULD YOU USE A VOICE INPUT, VOICE OUTPUT COMMUNICATION AID?

Eight of the twelve respondents reported that they would be prepared to use a Voice Input, Voice Output Communication Aid (VIVOCA). They perceived potential benefits to be an increase in the speed of communication and reduced keyboard use:

*"I think the idea of a communication aid that speaks a message out clearly would be much easier than typing into a machine."*

*"[It would be] quicker to communicate."*

The respondents conveyed the idea that the VIVOCA might increase the ability to communicate, increasing self expression and independence. One respondent also saw the potential for using the speech recogniser as a means to help him write. A respondent with progressive apraxia and aphasia saw the use of a VIVOCA as a potential benefit for the future. Specific situation that more than one respondent would like to use a VIVOCA for include meeting new people, talking on the telephone and shopping, all situations where speed and intelligibility are crucial.

However, situations that may not be improved by a VIVOCA were also highlighted. Firstly, four of the twelve respondents report lack of, or very limited vocalisations. One respondent reported, *"I cannot vocalise"* and another *"I have not enough voice"*. Two other respondents also produced only a limited range of vocalisations including a few vowel sounds only. Neither of these two respondents was able to pro-

duce any consonant sounds on observation at face to face interview. This group of communication aid users would pose an interesting challenge to a Voice Input, Voice Output device. A further challenge to a speech recognition based communication aid was highlighted by a man with progressive apraxia. His condition results in a large variation of productions representing the same word. In addition, his speech output will progressively reduce over time. This respondent reported that a VIVOCA would be:

*"Ideal if it can understand varied attempts at producing the same thing."*

#### WHAT WOULD A VIVOCA NEED TO BE LIKE TO MAKE IT USEFUL?

The respondents showed a preference for direct translation of speech, word for word as an input option. The presence of an alternative input method such as switch or typing was reported to be quite desirable to the respondents so that the aid can still be used for communication if speech fails. Other methods of input were reported to be acceptable to some respondents including using single words or sounds which represent whole phrases.

Recorded speech, particularly with a local accent was more acceptable than computer generated speech although ratings showed computer generated speech output is not totally unacceptable to most respondents. The respondents reported the addition of text on a screen to be very important, perhaps ensuring the safety net of a method that is already known to them.

The most desirable hardware option was that the aid should be small enough to fit in the user's pocket, making it usable when on the move. If text is to be displayed on a screen, the device needs to offer the ability for the listener to see and read the

Acceptable / Desirable Input Options	Acceptable Output Options	Acceptable Hardware Options
Direct translation of speech, word for word	Addition of text on screen	Small aid to fit in your pocket
The presence of an alternative input method e.g. typing or switch	Recorded speech with local accent	Large enough aid for people to be able to read text on screen
When you speak a single word, the machine speaks a complete phrase on your behalf	Recorded human speech	Less visible microphone
When you produce a sound of your choice the machine speaks a complete phrase on your behalf	Computer generated speech output	

Table 2 Relative desirability of the potential design features (most popular shown first)

text. The respondents liked the idea of a microphone that was small and unobtrusive. Table 2 summarises the relative desirability of the potential design features, presenting them in order of popularity with the most popular shown first.

These views and ideas are being used to help inform us of the most useful features that need to be considered when designing a Voice Input, Voice Output Communication Aid. \*

Rebecca Palmer, Researcher

#### NOTES

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**SM1      or      Handheld  
Tablet      Communicator**



## Common Family Features

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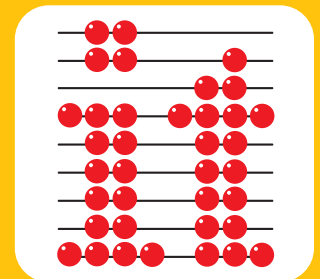
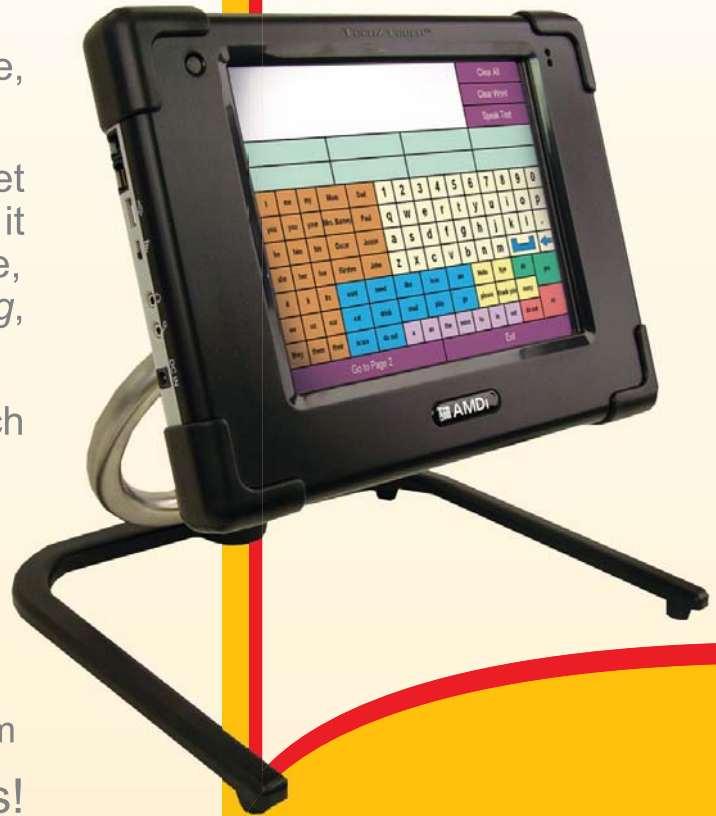
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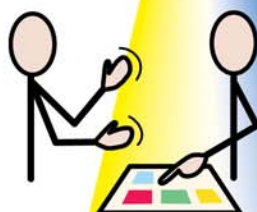
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