

# COMMUNICATION MATTERS

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THE JOURNAL OF COMMUNICATION MATTERS / ISAAC (UK)



## IN THIS ISSUE

Augmentative Communication for Children with Autism  
Bliss Symbols Communication  
Communicate with Confidence  
Establishing a Computer and Communication Class for  
People with Profound and Multiple Learning Disability  
Improving the Speed of Real-Time Language Generation  
Making Waves: Communication and Swimming!  
Setting up an AAC Assessment Service  
Supporting Children's Access to the Curriculum in  
Mainstream Schools Using Low-tech Communication  
Boards

Taking Control: Environmental Control Technology  
Project

The Development of the Use of Signalong in  
an Inclusive Borough: The Newham Experience  
Update from Romania

## REGULAR COLUMNS

Diary Dates  
eCAT News  
Trustees' News



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# CONTENTS



Cover: Taking Control (page 36)

## COMMUNICATION MATTERS JOURNAL

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Communication Matters / ISAAC (UK)  
c/o The ACE Centre  
92 Windmill Road  
Oxford OX3 7DR, UK  
Tel & Fax: 0845 456 8211

Email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)  
Website: [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

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### Editors, Design & Production

Sally Millar Email: [sally.millar@ed.ac.uk](mailto:sally.millar@ed.ac.uk)  
Patrick Poon Email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

### Advertising and Overseas Subscriptions

Tel & Fax: 0845 456 8211

Email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

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- 2 **Making Waves: Communication and Swimming!**  
Ann Gresswell & Emilie Leeks
- 5 **Establishing a Computer and Communication Class for People with Profound and Multiple Learning Disability**  
Julie Wright & Catherine Wilson
- 9 **Supporting Children's Access to the Curriculum in Mainstream Schools Using Low-tech Communication Boards**  
Amanda Bousaki
- 15 **The Development of the Use of Signalong in an Inclusive Borough: The Newham Experience**  
Rosie Dickens & Janine Walters
- 17 **Communicate with Confidence (Conference Report)**  
Janet Scott
- 23 **Improving the Speed of Real-Time Language Generation in AAC**  
Tony Jones
- 30 **Setting up an AAC Assessment Service**  
Sally Chan
- 32 **Augmentative Communication for Children with Autism: What do we Know? (Study Day Report)**  
Sally Conner
- 35 **Update from Romania**  
Dorothy Fraser
- 36 **Taking Control: Environmental Control Technology Project**  
Jenny Boyd
- 39 **Bliss Symbols Communication**  
Sally Millar

## REGULAR COLUMNS

- 20 **Trustees' News**
- 21 **eCAT News**
- 22 **Diary Dates**

# Making Waves: Communication and Swimming!

**ANN GRESSWELL & EMILIE LEEKS**

Email: [ann\\_gresswell@hotmail.com](mailto:ann_gresswell@hotmail.com) [emilie.leeks@gmail.com](mailto:emilie.leeks@gmail.com)

## INTRODUCTION

Through our experiences of teaching swimming using the Halliwick Concept, we have found the swimming pool to be one of the best places for increasing communication. In this article we will discuss why the swimming pool is such a good place for this, and how to make the most of the communicative opportunities offered with people who use augmentative and alternative communication (AAC). We will examine the Halliwick Concept approach to teaching swimming, and how it adds to the communicative experience in the pool. We hope that the article will give some ideas of things to try in the swimming pool environment.

Swimming – or just being in the water – is an excellent vehicle for communication; it is fun (unless you're very nervous) and sociable, and everyone in the water is on the same level. This means you are meeting a range of people in a relaxed situation, and have lots of opportunities to interact.

There are also fewer physical barriers and the physical closeness seems to encourage increased communication. Being on the same level means eye contact is easier – particularly important where you may be communicating non-verbally.

## THE HALLIWICK CONCEPT

We teach swimming through an approach called the Halliwick Concept. This is a method used to teach people with dis-



abilities to be competent and confident in the water. It is also successful for others, such as family members, who often join in the swimming sessions.

Halliwick uses the term 'swimmers' for all learners, even if they are not yet swimming. One of the principles of the Halliwick Concept is to teach without using flotation aids (such as arm bands, rubber rings, etc).

Not using flotation aids means that swimmers are given one-to-one support by an 'instructor' (who might be a parent, a teaching practitioner, a volunteer in a club, etc) in the water until they are competent. This is often seen as the difference between Halliwick and other ways of teaching swimming: although it is important, there are a number of other factors

which are central to the Halliwick philosophy.

## HOLISTIC APPROACH

We use an holistic approach, which takes into account social, communicative and academic development, alongside teaching swimming.

We teach from the water, rather than from the poolside, meaning that we are all at the same physical level and social level. Group work, and games and activities (in groups or one-to-one) are an integral part of Halliwick. This gives plenty of opportunities for choice-making and contributing, learning, and having fun.

The holistic approach in Halliwick leads to many opportunities for socialising and communicating. Social skills develop

through group work, where you encounter a range of experiences and practise different skills such as taking turns. Watching others, and working at your own level with your instructor in a non-pressured situation, helps to increase confidence.

Using games also builds confidence – they are often familiar, repetitive activities, and of course are fun. Communication skills also develop, with the swimmers being encouraged to take control and responsibility for what happens in the sessions. For example, initiation of communication is encouraged, such as by waiting for a swimmer to indicate 'change' to change direction in a moving circle activity. Communication by any means is accepted and interpreted within the context of the activity, and time is given between or during activities for individual swimmers to discuss with their instructors what they would like to contribute next.

This article is about communication in the water (particularly focusing on AAC) but we also want to mention vocalising, as being in the water appears to promote vocalising and/or speech for some people. A speech and language therapist began some work on vocalisations in the water (sadly not completed as she changed jobs), which compared vocalisations of a group of children (most of whom had cerebral palsy) in group activities in water and on land. Her initial findings were that the children vocalised more in the water than on land.

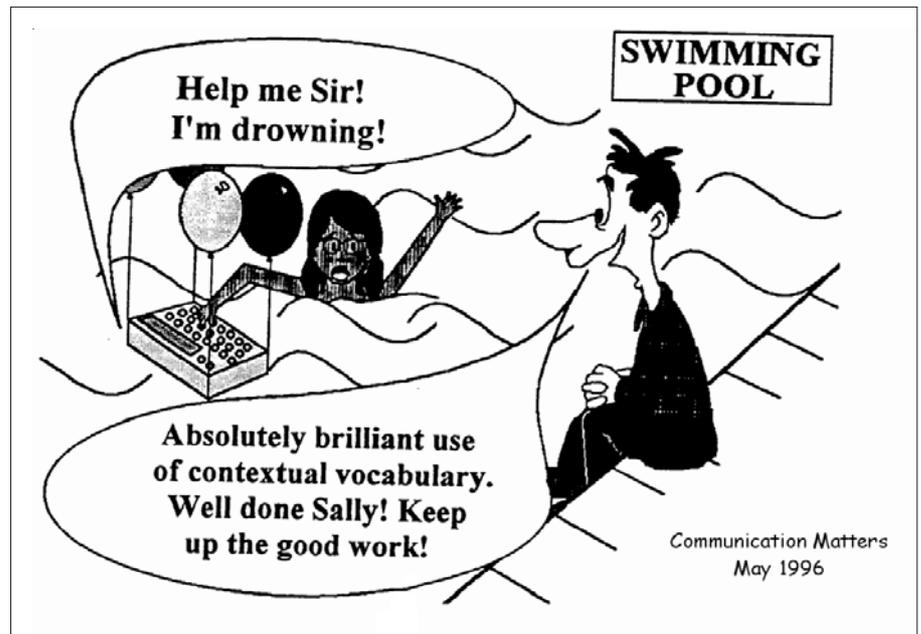
### BREATHING

Breathing can be easier in water for some people – this may be due to any or all of the following factors:

- water giving support to the body (good support makes it easier to concentrate on breathing);
- the pressure of water on the chest giving proprioceptive feedback (allowing the swimmer to become more aware of their breathing);
- the emphasis on controlled blowing and humming (leading to better control of breathing).

If breathing is easier, vocalising is also easier.

The swimming pool is a very good place to learn about breath control such as blowing and humming. The pressure of water on the chest helps exhalation, and the incentive to blow/hum (i.e. breathe out) to stop water getting into your airways (nose/mouth) is great. We teach about blowing out (there is no need to teach breathing in again, as this happens



automatically) when the face is near or in the water. Humming (blowing out through the nose, rather than the mouth) can be useful for some people who find blowing out very difficult, and will eventually be needed for more advanced underwater work.

### DEVELOPING COMMUNICATION SKILLS

Halliwick, as mentioned above, uses groups and games to develop skills in the water. This way of working also supports development of a variety of communication skills.

Games and activities can be used with both children and adults – adapted as necessary. Singing and music are very motivating, or sessions might be based around a story (e.g. 'We're Going on a Bear Hunt').

Competition-type games, for example musical statues, relay races, water basketball or water polo are also useful. Teenagers may particularly enjoy these activities, and will develop skills in team work, turn-taking and even cheating. Sometimes we go on a 'visit' – to the seaside, zoo, fairground, football match... The possibilities are endless.

Communication in the swimming pool, just as on land, will consist of a variety of aspects, including speaking and listening, signing/gestures, communication aids (symbols and charts), and writing/drawing. To make it as easy as possible for effective communication to take place, we need to adapt to each other and to the situations we are in. Things to consider include:

### Speaking and Listening

- Use a clear voice, position yourself where you can be easily seen, modify

your speech – use key words, keep it simple.

- Use facial expressions, tactile clues, and objects.
- Speak clearly (but take care not to *over-exaggerate*) when someone is lip-reading.
- Give demonstrations – but make sure they are accurate.

### Signing / Gestures

- Again, consider your position – be seen, and make sure your hands can also be seen.
- Think about the physical support your swimmer may need when they are signing – they may need more support at these times.
- You may need to adapt your support if signing – and an extra pair of hands may be needed.

### Communication Aids – Symbols & Charts

- Low-tech aids may need to be accessed differently when in the water, e.g. eye pointing instead of hand pointing.
- The format may also need to be changed – e.g. enlarging a page of book.

### Writing and Drawing

- You'll need to have a pen and board that can be used in a wet situation.

Generally, high-tech aids will not be useful in the water, and care must also be taken with them on the poolside.

We may be heading to a point where some aids, e.g. the Toughbook (Figure 1), can at least be available to a swimmer on the edge of the pool, but even then consideration would need to be given about how to access the aid.

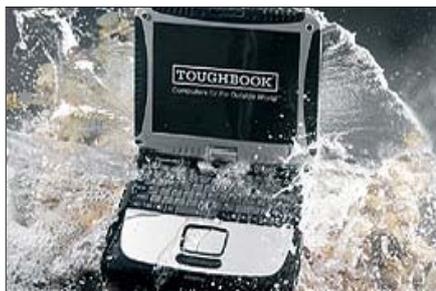


Figure 1 Toughbook waterproof laptop

Some of the resources you will need on the poolside in terms of AAC are objects of reference (objects which represent the activity, e.g. a small piece of sponge to indicate playing with the sponges), photographs, pictures and symbols – laminated for the last three options of course!

When using symbols, remember that individuals will use different systems, and that you will need to prepare appropriate resources in advance to make sure you have what you need, and that it is suitable and accessible for each swimmer.

When thinking about symbols, along with considering which symbol system/s to use, you will also need to think about the following:

- the colour of the background of the symbol;
- whether you will use black and white or colour symbols;
- whether you can laminate them with matt pouches, which do not reflect light so much (glare can be quite a problem in the swimming pool).

Once you've got all your symbols together, you'll need to think about how you're going to present them. There are certain practicalities to consider, as it is more challenging in water than on land to keep all of your resources organised.

Communication books are not very practical in the water (although they will be necessary on the poolside/in the changing room), but individual charts (laminated) can be great – especially as they will float. You don't want too many charts bobbing around, so a floating tray could be useful. An Etran frame is also a useful way of displaying symbols – try a small one, with handles, to make it more manageable in the water.

Whatever you consider using, you need to think about the following factors:

- Is it waterproof?
- Is it easily accessible?
- Do you need a spare pair of hands?
- How will a swimmer indicate on the charts?

- How does a swimmer indicate 'yes'/'no'?
- Are you giving enough time for the swimmer to confirm their choice/comment?

Now we need to reflect on the vocabulary choices we are making – think about the activities you're going to be doing, and also things that swimmers might want to say. Consider the different functions of communication (not just making choices in an activity). For example:

- Taking control
- Commenting
- Questioning
- Choosing
- Socialising

Wherever possible, discuss vocabulary choices with the swimmer and, where appropriate, with their parents/carers – they are bound to have ideas you haven't thought of. It is important to discuss and prepare resources in advance, but you'll want to keep adding to your resources over time.

A 'Feelings' chart is a very useful one to always have available. This gives opportunities to comment (e.g. "I'm enjoying this", "This is scary", "I'm cold"), but also gives opportunities to take control. Make sure you also have a 'something else' symbol on each chart, so that the swimmer can let you know that they're thinking of something that isn't on the chart.

We hope that this article has given you ideas of things you could try in the swimming pool environment, and has shown how many communication opportunities there are available which can be capitalised on. You are very welcome to contact us at any time if you'd like further ideas or information. Have a look at these websites for more thoughts on swimming with Halliwick, and on AAC:

- [www.halliwick.org.uk](http://www.halliwick.org.uk)
- [www.ace-centre.org.uk](http://www.ace-centre.org.uk)

Now go and make waves! \*

Ann Gresswell, *Teacher & Physiotherapist*  
Emilie Leeks, *Speech & Language Therapist*



#### UPCOMING EVENT

### 1Voice Family Winter Weekend

23rd-25th November 2007  
Blackpool

The theme of the next 1Voice Family Winter Weekend is 'Under the Water'.

There are places for 12 children using high-tech AAC who are aged 6-12, and their family.

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For an application form, contact [info@1voice.info](mailto:info@1voice.info) or phone Katie Clarke on 0845 330 7862

1 Voice is run by a team of families, role models and professionals in consultation with children to provide a network of information and support for children and families using communication aids.

For more information please contact:

1 Voice  
PO Box 559, Halifax HX1 2XL  
Tel: 0845 3307861  
Email: [info@1voice.info](mailto:info@1voice.info)  
[www.1voice.info](http://www.1voice.info)

# Establishing a Computer and Communication Class for People with Profound and Multiple Learning Disability

**JULIE WRIGHT & CATHERINE WILSON**

Lewisham Community Team for Adults with Learning Disabilities, Wavertree FHC, 57 Prince Alfred Road, Liverpool L15 5BG, UK  
Email: julie.wright@liverpoolpct.nhs.uk catherine.wilson@islingtonpct.nhs.uk

## BACKGROUND

### Lewisham Partnership

Our health team is commissioned by Lewisham Partnership who buy and monitor services for people with a learning disability in Lewisham. They also commission Residential and Supported Housing, Community Based Services - employment, education & leisure (Day Centres and Outreach), and Short term care (respite).

### Community Education Lewisham (CEL)

CEL is an adult education facility in the Borough of Lewisham. It offers daytime or evening courses at a variety of levels from entry level or experiential, to more advanced with formal qualifications on completion.

Courses may be vocational (childcare, computing, beauty therapies) or interest based (belly dancing, yoga, African cooking).

### Learning Support Unit

CEL also offer specific courses for people with Learning Disabilities, physical/sensory disabilities or mental health disabilities, overseen by the Learning Support Team. Learning Support currently offer over 20 courses for Adults with Learning Disabilities. Of these, three are designed specifically to cater for the needs of Adults with Profound and Multiple Learning Disabilities (PMLD).

### Computer Project for People with Learning Disabilities

This is a small team of tutors within the Learning Support unit, who have designed courses to teach Information and Communication Technology (ICT) specifically to Adults with Learning and Physical Disabilities.

This paper is based on the presentation at the CM2006 National Symposium. The presentation included demonstration of computer software, activities, video clips of students in action and a 'show-and-tell' of the materials we use. It has not been possible to duplicate such material in this written paper.

### FIRST STEPS ... OUR INSPIRATION

Several years ago there was an above average number of school leavers with PMLD and very high demand for daytime activity and support (Day Centre places, Outreach support and Education). CEL had many requests for classes for people with PMLD. At that time the Learning Support Unit offered a music class and a movement class, however demand for places greatly exceeded supply.

Around that time, coincidentally, Speech Therapy were supporting a client in a Day Centre who was attending the 'Literacy and Numeracy' computer class. This client had a severe physical disability and his learning and access

needs were much greater than the tutors had experienced.

Discussions around how to support this client led to further general discussions about computer technology, and how switches and specialist software could be used with a wider range of students with significant learning and physical disabilities.

The manager of the Learning Support Unit, speech and language therapists, tutors and some support workers contributed ideas about the feasibility and logistics of setting up a class specifically for students with PMLD. Discussions included funding implications and funding opportunities, equipment requirements, staffing and tutor training requirements, classroom space and layout, student selection and MDT support. It was agreed to develop a pilot project which resulted in the 'Communication Workshop' for students with high support needs being offered.

### CLASS SET UP

The class runs for two hours on a Thursday morning from 10am to 12pm. We use the main Learning Support computer suite which has 10 computers and a ceiling mounted projector. The class is supported directly by one tutor and a support worker / parent for each student. The Computer Project Manager

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and SLTs provide visiting support. The intensity of support provided by SLT is flexible upon need. In the initial pilot stages SLT attended nearly every session, this has now reduced to once or twice per term.

During the pilot phase of the class, enrolment was limited to four students, however, more recently we have been able to increase enrolment numbers, and also offer 'half sessions' where students may attend for one hour or less of the class. The two hour session comprises a mixture of one-to-one and group computer-based activities (see Figure 1 for an example).

**Hit-Miss-Maybe**

This is a group turn-taking activity (using the projector) and is pretty simple to develop if you know a bit about PowerPoint. We made a slide show of photos of popular music artists. Slide transitions were set so the photos automatically scrolled (we encouraged supporters to call out the names of the bands as the photos scrolled). The artist's music played whenever the photo was 'clicked' on. We set the switch to act as a 'click'. Whether the switch was accidental or intentional, the supporters watched closely for the student's reaction and decided if the song was a 'Hit, Miss or Maybe' and would reinforce the students reaction with cheers or boos, and all students were encouraged to join in.

Figure 1 Hit-Miss-Maybe

**WHO DOES WHAT?**

- Class Tutor - Lesson planning, leads the sessions, sets individual student goals, manages technical breakdowns (or reports these to IT support). The tutor is now more actively involved in developing her own resources and modifying programs.
- Speech Therapy - has been involved in recruiting tutors and the coordinator of the Computer Project, demonstrating new software & how to introduce these to individual students, tutor training (signing, technical, goal planning), resource development, nominating students.
- Support Workers - Provide information & suggestions about students'

interests, record daily progress, motivate and encourage students.

**STUDENT SELECTION**

In the pilot phase SLTs nominated people from the SLT caseload and initially all students had severe or profound learning disability with pre or very early intentional communication skills. Most had sensory impairments and a severe physical disability. More recently we've broadened our definition of 'high support needs' to include students with challenging behaviour and autism.

**INDIVIDUAL STUDENT GOAL SETTING**

This continues to be one of the biggest challenges for tutors. There are pressures from Adult Education to produce goals for each student from week one, however, we continue to reinforce to tutors and their managers that students with PMLD need an extended assessment phase before setting specific goals. We have supported tutors to develop a core of 'first term goals' that are fairly general, for example: '*orientation to environment*', '*decreasing anxiety through familiarity*', '*having opportunities to experiment with a range of switches/access options*'.

**Resource Development - Example Goals Document**

Using the Adult Pre-entry Curriculum Framework (Milestones 1-3) as a guide we produced an example set of goals adapted to suit our class (see Figure 2 for an example). This helps tutors to set more specific individual goals for each student.

Curriculum Element:  
**Contexts for Communication and Numeracy**  
Milestone 1a-1b

- Shows emerging awareness of activities (or experiences or people) by showing more consistent responses.

HOW: The tutor/support worker will reinforce any communication attempts made by the student (laughing, smiling, vocalising) by repeating these back to the student to encourage their involvement and encourage continued participation. Tutor/supporter should respond clearly to every reaction from a learner by mirroring it or commenting on it, or by extending the activity if the reaction seems favourable.

Figure 2 An 'Example Goal'

**Resource Development - Daily Summary Form**

This simple single page summary form asks the support worker to briefly comment on which activities/programs the student tried that day, what they seemed to like or dislike, any distractions, how the student reacted at break-time and ideas for the next session or ideas about student's interests outside of the computer class.

**Resource Development - Software Specific Record Forms**

For each software program we use we developed a detailed record form. This includes each setting and variable (number of stimuli on the screen, background colours, scanning speed etc). This allows for detailed assessment of how the student is progressing on specific software. These are not filled in every week, but provide good baseline information for subsequent reviews.

**Resource Development - 'Switch Rules'**

These are posters for the classroom and also individual copies for each student portfolio and include things such as 'What to say instead of "hit the switch"', positioning tips and using switch cap labels.

**Resource Development - Software Guides**

'Easy guides' for support workers were designed to use in class (see Figure 3). There is one for each piece of software. They contain instructions on how to change settings and example goals for that specific software. They are colourful and engaging, including a lot of 'screen captures' and provide an easier

**Drumkit**  
Information for supporters

- This program allows students to play music using up to four switches.
- Students can play drums, instruments or "motifs" which accompany background music. They can also turn background tunes on and off and control their tempo.
- Animated graphics accompany the music at every stage.

**The main screen**

- There are two interfaces for the main screen - youngist interface and older interface. You can choose which one you want by selecting 'Setup' from the Options menu and clicking on 'oldist' in the 'young interface' box.



**Controls:**

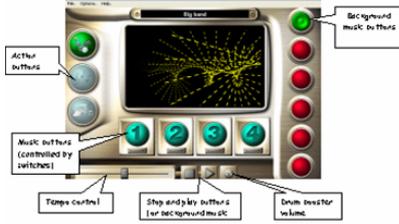


Figure 3 Software Guide Example

to access option that the traditional user guide supplied by the manufacturer.

## FINANCES

### Resources Available Prior to Pilot

Lewisham Partnership commission a fixed amount of money to the Computer Project (via Community Education Lewisham) which is currently used to fund a part-time coordinator and part-time technical support. These resources were in place prior to the pilot and contributed to supporting the project.

Support worker time was funded out of the student's existing packages of care. Some students attended with Day Centre staff or Outreach support workers. Some students did not have support workers and were accompanied by a family member.

Support from the MDT team included regular input from SLT and occasional consultative visits from occupational therapy, visual impairment worker, and physiotherapy. These resources were provided via the existing therapy teams.

A full time manager of the Learning Support Unit was already in post, as were course tutors for other computer project classes. Tutors were recruited to the Pilot project and paid via Learning and Skills Council budgets.

### New Funding

A limited amount of funding for transport was granted for specific students. Most students were able to access existing transport systems.

The Manager of the Learning Support Unit accessed Learning and Skills Council money under the 'Additional Learning Support' scheme. This money was used to purchase equipment specific to individual student needs.

## DISCUSSION

There are several points of discussion:

- We often hear that students need to show progression' to 'please funders' and to maintain their place on the course. However we continue to remind education staff that 'horizontal progression' (using same skill in a broader range of activities or settings, or in a different way) in this population is achievable.
- There is a misinterpretation by some people who think that this class will be the 'key' to 'unlock' the students, i.e. start with one switch - student progresses to choice making with 2 switches - student becomes intentional symbolic communicator using grids. We continue to educate education staff, families and support workers that technology alone does not provide the 'key' for the com-

munication of these students, but that it acts as a stimulus, an interesting multi-sensory incentive, and a tool to broaden the preliminary skills required for communication. We remind tutors not to set unrealistic goals or expectations for families and carers.

- Progression made outside of the classroom is hard to quantify. Students have usually also had access to simple technology (i.e. BigMacks or Powerlinks) in their day centres or homes but it is difficult for us to prove transfer of a skill as we only see these students in the classroom setting. There was no scope within the pilot to assess progression in skills outside of our setting.

## OUTCOMES

- It has been reported to us that the support and training we have provided tutors has been carried over into their other 'mainstream' Learning Disability classes. It has given tutors ideas about other activities, and goal setting for a larger number of students than we had direct access to through the pilot.

- We have had several requests for SLT to develop similar models and programs in Day Centres.

- There has been home carry-over for a number of students. The class has provided enthusiasm and interest in parents and workers to 'dust off' the equipment they had accumulated at home and continue activities. Some of the parents have enquired about the equipment and software we use with a view to purchasing their own.

- There has been preliminary discussion with a tutor who also runs a class in the local public library. It is felt that the resources developed and increased confidence of tutors, may mean that it would be possible to investigate developing computer access for people with High Support Needs in a public venue.

- Although the direct support provided by SLT was intensive during the pilot stages of the project, we now offer a consultative model of support.

- The class is no longer a 'pilot'. Intake of students is no longer monitored by SLT as staff at CEL have the ability to screen and direct students to this class appropriately, and recommend other classes for students enquiring who do not fit the criteria of 'high support needs'.

- It has been extremely rewarding to know that what started as a "wouldn't it be nice..." chat over a cup of tea does have the capacity to turn into reality, and that this was made possible by the dedi-

cation and drive of many people from a variety of agencies who all shared the belief that people with severe learning disabilities were entitled to more opportunities. \*

Julie Wright & Catherine Wilson  
Speech & Language Therapists

## NOTE

The authors no longer work for the Lewisham Adult Learning Disability Team. However, they can be contacted at [julie.wright@liverpoolpct.nhs.uk](mailto:julie.wright@liverpoolpct.nhs.uk) and [catherine.wilson@islingtonpct.nhs.uk](mailto:catherine.wilson@islingtonpct.nhs.uk)

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- Department for Education and Skills (2002) Adult Pre-entry Curriculum Framework.
- Department for Education and Skills (2002) Access for All - Guidance on Making the Adult Literacy and Numeracy Core Curricula Accessible.

### Andrea Wallbank-Scales Needs Your Support!



### Inca Trek Challenge in aid of Communication Matters

Andrea has been training hard for her challenge to walk the Inca Trail to raise funds for Communication Matters. Andrea writes:

"I want to help give children with physical difficulties the opportunity to communicate more effectively with their family and friends. I love to chat with friends and catch up on the latest gossip, so I cannot imagine not being able to communicate! So, how wonderful for me to be have this fantastic opportunity to help raise money for these children!"

It's tough crossing the Andes at over 13,000 feet, but it's easy for you to make a donation online, however small or large - simply visit:

[www.communicationmatters.org.uk/andrea](http://www.communicationmatters.org.uk/andrea)

Good luck Andrea!

# Supporting Children's Access to the Curriculum in Mainstream Schools Using Low-tech Communication Boards

**AMANDA BOUSAKI**

Early Years Special Needs, Speech and Language Therapy Dept, Milton Keynes Primary Care Trust, UK  
Email: amanda.bousaki@mkpct.nhs.uk

## INTRODUCTION

At the turn of the Millennium, Milton Keynes shared the same funding frustrations as many other areas of the country for the provision of communication aids. 2002 was our 'Year of Hope' when BECTa launched the 'Communication Aids Project' (CAP) and Milton Keynes embraced the opportunity to form a multidisciplinary local CAP team within existing resources.

The team comprised of an ICT specialist advisory teacher, occupational therapist (OT) and speech and language therapist (SLT).

As part of the detailed communication assessment for voice-output communication aids (VOCAs), it was considered good practice to initially introduce the child to low-tech communication support. This provided us with more detailed information for the VOCA, on such issues as the number of squares needed per overlay, the most appropriate symbolic representation to use (photo, coloured symbol, black & white symbol) and most importantly, it gave us the opportunity to introduce children to the meaningful use of symbols across the school curriculum and to support staff in developing their skills with a child using Augmentative and Alternative Communication (AAC).

All the low-tech resources were initially made up by qualified SLTs which proved to be a time consuming and expensive process. In order to ensure cost effectiveness, our Director of Service funded an AAC technician post. This was initially part-time but quickly became full-time and expanded across the adult and paediatric SLT services. This post was undoubtedly one of the most valuable contributions to the development of low-tech AAC support in mainstream schools across Milton Keynes.

## ROLE OF THE AAC TECHNICIAN

The technician's role was initially narrow in its remit and consisted of:

- Producing a range of low-tech support materials (boards, books, PECS, symbol timetables, photographs to accompany Objects of Reference systems and overlays for simple VOCAs).
- Researching vocabulary and sourcing photographs/pictures (on the internet and taking digital photos).
- Training staff/parents in simple VOCA programming.
- Reviewing vocabulary needs of an individual child on a termly basis.
- Maintenance of low-tech equipment.

- Logging and tracking equipment loans.

- Providing administrative support to SLTs in the area of AAC (PowerPoint presentations for training, organising and producing training materials).

As the AAC technician became more competent and knowledgeable in the area of AAC, the role expanded to include:

- Working alongside the child / Learning Support Assistant (LSA) in the classroom. The purpose of this was to familiarise the child with new symbol vocabulary and model useful communication strategies for the LSA to use with the child.
- On-going assessment of vocabulary need and programming vocabulary during the child's session.
- Introducing communication books to parents (how to use with the child, do's and don'ts, programming advice sheets).
- Developing a symbol-based library of resources for the Foundation and Key Stage 1 curriculum topics.

This extended role has enabled the technician to work closely alongside the qualified SLT to provide a more intensive and responsive service.

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## PRACTICAL CONSIDERATIONS WHEN INTRODUCING AAC INTO MAINSTREAM SCHOOLS

Milton Keynes has a strong inclusion ethos and this has led to an increase in the number of children with severe communication difficulties educated in mainstream settings. For the majority of classroom staff this has been their first experience of children with such needs.

For seven years prior to taking up my post at Milton Keynes, I worked in a school for children with severe learning difficulties. In this isolated setting, the implementation of AAC support was core to the curriculum and provided the pupil with ways to both communicate and demonstrate learning. In my naivety, I assumed that exposure to symbols in the classroom and tailor made symbol materials could be introduced and implemented with the same ease. I very soon discovered that my simplistic approach was not working!

This paper is based on my reflections from the last four years, armed with hindsight, as I have attempted to develop AAC services in Milton Keynes mainstream schools.

### 1. PREPARING FOR AN EXPEDITION INTO THE UNKNOWN

For many classroom staff, teaching and working with a child with severe communication difficulties is a new experience. It is important to listen to their anxieties regarding the introduction of visual support materials and recognise that this is an additional skill they need to develop. The following questions were frequently asked at initial meetings to discuss the need for AAC and need honest, realistic responses:

#### a. How much planning time is needed?

There are time implications here but a planning process has been developed to help reduce the teacher's time and this is generally reassuring.

#### b. How can it be implemented into the lessons?

This requires planning and preparation but low-tech boards are initially introduced into specific literacy and numeracy tasks. The teacher will already have set targets in these areas and the symbol materials will support these targets.

#### c. Does the child need 1:1 support?

Yes, not only to help the child develop competent communication, but also to ensure the LSA has adequate time to organise all relevant materials needed for a particular lesson.

#### d. Who makes up the materials?

The AAC technician is initially responsible for providing materials and training in the use of symbol software packages, if the school purchases their own software.

#### e. How much support will we receive from SLT?

It is vital to be realistic to this question. In Milton Keynes, we initially provide a high level of input to ensure positive outcomes are achieved i.e. weekly visits and telephone contact for the first term.

#### f. I suppose it's the responsibility of the LSA?

Although the LSA will have a major role in developing the use of AAC in the classroom, the teacher needs to share this responsibility to ensure it is used meaningfully within the whole class context.

#### g. Who will pay for the teacher/LSA cover when they need to attend training?

School funding varies, and consultation with the Headteacher is required to answer this question.

*Roles, responsibilities and procedures* were a recurring theme of the initial discussions which took place between the SLT Department and the schools. In response to this, an AAC policy was gradually drafted by health and education to give clear guidelines on the nature of AAC, funding pathways and the multi-disciplinary team roles. In hindsight, a working document would have been beneficial from the initial stage of the project. It would have formalised the agreement between Health and Education and demonstrated the long-term commitment to AAC within the mainstream settings. In practice, classroom staff would then have an awareness and understanding of the importance of developing a child's overall communication skills, as opposed to placing emphasis on the development of speech.

### 2. LET'S BE REALISTIC!

- The pupil will not immediately, spontaneously use the symbol support in their communication - It needs to be modelled / shared by an adult with some specific vocabulary teaching.

- Vocabulary is continuously evolving/developing more particularly in the first 2 terms, so there will be frustrating times when vocabulary is needed but not available. We need to be prepared to improvise with other visual resources / teaching aids.

- A symbol book/board will not instantly solve a pupil's communication difficulties, particularly if semantic/pragmatic difficulties are present.

### 3. A LESSON IN CHANGE MANAGEMENT

Initial attempts to introduce symbol support using core / social communication

vocabulary received negative feedback from classroom staff. It was difficult to remember to use it all day, the vocabulary was limited, the remit was too broad and so quite overwhelming. This would be a natural approach for an SLT but did not work practically within the mainstream classroom. There was a lesson to be learnt here: the reality of changing other people's behaviour is to start within their comfort zone then gradually move on. Teachers and learning support assistants requested more structure, using specific tasks. We therefore linked into high priority areas i.e., literacy and numeracy, thus ensuring SLT targets were included in IEPs.

When introducing low-tech support, we initially focussed upon:

*Literacy* - symbol boards for reading books used within the classroom. Emphasis was not on written word content of the book, but discussion of the pictures and retelling the story.

Symbol boards for big books to enable the child to answer simple questions in a group situation.

*Numeracy* - symbol boards for colour, shape and everyday adjectives (including maths concepts long/short, big/small, more/less).

Once staff felt confident implementing specific objectives for using the above, boards were introduced for other curriculum areas which had themed termly topics (i.e. geography, history, science, music and design technology).

### 4. BE PREPARED

Forward planning to create and provide appropriate and timely boards is essential. This was initially very haphazard and the team quickly realised that consistency and reliability were vital. How could we expect class staff to implement a strategy without the appropriate support materials?

At the end of the first year of the project we formalised a planning process which we continue to use to date.

#### The Planning Process

- School provides the SLT department with their yearly topic timetable. (Schools do not necessarily cover the topics in the same termly order.)

- School provides the SLT department with detailed half-termly plans, usually at least two weeks before that particular half term begins.

- SLT minimise planning time and vocabulary sourcing by using a range of educational web sites to produce 'skeleton' boards.

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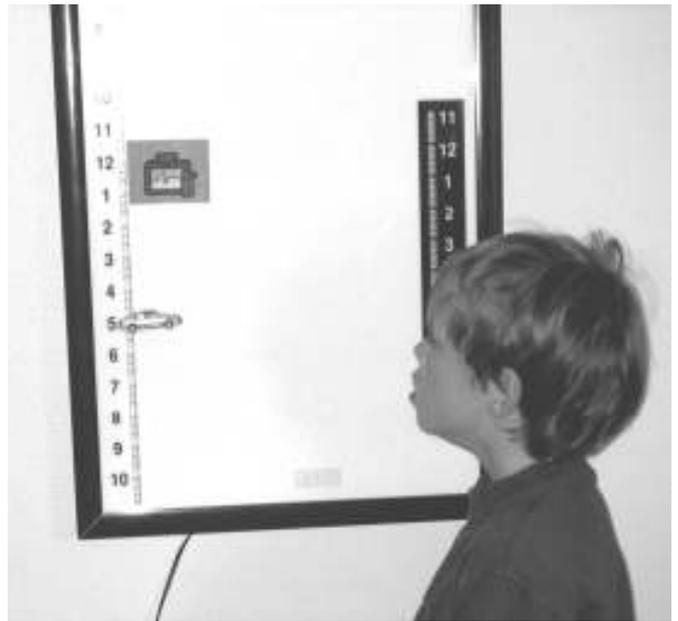


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- Meet with teacher / LSA one week before the end of half-term to refine relevant vocabulary and identify communication aims.
- Extract vocabulary from reference/story books used in the lessons.
- Technician takes any digital photos of places/resources/play equipment that need to be included on the boards.
- Therapist then organises and formats vocabulary on the A4 overlays and gives to the technician to produce on Boardmaker, laminate and save on computer.
- LSA gives feedback on boards used in the previous half-term. This information is then used to review the vocabulary content and layout of the boards.
- The reviewed boards are then saved in topic / year group on a computer 'library'. We have now built up library resources for various primary school reading book schemes, popular stories and curriculum subjects for numeracy, literacy, geography, history, RE, DT and music. We also have a Milton Keynes 'locality' library which has photographs of local landmarks, shops, entertainment venues and general amenities.

#### 5. LET'S GET IT OUT OF THE CUPBOARD!

We have learnt that insufficient training and modelling in the use of the boards only has one outcome - the boards stay in a folder in the cupboard.

#### SUCCESSFUL OUTCOMES

Successful outcomes depend upon:

- Providing intensive support when AAC is initially introduced in the classroom. (Modelling use of boards in the classroom, pre-teaching symbol vocabulary prior to the lesson, identifying when the teacher could involve the pupil using a board, promote use of boards with peers.)
- Shift the emphasis from speech to 'communication'. It is often difficult for staff to realise that the child they are working with may never achieve functional use of speech as their primary means of communication. AAC is supporting the development of a child's expressive abilities and is therefore a long term target. Having an AAC policy included in the local educational authority policies, gives value to augmentative communication forms and makes it acceptable to classroom staff.
- Setting small targets for specific lessons then *gradually* building up the number of boards used across the curriculum.
- Jointly agreeing realistic aims which are recorded on 'Joint Action Plans'. Joint

Action Plans are widely used in Milton Keynes and were designed by the mainstream SLT schools team in collaboration with education. Communication needs are reviewed jointly with teachers / parents and SLT outlining 'aims and recommendations' and 'action required to meet aims and recommendations'. This ensures that all parties have a clear written summary of their responsibilities.

- Providing telephone/texting support so that queries can be answered and actioned quickly.
- Providing Boardmaker training and basic IT support for troubleshooting.
- Joint working with the advisory ICT teacher to promote the use of Clicker 4 and Clicker 5 programs. Clicker and the symbol boards both use Picture Communication Symbols (PCS) and therefore provide additional, and complementary opportunities to use symbols meaningfully, learn new symbol vocabulary and practise symbol combining.
- Early OT involvement to resolve any significant accessing issues.
- Continual assessment of vocabulary need, and ensuring that this is provided.

#### SUMMARY

The AAC team in Milton Keynes has now supported pupils through Key Stage 1 using low-tech support as the primary method of developing communication, or use alongside a VOCA. The Communication Aid Project has had a significant impact on the development of AAC services in Milton Keynes, providing a driving force to create a multidisciplinary approach to both high-tech and low-tech AAC provision. We now have draft AAC competencies, a draft AAC policy, agreed funding pathways for pre-school and school-aged children, an extensive symbol-board library and a greater understanding of how SLTs and education staff can work together to develop the aided communication skills of children with severe and complex speech and language difficulties.

The last four years have provided me with a wealth of information and experience which I will continue to evaluate for the future. From the past, I am absolutely sure of one factor; we would not have been able to provide such timely, high quality resources without the AAC technician post. This support role is essential and we were fortunate enough to have a Director of Service willing to fund this innovative post, and dedicated, creative people to work within it. \*

Amanda Bousaki  
Speech and Language Therapist

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On one of the wettest and wildest days in the history of British weather the valiant ACE Centre Venturers (including representatives from Possum-SRS and Smartbox) finished 5th out of 30 dragon boat teams, making it very unexpectedly through to the final! In scaling this incredible height, they beat the local Royal Air Force team!

The courageous crew of minnows was there to raise funds for the ACE Centre. Made up of a motley bunch of mixed ability, mixed aged, mixed gender, mixed height, and mixed fitness 'rowers', none of them had ever sat in a dragon boat before! It was simply a demonstration of David triumphing over Goliath once again, of excellent spirit and camaraderie, and, of course, magnificent leadership from Captain Andrew Lysley with his quick strategist brain, but appointed on the grounds that he was the most likely to remain sober throughout the day!

In addition to thrashing the Royal Air Force, the ACE team was within 3/16th of a second of the Abingdon Fitness and Body Building Centre (who capsized after the finishing line through sheer exhaustion and fright at being run so close by a bunch of skinny weedlings from ACE) and only 1.6 seconds behind the overall winner of the final!



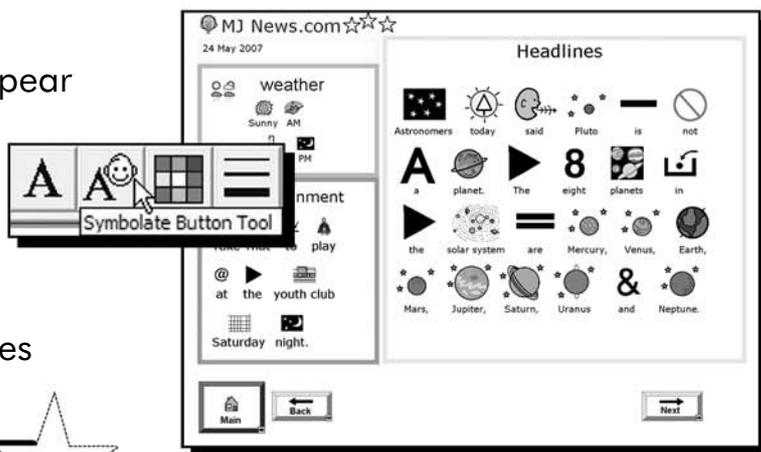
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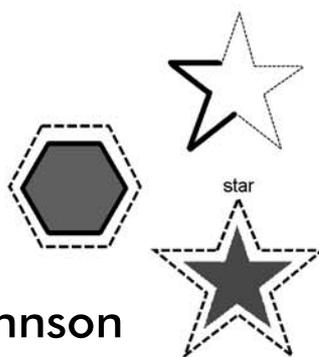
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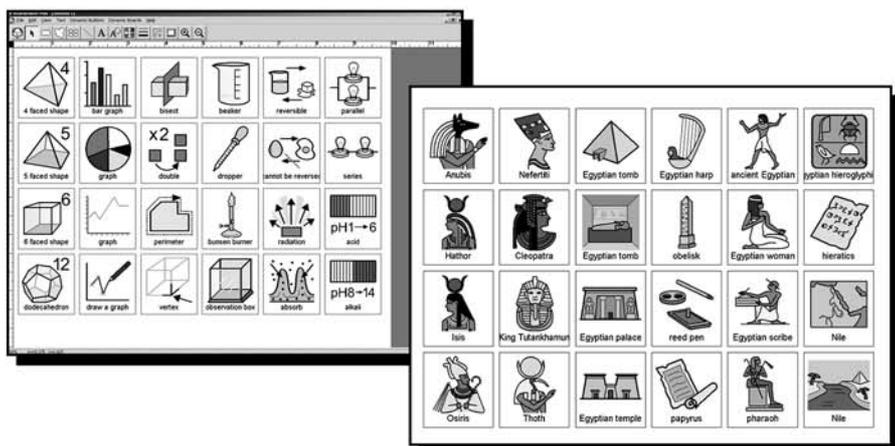
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# The Development of the Use of Signalong in an Inclusive Borough: The Newham Experience

**ROSIE DICKENS & JANINE WALTERS**

Tunmarsh Centre, Tunmarsh Lane, London E13 9NB, UK

Email: [rosie.dickens@newham.gov.uk](mailto:rosie.dickens@newham.gov.uk) [janine.walters@newham.gov.uk](mailto:janine.walters@newham.gov.uk)

**We are advisory teachers working for** a centrally based Learning Support Service in the London Borough of Newham. Newham is a local authority in East London with a long history of inclusion. It is a large authority where the Learning Support Service receives many requests for support and training covering a variety of educational topics and needs. There are pupils with a range of complex communication needs in mainstream schools and many of these children need a high level of support.

We have been Signalong tutors for about 6 years and we are part of a tutor team in the authority, where Signalong is one aspect of our work as advisory teachers. In this article we want to show the development of Signalong in our local authority. This will include the types of training offered, the organisation of the tutor team and how it has been developed, its sustainability and future developments.

Newham adopted Signalong in the late 1990s as the preferred sign supporting system, in order to develop and maintain a consistent approach to communication strategies. The Signalong Group is a nationally registered charity based in Kent (see below for contact details). The local authority views Signalong as a priority and, as part of its inclusion strategy, has made a philosophical and significant initial fi-

nancial investment, as well as providing ongoing funding. Strong links have been maintained over the years between the authority and The Signalong Group. A member of the Learning Support Services has recently become a Trustee.

Signalong training in the local authority extends across all age ranges, in collaboration with various partners across the borough. The bulk of our training is centrally based, but we also train in schools, nurseries, colleges and other settings. The course participants include teachers, support staff, speech and language therapists, physiotherapists, early start practitioners and parents and carers.

Joint training is strongly encouraged; for example between professionals within the same setting, such as teacher and support assistant. We offer a range of courses which include short 'Raising Awareness' sessions, Introductory sessions, Foundation Courses, a six session Parent and Carers course, and accredited courses linked with the OCN (Open College Network). We are as flexible as possible and adapt our training according to the various needs and requests.

There is a rolling programme of Signalong training throughout the borough where these courses are offered on a regular basis. As part of the newly qualified teacher training programme a Signalong Raising Awareness course is

included as part of the induction, similarly in the two graduate training programmes. This ensures that all newly qualified teachers to the authority are aware of Signalong and its philosophy.

The Newham tutor team has developed classroom based Signalong. Signing is modelled to whole classes and relevant staff. As tutors we feel that classroom based signing shows how Signalong can be incorporated into school routines and can be used to make the curriculum more accessible. Through this classroom based training we aim to create a signing environment. Here individual pupils who need to use signing are able to access a range of social interactions with peers and adults. Ofsted Inspectors have observed two sessions in primary and secondary schools during inspections and have praised them.

A crucial part of the success of Signalong in Newham is due to the organisation of the tutor team. There are 20 registered tutors. Of these, ten are based at the Learning Support Centre. Others are in schools and other settings. There are links with all tutors through termly meetings.

Signalong is co-ordinated by Rosie Dickens who manages requests for training, keeps a data base of training in the authority, organises tutors' meetings and manages a small budget, which enables us to develop training and resources. She

also maintains links with the Signalong group by attending the tutor meetings held four times a year in Kent.

Tutor development is an important part of our role. As well as maintaining our tutor registration and attending development days run by The Signalong Group, we have three tutor days per year where we share ideas, discuss future training, develop resources and evaluate our training. Over the last few years we have not only focused on classroom based Signalong, but also on the needs of various settings and have developed the appropriate resources. These have a two-fold impact: to use in schools as part of our advisory work and to use in training. A DVD resource, which shows a range of training and its impact, is currently being developed.

Another crucial part of sustaining our work is to maintain tutor numbers. Rosie has trained as a senior tutor, which means she is able to train new tutors both in and out of the borough.

In order to support schools and other settings with regard to sustaining Signalong we have developed several strategies. One of these strategies is to encourage staff to identify a range of key signs for the routines or important times of the day, and then purchase copies of these signs from The Signalong Group. These signs are included in the training. Another strategy is for tutors to organise a follow up visit to the school or setting to monitor the longer term effects of the training. This is through a questionnaire where the tutor and a designated member of staff talk about the impact of the Signalong training they received, and possible ways forward. It also provides an opportunity to discuss the progress of the pupils who require Signalong to support their communication and learning.

Future projects include: a new course for Parents and Carers where topic vocabulary is taught; a course for Early Years practitioners using songs and sto-

ries; resource packs for secondary pupils, including poems and a Shakespeare play: development of a tool for evaluating the impact of Parent and Carer training.

We recognise the difficulties schools and settings may face, for example with releasing staff to attend courses or with staff retention. As tutors we try to be flexible and explore the different ways to introduce sign and adapt the existing resources. Constant analysis, monitoring and evaluation of our work enable us to plan accordingly. The systems we have in place help to sustain the success of Signalong within the authority.

\*

Rosie Dickens, *Specialist Advisory Teacher*  
Janine Walter, *Specialist Advisory Teacher*

For further information regarding Signalong, contact: The Signalong Group, Stratford House, Waterside Court, Neptune Way, Frindsbury, Rochester, Kent ME2 4NZ, UK. Tel: 0870 7743752 [www.signalong.org.uk](http://www.signalong.org.uk)



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# Communicate with Confidence

## JANET SCOTT

SCTCI, WESTMARC, Southern General Hospital, 1345 Govan Road, Glasgow G51 4TF, UK  
Email: janet.scott@sgh.scot.nhs.uk

I was invited to attend the Spring conference of the British Society for Disability and Oral Health (BSDH) on behalf of Communication Matters. The title of the day and the outline programme were intriguing and I went along, not quite knowing what to expect. My first contact with this group of dental practitioners, oral health promoters, dental nurses, etc. was over dinner at the Baltic Centre in Newcastle – a wonderful building with fantastic views over the redeveloped water front and the Millennium Bridge – and what a friendly and informed bunch of people I met. From conversations over dinner I was beginning to realise how much our two organisations had in common. The strap line of the BSDH ‘Unlocking barriers to care’ should have given me a clue...but I am slow on the uptake!

The conference was held in the Life Centre and was attended by 105 delegates. There was also an exhibition, with Communicate (the AAC assessment service based in Newcastle) attracting a lot of interest. The theme of *communicating with confidence* was present in every presentation – from the opening address by David Barker, Director of Adult Services with the Percy Hedley Foundation, who reminded us all that it can take confidence to say “I’m sorry I don’t understand you – can you say that again”, and the importance of *never* pretending to understand.

Craig Duerden and Russell Bowman followed up on this theme with information and advice for those working in the dental field (and for all of us) about the ‘DOs’ and ‘DON’Ts’ when dealing with clients who have communication and other disabilities. Russell presented his paper using a Lightwriter and PowerPoint to supplement his own speech, which is now very difficult to understand following a head injury. Tessa Padden gave an inspirational presentation from her perspective as a deaf woman. She reminded us that com-

munication is also about cultural awareness; society is full of multi-cultural diversity of which the deaf community is part – as are, I would suggest, people who use AAC and other forms of communication. Several of the speakers gave real, practical examples of how they had adapted their practice to take into account the communication needs of their patients. Many of the people I had spoken to over dinner were already aware of the need to provide visual supports for some of their patients in the form of photographs, simple line drawings, etc. – some had already started to do this either on their own or in combination with their local speech and language therapy department. So they were a very receptive audience for Joan Murphy’s discussion of her research project *Consultation Between GPs and People with a Communication Disability*. Joan also discussed Talking Mats™ and how this type of approach could be used to help people describe their anxieties and give consent for dental procedures, oral health care, etc. Pamela Steele, a Senior Dental Officer in Northern Ireland, developed this theme in her interesting presentation outlining how her team have developed a very sensitive and person centred approach to ‘going to the dentist’ for people with a learning disability. Pamela had already started to make up personalised photo records for people, with pictures of the hospital, staff, equipment, etc. to allow patients to become familiar with the procedure before their appointment and also to act as a record of their visit – she had even gone as far as purchasing a digital photo printer and small photo albums to give to patients. Interestingly, the initiative for this work came from the dental service and not speech and language therapy – although now Pamela is in discussion with the local SLT service to develop the photo records.

I am very grateful to the BDSH for inviting me to attend the conference. Personally I feel as if I benefited greatly – I met some very committed and lovely people, I was able to listen first hand to their stories. For me, it reinforced the importance of thinking outside of the immediate AAC box. It was a timely reminder of Pam Enderby’s keynote presentation at the CM02 National Symposium when she stressed the need to look outside of our immediate contacts if we are to make any real difference to the lives of people who use (or perhaps even more importantly) could use AAC. I would urge you to make contact with your local community dental service – they will make you welcome, and – I am sure – would be happy to work with you to make their services more accessible to people who use AAC. \*

Janet Scott, Speech & Language Therapist

## ABOUT THE BRITISH SOCIETY FOR DISABILITY AND ORAL HEALTH

The Society exists to:

- promote the oral health of disabled people of all ages;
- promote links with organisations representing disabled people;
- consult with disability groups to identify their needs and demands;
- study the barriers relating to the provision of oral health care for disabled people;
- develop Undergraduate and Postgraduate teaching in the subject;
- encourage research in the field of oral health for disabled people.

Members include those with a UK dental or medical qualification, Dental Hygienists, Dental Therapists, Dental Nurses and members of the parodontal and paramedical professions who have a special interest in the care of people with disabilities.

For more information about the Society and to find a Salaried Primary Care Dental Service/Community Dental Service near you, go to [www.bsdh.org.uk](http://www.bsdh.org.uk)

## JOINING COMMUNICATION MATTERS & ISAAC

### What is Communication Matters?

**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.

**Our Vision:** Communication Matters' vision is a world where speech, language and communication difficulties are not barriers to opportunity and fulfilment.

**Our Mission:** Communication Matters is all about enabling people to communicate. We value and promote the individual's right to participate in all aspects of life by using their most appropriate means of communication to express their thoughts, feelings, needs and desires.

### 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 can also access the member's area of the ISAAC website and, if you join early in the year, you will receive a 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 14 national chapters in Australia, Canada, Denmark, Finland, French speaking countries, German speaking countries, Ireland, Israel, Italy, Netherlands-Flanders, Norway, 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:

Tel: 0845 456 211

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

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## Clearer Speech

### Determining the Prognosis for Children's Intelligibility

10 October 2007, London

Increased intelligibility is often a stated goal for children with severe communication impairments, and is frequently the focus of parents' questions and anxieties. Determining the natural progression of improved intelligibility across the wide number of different conditions giving rise to poor speech clarity is difficult enough, establishing the role of speech and language therapy / intervention in enhancing the rate of any natural, developmental changes even more so.

This study day will be useful to speech and language therapists working with children who have intelligibility difficulties as part of their communication impairments. The objective assessment of speech intelligibility for intervention plans, monitoring and evaluation continues to present a challenge to speech and language therapists working with this group of children. The day will bring together a number of presenters to examine the evidence base for the role of speech therapy intervention for some of the groups of children for whom reduced speech intelligibility is a known problem. There will be opportunity in the afternoon for focused discussion to inform best clinical practice, and to discuss measures and outcomes for speech intelligibility.

The presenters will be: Dr Lindsay Pennington, University of Newcastle; Dr Debbie Sell, Institute of Child Health; and Pam Williams, Nuffield Hearing and Speech Centre.

For more information or to download booking form, visit: [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk) Tel: 0845 456 8211

Organised by



and

The Augmentative Communication Team, The Wolfson Centre

### ISAAC INTERNATIONAL AAC AWARENESS MONTH

All ISAAC Chapters worldwide have been asked to raise awareness of AAC in October 2007. After considerable discussion by the Trustees of Communication Matters, it was felt that in the UK this could best be achieved this year by asking each Associate Member of Communication Matters to carry out an activity of their choice at a local level. The size of event is not important, the aim is to increase overall awareness of what AAC is and, if possible, the needs of people who use AAC.

For instance, if each individual were to make a presentation to a group who had little or limited knowledge of AAC then awareness would rise phenomenally. This could be to a group of work colleagues, the local Women's Institute, the Lions, etc. To support this we have available 'The Power of Communication' DVD and seven downloadable PowerPoint presentations about AAC that are based on the information in the 'Focus on' leaflet series. Another suggestion might be for those who work in schools to set aside a day during October when activities could be focused on communication using AAC.

The possibilities are endless - the choice of activity is up to you. All we ask is that you mention both ISAAC and Communication Matters and tell us what you are up to so we can publicise your initiative on our website. For more details visit: [www.communicationmatters.org.uk/awarenessmonth](http://www.communicationmatters.org.uk/awarenessmonth)

*Working Party for 2008* - we are setting up a working party to organise the 2008 AAC Awareness Month, when it will also be ISAAC's 25th birthday. Please let us know if you wish to become a member of the working party - Tel: 0845 456 8211 or Email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

We look forward to hearing from you!



isaac

CELEBRATING INTERNATIONAL AUGMENTATIVE COMMUNICATION MONTH



## TRUSTEES' NEWS

### A MESSAGE FROM THE CHAIR OF COMMUNICATION MATTERS

Hello again!

This is my last time of writing this column as Chair of Communication Matters. I feel very privileged to have been able to hold this position and am grateful for the trust you have placed in me. In some ways it feels like a very long time (and I am really looking forward to coming along to next year's conference as an "ordinary" punter) – but in other ways it does not seem long at all. A lot has happened over the past 8 years – we have seen membership rise...and fall a bit in the past couple of years (probably due to a number of factors including the end of CAP, the re-organisation of the NHS and children's services, etc.); we have seen Communication Matters' finances peak, fall and begin to rise again to a more viable situation; we have seen the publication – and the success – of the yellow *Focus On* leaflets and the *Power of Communication* DVD; we have looked in detail at how we organize ourselves and have re-written our governing documents to take account of changes that have happened since we were formed in 1985; we continue to publish an informative and readable Journal and to develop our web based resources and information; we continue to run a successful conference each year and to host a number of smaller, regional study days. Last year we celebrated 21 years of Communication Matters. But over all this time the basic ethos of the organisation has remained strong and true, and none of this would have happened had it not been for your ongoing support and enthusiasm – and for the hard working teams of Trustees and other office bearers, especially Patrick Poon and Sally Millar.

This is an exciting time for Communication Matters – there will be a new and keen Board of Trustees, led very ably by Liz Moulam assisted by Toby Hewson. I feel very excited that Communication Matters is going to have a parent of a young person using AAC as its Chair – this is a first for us (but by no means a first amongst some of the other ISAAC chapters). Liz is taking on this position with a lot of personal experience in terms of supporting her daughter, and she has just as many other qualities that will make her a brilliant Chair of Communication Matters. Her professional life in the commercial sector and marketing fields will be an asset to this organisation – she has been great at keeping us all to task and on schedule throughout our recent governance review. She has lots of exciting and imaginative ideas and she is keen to see Communication Matters continue to grow and develop to meet the needs of all its stakeholders. Toby is in an ideal position to support Liz in her new role and to take on the responsibility for some of the activities of the organisation that have specific relevance to people who use AAC.

The CM2007 National 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.

The Trustees have a number of exciting new ideas to discuss with you during the conference in September and at the Annual Meeting. However in the meantime I would urge you to read the next section about changes to the governance of Communication Matters, and to download the proposed new constitution and Best Practice documents. There will be an opportunity to discuss this at the Annual Meeting in Leicester.

I have really enjoyed my time as Chair; I look forward to continuing to work with you all to achieve our aims and to help this really important organisation continue to grow and develop.

Thank you all for your support – see you in September!

**Janet Scott**, Chair of Communication Matters  
Email: [janet.scott@sgh.scot.nhs.uk](mailto:janet.scott@sgh.scot.nhs.uk)

### IMPORTANT CHANGES TO THE GOVERNANCE OF COMMUNICATION MATTERS

As you know, the Board of Trustees has been undertaking a thorough review of Communication Matters' governance procedures, including bringing the Memorandum and Articles of Association (the 'Constitution') up to date. The Trustees are very grateful to everyone who volunteered at the National Symposium in 2006 to be part of the Membership Guidance Group to help in this process.

The governance review was intended to ensure that Communication Matters is a well run, best practice organization. In going through the documentation with a charity lawyer it was discovered there was some confusion about who and what Communication Matters' membership actually consists of, and that some practices had crept in which had acquired a kind of 'legality' even though they were not actually within the Constitution. Having taken expert legal advice the Board of Trustees found that at any time the members of Communication Matters are only the current members of the Board (these are the Trustees of the Charity who are also listed as Company Directors with Companies House). After further investigation as to whether the term 'members' could be redefined to be what was previously understood to be the membership it has been found this is not legally possible.

This means the Board of Trustees have had no choice but to adapt current practice. In many ways this does not actually alter your relationship with Communication Matters. The Board of Trustees will continue with the custom and practice of holding an Annual Meeting in September where they will update the 'Associate Members' on the activities of the previous year and bring to the meeting new initiatives for feedback. In addition the Board of Trustees will ask for approval of the Annual Accounts being a true and fair reflection of



## TRUSTEES' NEWS

activities, the finances of the charity, the re-appointment of the auditor and/or accountants, and the election of Trustees/Directors. The Trustees very much value the views of every member of the Communication Matters and will endeavour to make only decisions they feel are in the best interests of the Charity. It is the intention that Associate Members continue to have a very important role in advising the Board of Trustees. To protect this role, new safeguards have been incorporated to ensure decisions made at an Annual Meeting can only be reversed by Trustees if there is an adverse legal or financial implication for Communication Matters, and if this is agreed by a two thirds majority of the full Board.

The Board of Trustees have identified various categories of 'Associate Membership' of Communication Matters. These tie in with the categories used up to this point e.g. 'Individual members', 'people who use AAC', 'Commercial members' in the field of AAC, 'Institutional members' who work professionally in the field of AAC, etc. The benefits of belonging to Communication Matters remain and there will continue to be an annual fee linked to the different categories to cover ISAAC capitation, the running of Communication Matters, the publication of the Journal etc.

However, with this new discovery comes perhaps an added responsibility - if you are at all concerned about how Communication Matters is run, what its direction should be for the future, if you feel strongly about Communication Matters then this is the impetus you might need to stand for election as a Trustee. It is now perhaps more important than ever that the make up of the Board of Trustees is representative of the Associate Membership, i.e. YOU!

From early September, you will be able to download the proposed Memorandum and Articles of Association and a number of Best Practice documents from the password protected members' area of the Communication Matters website (the password will be sent by post to all current members). If you have any difficulties accessing the documents, email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

All the documents have been written in conjunction with a specialist charity solicitor and wherever possible have taken on board the suggestions from the Membership Guidance Group. The Board of Trustees hope you believe they have endeavoured to maintain the status quo for the new 'Associate Membership' and tried to put in safeguards to ensure the views of the whole of the Communication Matters' community continue to be taken into account.

If you have any queries or concerns about this please contact Liz Moulam (Chair Elect & Chair of the Governance Review Committee) or Janet Scott (Chair).

**Liz Moulam** Email: [lizmoulam@aol.com](mailto:lizmoulam@aol.com)

**Janet Scott** Email: [janet.scott@sgh.scot.nhs.uk](mailto:janet.scott@sgh.scot.nhs.uk)

## eCAT NEWS

### FUNDING ISSUES

At our last meeting in April, David Weatherburn (PRI Liberator Ltd) who represents the BHTA on the 'AAC Task Force' (a group set up by SCOPE and FAST - Foundation for Assistive Technology) reported that BECTa had commissioned a report on AAC provision from Oakleigh Consultants and the University of Dundee.

SCOPE have secured a commitment to three more years of campaigning and lobbying and will be publishing a three year plan before the end of April. They are trying to raise awareness in respect of communication aids and produced a questionnaire to gather information. This is available on the SCOPE website [www.scope.org.uk/disabism](http://www.scope.org.uk/disabism); everyone is encouraged to promote this (see Editors' Note below).

### CM NATIONAL SYMPOSIUM

We have discussed this at the BHTA with regard to the amount of effort CM Trustees have to put into organising the annual CM National Symposium, and also the liability on CM (and therefore their Trustees) should anything go wrong with it. The BHTA Director General (Ray Hodgkinson) made a suggestion and gave us a contact that has led to discussions, with the objective of possibly removing much of this workload, reducing the CM liability and increasing public awareness whilst trying to maintain the 'look and feel' of the event. Representatives from the Board of CM Trustees have met with the contacts, but after much consideration the Board decided it was not appropriate to move forward with this suggestion.

The reason for mentioning this is to show how the commercial members joining eCAT is leading to new opportunities and new ideas.

### CM ROAD SHOWS

A 'sub group' of eCAT consisting more of employees who regularly attend and present at CM Road Shows rather than the 'ivory tower sitters' (I think that was addressed at me!), have met with Patrick Poon, the CM Administrator, to discuss how the Road Shows could be improved. Existing Commercial Members of CM who have not joined eCAT were also invited. Reviewing past successful and not so successful events have enabled the group to refine them for the future.

**Dave Morgan**, Chair of eCAT section, BHTA  
Email: [david.morgan@dynavox.co.uk](mailto:david.morgan@dynavox.co.uk)

### Editors' Note:

SCOPE has published a literature review on the provision of communication aids, as part of their 'Time to Get Equal' campaign. They have also published a briefing paper on their 'No Voice, No Choice' campaign to focus on the provision of communication aids in Wales. For more information, and to download a copy of the Communication Aids Survey, visit: [www.scope.org.uk/disablism](http://www.scope.org.uk/disablism)



## DIARY DATES

20 September 2007 <b>PowerPoint</b> Contact ACE Centre North: 0161 684 2333 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oldham	7 November 2007 <b>Playing with IT</b> Contact ACE Centre North: 0161 684 2333 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oldham
23-25 September 2007 <b>CM2007 National Symposium</b> Contact CM: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	Leicester 	14 November 2007 <b>CM Road Show in Bristol</b> FREE Tel: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	Bristol 
27 September 2007 <b>Voice Recognition: Who, why, how and when</b> Contact ACE Centre: 01865 759800 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oxford	14 November 2007 <b>Augmentative Communication in Practice: Scotland Study Day</b> CALL Centre: 0131 651 6235 <a href="http://www.callcentrescotland.org.uk">www.callcentrescotland.org.uk</a>	Fife, Scotland
9 October 2007 <b>Clicker 5</b> Contact ACE Centre North: 0161 684 2333 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oldham	15 November 2007 <b>Creating Motivating Activities for Users of AAC</b> Contact ACE Centre: 01865 759800 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oxford
10 October 2007 <b>Clearer Speech Study Day</b> Contact CM: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	London 	16 November 2007 <b>CM Road Show in Portsmouth</b> FREE Tel: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	Portsmouth 
10 or 11 October 2007 <b>Eye Control and Disability: What's all the fuss about?</b> Contact ACE Centre: 0161 684 2333 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oxford	22 November 2007 <b>CM Road Show in London</b> FREE Tel: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	London 
5 November 2007 <b>CM Road Show in Warwick</b> FREE Tel: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	Warwick 	26-27 November 2007 <b>RAATE 2007 Conference</b> Contact IPEM: 01904 610821 <a href="http://www.raate.org.uk">www.raate.org.uk</a>	Birmingham
6 November 2007 <b>AAC SIG</b> Contact PCAS: 0117 924 7527 <a href="http://www.pcas.claremont.bristol.sch.uk">www.pcas.claremont.bristol.sch.uk</a>	Oxford	28 November 2007 <b>Prepare to Play</b> Contact ACE Centre North: 0161 684 2333 <a href="http://www.ace-centre.org.uk">www.ace-centre.org.uk</a>	Oldham
9 November 2007 <b>CM Road Show in Manchester</b> FREE Tel: 0845 456 8211 <a href="http://www.communicationmatters.org.uk">www.communicationmatters.org.uk</a>	Manchester 	29-30 November 2007 <b>Eastern and Central European Regional AAC Conference</b> Contact: lucie.laudova@seznam.cz	Prague

### AAC RESOURCES FROM COMMUNICATION MATTERS

#### The Power of Communication

This film by Communication Matters delivers a powerful message that communication really does matter. The DVD is an introduction to AAC, and celebrates and promotes communication in all its forms. It is of general interest, and in particular to service managers and purchasers who have responsibility for AAC services. The DVD is available from Communication Matters (£8 each; £20 for three) Tel: 0845 456 8211. Preview the film online at: [www.communicationmatters.org.uk/power](http://www.communicationmatters.org.uk/power)

#### 'Focus on...' AAC Topics

##### Now available in PowerPoint & PDF formats

The Focus On... series is a set of seven introductory topics related to augmentative and alternative communication, written in a clear and easy-to-understand style by Communication Matters. The seven leaflets are available in PDF and printed forms, and as individual PowerPoint presentations.

Download the PowerPoint and PDF files at: [www.communicationmatters.org.uk/focuson](http://www.communicationmatters.org.uk/focuson)

### WANT TO HOST A COMMUNICATION MATTERS ROAD SHOW?

The CM 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 Ireland - and they are free! We are always looking for new venues to hold CM Road Shows, so if you would like to host one in your area, please do let us know. Communication Matters will handle much of the administration and organisation, including taking delegate bookings, and offer you a lot of help and advice along the way! For more information, contact Patrick Poon on Tel: 0845 456 8211 [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)

### FREE SUBSCRIPTION TO COMMUNICATION MATTERS E-NEWS

You can subscribe to our E-News by sending an email (with your name in the subject line) to: [enews.subscribe@communicationmatters.org.uk](mailto:enews.subscribe@communicationmatters.org.uk)

# Improving the Speed of Real-Time Language Generation in AAC

## TONY JONES

PRI Liberator Ltd, PRI Liberator House, Minerva Business Park, Lynchwood, Peterborough PE2 6FT, UK  
Email: tony@pri-liberator.com

**Dynamic Screen technologies** have been with us now for some years. While the technology continues to improve, the methodologies used to retrieve language has remained much the same. Such methodologies tend to utilise a simple category and field page approach that, I believe, does not lend itself to fast and effective communication. There are a number of reasons for this:

- Moving through lots of pages and having to scan many symbols to locate and then select a word, does not tend to help to improve communication speeds.
- Some individuals can become 'lost' in the complexity of language encoding;
- On the other hand, some systems are so simple that they do not support communication and the growth of the individual;
- Designers of such systems have often not been involved with teaching language to individuals with a communication impairment;

I do not intend to review the old Static vs Dynamic debate here. However, I have met many more people using static (normally Semantic Compaction) systems who were able to communicate with me effectively in real time.

For over 10 years, I have been working on ideas to improve communication speeds and the encoding of language. These ideas have recently come into fruition in the development of VAI (Virtual Artificial Intelligence) which has would appear to be having a beneficial effect. Language generation much below 60 wpm starts to become 'uncomfortable' for the listener. The goal then is to achieve a speed of 60 wpm or above: not an easy task. People whose means of access is a single switch will likely have a slower rate than those who are accessing directly and therefore comparisons of this type are

somewhat unfair. However, if a switch user's rate was previously 8 wpm and becomes 15 wpm after a move to another system then there has been significant and measurable progress albeit that the SLG is below that which the average person in the street would find acceptable.

There are other factors that influence SLG. For example, the Mean Length of Utterance (MLU) is also important. Thus, if on making two activations, a system user is able to generate an entire sentence 'Would you get me a cup of tea please', the SLG is almost at its peak (it could be higher if the sequence activated generated a whole novel!).

This would appear to equate to a direct relationship: where the MLU is high then SLG is also high. Is it really this simple? The answer is 'No!' With a fairly limited number of characters (letters and number) and, providing there is literacy, it is possible to say anything at all. With my computer keyboard, I am able to write this entire article without having need for assistance from external sources.

If I wanted to do the same thing using whole words (rather than letters) then I would need a fairly extensive keyboard. The Second Edition of the Oxford English Dictionary contains entries for 171,476 words currently in use. Over 50% are nouns, 25% adjectives, and 14% verbs; the rest are interjections, conjunctions, prepositions, suffixes, etc. This figure represents header entries but each entry may have several distinct meanings. For example, look up the word 'set' and you will find pages of definitions. Is this really one word or many words sharing the same three-letter encoding (in what sense does the sun setting equate with a jelly setting with a set of tools). In addition, do we count 'go', 'going', 'gone', 'went' as one word or more than one word? (Note: ViP uses Liberator's new symbol set which is grammatically encoded. See Appendix Two for further details). Equally, do we count 'dog' and 'dogs' as one or two words? There are in

fact millions of possible 'vocabulary items' in any language. However, in order write this article, and for the majority of conversations, I could probably get away with around 30,000 without having to resort to spelling (there are in fact approximately 5,000 words in the article of which 2800 are unique: some words being used more than once).

However, if I wanted to be able to write anything using whole sentences then there is an exponential jump! There is an infinite array of possible sentences. If we assume that a sentence has to contain six words (obviously false) and any one of the 30,000 words can follow any other and still convey a meaningful message (obviously false) then there are 729,000,000,000,000,000,000,000,000 possibilities! If it were possible to program one sentence a second into a system then that would take in excess of several lifetimes!

Thus, attempting to increase the SLG by increasing MLU is not practicable. While, certain phrase structures ('May I have a cup of tea please') can be predicted and encoded, it would be impossible to present an individual with a system that would give access to all potential sentence forms.

With my computer keyboard, I have no problem in writing any particular sentence form that I require. Ask me to generate even the strangest sentence and I could do it within a few seconds - "the polystyrene mango that my aardvark painted indigo has disintegrated." To be able to generate that particular sentence with a single activation from a set of all sentences is practically impossible. Why would I want to generate such a sentence? Isn't there a finite set rather, has the potential to generate a infinite number of words (although the potential is somewhat more restrained) squeezing access to ever more language onto a single page. A single button might say 'dog' when activated the first time and then 'thank you' when operated again, even within the same sentence. Doesn't this make the system more complex? Yes and No! By definition, it does: however, complex is not synonymous with complicated. From the perspective of a system user the system could appear to be very simple because the VAI only kicks in as necessary and is 'hidden away' behind the scenes. Generating simple sentence forms only requires simple accessing and understanding. Generating more complex forms requires additional abilities. Aspects of VAI can be introduced as necessary, only when the user achieves a commensurate level of ability.

If a button is saying one thing one moment and another thing the next, how on earth is a user to figure out which button to activate for any particular item of vocabulary? The answer is that any single button, although it has the potential for an infinite vocabulary, in reality, is restricted to a logically connected vocabulary range. Thus, the button for 'go' could figure out whether 'go', 'goes', 'going', 'gone', or 'went' was the required word ('he is go' makes no sense whereas 'he is going' does) and could even generate 'leave', 'leaves', 'leaving' etc in certain circumstances.

Looking at some concrete examples from the existing ASPs (they all have snake names) should help to make things clearer:

"*May I have a cup of tea please*". Within CopperHead (one of the 128 location ASPs) this phrase can be generated with just 7 activations (see Figure 1):

MAY I HAVE A OF DRINK PLEASE

That's 30 characters (including spaces) in just seven button activations (a 76% saving over conventional orthography). Nowhere, on the CopperHead keyboard, can the words 'cup' or 'tea' be found and yet the phrase was generated without having to change screens!



Figure 1 "May I have a cup of tea please"

"*Can I have a drink of water now please*" This phrase took 9 activations (38 characters - a 76% saving, see Figure 2):

CAN I HAVE A DRINK OF DRINK NOW PLEASE

Again, the word 'water' is not to be found on the overlay.

These phrases (and thousands more like them) are generated with a one to one (button activation to word) correspondence. Buttons act 'intelligently' providing 'appropriate' words depending on what is being written to (and spoken from) the Text Screen.



Figure 2 "Can I have a drink of water now please"

"*Please would you get me a can of coke*" (37 characters in 9 activations - a 75% saving, see Figure 3).

PLEASE WOULD YOU GET I A CAN OF DRINK

No 'me' or 'coke' can be found on the overlay.



Figure 3 "Please would you get me a can of coke"

Although ViP is a dynamic screen system, it has been designed to create what Jones (1997) has called Static-Dynamic screens. Previously, the only way to generate more vocabulary than was available using a static screen (without using levels) was through the powerful Semantic Compaction technique (commonly known as Minspeak (Baker 1982)).

However, ViP is not Semantic Compaction: it does not use conjoined icons to store vocabulary, each button/symbol acts in isolation from all others. ViP utilises a form of polysemic iconicity that Jones (2005) has called Syntactic Encoding (SE). Syntactic Encoding relies on algorithms built into the programming of the system that provide ViP with VAI. In the above examples, SE has been used for both syntactic and semantic modifications to the text stream. One button (the DRINK symbol) generating a different drink depending on the learner's choice of words prior to the activation of the DRINK button.

How many different words can one button generate? There is no limit although, of course, in reality, all buttons have only been programmed with a limited number (although it is possible for anyone to add more thus increasing the power of the system).

For example, the 'I' button can be used to generate all its associated pronominal forms (I, me, my, mine, myself). In the example above (Please would you get me a can of coke), the 'I' button generated 'me' in a single activation because ViP's VAI realised that the 'I' form would be inappropriate in this particular sentence structure.

The English language is notoriously complex and, as each phrase is generated, it may have several (if not several thousand) items of that could form the next word:

Will you get me a .... <WORD>

Will you get me a drink of ... <WORD>

It is in ... <WORD> ... bag

What words could fill the space occupied by <WORD>?

In the first example, the possible number of words that could fill the blank is huge (book, penguin, biscuit, pill, newspaper, drink, clean, ...). Of course, if a button is selected from the CopperHead overlay, then that would narrow the possibilities somewhat. For example, if the selected button was the DRINK symbol, the likely outcome would be the word 'drink'. However, suppose that the only beverage this person ever drank was 'milk', then the button could be taught to generate 'milk' instead. This being the case, then why have 'drink' on the overlay at all? Why not simply replace it with the word 'milk'? If we were to do this, then how would the individual generate "I would like a *drink* of milk." With VAI, ViP can cope with both the word 'drink' and the word 'milk' from the one button without ever having to move to another page in the system (indeed, CopperHead only has two other pages: a Personal Information Page and a Spell Prediction Page).

The second example (Will you get me a drink of ... WORD) limits the possible choices somewhat. The word 'biscuit', for example, would not make any sense words 'been' and 'is' were both generated by one button dealing with all the copula forms. The present participle word form 'using' was generated by the USE symbol in just one activation. Likewise, 'done' was created automatically using the DO symbol in response to the prior use of 'have' in the phrase written to the text screen.

What happens when the overlay is severely restricted as in the 16 location Cobra ASP? Here (Figure 4), there are fewer buttons from which to choose to create sentence forms.



Figure 4 16 Location Cobra ASP

However, Cobra has the power to create any sentence possible with a typical saving of 50% or above.

Some further examples may serve to make clearer how this is possible.

"What is your name please?" can be generated from within Cobra<sup>16</sup> in just 6 activations (Figure 5). That's a saving for the 24 characters of 75%. How is that possible? It is possible because the only word that took more than one activation was 'what'.



Figure 5 'What is your name please'

'What' was generated by moving to the interrogatives pages.

'is' was generated with a single activation.

'your' was also generated in a single activation from the button that normally would move to the Pronominal Page. The button itself has intelligence! It assumed that the pronoun required was 'your' and generated it. ViP knows it wasn't 'my' because that would have been generated from the 'I' button on Cobra's main screen.

Therefore, the most likely form remaining is 'your' and that's what it predicts! What if the learner had wanted to say 'his' not 'your'? Then ViP got it wrong! No problem - activating the Pronominal Button once again instructs ViP that it has made an incorrect choice. It strips 'your' from the screen and moves to the Pronominal Page where 'his' can be selected. That makes the selection of 'his' (in this particular instance only) only one activation less efficient than it would have otherwise been. The gain in speed for the 'your' form is worth the loss in efficiency for the 'his' form. If you disagree then change the rules!

'name' was generated with one activation of the NOUN button. ViP decided that 'name' was the most appropriate choice in this

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Copperhead Overlay

Overlay above. SwordPlay can be turned on or off to suit individual preference.

VIP uses LIBsymbols throughout. LIBsymbols are a relatively new set of symbols, developed at Liberator, comprising over 32,000.wmf files providing extensive cover for most everyday vocabulary. However, it was realised that not everyone would want to use this set and so VIP has provided a symbol swap mechanism. Simply put, this imports another set of symbols from elsewhere on the computer and then exchanges them for the symbols within the ASP that is selected. Thus, it would be possible to have CopperHead run with PCS symbols, Makaton Symbols or Rebus Symbols (for example). The program looks for a match between the button label and the symbol name and makes an exchange where one is found. If a match cannot be found then VIP has been instructed to leave the existing symbol in place and keep a record of its inability to make a swap. After swapping, VIP then lists all the items for which no match was found and makes it simple to

select your own items from your chosen symbol set. Alternatively, it would be possible to run VIP with a mixture of symbols. LIBsymbols contain grammatical markers to differentiate root forms from words that have been derived from a root form. Consider the verb 'absorb', for example: its root in the system is the noun 'absorption' which is generated with the symbol as depicted to the right.



'Absorb' uses the verb indicator to differentiate it from the root form. This is a stylised 'A' (for action) in green in the background. Furthermore, the verb can be depicted in its various aspects using an additional range of markers in the top right hand corner of the symbol square.



Try to figure out the meaning of each of the symbols below:



The adjectival form is provided by another marker, this time in the bottom right hand corner, indicating the root form of the adjective: absorbent. Note that this is a three-box fill bar. Two boxes filled in red indicates the comparative form and three boxes the superlative. As 'absorbent' is multi-syllabic it does not take the standard 'er' and 'est' suffix to form the comparative and superlative but, rather, is prefixed with 'more' and 'most' respectively (therefore, other symbols are called into play). These are just a few of the grammatical markers used throughout the LIBsymbol set.



*1. absorbs 2. absorbed 3. absorbing*

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# Setting up an AAC Assessment Service

## The pitfalls and the rewards - Is it all worth it?

### SALLY CHAN

Paediatric Communication Aids Service, Claremont School, Henleaze Park, Westbury-on-Trym, Bristol BS9 4LR, UK  
Email: sallychan@blueyonder.co.uk Tel: 0117 9247527

I loved my job as a speech and language therapist working in a school for physical difficulties, Claremont School. I had been at the school since 1981, and my colleague, Hannah Curry, had been at the school since 1984. It was, and still is, a local authority school for children between the ages of 2-11. The school was in Bristol but attracted children from the surrounding local authorities within the old county of 'Avon'; (we are now known as CUBA - the County that Used to Be Avon!).

### THE EARLY BEGINNINGS

Not far away in a neighbouring NHS trust was Frenchay Communication Aid Centre, launched in 1981 as the first CAC (Communication Aid Centre) in the UK, by a forward thinking Chief SLT at the time, Pam Enderby. For several years the Frenchay CAC offered assessments for children as well as adults, but then withdrew the provision for children a few years later.

In the 1970s and early 1980s, technology was really developing for our children. Lightwriters had been around since the late 1970s, the Trace Centre in the US was working on voice-output communication aids, and the early UK suppliers were introducing an element of competition (who remembers Dynamic Abilities?).

As SLTs watching this technological development, we became involved in the production of some of the early high tech aids, but this was a specialist area. We were on a steep learning curve, as everyone else was in those early days of AAC.

In the mid 1990s, there was no CAC for children in the southwest, and so with the support of our dynamic head teacher, Bob Coburn, we decide to be proactive and

develop a service based at the school. He was passionate about giving the children a voice, giving them the opportunity and the means to become active communicators. He was a driving force behind the project, enthusiastically offering accommodation for the new service within the school. However, being NHS therapists we needed to get our Trust, North Bristol NHS Trust (originally Southmead Healthcare Services), to also support the development. We were fortunate that the Director of our Directorate needed merely one visit to the school to convince him of the opportunities for our children.

### THE LAUNCH IN 1997

Avon Health Authority, and two local education authorities, finally provided financial support (see Figure 1) to launch PCAS in 1997. Jeremy Guscott was invited to kick off the service. As an international Rugby

player, as well as playing for the local Bath Rugby team, he generated a lot of interest, particularly amongst the female contingent. He proved to be a great and natural communication partner for our children. The launch was televised locally as well as generating several press articles. We were on the map!

### GOVERNMENT LEGISLATION AND AUDIT RECOMMENDATIONS

Within the past 10 years, PCAS has developed, maintaining its position as a small regional communication aid service. The NHS has provided funding, but all the equipment within the loan library has been bought by charitable donations. It was a CAP (Communication Aid Project) contact, linking with the assessment centres of the ACE Centre and Scope.

Any developments identified in business plans needed to make reference to central Government Guidance and Legislation

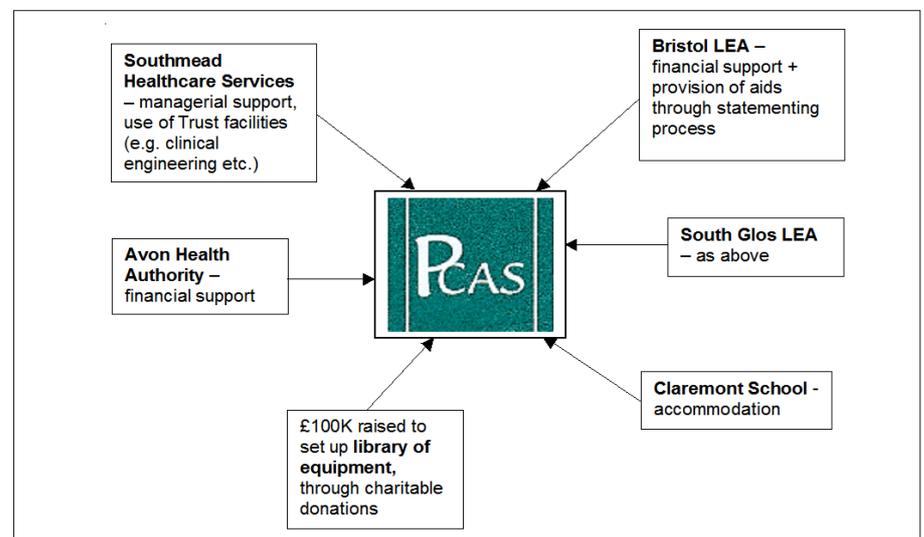


Figure 1 Funding setup of PCAS at launch in 1997

(though local interpretation often appears to be the stumbling block):

- *SEN and Disability Act (2001)*: Duty of the local authorities to plan strategically and to that ensure pupils have access to the curriculum.
- *Health Act 1999 partnership Arrangements (2001)*: Promote flexible working to facilitate inter-agency working & funding.
- *Children's Act (2004)*: Use of multi-disciplinary services across agencies when developing Children's Services.
- *Human Rights Act (2004)*: The right to develop the most appropriate means of communication for their needs.
- *Minimum Standards of Healthcare for children with Cerebral Palsy (1999)*:
  - Services should be provided to maximise the child's potential.
  - Team approach is essential to provide a more integrated service.
  - Parents should be encouraged to work in an effective partnership with the rest of the team.
  - Parents should be given written record of decisions.
  - Parents should have the opportunity to see all professional at the same time, so that a holistic approach is adopted.
  - A problem-solving approach for each family should underpin service provision.
- *Speak for yourself Scope Report (2000)*:
  - Central government should set up central fund for provision of communication aids and training.
  - DoH should conduct research to determine numbers of users.
  - DoH should issue new national guidance on provision of communication aids, and clear national standards to avoid postcode lottery.
- *NHS Plan (2000)*:
  - Modernising community equipment services.
  - By March 2004, to increase number of people benefiting from community equipment services.
- *Schools Access Initiative (2001)*:
  - Part of Government's Inclusion Policy
  - Improve access in mainstream schools.
- *Audit Commission (2000)*:
  - Need to promote independence, not save costs.
  - Many equipment services identified as fragmented and small, characterised by a lack of clinical leadership.
- *"That Kind of Life" (2001)*:
  - Looked at social exclusion.
  - Determined that carers of young people with cerebral palsy and severe communication difficulties were unable to provide concrete examples of how they communicate.

- *National Service Framework – neurological conditions (2005)*: The Long-term (Neurological) Conditions National Service Framework (NSF) was launched in March 2005. The NSF aims to transform the way health and social care services support people to live with long-term neurological conditions. Key themes are independent living, care planned around the needs and choices of the individual, easier, timely access to services and joint working across all agencies and disciplines involved.

- *National Service Framework: Children (2005)*.

- *Every Child Matters: Change for Children (2004)*.

- *Our health, our care, our say: a new direction for community services (2006)*

- *Questions, & Answers. House of Lords Debate – March 2006*: Responsibility for assessing people's communication aids needs rests with local health & social care agencies, using the increasing resources that the Government has made available. (Lord Warner, Minister of state, DoH) DoH has commissioned research on communication therapy & aids.

## EXCITING DEVELOPMENTS

### New Building

£120,000 has been donated by the Wooden Spoon Charity to provide a new building for PCAS, on the original site at Claremont School. It is hoped that the new building will be opened in Autumn 2007. It will include offices, kitchen, and a large room for assessments and training. The building will include many features that can be controlled by high tech communication aids, switches and environmental control units. The Life Skills Centre will aim to promote independence following the models at the Fitcher School, Greenfields School and the Star Centre. The Drake Music Project will also use the facilities within the new building. During recent years, PCAS has collaborated with this national music charity on several projects to promote communication and interaction through music and communication aids.

### Collaboration with Frenchay CAC

PCAS and Frenchay Communication Aid Centre are forging closer links as the two centres sit within the same NHS Trust. Joint training and business plans have highlighted the benefits of a unified service for all age groups.

### AUDIT

Our perception of an effective assessment service was not necessarily the same perception as our users. We were tending to assess children and follow-up

with telephone calls a few weeks later. But what was happening months and even years later? Was the advice appropriate when considering the long term?

In order to establish how effective the service was perceived by our users and how appropriate the recommendations were on a long-term basis, a clinical audit was carried out. A postal questionnaire was sent to those SLTs who had referred children to PCAS within the previous 3 years. 51 questionnaires were sent, with 31 replying (60% response rate).

The questionnaire was divided into two sections: (i) The assessment process; (ii) Recommendations and provision of equipment. Copies of the questionnaire can be obtained from the author. The results of the first section, the assessment process, can be summarised as follows:

1. Waiting times need to be shorter - most found the usual 2-3 months waiting time acceptable; 4 months wait was rare but viewed as unacceptable, this is comparable with the limit of 18 weeks within the NHS.
2. Loan period needs to be longer - the usual loan period is approximately 2-3 months.
3. Some ICT equipment did not work as expected during the assessment.
4. Service recognised as covering very wide range of communication aids & low tech systems, advice is invaluable to teachers in special schools.
5. Training has been very useful, and should continue.
6. Six-monthly/yearly updates would be useful.

## CONCLUSION

The description above would hopefully illustrate to some the possibility of setting up a local service in these post CAP days. This was one of the fundamental aims of CAP - to establish local assessment centres serving a cluster of NHS Trusts/ Education Authorities.

PCAS has developed from humble beginnings. It has achieved regional recognition for providing an effective assessment and training service serving the southwest. Its strengths are that it lies within a respected special school that has integrated AAC within the deliverance of the curriculum. Its strong links with education and particularly local authorities has ensured provision of communication aids for most children across 3 local authorities. The new building will help to provide some permanency to the service, and the links with Frenchay and the possibility of a unified service will only strengthen its position as a regional centre. \*

Sally Chan, *Clinical Manager & SLT*

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## AAC Study Day Report

# Augmentative Communication for Children with Autism: What do we Know?

### SALLY CONNER

Ingfield Manor School, Stane St, Five Oaks, Billingshurst, W. Sussex RH14 9AX, UK  
Email: sally.conner@scope.org.uk

Perhaps the second half of the title for the Study Day should have read 'What we don't know', as a recurring theme of the day was the urgent need for research. This very enjoyable CM Study Day took place on 23 April 2007 at the Institute of Child Health in London. It was jointly organised by the Wolfson Centre AAC Team and Communication Matters, and was chaired by Katie Price with her usual blend of professionalism and wit. That the large auditorium was packed shows that there is a thirst for knowledge in this topic.

The four presentations were very well balanced and designed to update our knowledge on the nature of Autism, and also on AAC research and practice in this field.

#### 1. AAC & AUTISM: CLINICAL FEATURES, AETIOLOGY, INTERVENTION AND OUTCOME

*Dr Jeremy Parr: Consultant in Paediatric Neurodisability at Great Ormond Street Hospital and Clinical lecturer at the University of Oxford*

In the first paper, Dr Parr treated the audience to a comprehensive presentation of the epidemiology, aetiology and classification of Autism and ASD; a review of current research; and questions involved in assessing the efficacy of AAC for this client group.

Dr Parr described Autism in terms of clinical features, presentation and early signs, social interaction, communication and

behaviour. He referred to the fact that the terms Autism/ ASD and PDD-NOS (Pervasive Developmental Disorder Not Otherwise Specified) are often used interchangeably; but that the latter involves many variables, and it is important for research that differential diagnosis is specified. He also stressed the importance of prevalence data in service planning, particularly in view of evidence suggesting the increasing prevalence of Autism & ASD. Baird et al in 2006 concluded that "...services in health, education and social care will need to recognise the needs of children with some form of PDD who constitute 1% of the child population."

In discussing aetiology, Dr Parr contrasted secondary and idiopathic Autism. He outlined a variety of disorders with which secondary Autism may occur, including Fragile X, Downs, Angelman and Prader-Willi Syndromes. He described twin studies which suggest strong evidence that Idiopathic Autism has a genetic basis. He then outlined the exciting work of the Autism Genome Project - collaboration between international research groups looking into the likelihood of susceptibility genes and chromosomal links. Outcomes of this project look set to have a significant impact on the future of genetic counselling, medication and understanding of neurobiology.

Dr Parr reviewed research into the efficacy of interventions, concluding that data is sparse and that there is a critical need to review the evidence base. There is no gold standard intervention or comparative studies; there are methodological weaknesses in existing studies and no data on some approaches. Finally, Dr Parr posed a number of questions for the speakers. These included "What is the evidence regarding the efficacy of AAC in Autism?" and "If there is evidence for the use of AAC, what does it improve?" These questions led seamlessly into the second presentation.

#### 2. THE EVIDENCE BASE FOR AUGMENTATIVE AND ALTERNATIVE COMMUNICATION IN AUTISTIC SPECTRUM DISORDERS: A SYSTEMATIC RESEARCH REVIEW

*Oliver Wendt, PhD: Assistant Professor of Special Education, and Assistant Professor of Speech, Language and Hearing Sciences, Purdue University, USA*

The last time Dr Wendt had visited London was on a school trip, and he was looking forward to seeing our old style double decker buses from whence you could hang perilously on the back platform. Hopefully, the stimulating Study Day helped to compensate for any disillusionment he may have felt in our transport system.

Again, Dr Wendt referred to increasing prevalence of ASD, with the Autism Society of America describing it in 2006 as the

fastest growing developmental disability. This presentation was based on a meta-analytic review of intervention studies with the objectives of reviewing the relative efficacy of different AAC strategies and identifying research gaps. Rigorous selection criteria for inclusion resulted in only 44 studies being selected from 325 related papers. Forty three of the selected studies were single subject research designs.

The first research question posed was 'How effective were AAC interventions or groups of interventions in general?' This question was related to the use of VOCAs, graphic symbols, signing and gesture. In the studies looking at VOCAs, the range and complexity of devices was generally limited and requesting was the main communication function referred to. In summarising, Dr Wendt stated that whilst interventions with VOCAs appear promising, this is supported by only a very small amount of data/evidence. In summarising evidence relating to graphic symbol systems, Dr Wendt concluded that there is insufficient data to productively inform choices of one symbol set over another, and that future research is needed where instructional methods remain constant. 14 Sign Language studies were covered, and reported outcomes ranged from fairly to highly effective. The conclusion from reviewing this data is that there is a need for studies comparing aided with unaided AAC interventions. This also needs to relate to the fact that signing is not useable in all environments, and that we need to look into its use as part of a 'multi-modal communication system.'

The second research question was 'Which AAC interventions for children with Autism were more effective than others in yielding outcomes?' Variables included teaching functional requesting skills, natural speech production and increasing social-communicative behaviour, the former being the most represented in studies. Although gesture/signing and graphic symbols both yielded highly effective outcomes for requesting, compared with questionable effectiveness reported for the use of VOCAs, data for the latter is very limited and represents a research gap. Signing may present the highest outcome scores, but it also presents issues, such as learning demands for partners and ineffectiveness in some environments. Seven experiments relating to natural speech production provided inconclusive data for evidence-based recommendations in favouring AAC modes for promotion of natural speech. None of the studies registered a decline in natural speech production as a result of AAC intervention, and the majority of studies documented an increase, although sometimes very small. However, again there is a need for research into the

relationship between AAC and speech production. In looking at the relationship between AAC and social-communicative behaviour (joint attention, eye gaze, cooperative play etc.), one study suggested that PECS may be a highly effective approach. However, this was only one study with three participants, and again the conclusion is a need for more empirical evidence.

Finally, Dr Wendt urged that selection of interventions is not made on the basis of generalised diagnostic labelling. Individuals with ASD present with varying profiles and form a heterogeneous population. It is more productive to view AAC selection relative to specific task demands and how they relate to individual requirements.

### 3. MOVING ON FROM PECS

*Ann Gresswell: Physiotherapist & Teacher, ACE Centre Oxford*

*Rachel Moore: Speech & language Therapist, ACE Centre Oxford*

The presenters said that most children referred to the ACE Centre had used PECS at some time. Their presentation addressed the issue of when to consider alternative and/or complementary strategies. They concluded that PECS can provide an important first step in the path towards social interaction; but that when this first step has been achieved, other methods should be considered for further developing communication.

Firstly, the speakers outlined the role of PECS, stressing that it involves picture exchange, and was developed because of the difficulties encountered by some clients with initiation, motor imitation, pointing and responding to social rewards. In the early stages, picture exchange may facilitate initiation of a communication act for a concrete item within a social context, and for some children this may be the first stage in developing interaction skills. Subsequent PECS stages are defined for introducing further communication functions and sentence structuring. Gresswell and Moore described how PECS trainers relate the criteria for giving up PECS to a time when speech takes over. However, the speakers questioned the validity of this for children who no longer need PECS to initiate communication and have not developed functional speech. They then described how a pointing system – whether paper or technology based – may have benefits in terms of speed, fluency, creativity, portability and maintenance. They gave examples of how a communication chart, consisting of Core + Fringe vocabulary, may be used to model phrases to convey a range of language functions.

Ann Gresswell described how computer work can be managed to help to move an

Autistic Child's communication and literacy skills forward. Children with ASD are often highly motivated by computer work, but this may need to be carefully managed in terms of equipment layout, onscreen pointer control, access method and software. With appropriate planning, the computer can provide a useful tool in helping to develop sentence sequencing. An example was shown of using Clicker with a Mouser and slowed pointer for a child who found it difficult to inhibit repeated left clicking. Video evidence was then presented of two students who were using VOCAs, communication books and/or the computer in moving on from PECS.

### 4. HORSES FOR COURSES: What factors should we consider when selecting AAC strategies for children with autism spectrum disorders?

*Helen Cockerill: Consultant Speech & Language Therapist (Paediatric Neurosciences)*

*Dr Vicky Slomins: Consultant Speech & Language Therapist (for children with complex communication disorders)*

Dr Slomins looked at factors interfering with speech and language development in ASD, pointing out that social impairment is the core deficit. This involves social reciprocity, joint attention and communicative intent. She showed how symbolic representation and cognition underpin language competence. Social competence is a driver for these. Something can only take on a shared symbolic characteristic if it is used interactively. A typically developing infant develops social communicative competence before words emerge, with behaviours that can be interpreted, and awareness of their effects on others. In Autism, there is evidence that the presence of joint attention and immediate imitation as starter skills, and later toy play and deferred imitation, may be predictors of language development. One point that Dr Slomins emphasised is that 75% of people with ASD develop speech spontaneously. This may not be achieved until 6 years of age. Prognosis tends to be poor if speech has not emerged by then. Dr Slomins described how impairments in social reciprocity, joint attention and communicative intent may persist and manifest themselves in spoken language. For example, inability to initiate or sustain conversation and socially inappropriate language relate to social reciprocity. Helen Cockerill then looked at the communication needs of children with Cerebral Palsy, and contrasted this with Autism. She described three functional groups for AAC (von Tetzchner & Martinsen 2000): Expressive Language Group (large gap between understanding & expression through spoken language e.g. CP); Supportive Language

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Group (AAC is a scaffold for speech development, temporary replacement or support for low intelligibility e.g. Downs); and Alternative Language Group (AAC supports both comprehension and expression e.g. Autism, PMLD). She pointed out that the use of pictorial timetables is a support to comprehension rather than an expressive communication strategy. She then used 'seesaw diagrams' to show how Autism and CP contrast when applying Communicative Competences as defined by Janice Light in 1989. In Operational Competence, strengths tend to be relatively high in Autism. However, in terms of Linguistic, Social and Strategic competences, skills in the Autistic population tend to be relatively low. This is particularly the case in terms of strategic competence, which requires flexibility and adaptability, and to quote Helen on this "If one strategy doesn't work, they have a hooley!"

The presentation then focused on the use of PECS, signing and VOCAs. Dr Slomins reiterated that studies show that the majority of people with ASD will develop speech, so that research suggesting that they develop speech alongside AAC need to be treated with caution. PECS (Bondy & Frost 1994) was described as a 'behaviour modification system to teach spontaneous requesting through pictures.' Positive outcomes may include initiation, frequency and range of requests, increased expressive language etc. Whilst signing is frequently used with ASD clients, and may have successful outcomes, some potential problems were highlighted, such as poor imitation and motor skills, poor symbolic representation and poor communicative intent etc. Furthermore, signing may reflect ASD style of communication e.g. stereotyped and repetitive, rather than increased social communication. Once again, a paucity of research data was highlighted with respect to the use of VOCAs, and it was concluded that more research is needed into predictors of success, both in terms of learner and environmental characteristics.

Finally, the audience was asked to rate PECS, signing and VOCAs in terms of demands on the four communicative competences, and in the light of this to consider the relative merits of each strategy for people with ASD and CP.

##### 5. PLENARY SESSION

This session saw all the speakers back on the stage, and unsurprisingly after such a well attended and stimulating day, questions from the floor were plentiful. A primary conclusion of the day is that there is an urgent need for Autism and AAC Experts, Clinicians and Researchers to

work together in improving the evidence base in this field. Questions included:

- *Is there a way of predicting who is likely to be among the 75% who will develop speech?* IQ (especially NV). Testing may include Vineland Social Maturity Scale + pulling data together from family, school etc. Also Joint Attention (Yoder & Stone 2006).
- *Should we be encouraging researchers to put together and circulate protocols to clinicians who can contribute data to methodologically sound studies?* People on their own are unlikely to conduct randomised trials. Clinical Psychologists are encouraged to think of each individual as a potential research project and therefore to document each client as part of a case series. Dr Slomins is involved in a study as part of 3 centres collating data. A related paper is imminent from Juliet Goldbart and Lyndsay Pennington.
- *Is there any evidence suggesting that VOCAs are successful with children with ASD?* Speakers from the ACE Centre said that they had run out of time before presenting a particular case study showing a positive outcome, and a member of the audience reported 3 or 4 successes. It was suggested that we must justify costs in those instances where we may be enabling children to become obsessive more successfully; and we need to ask ourselves whether there is added value over low tech strategies, such as PECS.
- *At what stage of PECS does it tend to be appropriate for a child to move to AAC?* Possibly when they can initiate.
- *Is there a note of caution relating to the novelty factor and high abandonment rate of VOCAs where users haven't returned to their PECS strategies?*

Parents may need to be protected from over-high expectations, and we must be certain not to do harm in our practice. Attention was drawn to people with Aspergers, who have relatively high linguistic and poor social competences. Learning to comment with PECS will not necessarily be transferred to social communication, and it may not be realistic to expect this.

##### FINALLY

I for one would like to congratulate the organisers and speakers for such a thought provoking and enjoyable day.

Conclusions may have been somewhat depressing in terms of the existing evidence base, but identifying that there are so many gaps to plug must surely be inspirational to all those folks out there who, unlike me, don't head for the hills at the merest whisper of numbers and graphs. \*

Sally Conner, *Speech & Language Therapist*

## UPDATE FROM ROMANIA

by Dorothy Fraser

On my last visit to Romania in mid-June, before the start of the summer holidays, I had time to discuss with my Romanian colleagues ways that we can develop existing projects.

In Bucharest, at Special School 6, I have been working with staff and pupils for several years to make changes to suit the needs of individuals. The school has a particular interest in the autistic spectrum, with an annual increase in the number of pupils with ASD. In addition, to making changes at management level there is a need for practical help, putting theories into practice in classrooms.

The staff feel it would be really beneficial for the school to have collaboration with similar centres in the UK and to exchange ideas. If anyone wants to go and work directly with staff and pupils in Bucharest, they would be greatly welcomed and appreciated.

In Sibiu, the project for IT in rural schools has been popular. It is on hold now for the holidays and other projects, e.g. sports/fun activity days are being organised by Ascensium in 10 villages, plus holiday camps. The IT programme will resume in September. This project could be developed to include more villages as there are Romanian volunteers who have the knowledge but unfortunately there is a shortage of equipment.

My original project provided laptops and a projector which travelled with the team plus a locally bought PC for each school. Any help towards providing more IT equipment would make a great difference to children's futures.

I now have a house in the Avrig Valley, near Sibiu, in Transylvania. It is a lovely part of the countryside to relax in, away from the city. I hope to develop it also as a place for international visitors to stay and where professionals from Romania and other European countries can get together and plan projects.

If you want to know more or if you already have work in Romania, please do not hesitate to email me: [dotfraser@hotmail.com](mailto:dotfraser@hotmail.com)

# Taking Control: Environmental Control Technology Project

## JENNY BOYD

Rosewood School, The Bradbury Centre, Aldermeer Road, Southampton SO16 5NA, UK  
Email: JennyBoyd@roseroad.org

### ROSEWOOD SCHOOL, SOUTHAMPTON

Rosewood School, Southampton, is a non-maintained special school for up to 40 children with profound and multiple learning difficulties. Run by the Rose Road Association, a local charity, the school offers a specialised curriculum focusing on the individual needs of each pupil, developing key skills in communication, cognitive development, Environmental Control Technology (ECT), physical skills, and personal social and health education. The National Curriculum is used to provide a breadth of experience and learning opportunities in which to teach the key skills. The school has an attached therapy suite enabling staff to meet the therapeutic and medical needs of the pupils. The therapy team consist of physiotherapists, occupational therapist, a full time nurse and two healthcare support workers, a hydro-therapy support worker, a speech and language therapist and a music therapist.

### THE ENVIRONMENTAL CONTROL TECHNOLOGY PROJECT

In March 2006, following the successful development and implementation of the schools Early Communication Assessment and Curriculum and a similar package for Cognitive Skills, the school moved to looking at the impact technology could have on the education of all our pupils. The earlier projects addressed again the weaknesses found in using ex-

isting target setting material. The assessment process was not integral to the curriculum planning process and the levels did not reflect the range of differential between pupils at P1-P3, i.e. our school population. The school had developed through training and curriculum guidance a strong child led approach to curriculum planning and whereas Information Technology had been agreed as a Key Area of learning it was not received with the same commitment as the other key skills. (This aspect will be discussed further.) The aim of the project was to use research material both academic and experiences from other schools; teachers' knowledge and experience and move forward the boundaries of what was the accepted use of technology within the school for pupils with PMLD, (the curse of the BIGmack will also be discussed later) and to ensure that through the use of technology learning opportunities could be provided and built upon. The final outcome was to be an Assessment and Curriculum in ECT with a full package of staff training; resourced from an initial budget and to produce a plan for future developments.

### INITIAL STAGES

As stated earlier the plan to include the then named Key Skill Area of ICT into the development of five Key Skill areas was met with a strong resistance and some



opposition. During the launch stage of Key Skill Areas five large sheets of paper were placed around the room for staff to put skills and opportunities for learning under each of the five headings. Communication was overflowing (very positive as this was our first area to be developed) but ICT was left blank. This was a difficult point as strong views were held against it then being included; staff were assured that if at the end of the development of the Key Skill Assessments and Curriculum there was still this level of reservation the inclusion would be reviewed. It was following the early stages of research that one of the leaders of the project renamed the subject. The re-launch at a staff meeting of the inclusion of Environmental Control Technology as a Key Skill Area was positively received and the idea that it was all about computers was dispelled.

## SCHOOL PHILOSOPHY

We live in a world in which it is becoming increasingly necessary to be aware of how technology is influencing our everyday lives and increasing our access, freedom and control on a global level.

The stark contrast of this is the world of PMLD, here events may often occur without the control of that person. There is a bank of research that demonstrates that without control of our external world actions become increasingly self directed and motivation to control reduces.

It is our intention to use the wealth of technology available to look at how the pupils at Rosewood can learn to control their environment. We want to use the advancements to help overcome physical and cognitive impairments and help reduce their level of dependency. We aim to provide environments that enable a level of control above what has previously been known to them.

In order to achieve increased control we must also remember that whereas we can access a range of technologies there are none, yet, as flexible as a human! Developing communication remains our central aim and developing interaction with other adults and peers is a main priority. For some of our pupils the development of ECT may lead to access to a high tech communication aid but this will only be the case when the child has acquired the necessary pre-requisite learning.

We must also acknowledge the development of assistive technologies is going to require often ambitious and targeted resources. We must be careful not to limit opportunities for future technologies to be embedded into practice.

At Rosewood we have given ECT the status of one of our five *Key Skills*; the others being, Communication, Cognitive, Physical and PSHE (Personal and Social Health Education). This means that every child will have an ECT target on their Individual Education Plan. It is expected that this target will be taught across a whole range of subjects and appear at least on a daily basis in the pupil's day.

We are committed to empowering parents as to the benefits assistive technology can have in their own home environments. The current funding means only adults with physical disabilities are prioritised to receive NHS funding to have home adaptations.

The benefit in preparing for this technology at school is currently being explored through companies such as Possum-SRS Ltd and we now need to look at the entitlement issue for pupils with PMLD.

## ASSESSMENT CONTENT

As with our previous two Assessments in Early Communication and Cognitive Skills the aim was to ensure a clear link through from the needs of the child, Individual Education Plans and into effective lesson planning.

Each pupil at the school has one ECT Target in their IEP, yet the assessment covers eight strands of ECT and each strand has a curriculum area with suggested teaching targets.

During the implementation the strands are:

- *Physical Access*: to maximise physical abilities, to increase levels of control accessible to the pupil.
- *Switch Control*: to develop access and degrees of control a pupil can have over devices.
- *Cause and Effect*: to develop the understanding a pupil has of their ability to control the environment.
- *Physical Refinement*: to increase levels of control by access to technology.
- *Stimulus Response*: To be actively engaged in the impact that increased control gives the pupil.
- *Motivation*: to ensure the use of ECT motivates the pupil to control their environment.
- *Control for Independence*: to ensure the skills being developed are functional and applied throughout the pupils' daily routines.
- *Communication*: to develop a link between controlling devices and controlling people.

For each strand, a series of questions have been devised so that they are developmentally sequenced through three main development stages; Pre-Intentional (P1-2), Intentional (P2-3) and Formal (P3-4). Then within each of these main development stages between two and four further sequenced steps are broken down (see Figure 1).



Linked to each of the boxed stages are three questions. A simple scoring system of 2 out of 3 means the box is etched in and the same title area appears in the curriculum showing suggested targets and teaching points (see Figure 2). This leading to the particular Curriculum area, for example the curriculum for 'Switch Control' (see Figure 3).

## LIAISON WITH ECT COMPANIES/PROVIDERS

As part of the initial audit of resources available, we browsed through endless catalogues of new technology and noted that equipment being highlighted by supplier QED Ltd seemed close to the way in which we were trying to go. Due to the close proximity of their headquarters contact was made with this company. QED agreed to loan equipment to the school to enable informed decisions to be made prior to purchasing. QED have been very supportive of our work and were keen to help us develop it into a computer based package that will enable teachers to assess (with whole school, class and individual data collection features), target set and plan lessons. The company has previous experience of working with schools to develop resources and were keen to forge such a relationship with Rosewood. The work is currently with a software designer to develop as a published resource.

One of the services QED offered the school, that we would strongly recommend, is an ICT Equipment Amnesty! All classes pulled every piece of technology out of their cupboards, including those

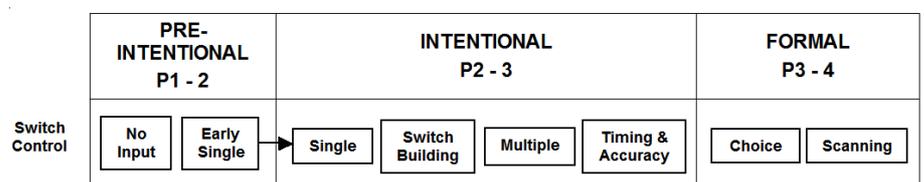
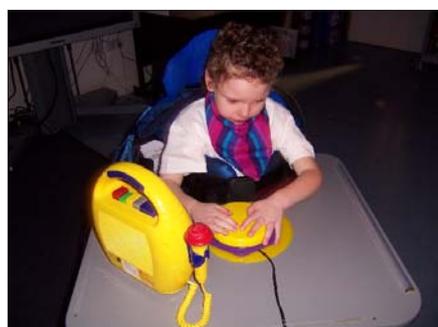


Figure 1 Developmental stages

gathering dust at the back and those still neatly packaged having never got out of their box let alone the cupboard. The QED team then came in for a day and explained the equipment and its use and whether they were beyond repair or now available with additional features. This day immediately increased pupils' access to ECT and highlighted areas for purchasing priority. It also confirmed the abundance of BIGmack switches throughout the school. Whereas for some pupils these switches are beneficial, what we had was an excessive amount of "Hellos" (usually in an adult voice), a few "More pleases" and generally a switch that for those who did activate it, lent itself very much to 'Happy Switching', where the switch is continually hit without waiting for the response and often the switch click was more of a reward than any message recorded. We are now looking for switch control that is more functional to the pupils and their access to the environment.

QED were keen for us to look at their new kit, Life Skills, which they had developed in partnership with Possum. Ever weary of a sales pitch we invited Possum into the school to demonstrate the possibilities of environmental control. Aspects of the kit were exactly what we were looking to develop for our post 16 pupils. However the company had worked closely with a number of SLD Schools and a lot of the technology required access through symbolic recognition of pictures or symbols and the majority of our pupils operate at a pre-symbolic level. At a recent training day Possum worked with the expertise of the staff and achieved "Blue sky thinking" on what the technology could mean for the pupils on a daily basis. We are currently looking to continue this relationship to the benefit of the pupils using the enthusiasm and expertise of the company with the knowledge and experience of the staff to move the boundaries forward.



**THE ASSESSMENT & CURRICULUM PACKAGE**

Currently the Assessment and Curriculum covering ECT is with a software company. Following our work with QED they are supporting the school in developing a CD-ROM to be available through their catalogues in

<b>SWITCH CONTROL</b>	
<b>No Input</b>	
1. Reflex reaction to stimulus activated by adult	<input type="checkbox"/>
2. Startles/stills at changes to the immediate environment, controlled by an adult	<input type="checkbox"/>
3. Briefly attends to an effect activated by an adult	<input type="checkbox"/>
Comments:	
<b>Early Single</b>	
1. Will activate switch as a reflex/chance event	<input type="checkbox"/>
2. Responds to action after switch is activated	<input type="checkbox"/>
3. Shows awareness of the switch	<input type="checkbox"/>
Comments:	
<b>Single</b>	
1. Is motivated to activate switch to cause action	<input type="checkbox"/>
2. Connects switch activation to action	<input type="checkbox"/>
3. Stops activating switch during reward/effect	<input type="checkbox"/>
Comments:	

Figure 2 Scoring for Switch Control

ENVIRONMENTAL CONTROL CURRICULUM – SWITCH CONTROL				
AREA FROM ECT ASSESSMENT	P-scale Reference	Learning Objectives (suggested)	Teaching Points	Resources
Early Single	ICT P1(ii)	<ul style="list-style-type: none"> <li>To have switch positioned where accidental effect can occur.</li> <li>To have access to switches, that can be activated by chance in a range of environments.</li> <li>To demonstrate a response to an effect activated by an adult.</li> <li>To consistently demonstrate a response to an effect activated by an adult.</li> <li>To begin to demonstrate preferences over effects activated by an adult.</li> <li>To briefly attend to the switch post effect.</li> </ul>	<ul style="list-style-type: none"> <li>Working with the Occupational Therapist and/or Physio to assess movement and positioning for switches will be crucial for development through this stage.</li> <li>Using a wide variety of switch types and effects will be essential to support this stage. Keeping a record of resources tried and responses will allow team to reflect and refine best access for the individual pupil.</li> </ul>	

Figure 3 Curriculum for Early Single Switch Control

the near future. It is the intention of the school to develop each Key Skill Area as a software package and to be able to collate data across all five for the purposes of whole school and individual target setting, in a meaningful way for pupils with PMLD. Obviously as a school we are delighted at this development but we recognise the strong role of INSET in the effective implementation of the work undertaken. Therefore linked to the published material will be the availability of training and on-going support packages for schools interested in the work being developed at Rosewood. We would strongly

promote any changes in assessment and curriculum material to be undergone at a pace suitable for an individual school's own starting point. The design of the materials is flexible to use the assessment and targets set in conjunction with a school's existing planning framework. \*

Jenny Boyd, *Headteacher*

**FURTHER INFORMATION**

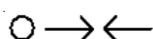
For more information, contact: Jenny Boyd, Rosewood School Tel: 02380 721223; Nadine Farris, QED Ltd Tel: 02392 580600; or Hector Minto, Possum-SRS Ltd Tel: 01296461002.

# Bliss Symbols Communication

SALLY MILLAR

Blissymbol Communication UK, c/o The CALL Centre, University of Edinburgh, Paterson's Land, Holyrood Road, Edinburgh EH8 8AQ, UK  
Email: sally.millar@ed.ac.uk

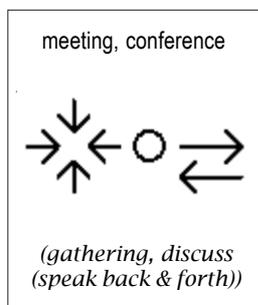
hello



## BLISS SYMBOLS

Bliss symbols (aka Bliss or Blissymbolics) is a graphic symbol communication system that has been around for many years although it has been gradually fading from view in the UK<sup>1</sup> as more new and different symbol systems, software, and voice output communication aids have 'come on the market'. But Bliss is still very much alive and kicking!

Making Bliss materials is easier than it has ever been. For example, although one of the strengths of Bliss is that you can easily and quickly hand-draw the symbols, you still need to be able to print out displays and educational materials etc. with properly drawn symbols. You can now buy a Bliss symbol library for BoardMaker (request details from [www.widgit.com](http://www.widgit.com) for details) and by this time next year, there will also be a Bliss wordlist for the Widgit Communicate software range.



## INTERNATIONAL BLISS CONFERENCE 2007

In July 2007 at Dundee University, there was an exciting international conference and 'Think Tank' on different aspects of Bliss symbols, attended by specialists from many countries including Canada,

the UK, Sweden, Norway, Belgium, the Netherlands and electronically (via Skype, live), the USA. The aim was to discuss 'Bliss in the 21<sup>st</sup> Century' and how to raise a renewed awareness of the Bliss language for those who need it, and to work on new symbol vocabulary.

Technologically, there are many innovative developments afoot. At the conference, we discussed development of a Bliss Font; accessing Bliss by 'Bliss Dasher' ([www.inference.phy.cam.ac.uk/dasher/development/bliss](http://www.inference.phy.cam.ac.uk/dasher/development/bliss)), concept coding (so that any symbols including Bliss can be translated across the Internet), and how to make symbols and different software tools more easily available.

## WHAT IS BLISS?

Although it was originally intended (by its creator, Charles K. Bliss, 1897-1985) as an international language, Bliss was used to support the communication of children with physical disabilities by an interdisciplinary team led by Shirley McNaughton in a special school in Canada in 1971. In the UK, Bliss courses in the 1970s and early 80s were 5 days long and gave a thorough grounding in all aspects of non-speech communication, not just the symbol system itself.

Bliss was therefore a pioneer and one of the earliest foundation stones of what we now call 'augmentative and alternative communication'. Bearing in mind that ISAAC itself was not formed until 1985 (and indeed Shirley McNaughton was a leader, founder member and first ever President of ISAAC) you will realize how advanced Bliss was, in its day. If you want to read a little more about the beginnings

of Bliss, read the article written by Paul Marshall, a one of the early Bliss users, at [www.blissymbolics.org/canada/readingroom/paul14.htm](http://www.blissymbolics.org/canada/readingroom/paul14.htm)

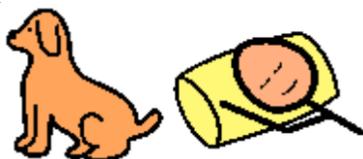
## WHAT IS SPECIAL ABOUT BLISS?

Bliss is not like a closed, pre-printed picture symbol set, it is a language that is open-ended and generative, based on elements of meaning, rather than on letters or sounds. The learner need only master the meaning of approximately 100 key symbols, and then these can be combined and recombined to create new symbol meanings. Bliss-words can be sequenced to form sentences, and express grammatical relationships. Bliss grammar is simple, yet it allows for sentences in past, future and present tenses (and has markers for possession, plurality, questions and commands, if the user is particularly sophisticated, but these do not need to be used).

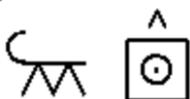
All of this means that although a user may only have room on his or her symbol board/book (or the accessing capability) for a few hundred symbols, nonetheless they have the linguistic power at their finger tips to express many of the complex and subtle relationships used in spoken and written language but without requiring skill in manipulating letter sounds and letters. The biggest difference between Bliss and picture symbols is that Bliss symbols can work at an abstract linguistic level (*as well as* at a basic functional communication level) rather than tying the user to a

<sup>1</sup> Bliss is going strong in the Nordic countries, where government support was obtained, in Israel and many developing countries.

specific concrete image. A simple example would be using 'eat' or 'sleep' with a subject that is non human, e.g. a cat or dog. With a picture system, we see a dog or cat and then a verb depicting a human eating or sleeping which is semantically absurd:



With Bliss, integrity of meaning can be preserved:



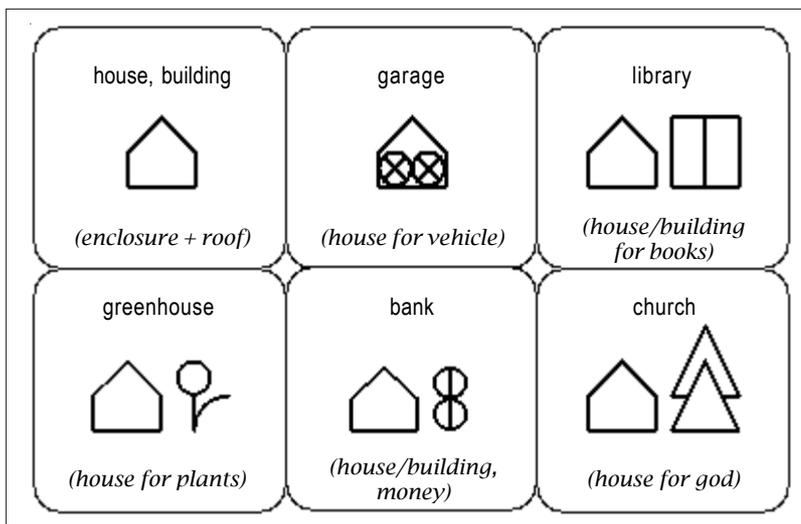
*dog, sleep (eye closed/within enclosure)*

The 'language-ness' of Bliss is shown by the fact that some Bliss users produce long symbol strings (or sentences, even if not always 100% grammatical) when communicating, whereas picture symbol users can tend to get stuck at 'key word' utterances.

At first sight, Bliss may look somewhat 'more complicated' than picture-based symbol systems, but that is not a weakness but an indication of its rich potential. Where would we be if all language learning was required to be instantly transparent, e.g. 'Learn German in 3 minutes, no teacher, no books, no tapes, no exercises, no homework, no conversation, no practice' - I don't think so! Like most valuable knowledge, Bliss *does* need to be taught and learned. That process is also teaching and learning *about language* and about the world that is valuable on many levels, going beyond day to day functional communication, for example, as a foundation for the later learning of reading and writing of print - users are aware of how to segment units into smaller components. It is not really all that complicated, once you 'get' the basics, as there is strong internal consistency.

#### WHO USES BLISS?

Bliss is not for everybody, but for the people it's good for, it's really good! The kind of individual that can benefit from Bliss is relatively cognitively able, functioning at the level of intentional communication, with symbolic understanding (or able to achieve this). Bliss symbols can be introduced at any age, and can be used simply at first and expanded as ability grows to allow expression of thoughts, feelings and abstract ideas. Bliss users are individuals who have difficulty using print, but who require a far wider, more complex



and open-ended vocabulary than can be provided with pictures.

Here are some questions for you to take away and think about: *How many AAC users do you know that you feel, in your heart of hearts, should be able to do more/better? Could a more powerful symbol system open up their linguistic capabilities?*

#### BLISSYMBOL COMMUNICATION UK (BC UK)

Today, a small core of Bliss specialists maintains the Blissymbol Communication UK committee as an unfunded voluntary organization. The role of BC UK is to provide support, experience and information, and, potentially, input to specific project work. The first priority is to try and provide a base of support for the adults who use Bliss in the UK, and their families and the people who work with them. There is a major concern that Bliss users might have their expressive language taken away from them (or that it just falls into disuse) because staff are unable to maintain their symbol displays or are unaware of the unique power of Bliss. One adult Bliss user I interviewed said that at review points he regularly has to fight off people trying to change him off Bliss and on to another system "because they don't understand Bliss themselves because they don't want to say I don't understand about Bliss sometimes I do feel they do put it down because they don't understand about it themselves."

Secondly, BC UK hopes to re-ignite awareness of Bliss amongst AAC practitioners, so that young children with good potential are not held back from their full potential for exploring and developing language.

#### SUPPORT FROM BC UK

BC UK will answer any enquiries and (bearing in mind that this is a small voluntary organization) do its best to meet any requests for support, on a flexible and person-centred basis. For example we can help you with:

- information and advice, including news of new research and development and relevant contacts;
- awareness raising and training for staff;
- new Symbol vocabulary;
- actually making new Symbol boards or books for a user (if someone lists the vocabulary needed and specifies size and layout, etc. - we cannot generally make assessment visits).

We have to make a realistic charge for services such as training and making symbol resources, but try to keep this as low as possible for users and families.

#### CALLING ALL UK BLISS USERS!

BC UK hopes to build a database of UK users, in order firstly to try and offer support to them and their carers, if required, and secondly to form a clearer picture of what the user base and its needs actually are. If you know anyone who uses Bliss or who used to use Bliss, please ask their permission and contact BC UK through: [sally.millar@ed.ac.uk](mailto:sally.millar@ed.ac.uk) or [gillian@gmhazell.fsnet.co.uk](mailto:gillian@gmhazell.fsnet.co.uk)

#### WHERE CAN I FIND OUT MORE ABOUT BLISS?

If you would like to learn more about Bliss, please contact BC UK and/or try looking up the following web sites:

- [en.wikipedia.org/wiki/Blissymbolics](http://en.wikipedia.org/wiki/Blissymbolics)
- [www.blissymbolics.org/](http://www.blissymbolics.org/)
- [www.blissymbols.co.uk/](http://www.blissymbols.co.uk/)
- [www.blissymbolics.us/](http://www.blissymbolics.us/)

#### Bliss Connection

To keep up to date with what is going on in the 'Bliss world', log on to the BCI website [www.blissymbolics.org](http://www.blissymbolics.org) and download the short quarterly e-magazine Bliss Connection.

#### Online Bliss Training Course

[www.blissymbolics.org/moodle](http://www.blissymbolics.org/moodle)

\*

Sally Millar, Speech & Language Therapist

# ECO™ -14

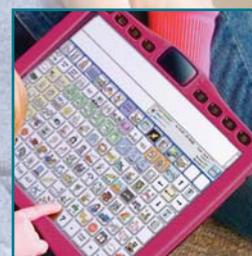
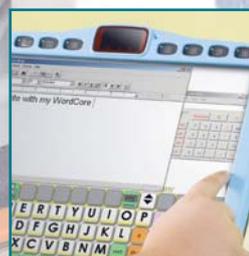
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# Speech Aids -

- a new era  
dawns!

In launching its new products called the “V” and “V Max”, DynaVox Systems, already one of the leading speech aid suppliers in the industry, have taken the communication aid concept into a new era in terms of hardware and software, furthering language and literacy development and promoting inclusion.

On the hardware front, as well as the “V” and “V Max” being speech aids, they are also full XP based Windows computers. This means that the user can now access any standard Windows programs without the need for another PC, and users who access the device through a switching system can use it as a PC.

So, the “V” and “V Max”, are truly “communication aids” in the fullest sense of the phrase as they allow access to speech software, email and internet applications and even text messaging through the users mobile phone – in fact all methods of communication most people take for granted – even the printed word, through a printer via a USB port.



In addition the products allow full infra red connectivity to enable a user to control other electrical products like a TV, video,

lights etc. DynaVox have also recognised the importance of colour choice of the hardware itself, so the “V” and “V Max” come in 5 different colours, black, silver, blue, green and a great hot pink.

On the software side, DynaVox have introduced a new concept called **InterAACT™**. This is a strategy that uses a matrix of the individual’s age (to ensure age related vocabulary) and their ability, to point to a set of pages that the person should be able to use quickly and easily. As they grow in both age and ability, they can then move through the spectrum of literacy to more relevant pages and vocabulary to increase their communication ability.

The system also introduces many new features to speed up communication, like “my phrases” and a “Talk” button on every page. Through conversations with users, carers and professionals DynaVox have realised the importance of both language use and language construction and had tried to incorporate both into InterAACT™.

In addition, Boardmaker, used extensively in early stages of language development is included on every device with a seamless method of transferring existing grids into the InterAACT™ software

The launch of the “V” and “V Max” with **InterAACT™** truly is a new era in speech aids.

For more detail call 01384-446789 or email [enquiries@dynavox.co.uk](mailto:enquiries@dynavox.co.uk) or write to DynaVox Systems Ltd, Sunrise Building, High Street, Wollaston, West Midlands DY8 4PS





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