

# COMMUNICATION *MATTERS*

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# Journey to Independence and Equality

**SIMON WILSON**

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**I was born with cerebral palsy without speech.** I was told I was always active. Even when I was a baby, I wanted to be doing things – whether it was looking at something colourful or playing with a toy. As I grew into a young boy I discovered that I could do things with my hands and feet. This gave me a sense of achievement as I had control over an aspect of my life. As well as playing with toys, I used to play with random things such as spoons, newspapers and books. I liked playing with these things because I liked challenges and I found turning a page over with my feet a challenge.

My first school was Ingfield Manor School which, as readers may know, concentrates on children with disabilities taking control over their bodies. I enjoyed working with my body and getting it to do certain things, such as grasping bars and managing to sit on a box by myself. Sometimes my box used to come out from under my bottom whilst I was still hanging on to the bar on the table! There were a number of classes which were orientated towards physical education and in one class we had to lie on slatted tables and roll around. To me, this felt scary as I was always worried about falling off. When we had to roll over, I always liked someone to be there in case!

I attended 'national curriculum' lessons: English and Maths. I enjoyed the academic work but I was not getting as much as I needed, so my reading was behind. I think

a few of the staff spotted my capabilities and so they arranged extra lessons. I had a really good teacher who was inspiring. She took lots of time talking to me and understood what I needed to progress. When she was teaching me to read, she went really slowly so I could try to say the words. Looking back, this was an important time for me as this really helped me to achieve more academically.

I left Ingfield Manor when I was seven years old and attended Chailey Heritage School. At Chailey I took many more academic lessons which inspired me. I had a computer which I could use myself. This felt good because I could work independently. I was a very determined boy and I preferred to do things by myself. At that time my written work was behind and I wrote using just key-words. I stayed at Chailey for six years and had some good teachers who encouraged and pushed me to achieve what I could.

From Chailey Heritage, I went to my final school - Valence. I was thirteen and I would say it was one of the important stages of my life. Valence felt different, as it was ran more strictly and their classes had to follow the national curriculum. I was put in a class with about eight other students. The school employed a classroom assistant who worked with me for twenty hours a week. I did enjoy most of the lessons but when it came to art classes,



Presenting at the CM2007 National Symposium

my teacher, my assistant and I were perplexed about what I could do. I could not draw because I could not control my arms. Okay, I could have messed around spreading paint on some paper, but to me that would have been quite a pointless exercise. Instead, I used to clock-watch.

I began to go to French lessons – what a joke they were. Let me explain. I had a communication aid with an American voice. This meant in order for me to 'speak' in French, I had to type everything in phonetically with the assistance of my teacher. As it approached the GCSE level, the school

decided that I should drop French lessons and concentrate more on my English and Mathematics. In Year 10, I had extra one-to-one lessons. I really looked forward to these lessons as they gave me a chance to ask questions about what I did not understand during the week.

I was a keen student and I really liked getting on with my work, but the other students were playing up. A new student joined the class who had behavioural difficulties and the others got to like him so they misbehaved more. I was ashamed by this so I decided to speak my mind. This did not go down well with my classmates. In fact they did not talk to me for a few weeks after but that did not bother me as I kept doing my schoolwork.

My social life at school was not a lively one. I felt there were not very many students who I connected with. There were some who I had a laugh with but I did not hang around with anyone in particular. I was quite happy about this but the care staff thought this was strange. I got told that I should socialise with the other students who I was living with and I remember thinking, why? Why should I spend my free time socialising with students I did not have anything in common with?

Returning back to my journey, after my sixteen year school life, I started my nine-year further education 'career' at Hereward College. At first, I was very impressed with the college because it encouraged me to be independent and take responsibility over my life. At that point in my life I loved computers and I wanted to work in IT and I studied GNVQ Intermediate information technology to start with. I found the work incredibly hard because I felt out of my depth. Anyway, I kept at it, and very slowly I was completing the assignments.

Even though I spent most of my time undertaking my college work, I did quite a bit of socialising – both with students and staff. I felt free to express myself. When I was at Valence, I felt as if I could not express myself because of the way I was perceived. At Hereward, at least, for the first year, I was treated as an equal. If I wanted to do something, I had to arrange it myself. For instance, I had a tricycle which I needed help to get on, so I had to arrange for my physiotherapist to train some of the care staff to help me on it.

When I was around seventeen, I went through a depressive patch regarding a girl I liked. This girl did like me but let us say something happened which resulted in her not liking me. This made life really hard because I was thinking about the situation I had put myself in. This made what I did ten times harder. Fortunately, I was aware I had a real problem so I got psy-

chological help. I had counselling on and off for a year and a half. I am a deep person and always have been. The situation eased off after she had left.

I completed my Intermediate IT course in Christmas 1997 and I started my advanced GNVQ in the January. I excelled in my first year. I was in a class with some nice students who were keen to do their work. A few of the students took me under their wing. I enjoyed the rest of the year in the academic sense but my personal life was a different story.

The college employed a number of new care staff, some of these had experience with people who had learning disabilities, some had no experience. I got on with the new staff without the experience because they did not assume things about me and the other students. But the others with experience had preconceptions of people with disabilities. These preconceptions got in the way of how they were caring for me. They did not realise that I just had a physical disability. This made me very frustrated as I could not get them to understand what I wanted and, indeed, my philosophy on life. This got me down and I began to keep myself to myself.

January until June 1999 was a really stressful time because the college was doing some refurbishing of the student accommodation. There were three residential blocks and one was closed for this work. This meant the students had to move into the two remaining ones. At this time, the college was so short-staffed that everyone was stressed out. This affected me mentally and physically. The reason it affected me physically was because when I sense people are getting stressed, my body tenses up.

I decided to leave Hereward College that year and I continued my GNVQ at a local mainstream college in September. This was a major change in my life as I also wanted to get my flat so I got myself on the housing list. I lived with my Step Dad, Mum and brother. For the majority of the time my Mum assisted me with my personal needs and care agency staff came in mornings and evenings. Big challenges faced me when I started at West Kent College. For a start, the college could not find someone suitable enough to be my study assistant, so a mate stood in. Due to our differences, it was a difficult time for me.

My first year went, and I did not feel happy with how much work I had achieved. In October 2000 I had a new study assistant who worked there before so knew how the college worked. In effect, I was behind a year so there were not any formal lectures for me. I was doing my assignments unsupported from my lecturers. In fact, I requested just an hour's contact with a

lecturer a week but this was not granted. Fortunately, I have always been a determined person so I located the core material from the Internet and undertook those. My Advanced GNVQ eventually took five years to complete.

With my HND Business course, it was very different. I had the option of taking it over four years but I wanted to see if I could do it in two because I was feeling my life was running away. The new lecturers were really good and very accommodating. Unlikely the final two years of my GNVQ, I was in a class again. This felt brilliant as I was able to talk to the other students about my assignments. Naturally, it took a while for them gain confidence when communicating but very quickly some were picking me when group work was set. Throughout my HND, my career ideas were leaning more and more toward psychology and disability awareness. From this, I decided to go to university to study social psychology.

Meanwhile, the college asked me to run a communication workshop for a training day. I was thrilled by this and accepted straight away. I felt this was my chance firstly to give the staff the confidence to talk to the students without speech and secondly, to convey what sort of person I am. I was preparing for this workshop weeks before, making it look and sound really good. The day came round extremely quickly and I was ready to delivery. Two of my assistants came with me to set up my equipment.

My workshop started and I had everybody's attention. There were a few tasks throughout where people had to do role plays. There was lots of very positive feeling in the workshop and the tasks went down a treat. After the session, I felt on a high, like I had discovered what I really wanted to do.

In October 2004 I started my Social Psychology at University of Sussex. I really enjoyed studying people and how human behaviour. I was particularly interested in how attitudes are formed, especially about people with physical disabilities. I liked it so much that I chose to do my final year project on it. Another student and I researched to see if the more contact people had with others who have disabilities, the less prejudice they hold towards them. Studying the actual course material was not easy as it was not on computer. This meant my study assistant had to spend most of her time scanning books and articles. Throughout my degree, I had so much trouble chasing up core reading material from the lecturers but because I was determined, I kept battling on. I had to work long days to complete my essay. I had similar problems at university with my social life as it was hard to meet students as the



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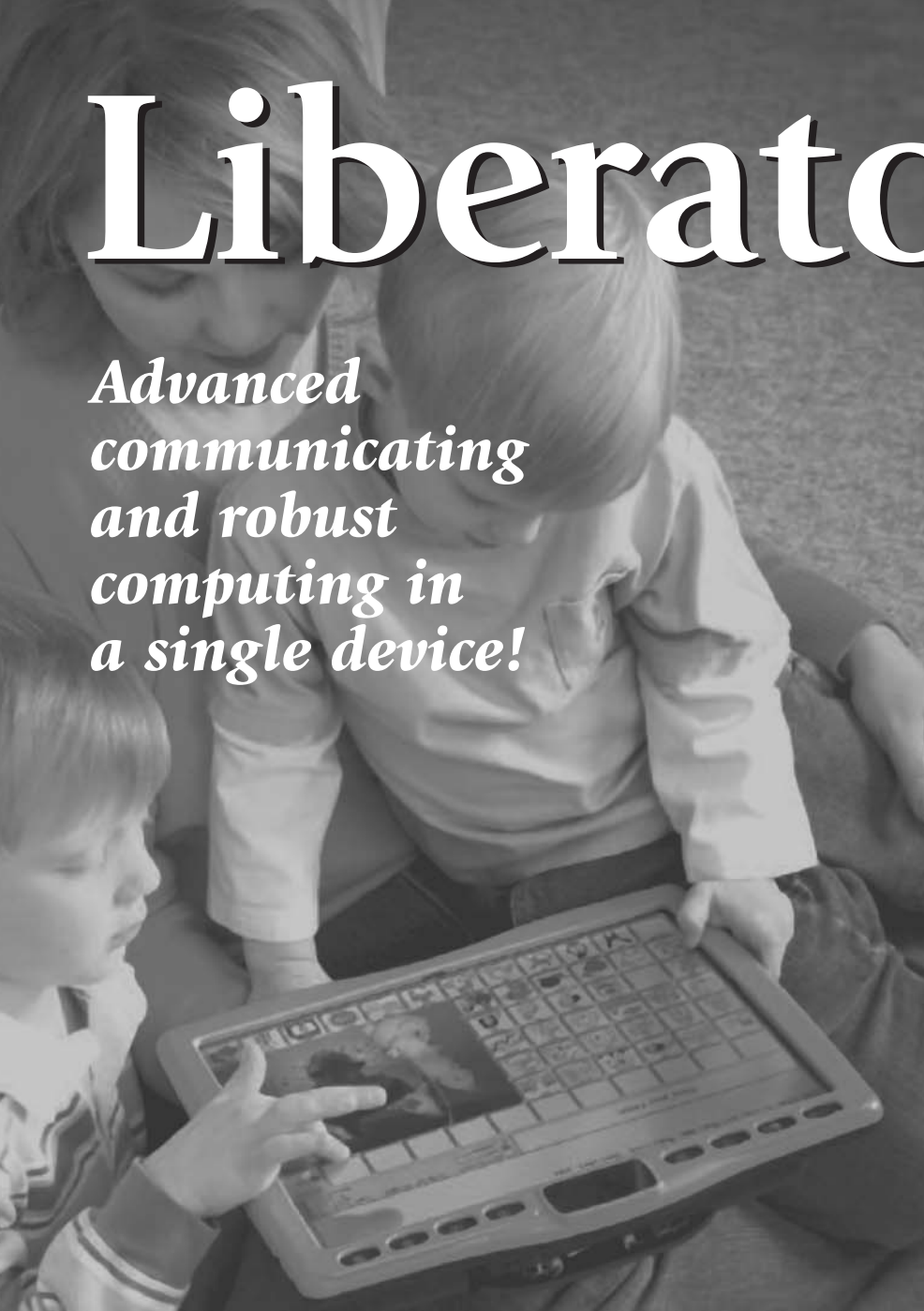
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only time I met up with them was at our lectures and seminars.

Throughout university I started writing more workshops. With these workshops, I tried to write them taking into account other people's situations and how they might view life. I felt one of the main things that I wanted to get across was 'it is okay to talk about what concerns people'. I also thought it would be helpful if my workshops had a few tasks so the attendees can talk about certain topics. I believe it is important for people to feel safe to discuss their concerns. I wrote almost three workshops: Communication with a Difference, Independent Living, and Disability and Personal Relationships. They were quite hard to write because I wanted to make sure they could relate to anybody with a physical disability and/or no speech. However, I was extremely conscious that everyone is individual.

About two years after my workshop at West Kent College, I contacted Scope and made them aware about my workshops. They replied straight away and asked me to put on a training day and run two workshops. As you can imagine, I was really excited and accepted. I treated this as a vital opportunity because if Scope liked it, this would set me in good stead for future workshops. The workshops they chose were Communication with a Difference, and Disability and Personal Relationships. The day came and I was really nervous. When I got there, most of my nerves went because there were some people who had known me for years. Both of the workshops

went down well and generated plenty of discussion – especially in the Disability and Personal Relationships one. The second one was a challenge because the subject area was new to them. I was really pleased on how the day went and the feedback I received was brilliant.

Since September 2007, I have been self-employed running my business. I focus it very much on equality and independence for people with physical disabilities. The reason I set it up was because I have been exposed throughout my life to so many situations and observed how different people react to others who have disabilities. Even though society has got more of an equal view of non-disabled people and people with disabilities, I have always been feeling there has been a power imbalance between both parties. With regards to achievement, a good percentage of non-disabled people do not expect as much from people with physical disabilities as from those without. I want to be clear that I am referring to people with physical disabilities only. One of the examples in my life is when I was going to university, some people were amazed and reacted almost in a patronising way.

What I am trying to do with my business is to challenge those attitudes. I am interested in working out the actual reason why people have these attitudes. Is it because people are in wheelchairs or is it solely because society has the perceptions in general? These are some of the questions which I am addressing throughout my career.

I have developed more services as well as running workshops. I also visit schools and colleges to work with children and young adults who use communication aids. I encourage them to feel comfortable and confident about using their communication equipment. I am a great believer in being independent and taking control. If children with physical disabilities can convey exactly what they feel and think, this would enrich their lives. I find other people often answer for them which hinders their independence.

One of things I am trying to convey is that everyone is individual. Each individual has their identity which consists of their likes and dislikes, how they do things, and the words they talk with. Someone who has a severe disability without speech relies on other people to help them to express themselves.

All my work inter-relates, as I write my workshops using what I have observed from my other work. The main reason I do this is because I really want to make a difference on how disability is viewed. I know changing society's attitudes will not be easy, but readers might have realised by now that I am real battler. I really do not believe in giving up. I really love what I do as my career and I will not stop working until I have achieved everything I want. If someone was to ask my advice on how to make the most out of life, I would say "Be determined and do not give up on whatever you want to achieve." \*

Simon Wilson

Independent Disability Trainer/Consultant



### Augmentative and Alternative Communication

This is the official journal of the International Society for Augmentative and Alternative Communication (ISAAC), published quarterly by Taylor & Francis Ltd, UK. AAC publishes original articles with direct application to the communication needs of persons with severe speech and/or communication impairments for whom augmentative and alternative communication techniques and systems may be of assistance.

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# Developing an ICT/AAC Outreach Service

**JUDITH PILKINGTON & DOT REEVES**

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## INTRODUCTION

Severndale School is a large special school (250+ on role within school aged 2½ - 19 years) with a well-established Outreach Service.

The ICT/AAC Outreach provision complements the general outreach work of the school, which targets pupils with significant learning difficulties in mainstream primary and secondary schools. The ICT/AAC outreach service is not limited to pupils with severe or moderate learning difficulties. The pupils who are referred to the service have specific difficulties which affect communication and/or curriculum access. The school receives a nominal funding from the Local Authority which is used to partly fund the assessment and follow up support for pupils who needs to use ICT/AAC in Shropshire mainstream schools.

The article aims to provide an outline of the development of the ICT/AAC Outreach Service within Shropshire. It will aim to show how a service has developed processes which allow the diverse needs of pupils aged 5 to 16 to be met. There are a number of factors which influence the recommendations being made and challenge the use of ICT/AAC in a school environment. The article will also outline the benefits of having staff from different professions and how their roles enhance the service.

## DEVELOPMENT OF THE SERVICE

The current service represents a development forward from the early AAC centred work of what was known as the schools 'Access Team' to the current set-up which has a broader curriculum driven focus for its outreach work. The service has been operating in its current form since 2002, and is seen as being very separate from the speech and language therapist led AAC practice within Shropshire, with practitioners from both services collaborating closely with regard to the overlap in AAC work. The school was also a CAP Partner with the status being awarded due to the early ICT/AAC practice within the school and county.

## STAFFING

The core practitioners involved in the ICT/AAC outreach work are a teacher and a qualified speech and language therapist who is employed by the school as a communication adviser. These practitioners are supported by an ICT manager and technician as required. A recently appointed 'Director of Specialism' within the school co-ordinates the aspects of practice within Outreach which fall within the remit of the communication and interaction specialism work.

Judith Pilkington who is the teacher for the ICT/AAC outreach work is also the Primary Phase Outreach Service Teacher

(OST), and there is useful over-lap between the general outreach work and the ICT/AAC focused support. Judith has a background of teaching individuals with physical disabilities, which includes a period when she led a conductive education-based SCOPE 'School for Parents' based at Severndale. Judith is a manual handling trainer for the Local Authority, and works closely with the Access Panel on matters involving pupil access within Shropshire. In addition to many years of experience with ICT and AAC for curriculum access and communication, Judith has a Postgraduate Certificate in Speech and Language Difficulties and is also a regional Makaton Tutor.

Dot Reeves, speech and language therapist (SLT), is employed 0.7 sessions/week by Severndale School in an advisory/training capacity, otherwise employed by the NHS as a Highly Specialised SLT working with young children with specific language impairments in mainstream schools. Dot has an SEN background with considerable experience within the field of AAC/ICT. Dot has Approved Teacher Status with the British Dyslexia Association, and is also a senior tutor for The Makaton Charity.

## ON THE ICT/AAC REGISTER

- Pupils of statutory school age
- Pupils with and without learning difficulties



- Pupils with varying degrees of motor difficulty
- Pupils with dyslexia
- Pupils with little or no speech
- Pupils who struggle to get much down on paper
- Pupils with ASDs

### Processes

These are:

- Referral
- A pre-assessment visit
- Assessment
- Action
- Review

### Referral

Pupils must be, or approaching, statutory school age. The school must agree to the referral, although the form can be (and often is) initiated by another professional such as an Occupational Therapist, Physiotherapist or Learning Support Advisory teacher. No referral is accepted without parental consent. Referral forms can be downloaded from the school's website. 23 new referrals were made to the service in the academic year 2006/2007.

### Pre-assessment visit

This step in the overall process evolved as an enhancement to practice, as experience reinforced the benefits of a preliminary teacher-led visit to meet the pupil prior to assessment. Here the focus is on curriculum access in addition to communication. Information is gathered through classroom observation, interaction with the pupil and discussion with school staff and parents. The pre-assessment visit is made within four weeks of referral.

### Assessment and action

This is booked to take place within 4 weeks of the pre-assessment visit. Again experience commends the benefits of holding the assessment at Severndale as opposed to within the pupil's school. When the session is booked to take place in the pupil's school the available accommodation is of variable suitability for purpose, and the likelihood of key people involved with the pupil being busy elsewhere in school appears to increase. For the Severndale-based assessment an invitation letter is issued *to the school* inviting the class-teacher, any Teaching Assistant involved, plus parents and any other key professional involved (OT, physio etc). Our service do not contact each party individually – the school is asked to take responsibility for this. *Both* team members are involved at this stage of assessment. Attempting to assess single-handed does

not – experience has shown – support the higher quality of service possible when operating as a team.

The standard practice is for one team member (DR) to engage directly with the pupil. This part of the session is initiated promptly, avoiding a situation whereby the pupil is faced with adult dominated discussion. Tasks/activities have been planned guided by the pre-assessment visit findings. As the pupil works with DR, JP sits with the pupils 'team' – and is able to act as a link person, explaining why the given tasks have been set, and guiding discussion about how the planned investigations can inform thinking about on-going plans for the pupil.

The desired outcome of the session is that information from assessment and information from the associated practitioners and parents feeds into a plan of action for improved curriculum access. The pupil, who after all is the central focus of the session, is frequently enabled to communicate clear messages about what works well for them. The response to a piece of hardware which significantly improves physical access, or the response to a piece of software which suddenly makes recording within a pupil's grasp is self evident, and in many instances leads to clear-cut decisions. The aim within the assessment session is for a consensus to be reached, and this is achieved within the majority of instances.

A common area of divergence of expectation against recommendation is when a school, parents or both, state at point of referral a laptop computer for the pupil is desired. Whilst having every regard for the value of a laptop when it is the right solution, there are also times when a more effective solution exists. Through the medium of these collaborative working sessions, it is rare to end the session on a note of disagreement. The pre-assessment and assessment sessions are viewed as the beginning of an ongoing process.

The assessment closes with verbal agreement amongst the parties concerned regarding any action to be taken. This is confirmed in writing within 2 weeks of the session. The report outlines findings, gives recommendations and sets objectives where applicable. The loan of any hardware is confirmed. Any purchases recommended to be made by the pupil's school are clearly set out. Training in the use of software or access equipment is offered if necessary, and a date or timescale for review is set.

The service operates a loan bank of hardware including a limited number of laptop computers. The stock comprises items such as mouse alternatives, modified and

'guarded' computer keyboards, portable writing aids, angled rests for keyboards. The emphasis of this service is curriculum access. Pupils with needs for communication aids can also be seen. This is always in liaison with their SLT.

The funding stream for AAC equipment is separate to the Severndale service, but the Severndale team are members of the AAC Panel which operates within the County across the two Local Authorities and the one NHS Trust involved. It would be common practice for members of the Severndale ICT/AAC Outreach Service to become involved with a pupil using AAC in a mainstream school, if additional advice is needed with regard to curriculum access.

### Review

The timescale for review is variable. It may be after half a term, a term, and academic year etc. It may take the form of a school visit by one or both of the team members. It may involve a return visit to Severndale. It could be that the recommended solution completes the necessary action, in which case the pupil would be classified under the heading 'school to contact if further input required'. In total at the current time there are approximately 60 pupils on the register in a review capacity.

### SCHOOL-RELATED CHALLENGES

Schools pose significant challenges for pupils who use alternative or augmentative means of communication and/or recording. The following factors are identified as having particular significance. The secondary school environment can be particularly challenging.

#### The physical environment

Classrooms do not come in standard sizes. The limited possibilities for layout of tables and desks can thwart best access. The height, size and design of available tables are crucial. The recommendation for a height adjustable table which was a simple solution in the primary school poses a logistical problem at secondary school. The pupil using additional equipment needs additional space. Issues such as how the pupil can effectively access a text book for the lesson are not fixed, measurable events. Robust recommendations by our OT colleagues aside, reality frequently means on-the-spot improvisation is required.

#### The speed of lessons

Best practice for AAC users in terms of time for responses is at significant threat when the context is a fast-moving lesson at secondary school. Similar situations arise at primary level. Huge quantities of verbal information are being presented





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and there are expectations for speed and quantity of responses, particularly when group discussions are taking place.

### Logistics of accessing information

The reality of the curriculum is that pupils are expected to be active participants in the learning process. Taking down notes as the teacher teaches is only one 'challenge'. The pupil who arrived at secondary school with a broadly effective access set-up may encounter unexpected difficulties as they seek to find things out from the internet, and view documents on the local intranet. The most sophisticated wireless intra and internet set-up within a school can pose unexpected problems for users of specialist communication and recording software. In addition to this, there are often a number of different support staff involved with the pupil with communication/recording needs, not all of whom are guaranteed to be as comfortable with the technicalities of the type of hardware and software which may be being used.

### Logistics of presenting findings

The expected medium by which work is presented is extremely significant. Worksheets which are fun and attractive for other learners can be inaccessible for pupils using AAC/ICT as their means of communicating/recording. The standard school exercise book likewise. Other pupils use a range of software for a range of purposes; use of 'Powerpoint', 'Publisher' and 'Excel' is as common as the use of basic word-processing software. Numeracy/mathematics is a well-known challenge for the AAC/ICT user who seeks to collate their findings into a bar-chart or a graph. If mathematics is a clear area of challenge in this respect, it is also true that subjects which may be expected to be 'easier' for our specialist pupil can present unexpected 'problems'. One example is the difficulty often encountered by the AAC user who by the very nature of their system tends towards a 'telegrammatic' style of expression. When the English teacher is looking to mark on the expression of mood and style, the AAC user could find their form of expression a significant block to achievement in this context.

### COMPLEMENTARY ROLES OF STAFF

An analysis of input from the Service shows that the two members of staff have evolved into roles which complement and ensure a more effective service. Effectiveness being measured in terms of increased access to the curriculum alongside effective communication within lessons and in social context. The Outreach Service Teacher's role has become more focused

on liaison between all agencies, parents and school. The pupil's educational needs alongside communication needs often need to be explained to parents and school staff. Experience has shown that educationalists appear to take on board suggestions from a fellow educationalist more readily. The Outreach Service Teacher uses previously established links with the Local Authority to pursue funding. The SLT in the team is more skilled in the technical aspects of ICT/AAC and so is the professional who generally provides training for the pupil, staff and parents. The Severndale ICT/Access SLT ensures close links with the NHS SLTs. The roles are not mutually exclusive and the Outreach Service Teacher will often demonstrate the use of ICT/AAC in the classroom with the SLT liaising with manufacturers, software developers and other agencies in order to achieve the access solution required.

### CONCLUSION

The evolution of the current service has taken time and its success is measured by the pupils being able to access the curriculum more effectively while meeting communication needs. The main area of difficulty remains funding. This has been particularly complex in Shropshire where there are several different funding streams. Difficulties are compounded by the ending of the funding and support that was available through CAP. The LA contributes towards the cost of the service which is supplemented by monies secured by Severndale School through Leading Edge and Specialist School status.

The establishment of processes which are used for all referrals goes some way to ensuring parity across primary and secondary phases. The amount of support given to schools, staff and/or pupils varies. This is due to the diverse needs of pupils and the needs of different schools. Some schools are more experienced in managing pupils with complex learning and communication needs. For schools who are less experienced the level of support initially is more intense. The aim of the service is to equip the school with skills to enable them to manage the use of ICT/AAC on a day to day basis. The level of support is decided upon by the Outreach Service in conjunction with the school. The value of having staff from different professions has been of benefit to the balance of the recommendations. It has also enhanced the credibility of the recommendations and advice being followed and acted upon by educationalists and therapists. \*

Judith Pilkington, Teacher  
Dot Reeves, Speech & Language Therapist

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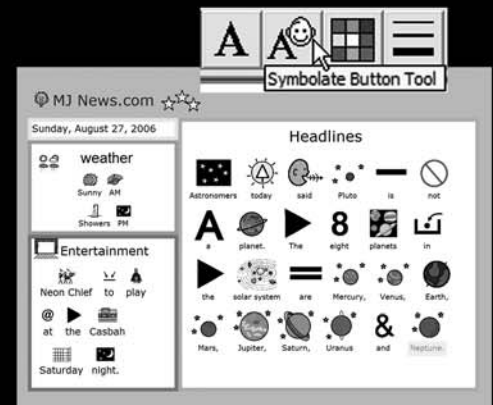
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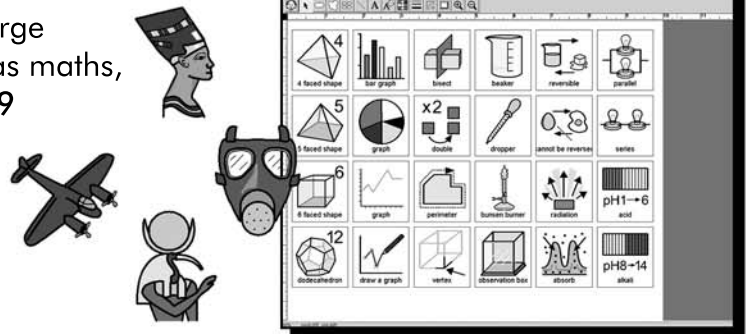


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# Teaming Models and Processes at a Specialist FE College

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Email: lawrencea@beaumontcollege.org

## INTRODUCTION

Eminent writers in the field of AAC (e.g. Beukelman & Mirenda, 1992) recognise the necessity for good team-working for effective AAC assessment and implementation. Certainly, from our point of view one positive outcome of the CAP project (BECTA, 2002-2006) has been the drive towards setting up and skilling more locally based AAC teams. Although Beaumont College is outside the remit of that particular project, we strive to replicate the good practice regarding team working.

## BEAUMONT COLLEGE

Beaumont College is a specialist residential Further Education College run by Scope. There are 77 students, 23 of whom are day students. The students are funded by the Learning and Skills Council and their local authority. The students range from those with Profound and Multiple Learning Disabilities, to students with more moderate physical and learning difficulties.

The college underwent a significant curriculum change in 2006 to become a College of Creative Arts and Communication. There is a formal academic timetable focusing on Creative Arts which includes subjects such as dance, music, performing arts, media etc. There is also a strong Personal Development component which involves working on individualised goals relating to independence, communication, social and leisure skills, numeracy and lit-

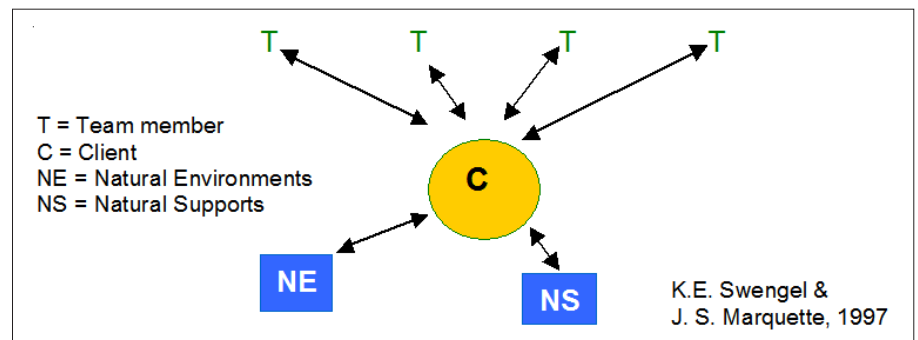


Figure 1 Multi-disciplinary Team Model

eracy. Students have two timetabled sessions to work on these areas, but they are also encouraged to work on them during their leisure time. The students' goals are based on a Person Centred Plan which is carried out prior to starting at college, and is reviewed on an annual basis.

## AAC ASSESSMENT, IMPLEMENTATION AND SUPPORT IN COLLEGE

In the past, the speech language therapists, occupational therapists, physiotherapists and lecturers have worked in parallel, providing equipment and recommendations based on discipline-specific assessment. Often, there wasn't a full complement of these professionals as staff came and went.

This way of working can be mapped on to the multi-disciplinary model of team work, and as such, we recognise there were some

limitations to the service that could be provided.

## MULTI-DISCIPLINARY TEAM MODEL

In this model (Figure 1), professionals from distinct disciplines, although possibly working in the same physical space, take on separate roles and set separate goals for the client, and information is shared between professionals 'after the event'. The client's experience of this model can be that it feels fragmented, repetitive (i.e. repeating case history information with each different professional, carrying out similar assessments with different professionals) and confusing.

## Limits to the Model in Beaumont College

What seemed to be happening in Beaumont College was that two professionals could end up doing the same thing, and



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occasionally, there were gaps when some things were overlooked. As the professionals were carrying out their assessments and writing recommendations independently, there was a lack of shared vision regarding what was to be achieved, and the goals were based on the progress the professional wanted to see, rather than on what the client hoped to achieve. Compounding this, information and knowledge was not always shared between professionals which limited the opportunities for knowledge management and professional development.

### Catalyst for Change

A few things happened at once, which created a catalyst for change. New personnel joined the college, bringing with them different ideas and experiences. Also, an increased number of professionals were now employed allowing more time to begin working in a different way.

At that time, there were sessions, led by teaching staff, focusing on communication which meant the communication team meetings involved a more than just speech language therapists. This 'cross-pollination' of knowledge and practice was not only stimulating for the professionals, but was also providing a more holistic approach for the students. This formative experience led to a realisation that this was a positive way forward for our AAC clients too, and change on a bigger scale was necessary.

### INTER-DISCIPLINARY MODEL

The first step towards change on a bigger scale was for the professionals involved with AAC to meet together regularly, allowing us to spend time jointly planning assessment, sharing findings and jointly discussing goals and evaluating progress. This inter-disciplinary way of working (Figure 2) maps on to the inter-disciplinary model whereby the aim is to unify the findings of assessment and there is some shared responsibility for the outcome of assessment. However, although there is joint planning; goals and intervention remain discipline specific.

### HICCUGHS IN TEAM PROCESSES: TUCKMAN'S MODEL

We had assumed that the team would start to perform effectively straight away, but we quickly realised that we were caught in the early stages of the teaming process as described by Tuckman (1965).

Tuckman describes the teaming process in four stages:

- Forming
- Storming
- Norming
- Performing

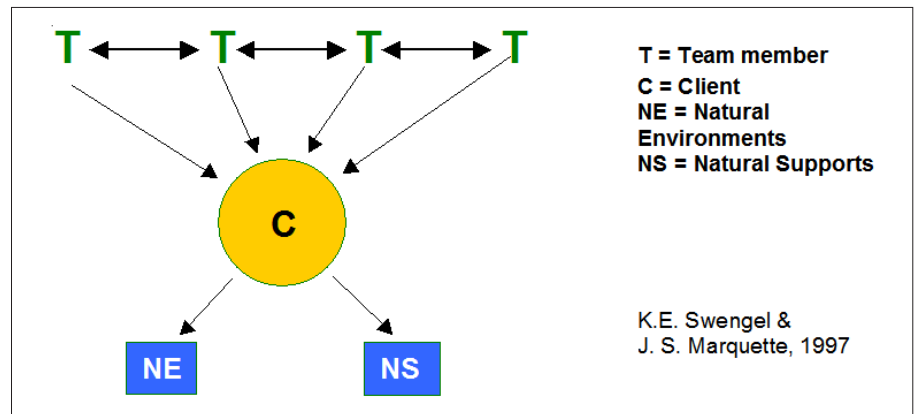


Figure 2 Inter-disciplinary Team Model

### Forming

- Little agreement on team aims
- Individual roles and responsibilities are unclear
- Lots of questions regarding team's purpose and objectives
- Processes are often ignored

Typically, the team has just formed, it is the 'polite' stage when everyone is being nice to each other, but often not very effective in achieving goals.

*Our Team:* Although we were setting up new systems and we were all enthusiastic, our roles weren't defined. There had been an incomplete speech language therapy service which had meant that tasks traditionally undertaken by SLTs had been carried out by lecturers and communication technicians. Attending the Communication Matters Conference as a department helped with the initial forming of the team. It was a joint learning experience, during which we were forced (in a positive way) to spend time together 'after hours'. This not only supported the development of inter-personal relationships, but it also gave us insight into each other's lives, and pressures, outside work.

### Storming

- Decisions in the group don't come easy
- Members vie for position
- Clarity of purpose increases
- Still some uncertainties
- Power struggles

This is the point at which a team is most likely to fail. Typically, defensiveness and competition get in the way of developments which will improve team effectiveness. Energy can be spent on arguments rather than achieving joint goals. The resulting tension and dependency can mean that team members question whether the team is worth investing in.

*Our Team:* We certainly had difficult days, and sometimes we felt like we weren't getting anywhere. We were struggling to

establish roles. As SLTs, we were trying to find our own boundaries and take back the tasks an SLT should do. There were times when we felt like we had established the shared vision but then someone would do something that didn't fit with it and we would be back to square one.

### Norming

- Agreement and consensus
- Roles and responsibilities are clear
- Big decisions made by team agreement
- Smaller decisions delegated
- Strong unity and commitment
- Engagement in fun and social activities
- Open discussion of team processes and working style

Finally, the team starts to work well together, and more energy is being spent on working towards the goals rather than on the teaming process. There is a sense of cohesion, and team members feel able to constructively challenge each other.

*Our Team:* The team needed to move through the storming stage to the norming stage, and one of the ways this was facilitated was by having an 'away day'. The team had great management support who made it possible for everyone to be present. During this away day, everyone had time to tell other team members about their professional history, professional interests, and if they wanted to, a bit about their private lives. We all came away with more of an idea about each person's knowledge and skills and we developed respect between members.

### Performing

- Team is strategically aware
- Shared vision in place
- Focus on over-achieving goals
- Disagreements resolved positively
- Team reflect and make necessary changes
- Attention to team processes and relationships

Although it can take a long time to reach this stage, it's worth it! At this stage, the team knows why it's doing what it's doing. Members can challenge each other in a positive way and resolve differences of opinion. Members have knowledge of each other's personal and professional lives and strengths and weaknesses which leads to more sensitive dealings with each other, and consequently a reduction in potential conflict.

It's inevitable that the team will fluctuate between stages, especially when members leave, or new members start, but also when other changes impact on the processes.

These team processes impact on the effectiveness of all kinds of teams – collaborative and trans-disciplinary teams need to go through these processes as well.

*Our Team:* We're still working towards this stage! However, through learning about the teaming process, we have a better understanding of what is happening to us. By knowing about and understanding the process that a team has to go through, we have been able to keep going and have hope that things will get better.

#### WHERE DO WE GO FROM HERE?

On the whole, we feel that we are working within an interdisciplinary model, with occasional lapses when one of us gets carried away with an exciting development and forgets to tell everyone else! However, we would like to work towards a model with an even higher level of collaboration.

#### TRANS-DISCIPLINARY MODEL

Figure 3 symbolises a trans-disciplinary team structure where everyone has equal status. There is an acceptance that every member of the team has something to bring – even if it's contextual knowledge rather than clinical expertise. (e.g. the student support worker knows that the student currently chooses not to take their device out to the pub, therefore a goal about buying a round using an AAC de-

vice would not be appropriate at this stage.) There is no fixed leadership role or hierarchy. Individuals may take the lead for a particular client or 'job' but this changes for each case and the leadership role is about the task in hand, not the management of team members. The client also has equal status within this model.

At Beaumont College, students are always as involved as possible in decisions around their curriculum options, and personal development goals, but there are other components of the model we strive towards.

Within this model, people begin to break out of their traditional roles, so there is a greater sharing of responsibility. Team members may extend their roles, by developing further knowledge from working with other professionals or they may release some of their own role to others. This allows for a more flexible, client driven service. An example of this would be that an SLT develops some knowledge about positioning, so at the very least she can identify when it's not right and when advice from the 'specialist' needs to be sought.

Within a trans-disciplinary team, assessment is completed through the collaborative efforts of team members. So several professionals may be present at a single assessment, although this would be kept to a minimum through role extension. In this situation, team members are familiar enough with what colleagues are looking for to be able to bring that information back, although it is still up to them 'the specialist' to make the clinical decisions.

The goals that come from assessment can consequently be more holistic and client-centred, and not service/discipline specific. They are considered to be 'owned' by the client, rather than the professionals.

#### COLLABORATION

While researching for this presentation, we found a couple of dictionary definitions for collaboration.

*"The act of cooperating traitorously with an enemy that is occupying your country"*

Hopefully this one is more appropriate for the current discussion:

*"The act of working together through reflective listening and genuine articulation of ideas, in a partnership of mutual respect and diversity"*

So we understand collaboration to be about how people actually work together, and it's the level of collaboration that dictates the team working model. For most

of us, effective collaboration involves a degree of conscious effort and thorough communication.

#### COMMUNITIES OF PRACTICE

Our team was having regular meetings about the students using AAC, but these meetings were not strictly student focused. We realised that our meetings had many of the features of a Community of Practice because we were discussing our own knowledge, theories and ideas, and we were starting to put in to practice what we had talked about during the meetings such as carrying out joint assessments, using jointly developed paperwork etc.

"Groups of people who share a concern, set of problems or a passion for something they do and who deepen their knowledge and expertise in this area by interacting on an ongoing basis." (Lave & Wenger, 1998)

Wenger first described Communities of Practices (CoP) with Lave in 1991, although this was not the first appearance of such groups. There are many examples of CoPs in history, such as the group of Impressionist painters who used to meet in Parisian cafes and bars to compare and discuss their methods and to learn from each other.

However, what's significant about Communities of Practice is the theoretical shift away from learning being something that an individual does in a context free situation i.e. sitting in a quiet room and reading a book or course notes, to the idea that learning is something that happens through engagement with other participants.

According to Wenger, a Community of Practice has three specific features without which it isn't a community of practice:

- *The Domain* = the topic of interest;
- *The Community* = the nature of the group of people i.e. their shared desire to learn;
- *The Practice* = the community is not just discussing the topic of interest but is looking at how knowledge can be put in to practice.

This model (Figure 4) highlights the three features of CoPs, and represents the peripheral and core participation. The members of the community can be highly-experienced or inexperienced and they can be long term or recent members. This way, inexperienced members can learn from those with more experience, but equally, those with more experience can benefit from a fresh perspective and both allow for professional growth. Members can start at the periphery, especially when they're new, and work towards the centre. The core is the shared knowledge that binds the CoP together.

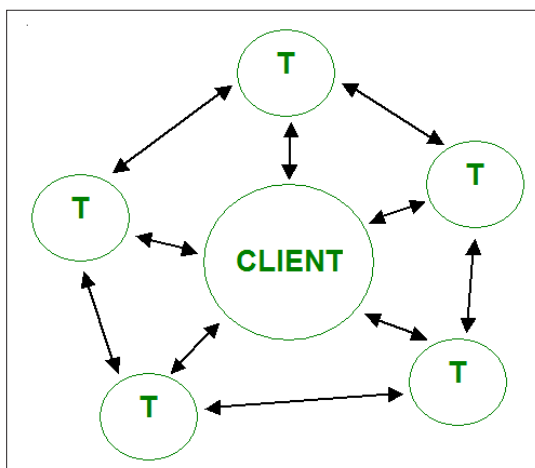


Figure 3 Trans-disciplinary Model

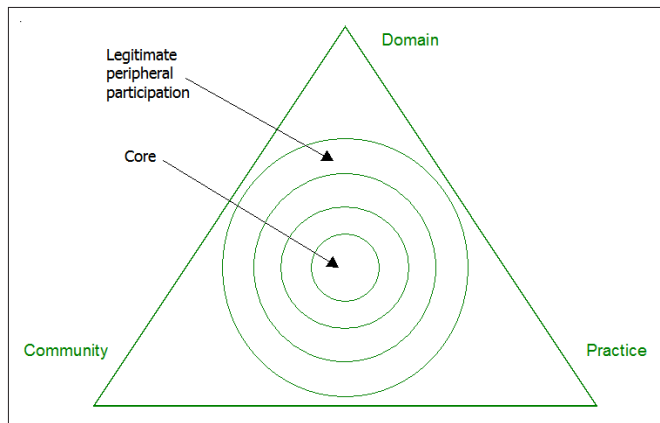


Figure 4 Communities of Practice Model

It's important to realise that Communities of Practice are different to teams, but they can compliment teaming processes. Unlike teams, CoPs can be formal or informal, they can be clearly delineated or fuzzy, and there has to be voluntary participation. The CoP evolves according to the needs of the community rather than being specifically designed and driven to meet the needs/targets/agendas of the service.

### The Three Features of a CoP

#### The Domain

The domain is the area of knowledge or interest that all the members are committed to. Through the CoP, knowledge is shared, and new knowledge is created through discussion and problem solving. It is the shared competence in the identified domain that distinguishes members from others, but the domain is not necessarily recognised as "expertise" outside the community. For example, a group of skateboarders who meet up and share new moves or information about new skateboards would not necessarily be seen as having expertise outside of their own group.

#### The Community

The key to a successful CoP is creating an environment of respect, trust and integrity amongst members which in turn creates a more effective learning environment. This can be achieved by fostering a sense of belonging in all members, supporting each other (core and peripheral members) and building relationships that allow us to learn from one another. In a trusting environment, people are able to expose their weaknesses and mistakes through the telling of anecdotes and stories which leads to new learning as the group problem solves together. The shared repertoire of stories informs our practice in a different way to reading theory from books.

A group of learners or reflectors cannot be considered a Community if they're not learning from each other. For example, a group of lecturers in a university are all

reflect on practice and create a shared repertoire of vocabulary, paperwork, and resources. Knowledge is generated within a social and cultural context which means solutions are localised and contextualised and therefore more applicable.

### Other features of Communities of Practice

#### Coordinator

The coordinator is a broker of relationships rather than someone leading the process. They organize when and where the meetings take place, and circulate information, but they don't set the agenda.

#### Distributed leadership

There is not a single leader, but different people take the lead as different issues arise creating a distributed leadership.

### The Community of Practice at Beaumont College

Our development of a Community of Practice and our desire to work towards collaborative trans-disciplinary teaming runs hand in hand. Our CoP meetings promote the trust and integrity needed to move forward as a team. As a result of our CoP meetings, we have engaged in activities such as generating documents that can be used across discipline, setting up shared note keeping, discussing the value of identified software, and problem solving around the systems and contexts within college.

### WHAT MAKES A SUCCESSFUL TEAM?

It's not just the team structure that allows for strong inter-professional working. There are certain components which are essential for successful teaming.

*Communication* is first and foremost. It's not just about sharing client information, but clarifying roles and sometimes compromising. It's also important to *Recognise* and value each other's backgrounds, expertise and other commitments and also the constraints and priorities, which are often imposed externally. Having an opportunity to do this might seem like a

learning, but they're doing it individually and they're not learning from each other.

### Practice

A Community of Practice is not just about learning new things, but also about putting that new learning into practice. A community can consult over casework, collaborate on projects,

'waste of time', but for our team at Beaumont it proved to be a really valuable and strengthening experience. *Consensus building* and *conflict resolution* can only be achieved through strong and honest communication. Sometimes, finding a resolution is the only way for the team to move on and grow.

*Sharing* of values and philosophy. This is where it is the individuals who make up the team that determine the strength of the team. The more closely belief sets match, the easier it becomes. Also, sharing knowledge with all and 'effort' are valuable indicators of a preparedness to develop a team of members of 'equal status'. It takes confidence and *trust* in each other and their values and opinions to allow roles to blur or be redefined, and also trust in the teaming process when things feel rough during a 'Storming' phase.

Teams need to be *adaptable*. Individual members should ideally be adaptable such as through role extension or release; but the team as a whole can be flexible with it's working model depending on the needs of the client. As in any organisation or team, there are changes as personnel come and go and that requires adaptability. Certainly for our team at Beaumont College; staff leaving, getting pregnant, breaking limbs etc have required our adaptability and often a redefinition of roles.

*Time* is undeniably essential. We don't just mean setting a time for meetings to happen, but allowing the team time to evolve and work through the teaming process to become a well-functioning body.

### BARRIERS TO TEAMING

We recognise that at Beaumont College we are lucky, in that we have a management team committed to supporting the development of good practice, we are all on the same site, and we already have some level of shared philosophy, because we've all chosen to work in this setting. Most of our team have worked in other settings and establishments in the past, and we realise that many people reading this will be working in different scenarios. That means the barriers and constraints to team working for each individual will be different. We acknowledge that barriers such as geography, role inflexibility, lack of role clarity and service level constraints can be difficult to overcome, but we hope that by acknowledging what the barriers might be, readers may be able to go some way towards resolving them.

### THINGS WE FOUND HELPFUL

#### Away Day followed by regular CoP meetings

Protected time for discussion. The away day allowed us to recognise roles, acknowl-



### 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 also 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:

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- 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.

### 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:  
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### What is ISAAC?

- ISAAC stands for International Society for Augmentative and Alternative Communication.
- ISAAC is a big international organisation that focuses on AAC.
- ISAAC was formed in 1983 and has over 3,700 members.
- ISAAC members live in more than 50 countries around the world.
- There are ISAAC Chapters in Australia, Canada, Denmark, Finland, French-speaking Countries, German-speaking Countries, Ireland, Israel, Italy, Netherlands-Flanders, Norway, Sweden, United Kingdom and United States of America.

**ISAAC's Vision:** AAC will be recognised, valued and used throughout the world.

**ISAAC's Mission:** To promote the best possible communication for people with complex communication needs.

### What does ISAAC do?

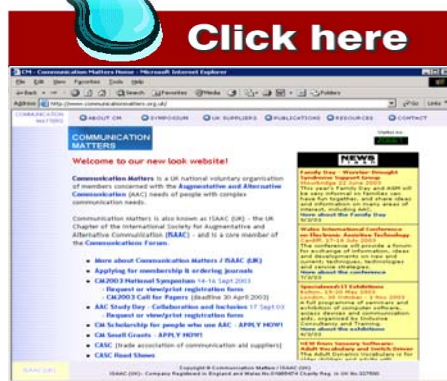
- Advocates for augmented communicators & their families.
- Supports the use of AAC around the world. This includes countries that do not know about AAC.
- Has an exciting awards & scholarship program for members.
- Encourages the development of AAC products & services.
- Produces a series of books for people involved in AAC.
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- Sponsors a peer-reviewed scientific journal – Augmentative and Alternative Communication (AAC). Peer-reviewed means that each article is anonymously reviewed by three people who are experts to see if it is suitable for publication. Visit the website at: [www.isaac-online.org/en/publications/aac.html](http://www.isaac-online.org/en/publications/aac.html) for more details.

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- Full access to *ISAAC Information Exchange* the new web-based version of what was *The Bulletin*. *ISAAC Information Exchange* is a dynamic international resource for sharing knowledge, experiences and perspectives on AAC.
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**Links...**

edge values and beliefs and begin to build consensus.

### **Tracy Kovach's Continuum of Learning for AAC (CM Study Day, Leicester 2006)**

Those of you who were lucky enough to attend Tracy's study day last year will know how valuable this tool is. It has really helped us by backing up our clinical judgement and providing tangible proof of differing priorities, so e.g. no point SLT independently slogging away at the 'making requests' goal until the access is properly sorted out. We sat down and discussed the checklist as a team - which helped form consensus.

If anyone is interested in knowing more about the continuum, Tracy has asked that you contact her directly. She is very happy for teams to use the checklists and offer her valuable feedback, but they need a bit of explaining first.

### **Shared Documentation**

We developed documents such as a 'Switch Trial' chart which are available on the college network to the whole team. (This particular chart documents what was trialled, using which part of the body, when and the outcome. Because technician, OT and SLT all have an interest in the outcome and might all be trialling things - it gave one central point of communication.)

### **Chocolate Biscuits**

They really do help. It's important to have shared nurturing - and this includes snacks! If people feel the team gatherings are a little bit special, even if it is only because of a Jaffa Cake - then they have a little bit more commitment to the team process.

### **FINAL WORDS**

As the Beaumont College AAC team, we are aware that we are not yet resting on our laurels as a 'performing' (no pun intended, given our curriculum), totally efficient trans-disciplinary team. However, by exploring the research and making the process conscious and transparent, we can see how far we have come, and where we want to be next. \*

Alison Lawrence & Catherine Maunder  
Speech & Language Therapists

### **REFERENCES**

#### **Decision Making**

Kovach, T. (2006). *Continuum of Learning for Children using AAC Systems*, Communication Matters Study Day, University of Leicester, 27 Sept 2006.

Please contact Tracy directly for further information: [kovach.tracy@tchden.org](mailto:kovach.tracy@tchden.org)

#### **Teaming/Communities of Practice**

Anderson, C., Bowser, G., Day, P., Kline, S., Roberts, D., Thompson-Arbogast, P. &

Schaeperkoetter, K. (2001). *Models of Teaming and Service Design in EI/ECSE Programs*. Oregon: Collaborative Teaming Work Group

Beukelman, D.R. & Mirenda, P. (1992). *Augmentative and Alternative Communication: Management of Severe Communication Disorders in Children and Adults*. Baltimore: Paul H. Brookes.

Bruneviciute, R., Veckiene, N.P., Brazdzionyte, J. & Padaiga, Z. (2004). *Creation of the Environment for Learning to Communicate in an Intercultural Team*. European Conference on Educational Research, University of Crete, September 22-25, 2004.

Businessballs.com. Tuckman Forming Storming Norming Performing Model [website]. From [www.businessballs.com/tuckman-formingstormingnormingperforming.htm](http://www.businessballs.com/tuckman-formingstormingnormingperforming.htm) [Accessed 11 September 2007].

Davey, J., Kruger, F., Martin, L., McLoughlin, D., Roberts, S. & Williams, S. (2006). Ethnographic Research Partnerships within an Interdisciplinary Team at Edge Hill. [Website]. From [www.edgehill.ac.uk/Sites/SOLSTICE/ResearchandDissemination/documents/SOLSTICEconference-EthnographicMay2006](http://www.edgehill.ac.uk/Sites/SOLSTICE/ResearchandDissemination/documents/SOLSTICEconference-EthnographicMay2006) [Accessed 10 September 2007].

Dyer, J.A. (2005). Collaborative Team Models and Remotivation Therapy. In A. J. Dyer & M. L. Stotts (eds.) *Handbook of Remotivation Therapy*. New York: Haworth Clinical Practice Press, 157-164.

Haig, A.J. & LeBrek, D.B. (2000). Measurement of Change in Rehabilitation Team Dynamics With the Team Assessment Profile (TAP). *International Journal of Rehabilitation and Health*, 5(2), 71-83.

Handley, K., Sturdy, A., Fincham, R., and Clark, T. (2006). With and Beyond Communities of Practice: Making sense of learning through participation, identity and practice. *Journal of Management Studies*, 43 (3) 641-653.

Lave, J., & Wenger, E. (1998). *Communities of Practice: Learning, Meaning, and Identity*: Cambridge University Press.

Mittendorf, K., Geijssels, F., Hoeve, A., de Laat, M., and Nieuwenhuis, L. (2006). Communities of Practice as Stimulating Forces for Collective Learning. *Journal of Workplace Learning*, 18 (5) 298-312.

Mullins, L.L., Balderson, B.H.K. & Chaney, J.M. (1999). Implementing Team Approaches in Primary and Tertiary Care Settings: Application from the Rehabilitation Context. *Families, Systems and Health*, 17(4), 413-426.

Precup, L., O'Sullivan, D., Cormican, K. & Dooley, L. (2006). Virtual Team Environment for Collaborative Research Projects. *International Journal of Innovation and Learning*, 3(1), 77-87.

Ruiz Ulloa, B.C. & Adams, S.G. (2004). Attitude Toward Teamwork and Effective Teaming. *Team Performance Management*, 10(7/8), 145-151.

Swengel, K.E. & Marquette, J.S. (1997). Service Delivery in AAC. In S. Glennan & D. DeCoste (eds.) *Handbook of Augmentative and Alternative Communication*. San Diego: Singular, 445-471.

Waters, L. (2007). Integrated Teams: the way forward? *RCSLT Bulletin*. May p.18-19.

Wesley, P. and Buysse, V. (2001). Communities of Practice: Expanding Professional Roles to promote reflection and shared enquiry. *TECSE*, 21 (2) 114-123.

Wilson, V. & Pirrie, A. (2000). *Multidisciplinary Teamworking. Beyond the Barriers? A Review of the Issues*. Glasgow: Scottish Council for Research.



Many children and adults have plenty to say, but are unable to control their mouth muscles to speak clearly. They can use aids such as pictures, written words and technology to communicate.

1Voice takes a family and social perspective on communication and recognises the great need for adult role models to inspire children and families alike. 1Voice promotes families supporting each other to overcome the isolation that being unable to speak can bring.

For more information, visit [www.1voice.info](http://www.1voice.info) or contact Katie Clarke at [info@1voice.info](mailto:info@1voice.info) or phone 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)



isaac



## MANY STORIES - ONE VOICE INTERNATIONAL STORYWRITING CONTEST

### International Winners

As part of the 2008 International AAC Awareness Month this October, ISAAC invited anyone who uses AAC to enter a story to the ISAAC international storywriting contest. Over 110 stories were entered from all over the world. ISAAC has selected the following two international winners:

Youth category: **'MI6 Rescue'** by **Sean Lucas** (Age 7), UK

Adult category: **'Aparajita'** ('The Undefeated') by **Barsha Bhattacharya** (Age 26), India

### UK Story Reading Event Winners

Communication Matters has selected the best of the UK entries from three age categories. The three winners will be invited to the *Communication Matters Story Reading Event* to read their stories to an audience at a London venue during the International AAC Awareness Month in October:

Age 11 and under: **'MI6 Rescue'** by **Sean Lucas**

Age 12 to 16: **'Just Talking'** by **Beth Moulam**

Age 17 and over: **'Secrets'** by **Alan Martin**

Congratulations to all the winners! Find out more about the contest and read the entered stories at:

**[www.aacawareness.org/collectiontoc.html](http://www.aacawareness.org/collectiontoc.html)**

## ESSENTIAL PUBLICATIONS FROM COMMUNICATION MATTERS

### Speaking Up and Speaking Out! Pathways to Self-Advocacy

This pack is intended for carers, facilitators and others concerned with the advocacy needs of people with severe communication difficulties who need or use AAC. It is useful for staff development, especially for those working with adults. The pack comprises two books. One is a comprehensive and detailed Handbook which includes case stories, discussion points and references. The other is a Practical Guide which summarises the main points of the Handbook in a series of photocopiable overheads, checklists and activities designed to help users build an advocacy plan for individuals.

Price: £30 including p&p from **Communication Matters**

### Safety in Numbers: A Photographic Phonebook

This photographic phone book is for people who find reading difficult. The pack includes an information page with key information about the person, several blank pages ready to add photographs or symbols, space for additional notes for an enabler, babysitter or other adult, a tag to make the book easy to hold as well as identifying the owner, and a page of symbols for common services printed on labels ready to stick in.

Price: £3.50 incl. p&p from **Communication Matters**

### Communication Without Speech: AAC Around the World

This ISAAC book is a highly accessible introduction to AAC. It contains lots of questions and practical tips such as vocabulary selection, assessment, education and vocational considerations, making communication boards, and includes excellent photographs and illustrations.

Price: £15 plus £1.50 p&p from **Communication Matters**

### Beneath the Surface

In August 2000, the creative works of 51 authors and artists from around the world were published in one book, *Beneath the Surface*. What these writers and artists have in common is that they are unable to speak and thus rely on assistive technology to communicate. Published by ISAAC.

Price: £15 plus £1.50 p&p from **Communication Matters**

### Waves of Words

The challenges confronting individuals with severe communication disabilities are chronicled in *Waves of Words: Augmented Communicators Read and Write*. The focus is on the strategies that teachers, therapists and individuals who rely on augmentative communication from around the globe have used to produce ultimate success in the struggle to learn to read and write.

Price: £15 plus £1.50 p&p from **Communication Matters**

When ordering from Communication Matters, make your cheque payable to **Communication Matters**, and send to:

**Communication Matters**

c/o ACE Centre, 92 Windmill Road, Headington, Oxford OX3 7DR

CM Tel & Fax: 0845 456 8211 Email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk) [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)



## TRUSTEES' NEWS

### FROM LIZ MOULAM, CHAIR OF COMMUNICATION MATTERS

As I'm sat writing this I have a pile of ironing, open suitcases and travel tickets on the table. The ISAAC 2008 International Conference calls! By the time you read this summer holidays will be over and most people will be back to work and hopefully looking forward to CM2008 in Leicester. Anyway, I hope you had a good summer whatever you chose to do.

The pace of activity meant that late spring and summer continued to be just as demanding for the Trustees as earlier – I hope I don't sound like a stuck record, it's been a challenging but exciting year.

#### THE BERCOW REPORT

In May, we made final recommendations and were pleased to find these had been taken up in the report published on 8 July. John Bercow has recognised the needs of children and young people in England who use AAC, and at present we are waiting to hear how government propose to fund the recommendations.

#### AAC CAMPAIGN IN SCOTLAND

The AAC Campaign in Scotland continues – members of the government appointed short-life AAC working party, led by Augmentative Communication in Practice: Scotland, have volunteered (by the beginning of September) to:

- define what is meant by AAC for the purposes of the group;
- describe what the current situation is re AAC assessment, provision and support;
- begin to tease out what might be examples of good practice/minimum standards of service delivery
- consult with people who use AAC re what their views of a 'good service' would look like, their thoughts on their experiences, etc.

It is hoped that some of the recommendations and findings from the Bercow Review will be helpful to them in their work.

#### COMMUNICATION CONSORTIUM ACTIVITIES

The Communication Trust continues to be very active and is now the main body in England that the government approaches for topics relating to workforce development and Speech, Language and Communication for children. As members we have attended, since April 2008, the ICAN parliamentary launch of 'Make Chatter Matter', a grants meeting with the Paul Hamlyn Foundation, and regular Consortium meetings. From September I will represent the Trust on the Lamb Enquiry which is about improving parental perceptions of the assessment process; this is absolutely crucial for the families of children and young people who use AAC and often have other associated challenges.

#### BECTA – HOME ACCESS PROGRAMME

The Government has asked Becta to deliver the home access project giving all children and their families access to computers. Communication Matters attended a workshop for groups involved with SLCN to discuss the particular needs of children and young people with additional ICT needs.

Other activities have included a focus group with a consultant for QCA to find out directly from teenagers their experiences of accessing the curriculum and exams using AAC. This has sparked considerable debate and we are hoping to have the opportunity to develop this further.

#### ISAAC BIENNIAL INTERNATIONAL CONFERENCE

The ISAAC biennial conference has a full programme with a good share of UK speakers – many of whom will also be presenting at CM2008 or intending to present at CM2009. During the ISAAC week there are numerous meetings of the Committees and Boards that help to run ISAAC. Considerable work has happened over the last few months; the Executive Committee has reviewed the governance of ISAAC and this will be debated in several meetings. Full feedback will be available post conference.

#### ISAAC STORY WRITING CONTEST

The final tally for the UK entrants for the ISAAC story writing competition was excellent – the 25 entries from the UK amounted to over 20% of the total from all over the world including India, China, Spain, Australia, Canada and USA. The stories will be presented to Sudha Kaul, ISAAC President, during the ISAAC biennial conference, and there will also be a press conference to promote literacy for people who use AAC. The winner's entry will be read to delegates.

#### INTERNATIONAL AWARENESS RAISING FOR AAC – OCTOBER 2008

The UK stories entered into the ISAAC Story Writing Contest have been forwarded to Communication Matters. During August, panel of judges from the UK will be busy reading and evaluating the entries. Three worthy authors will be selected, and they will be invited to read their stories at a venue in Central London at the end of October. The event (by invitation only) will be a great opportunity to showcase the literary talent of people who use AAC. Also, all the UK stories will be available at CM2008 and will be posted in due course on [www.symbolworld.org](http://www.symbolworld.org), courtesy of Widgit Software. *[Editor's note: the judges have now selected the three entries to be read - please see page 18 for details.]*

Now is the time to think about what you might be able to achieve locally to raise AAC awareness. Perhaps you could arrange a story reading in your school, clinic, workplace, library, etc., and use one of the published entries or work of your own pupils. You could consider asking the press along, invite parents, and share with as many people as possible. Please let Patrick Poon know if you arrange a story reading ([admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)) and we will put the info onto the CM website. Please send us your photos too!

#### THE COMMUNICATION MATTERS BUSINESS PLAN AND RESOURCE STRATEGY

The Trustees took seriously the feedback from the on-line survey completed in January 2008, and have continued to work hard to raise awareness of Communication Matters, AAC and the needs of people who use AAC. Below are details of some of these activities which have been carried out by Trustees in their own time. Whilst the Trustees





## TRUSTEES' NEWS

are passionate about this work it is recognised that this level of input is not sustainable in the longer term without changing the way in which Communication Matters operates.

The Trustees believe the time has come to raise additional resources to support the position of Communication Matters as the national UK charity for AAC and Assistive Technology for Communication. This will involve employing additional staff and bid-writing to take on a variety of projects to develop awareness raising, information services, education and training, research and workforce development. In addition, the Bercow Report recommended funding for provision of assessment, equipment and ongoing support services co-ordinated by a national organisation for AAC. The Trustees believe Communication Matters is the best placed organisation to do this and what this means is explained in the Plans. Paid-up associate members can read the Business plan and Resource Strategy at [admin@communicationmatters.org.uk/members](mailto:admin@communicationmatters.org.uk/members) using the password already provided (contact Patrick Poon at [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk) if you need this again). These plans will be shared during the Annual Meeting of associate members at 5pm on Sunday 21 September at the University of Leicester.

### REGIONAL CENTRES QUALITY INDICATORS AND STANDARDS

The Bercow and Scottish reviews of AAC have highlighted that the AAC sector is lacking a standardized level of service for all people who use AAC. Whilst this comes as no surprise it is now key that, to ensure future equity of provision, there are standards and quality indicators for both assessment and ongoing support services for people throughout the UK, while recognising that there are variations between nations. Draft quality indicators and standards are available to paid-up associate members and can be viewed at [www.communicationmatters.org.uk/members](http://www.communicationmatters.org.uk/members) (email [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk) if you require the password). The time is right to have this discussion with all interested parties, there will be a meeting during the CM2008 National Symposium at 6pm on Monday 22 September. A further follow up meeting is scheduled in London for 8 October 2008.

### RESEARCH

The research strategy has gone out to all research bodies and individuals who expressed an interest in collaborating with Communication Matters to apply to the Big Lottery. A copy of this can be viewed at [www.communicationmatters.org.uk/research](http://www.communicationmatters.org.uk/research) (email [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk) if you require the password). The Lottery is only one potential source of funds, once core funding has been established to run Communication Matters with paid employees then we will seek out further funding opportunities for research.

Hoping to see you many of you at the CM2008 National Symposium in September.

**Liz Moulam**, Chair of Communication Matters  
Email: [lizcommatters@aol.com](mailto:lizcommatters@aol.com)

## eCAT NEWS

### JOHN BERCOW REVIEW

Obviously, like most interested parties, we have been watching events regarding this review with interest (and a degree of hope). As a trade association, we met John in May and agreed to come up with the two most important needs from our perspective, which meant trying to reduce our individual lists down to two agreed main points. After many emails and much conversation we ended up stating that more and better funding for AAC devices AND support as our Number 1 priority (no surprise there then) and a properly funded, organised and approved post grad qualification for those who assess and make recommendations for AAC devices as the Number 2 priority. Although we have not met since the final report was published, we have discussed it 'electronically' and sent our response to the report to John. In it we said that:

- we felt he had done a good job in understanding our industry and the issues faced in a short period of time;
  - it was still quite difficult to see exactly what effect the report will have in some areas, especially the provision of equipment to children who need it;
  - there is a desperate need for sufficient funding to be provided to allow children with speech and language impairment to obtain the most appropriate aid to allow them a full education and not be marginalised or excluded due to their lack of speech;
  - we liked the idea of the Communication Champion and the Communication Council although the choice of champion and the make up of the council was critical;
  - the idea of a "national organisation" to "co-ordinate the...regional provision" of AAC is interesting as long as we do not allow the system to get bogged down with bureaucracy which might prohibit effective and swift action to be taken and/or use up vital funds that might otherwise have been used to fund devices and support;
  - we must keep assessment/prescription, procurement and supply totally separate from each other to keep total integrity in the system and avoid the pitfalls that other healthcare sectors have fallen into;
  - we should ensure that any "hub and spoke" model does not become like another CAP project which, although did an excellent job in funding equipment, also caused problems with delayed funding and too much bureaucratic administration;
  - we hoped the Champion and/or members of the Council will have an open and effective dialogue with the Trade Association, as CM does now;
  - we encouraged him to ensure that changes brought about by this report should also be the foundation for improving funding for the post-19 age groups, as communication is a life-long need and right;
  - we would like to see a clearer defining of the provision of funds for AAC equipment & a government initiative that effectively prohibits local authorities pulling back on any of their existing funding either whilst they wait for further clarification or after that clarification is made.
- Finally, we emphasised that *local funding to meet clinically identified needs is crucial in this environment.*

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



## HOT NEWS

### RCSLT STERNBERG AWARD FOR CLINICAL INNOVATION

**Clare Latham** and **Katharine Buckley** have been awarded the prestigious RCSLT Sternberg Award for Clinical Innovation for their work on the Look2Talk project at the ACE Centre. Look2Talk is a guide for parents and professionals who need to make and use communication books for children who communicate using their eyes alone.

### FUNDRAISING FOR COMMUNICATION MATTERS

**Bernie Henderson** and **Pamela Cornwallis** put on their respective running shoes and boots to raise over £600 for Communication Matters! Bernie completed the London Marathon in his very distinguished James Bond outfit, and Pamela and friends walked the West Highland Way in Scotland – all 152Km (95 miles) of it.

### POSSUM/MICROSOFT CHARITY BIKE RIDE

Staff from Possum teamed up with Microsoft this June to complete a gruelling 200 mile sponsored bicycle ride from London to Paris to raise money for Leonard Cheshire Disability and the Possum Trust. In order to raise awareness of the needs of people with communication difficulties, the 14 team members only communicated using AAC devices during the bike ride!

### 'COMMUNICATION MATTERS AAC FORUM'

The Communication Matters AAC Forum is an email discussion group designed for people who use, work with, or have an interest in AAC. The Forum is designed to be a friendly place that you can ask questions, provide information, share experiences or discuss anything to do with AAC.

To join the forum, simply send an email to [cm-aac-forum-subscribe@googlegroups.com](mailto:cm-aac-forum-subscribe@googlegroups.com). Alternatively, read messages already sent to the forum by visiting [groups.google.com/group/cm-aac-forum](http://groups.google.com/group/cm-aac-forum)

### 'AAC MATTERS' EMAIL DISCUSSION GROUP FOR PEOPLE WHO USE AAC

'AAC Matters' is an email discussion group which is open to anyone who uses AAC. It is a closed list, which means only people who use AAC can sign up to take part. The email group is hosted by Peter Zein who uses AAC himself. Everything posted is confidential and is not shared by anyone outside of the people who have signed up to the group. So here's an opportunity for you to talk about living independently, work, leisure, employing PAs, music, AAC devices, football, film, or ANYTHING you want! It's simple to join - just email Peter at [azein@btinternet.com](mailto:azein@btinternet.com) and introduce yourself.

### AAC Study Day

## ***"Guess What Happened Today!"***

### Enabling Children with Complex Communication Needs to Tell Stories



27 January 2009 at The Institute of Child Health, London

28 January 2009 at The Together Trust, Cheadle, Manchester

3 February 2009 at The City Chambers, Edinburgh

**More information & booking form at [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)**

**Enquiries Tel : 0845 456 8211 Email: [admin@communicationmatters.org.uk](mailto:admin@communicationmatters.org.uk)**



## DIARY DATES

13 September 2008 Exeter

### **Fun Day with 1 Voice South West**

Contact: Tel 01872 865520 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

16, 18 & 25 September 2008 Rotherham, Peterborough, Alton

### **Liberator AAC Study Day**

Contact: Tel 0845 226 1144 [www.liberator.co.uk](http://www.liberator.co.uk)

21-23 September 2008 Leicester

### **Communication Matters CM2008 National Symposium**

Contact: Tel 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

25 September 2008 Oxford

### **An Introduction to Assistive Technology (AT)**

Contact: ACE Centre 01865 759800 [www.ace-centre.org.uk](http://www.ace-centre.org.uk)

October 2008 Worldwide

### **ISAAC International AAC Awareness Month**

Contact: [info@aacawareness.org](mailto:info@aacawareness.org) [www.aacawareness.org](http://www.aacawareness.org)

7 October 2008 Bristol

### **Chatting Independently Roadshow**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

10 October 2008 Bristol

### **BoardMaker**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

15 October 2008 Bristol

### **Introduction to AAC**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

16 October 2008 Oxford

### **Boardmaker and its Application**

Contact: ACE Centre 01865 759800 [www.ace-centre.org.uk](http://www.ace-centre.org.uk)

17 October 2008 Bristol

### **Clicker 5**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

22-23 October 2008 Newcastle upon Tyne

### **DNEX 08**

Contact: Disability North 0191 284 0480 [www.disabilitynorth.org.uk](http://www.disabilitynorth.org.uk)

6 November 2008 London

### **Communication Matters Road Show: London**

FREE Tel 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

11 November 2008 Fife, Scotland

### **Aug. Comm. in Practice: Scotland - AAC & Autism Study Day**

Contact: CALL Scotland 0131 651 6235 [www.callscotland.org.uk](http://www.callscotland.org.uk)

12 November 2008 Manchester

### **Communication Matters Road Show: Manchester**

FREE Tel 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

13 November 2008 Oxford

### **AAC SIG: Emerging Communication**

Contact: [gillian@aac-consultancy.co.uk](mailto:gillian@aac-consultancy.co.uk) [www.aacsig.org.uk](http://www.aacsig.org.uk)

14 November 2008 Bristol

### **Communicate: In Print 2**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

20 November 2008 Bolton

### **Kidz Up North**

Contact: 0161 214 5962 [www.kidzupnorth.co.uk](http://www.kidzupnorth.co.uk)

## DIARY DATES

21 November 2008 Bristol

### **BoardMaker**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

26 November 2008 Bristol

### **Communication Matters Road Show: Bristol**

FREE Tel 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

1 December 2008 Coventry

### **RAaTE 2008**

Contact: 02476 158085 [www.raate.org.uk](http://www.raate.org.uk)

2 December 2008 Oldham

### **ACE Centre North Network Day**

Contact: 0161 684 2333 [www.ace-north.org.uk](http://www.ace-north.org.uk)

10 December 2008 Bristol

### **Implementing AAC in Schools**

Contact: PCAS 0117 353 3613 [www.pcas.claremont.bristol.sch.uk](http://www.pcas.claremont.bristol.sch.uk)

14-16 January 2009 London

### **Special Needs Fringe**

Contact: 0800 975 6090 [www.inclusive.co.uk](http://www.inclusive.co.uk)

14-17 January 2009 London

### **BETT 2009**

[www.bettshow.com](http://www.bettshow.com)

27 January 2009 London

### **Enabling Children with Complex Communication Needs to Tell Stories: Study Day**

Contact: 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

28 January 2009 Manchester

### **Enabling Children with Complex Communication Needs to Tell Stories: Study Day**

Contact: 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

29 January 2009 Oxford

### **Getting Motivated by AAC (including environmental control)**

Contact: ACE Centre 01865 759800 [www.ace-centre.org.uk](http://www.ace-centre.org.uk)

3 February 2009 Edinburgh

### **Enabling Children with Complex Communication Needs to Tell Stories: Study Day**

Contact: 0845 456 8211 [www.communicationmatters.org.uk](http://www.communicationmatters.org.uk)

## WHAT ARE THE BENEFITS OF DEALING WITH A COMPANY THAT IS A REGISTERED BHTA MEMBER?

The main benefit is in knowing you are dealing with a company which has signed up to a Code of Practice and to a set of standards which are actively policed. They should, therefore, be operating to that best practice.

There is also the benefit that in the unlikely event that a complaint cannot be resolved direct with the company, BHTA can be asked to mediate, with the ultimate possibility of independent arbitration should their findings be rejected by the complainant. In addition, BHTA act as a voice on behalf of the communication aid sector for support of campaigns and political discussions and negotiations.

# AAC for Communication and Expression

## DAISY CLAY

Specialist Teacher Advisory Service, Hampshire Children's Services, UK  
Email: daisy.clay@gmail.com

**Working in Hampshire, it is my role to** support children and young people using communication aids in mainstream education across the county. In September last year I met Amelia, who had recently moved into the area. Her arrival was taken as an opportunity to reassess her AAC needs, and this is where the story starts.

Amelia is 15 years old, and has cerebral palsy, which left her without use of her voice but, as she is always quick to demonstrate, with a great deal to say. Amelia was using various methods of communication at the time I met her – from high tech (a scanning Light Writer operated via head switches), to low tech (pointing to a letter board with her eyes or hands), to no tech (when not in her wheelchair, she will sometimes spell out words by moving her head in the shape of the letters). So, it is safe to say that Amelia is always able to have her say, using whichever methods are available to her.

The main decision following the assessment of Amelia's AAC needs was to provide her with a laptop computer running The Grid 2 software (with a view to investigating wheelchair mounted devices further down the line). The main idea was that Amelia would then have a method by which to record school work, but also to control other programs. Furthermore, as a switch user, Amelia could benefit from the speed advantages of word prediction, block scanning, and use of pre-stored vocabulary pages. My main criteria when considering the layout and composition of grids for Amelia were that:

- (a) she uses a 'frequency of use' keyboard rather than 'qwerty' layout;
- (b) she has the facility to switch quickly between talking and writing through the use of different 'workspaces';
- (c) she has access to other features such as word processing, web browsing and email.

In meeting these criteria, my starting point was the Computer Control (frequency layout) grid set which is provided as standard with The Grid 2. I then spent time with Amelia tailoring the grids to meet the criteria detailed above. I also had a lot of input from Amelia herself, as she told me exactly what she wanted to be able to do (instant messaging was high on the list!).

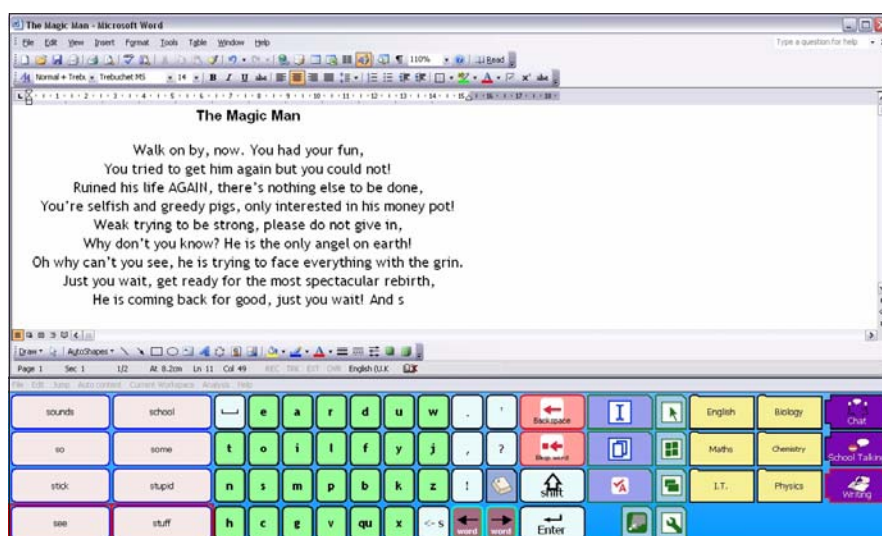


Figure 1 Amelia's tailored grid for writing



It was remarkable just how quickly Amelia achieved complete mastery over the grids, as she used them to write, edit and format text documents, browse the internet using shortcuts, send and receive emails, and use instant messaging to chat to her friends and family. What's more, Amelia did not simply browse the internet – she contributed to it!

A few months after I began working with Amelia, I found she had been spending a lot of time visiting one particular website: [www.allpoetry.com](http://www.allpoetry.com). (Second only to the official Michael Jackson website – Amelia is possibly his most enthusiastic and dedicated fan). The *AllPoetry.com* website allows anyone to share poems they have written and receive feedback from other budding poets, as well as read poems by others and leave them feedback. And just like the increasingly popular social networking websites *MySpace* and *FaceBook*, *AllPoetry* allows members to become online friends with one another. They may already be friends in 'real-life', or may become friends purely through the website.

So, Amelia has made excellent use of her communication aid, not only for face-to-face communication but also online communication via email, instant messaging, and a poetry sharing as I think you will agree from reading the two following pieces. Amelia, I will eagerly await your first book of collected poems.

#### AS I LAY UPON THE CLOUDS

I'm lost like a feather  
Floating away, to the unknown  
Wind blows, my mind clear  
On my own, no one near  
Only kindly quiet company  
Is wondering the silent soft sheep  
Floating flocks so pretty to watch  
Upon the blue sheet  
  
Across the seas, above the trees  
Breathing in the fresh air  
Fill with unstoppable energy  
Feeling it, exploring my body  
Smoothing my lungs, expanding to get more  
So rich and raw  
  
The distant songs of birds  
Pleasure to the ears  
Listening to peaceful sounds  
As I lay upon the clouds

#### WORLD OF MUSIC

The beat controls me,  
To happiness, it makes me cry!  
I feel light and calm  
On the top of the world!  
I can flitter away like a butterfly,  
Moving my body like centipede,  
head-banging like a maniac!  
Letting go of stress, anger and  
frustration!  
All my problems have gone! Somewhere!  
I had lost something,  
The music took its place, instead!  
Heart warming melodies  
Letting the peaceful music carry me,  
Over the rainbow, does not describe it!  
The place let me be myself there  
Filling me up with happiness, joy and passion!  
More than bliss! But it is not a place!  
I can't question it, that wouldn't be right  
Better than any heaven, better than a dream  
It makes me happy! Ever I had been!

There is no sadness, hurt or pain!  
I got to push the play button, to enter the world of music!  
An easy escape. I can always see the sun shine it brings!  
Only I can say I'm thankful for it!  
The aura comes with the paradise,  
Leaves me speechless!  
I want to stay forever!  
Sadly reality calls!  
Leaving with untouchable feeling!!!

And here is what Amelia has to say:

I enjoy writing poetry because it's interesting to see where the poetry takes me. Most of time I write about completely different things to my aim subject in the first place. That's really bizarre but extremely fun. I think poetry is an appropriate way to express yourself, just like music is too and I love music as well as poetry.

Writing helps me to express myself and to cope with things. Getting things off my chest and show my opinions properly. Art, music and poetry separate humans from animals. The proper way to communicate is by poetry!

I put my poems on a website, which lets me read poems from others. I post comments to tell them what I think of their work. Hopefully they will comment on mine. My sister introduced me to writing poems and to the website. I don't really read poetry very much, although I do sometimes read William Blake.

It's like a different world for me, I really enjoy it. I certainly recommend writing poems to other AAC users, in the beginning it is hard and eventually it becomes easier! \*

Daisy Clay, AAC ICT Technician

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\*Tutorial Day

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

# The Participation in Education Project: I want to choose too!

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## BACKGROUND

This article provides an overview of the research project 'Participation in Education' (PIE) carried out by researchers at the University of Bristol, in conjunction with members of The Listening Partnership, a group of young disabled people supported by Bristol City Council and the West of England Centre for Inclusive Living.

The project was advised by a group of professionals, academics and parents and was funded from 2005 -2007 by the Esmée Fairbairn Foundation. Our aim was to discover to what extent disabled children with little or no speech were being included in decision-making in their primary school education and to look at ways in which this was being encouraged. The background to the project was the current policy climate, which for some years has been moving well into the direction of including children's voices, albeit with the slower rate of involvement of disabled children's voices (HM Treasury/Department for Education and Skills 2007) and interest in this area by professionals in Bristol Local Authority. The recent development of the Communication Trust, and subsequent speech, language and communication review gives an encouraging message that this group of children's needs are now being taken seriously. Our guiding principle, however, has been that all young people communicate, however difficult that is for them, and can make choices, if given the opportunity to do so.

As the Children Act 1989 states:

*"Even children with severe learning disabilities, or very limited expressive language, can communicate preference if they are asked in the right way by people who understand their needs and have the relevant skills to listen."*

What became very evident at an early stage of our project was that professionals did not feel that they necessarily had the 'relevant skills to listen' and, rather than being given a set of guidelines, would appreciate practical ideas to assist them in their day-to-day work in schools with this group of children. There was an awareness that, as Coupe O'Kane et al. (1994) put it:

*"Developing the pupil's ability to make choices is an important extension of the capacity for enjoyment.....it is a vital achievement on the pathway of achieving autonomy" (p.18)*

While many of these children may not achieve complete autonomy, it is important that they are given some measure of control in their lives and allowed the opportunity to make meaningful choices and express their individuality. In order to go some way to facilitating this, the project developed a resource pack which was designed to be complementary to the 'R U Listening' self-evaluation framework for organisations eliciting the views of young people with special needs which was developed by the South West Regional

Partnership (available from: [www.sw-special.co.uk/documents/students/docs/RUListingSevaluationframeworkfolder.pdf](http://www.sw-special.co.uk/documents/students/docs/RUListingSevaluationframeworkfolder.pdf)). The resulting project resource pack 'I want to choose too', has been widely distributed and is available to download from [www.bris.ac.uk/norahfry/online.html](http://www.bris.ac.uk/norahfry/online.html). It covers four main areas: Peer relationships, classroom activities, whole school approaches and involvement in the wider community.

## METHODS

The project initially carried out a postal survey of schools in England to determine the current level of involvement of disabled primary school aged children with little or no speech in their education. 112 questionnaires were analysed from special schools, special units in mainstream schools and mainstream schools. This represents 46% of Local Authorities in England. We discovered a patchy picture of provision, but generally positive self-ratings for the success of current approaches and substantial evidence that there were examples of good practice in this area. What we did find, however, was that there were relatively low levels of involvement of this group of children in meetings that directly concerned them, for example, review meetings and in setting targets.

The report can be accessed online at: [www.bris.ac.uk/norahfry/download/questionnairereport.pdf](http://www.bris.ac.uk/norahfry/download/questionnairereport.pdf).

We then worked with two special schools in the southwest, one primarily for children with physical impairments, and one for children with severe learning difficulties. We determined from the survey that both of these schools were carrying out innovative work with this group of children. Within these two schools, we worked closely with 11 children with little or no speech, observing them in the classroom, and talking to their families, classroom assistants, teachers, head teachers, school nurses, deputy heads, and speech and language therapists. We also carried out some group work in one of the schools, with the help of two young disabled people who were members of the Listening Partnership. In addition, we have drawn on the work of several schools that are known to have 'good practice' in this area and on the relevant literature and related research.

A separate booklet, forming part of the resource pack, includes messages from groups of people that we have consulted in the research project. These messages have been written as a result of thematic analysis of the interview transcripts or from the notes taken at observation and group sessions with the children. The main part of the pack includes ideas and resources for involving children with little or no speech with peer relationships, in the classroom, the whole school and in the community.

## MESSAGES

For the purposes of this article, we have chosen to focus on the six core messages from the project that were presented at the CM2007 National Symposium.

*1. Children can be included in all aspects of decision-making at some level, given the right support and the motivation.*

We initially, in the survey stage of the research, found some resistance to the idea that this group of children could be involved in decision-making. What we found during the course of the research was that, when you give people concrete examples of ways that involvement can be achieved, the resistance drops away. For example, some parents and professionals were unsure about children being involved in their reviews and there was understandable reluctance among parents to consent to their children being exposed to what may be difficult discussions about their child's future. However, when given examples such as children being present for a short period of their reviews and presenting a sheet with digital photographs of activities that they have enjoyed doing over the past year, then attitudes changed dramatically.

*2. More training and support with communication is needed, for professionals, for families and Teaching Assistants in particular as they play a vital role.*

It was very clear that there was a serious gap in training provision for work with this group of children. Teachers reported that they constantly had to adapt training to their needs and there was a serious lack of training for teaching assistants, who are widely recognised to be vital to the involvement of children with little or no speech as they spend considerable one-to-one time with the children (Bowen and Plimley 2007). Our initial survey indicated that nearly half of respondents hadn't had any training in this area. Families also said that they needed more training that was suited to their particular needs rather than repetition of courses that they had already attended. One family also mentioned the lack of access to training that fathers had, due to the timing of courses. The training needs of siblings were not reported to be routinely considered.

*3. Children with little or no speech are increasingly successfully involved with their reviews, school councils and target setting.*

During the course of the project, it was clear that the involvement of children generally in the decision-making process has become more of an issue, and there is increasingly discussion about how this can be achieved for *all* children, including those with communication difficulties. For example, one of the two special schools involved in the project developed a school council, successfully including children with little or no verbal communication. Review meetings were also beginning to become more inclusive, with one school reporting that children come back to the classroom after contributing to their reviews 'really proud of themselves'. Just over half of the schools in our initial survey reported that children in their schools were involved in their own reviews, but it was unclear to what extent schools fully involved children with little or no speech.

*4. An increase in whole school and whole Local Authority approaches to communication is needed to ensure continuity.*

Findings from our project suggest that an holistic approach to communication is vitally important to this group of children, most directly concerning them when they move between classes. If there is no consistent approach within a school, and even within Local Authorities, then children are in danger of experiencing severe difficulties. Examples were cited of children's ability to communicate being seriously hampered when they moved to another class, simply because the communication between the teachers was not sufficient to ensure continuity. There are initiatives in place that can assist with this process, such schools employing communication workers who can gain an overall view of communication needs across the school.

As part of the Total Communication movement, the Somerset Total Communication service has carried out pioneering work to develop continuity within Somerset, both within mainstream and specialist provision. From our small sample of in-depth interviews, it was clear that without backing at a senior level and continuity across the board, it was much harder for schools to succeed in this area.

*5. There needs to be better sharing of good practice, both within and between schools.*

Time constraints within schools are often reported as a barrier to opportunities for sharing of good practice (for example, Hartas 2004). However, making use of the growing network of Total Communication projects ([www.totalcommunication.co.uk](http://www.totalcommunication.co.uk)) will mean that schools are much more likely to work together and learn from each other. This is starting to happen in some areas, but not consistently across the country. Professionals in schools have a keen interest in learning from each other, but the mechanisms for doing this are limited at the present time.

*6. The funding and insurance of communication aids is an issue that needs to be addressed.*

The funding of and insurance issues around communication aids were a recurring theme throughout the project. Some families reported that they had concerns about their child taking the communication aids out and about with them, as they were worried about the aids being damaged and the cost of the insurance premiums. This was a serious concern for some families and compounded the difficulties that some schools reported in supporting families to encourage the use of these aids at home and in the community. When considered alongside previous findings about the lack of opportunities that disabled children have generally to have informal occasions for social interaction (Lewis et al 2006), it is clear that this is a significant problem. Beresford (2003) highlighted difficulties in this area in her research on community equipment and also found that a higher number of children were able to use computers and communication equipment at school than at home.

## PEER INTERACTION

We did not routinely ask teachers about the children's friendships in this study, as it was not the focus of the project, but some interesting findings about friendships emerged during the observation sessions in the schools. One teacher told us:

*"The friendships are there for our children, they do have them, they are there, there are friendships, but just not as we know it."*



He went on to say:

*"...some of the children are quite protective of each other, some of the children who you might say are more able, the ones who've got speech anyway, are sometimes protective of the children who haven't got speech, which is nice to see."*

During the observation sessions, however, there was very little evidence of interaction between this group of children, with the vast majority of their interaction being conducted with an adult. In none of the instances was any verbal or augmented communication witnessed between the children. It was all done by body language and some eye contact and the two sustained examples of peer interaction were between children who had some mobility.

When families were asked about friendships, the range of children was such that there was wide variation in answers. For example, a mother of a boy with autism reported that he had made a lot of progress in that he was now quite happy to have other children in the house, whereas another child was having opportunities in the community to mix with other children at a local club. Overall though, there was little reporting of friendship activity either in school or at home.

Given the evidence about the social constraints that many disabled people, particularly those with learning difficulties, face (Chappell 1994) it would appear that attention needs to be directed in this area at an early age. Indeed, a recent report by ICAN (2007) indicates that unless children receive the speech and language support they need at reception class stage, then outcomes for this group of children are extremely poor in terms of their social exclusion.

#### CONCLUSION

The Participation in Education project has been timely in that it has been able to add weight to the emergent premise that the inclusion of all pupils, not forgetting those with little or no verbal communication, in their education is not only desirable, but also possible. Without involving this group of children in moves towards being consultative and inclusive, the enterprise is faulty. The evidence is clear that it is possible to include this group of children in many interesting and innovative ways, giving the children a sense of self-esteem and individuality. What is important is to ensure that children with communication difficulties are increasingly given the opportunity to make choices that are meaningful and mo-

tivating to them. We hope that our resource pack 'I want to choose too!' will mean that more children will be able to do just that.

You can download the pack from [www.bris.ac.uk/norahfry/online.html](http://www.bris.ac.uk/norahfry/online.html) or email Debby Watson to be sent a copy. \*

Debby Watson, Research Fellow

Anthony Feiler, Senior Lecturer

#### REFERENCES

- Beresford, B. (2003). The community equipment needs of disabled children and their families *Research Works* 2003-01 York: University of York, Social Policy Research Unit.
- Chappell, L. (1994). A question of friendship: Community care and the relationships of people with learning difficulties *Disability and Society* Vol 9, No. 4 pp 419-434
- Coupe O'Kane, J., Porter, J. and Taylor, A. (1994). Meaningful content and contexts for learning. Chapter 2 in Coupe O'Kane, J and Smith, B (Eds) (1994) *Taking Control: Enabling People with Learning Difficulties* London: David Fulton
- Hartas, D. (2004). 'Teacher and Speech/Language Therapist Collaboration: Being equal and achieving a common goal?' *Child Language Teaching And Therapy* 20 (1), 33 - 54.
- HM Treasury/DfES (2007). *Aiming High for Disabled Children: Better Support for Families*. London: HM Treasury/Department for Education and Skills.
- ICAN (2007). *Make Chatter Matter* [www.ican.org.uk](http://www.ican.org.uk)
- Lewis, A., Parsons, S. and Robertson, C. (2006). *My School, My Family, My Life: Telling It Like It Is*. Birmingham: University of Birmingham/DRC.

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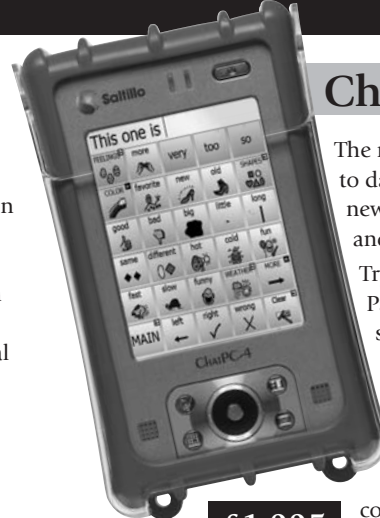
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# AAC City & Guilds Course: From Qualification to Therapy Tool

**MARY LASS & TRUDY BORE**

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## INTRODUCTION

Treloar College situated in Holybourne, near Alton in Hampshire, is a National Specialist College of Further Education for 180 young people aged over 16 who have physical impairments. It is recognised by the Department For Education and Skills as a Beacon College. Students of differing abilities come to Treloar ranging from those at Pre-entry level who are studying Skills for Life, to the vocational students who can be enrolled in a variety of courses at the local Sixth Form College including A Levels. Currently there are 35 students at Treloar who use different forms of Augmentative Alternative Communication (AAC).

There are many students at Treloar who are interested in gaining a qualification which recognises the high level of skill they have acquired in communicating with their AAC devices. Such a qualification is the City & Guilds Certificate in the Effective Use of Alternative and Augmentative Communication (Course Code - 3715). Treloar has been involved in the Augmentative Alternative Communication (AAC) City & Guilds Course since its inception. Each year a number of students gained this qualification in effective use of AAC. This is currently the only accredited qualification that recognises the skills individuals have gained in using high and light tech

communication systems. Over the past six years, the approach to managing and delivering this course has changed fundamentally. Originally, the therapists involved in this course focused in a highly structured way on enabling the students to gain the qualification taking the curriculum and working through it systematically. Subsequently through better understanding of requirements, the approach to delivering this course has become increasingly flexible and focussed on quality of communication. This has enhanced the students' potential to learn and develop their own skills as they progress through the various levels of Certificates, and take ownership of their own learning.

The Speech and Language Therapy Department is responsible for delivering the AAC City & Guilds Course which is recognised as part of the Treloar curriculum. City and Guilds run 500 nationally accredited courses in 28 industry areas. Since this qualification has such recognition throughout the country it is very motivational for both students and their parents, as it formally recognises the skills that students have gained in using high and light tech communication systems. It also benefits the students by raising the profile of those who use AAC within College.

## THE AAC CITY & GUILDS COURSE

The AAC City and Guilds Certificate is comprised of 4 units: Conversational Skills; Directing Others; Asserting Independence and Using ICT for Remote Communication. Within each unit there are different Elements and Criteria. For example, Unit 1 Conversational Skills there are 4 elements: Initiating, Maintaining, Repairing and Closing Conversations. Criteria from these Elements would range from formal introductions, asking and answering questions, requesting clarification and ending a conversation quickly. For Unit 2 the student is expected to give clear instructions for everyday events such as getting dressed, packing a suitcase or organising a trip. Unit 3 Asserting Independence can be more challenging as greater emphasis is placed on the use of communication to persuade, argue and influence others. To complete Unit 4 'Using ICT for Remote Communication' the individual is required to initiate, organise, send and reply to e-mails. Alternatively, they can gain evidence by making phone calls from which they gather and relay information.

This qualification is open to students of different abilities as there are 3 levels, Entry Level 1, 2 and 3. Entry Level 1 can be fulfilled through one word answers and as the levels progress grammatically correct

sentences are required. Initially, students can be entered at one level and progress to a higher level. Students can gain Certificates on completion of each Unit; it is not imperative for them to complete each Unit at the same level. This flexibility is particularly important if students are away due to illness. One student at Treloar went into hospital for a spinal fusion and was away for an extended period of time. Upon returning he was able to complete his AAC City & Guilds Certificate at differing levels. Students with slow access can take up to 3 years to complete the course.

### EVIDENCE COLLECTION

During each session a record is kept of all the students' conversations and the context in which it takes place. Non-verbal communication is also noted along with spoken conversation and any changes in message enabling us to have an overview of their total communication. Historically evidence was mostly collected within the session. Now efforts are being made to extend this process to encourage other members of educational and residential care staff to gather evidence in natural situations, illustrating to the staff how the students can use their communication aids to increase and promote their independence. For example, evidence is now being collected when students are on community skills in Alton shopping or travelling. This encourages the students to use their communication systems functionally.

### RECORDING RESULTS

A truly motivational tool is the Progress Sheets that have been developed by the Speech and Language Therapy Department at Treloar. As a visual tool it allows the students to see how they are accumulating evidence. The various levels of Certificate are defined by a different colour, hence, pink for Entry Level 1, yellow for Entry Level 2 and white for Entry Level 3. When they start the course the therapist discuss the progress sheets and what is expected of the students from the course - see Figure 1. As evidence is gathered each piece is marked on the sheet in red (darker shade) - see Figure 2. The students are shown these sheets each half of the term so they can see the red spreading across the page.

So how has the AAC City and Guilds Certificate changed from being delivered as a qualification to a therapy tool?

### TIMETABLE

Historically sessions were 2½ hours long to accommodate the College timetable demands. This resulted in students tiring and losing concentration. We now hold one hour sessions with more focus made

### Conversation Skills:

Student Name							
i) Initiating Conversations	a) respond to partner						
	b) secure attention						
	c) introduce self						
	d) request help/object/action						
	e) ask questions						
	f) choose social conversation						
	g) choose appropriate topic						
ii) Maintaining Conversations	a) answer & ask questions						
	b) listen & identify topic						
	c) recognise partner feedback						
	d) provide partner feedback						
	e) take turns						
	f) offer information						
	g) give explanation						
	h) maintain topic						
	i) change topic						
	j) use fillers, silence						
	k) interrupt when necessary						
iii) Repairing Conversations	a) repeat a message						
	b) request help						
	c) change message						
	d) ask questions						
	e) request repeat of message						
	f) offer information						
	g) persist						
	h) request clarification						
iv) Closing Conversations	a) using formal farewells						
	b) use informal farewells						
	c) use quick closures						
	d) end one topic						
	e) make excuses						

Figure 1 Progress Sheet at start of C&G Certificate 3715 - Unit 1 Entry Level Three

on evidence gathering throughout this time. As a result students are more motivated and results more positive.

### KNOWLEDGE OF THE COURSE

As inexperienced practitioners of this qualification therapists were very rigid in their delivery taking each City and Guilds Unit and working through it in sequence. With training therapists developed their knowledge and understanding of the curriculum and became more spontaneous in their approach to the group and evidence collection. Students reacted more positively to this approach and, with the Progress Sheets, were able to start identifying evidence that needed collecting.

### ABILITY GROUPS

Another aspect that hindered the group from succeeding was the disparate ability levels of the students. Groups used to consist of pre-entry students mixed with vocational students; as a result active participation of everyone was extremely difficult to achieve. Subsequently, electing to organise groups of students of equal capabilities has resulted in a more targeted and relaxed session, with students able to learn from one another.

### TECHNICAL SUPPORT WITHIN SESSION AND STAFF INVOLVEMENT

Currently there can be up to six members of staff available for the sessions and an

internal verifier. The reason that there are so many staff involved is that there are 23 students working towards their AAC City & Guilds Certificates.

Undoubtedly, sessions have improved by having technical support. Before, an inordinate amount of time was spent troubleshooting when pieces of communication equipment malfunctioned. This meant that one therapist was trying to both run the session and solve difficulties with equipment as they arose which is time consuming and led to the sessions becoming disjointed. An AAC technician has now joined the group freeing the therapist to concentrate on facilitating the group.

### THERAPIST ROLE

The role of the therapist has developed from being directive and being the main participant maintaining three or four conversations with individual students, to supporting conversations between students. This allows the students themselves, with guidance when necessary, to gain experience in interacting with each other. The expectation is that students chat upon entering the room. This initial conversation is so relevant for the students that sometimes the therapist will elect to continue with this for the greater part of the session. Within this conversation students pieces of evidence can be elicited by staff in both a natural and functional way, for example, giving a compliment or influencing others.

### EVIDENCE GATHERING

One method of gathering evidence is through scenarios and role plays. It has become apparent that choice of scenarios and role plays is far more productive if governed by the student. An example of this arose during one of the sessions where the therapist from their own experience thought a young person of twenty would be interested in clubbing and going to the pub, however, the student had different interests and socialised mostly through a church group.

The effect of placing these decisions with the students is that they are more enthusiastic in their involvement as the situations were real and relevant to them. Not only has a greater amount of evidence has been accumulated through this method but the students are more highly motivated. Furthermore, role plays are frequently structured around situations that occur in College, therefore within the experience of the students who use AAC. An example of this would be one particular student who enacts being the Principal of the College with aplomb, and the lively interaction that this creates with the other students.

Student Name									
i) Initiating Conversations	a) respond to partner								
	b) secure attention								
	c) introduce self								
	d) request help/object/action								
	e) ask questions								
	f) choose social conversation								
	g) choose appropriate topic								
ii) Maintaining Conversations	a) answer & ask questions								
	b) listen & identify topic								
	c) recognise partner feedback								
	d) provide partner feedback								
	e) take turns								
	f) offer information								
	g) give explanation								
	h) maintain topic								
	i) change topic								
	j) use fillers, silence								
	k) interrupt when necessary								
iii) Repairing Conversations	a) repeat a message								
	b) request help								
	c) change message								
	d) ask questions								
	e) request repeat of message								
	f) offer information								
	g) persist								
	h) request clarification								
iv) Closing Conversations	a) using formal farewells								
	b) use informal farewells								
	c) use quick closures								
	d) end one topic								
	e) make excuses								

Figure 2 Completing the Progress Sheet for C&G Certificate 3715 - Unit 1 Entry Level Three

To fulfil the ICT element of Unit 4, the students are encouraged to email the Department with any queries, for instance surrounding appointment times, issues that may have been identified in a session, or even a discussion of their favourite football team. It is sometimes possible to gather evidence which can be used for more than one unit. For example, if students use an interactive white board during a session, to maintain an e-mail conversation, they may be able to collect evidence for the ICT Element, Unit 4, and for Unit 2, Directing Others, by directing staff to set up the e-mail for them.

It is hoped to involve increasing numbers of staff in the collection of natural evidence from functional situations. This will require individual staff members to be trained in writing evidence and gaining an understanding of the various criteria.

### OWNERSHIP

Through these various changes students have a far greater ownership of this course. Increasingly, students identify their own initiatives partly as a way of gathering evidence but also for fun and interest. For example, students arrange an end of year party. This involves e-mailing invitations,

*continued on page 35...*



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# Improving Communication Systems with Data Analysis: Methods, Approaches and Privacy

**BARNEY HAWES**

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**Existing methods for using data analysis** to improve communication systems rely on collecting and storing data during everyday use. However, collecting and storing data on an AAC device is a contentious issue. On the one hand, adherents say that collecting data provides valuable insight into the way a communication device is used, and in turn this data can be used to improve what is provided. On the other hand, some say that it is invasive and intrusive and uses methods that would be unacceptable for people without disabilities.

In this article I will suggest that previous approaches to data collection have not done enough to address the issue of privacy. I will then put forward a different system of data collection that provides valuable data for analysis whilst respecting the privacy of the communicator.

## WHY COLLECT DATA?

Ultimately, the aim of data collection is the provision of better communication aids. This could be at the individual level – to improve the design of a system – or at the professional level – to build an evidence base to inform future decision making.

For the individual, data collection might involve recording how many times different cells are selected. Cells that are used more often could be moved to a better lo-

cation, allowing them to be accessed more efficiently. If a cell is rarely used, this could indicate that it is not useful for the individual or that the cell's function is not clear to them.

A communication system designer (such as a hardware manufacturer, communication vocabulary designer or symbol illustrator) could use collected data to gain insight into how effective their systems are, and to make improvements to them.

Data analysis can also be used towards building an evidence base for AAC. Data is collected by researchers to compare different communication systems. This has already been used for comparing semantic compaction with other writing methods such as prediction, but could also be used to compare different input methods, communication vocabularies, symbol sets, or other variables. A researcher might decide to analyse a variable, such as the number of switch presses required per sentence, and compare this across different systems. The results of this, once peer-reviewed and published, could provide independent, objective evidence for practitioners needing to choose between different systems.

## EXISTING DATA COLLECTION SYSTEMS

Data collection is not a new idea. Data can be collected in many forms: for the pur-

pose of this article I am using the term to refer to automatic logging of information on an AAC device, but it can include audio and video recordings, transcriptions of conversations or questionnaires.

Automatic logging has been available on many different AAC devices for some time. In general, data logging systems have been added by device manufacturers and there has not been a widespread use of these systems amongst AT practitioners.

A number of reasons might explain why such systems are not widely used. One is that each system is proprietary and complex (there was an effort to make a universal data logger,<sup>1,2</sup> but this did not solve the complexity problem). Another major hurdle is privacy, and this will be discussed next.

## PRIVACY

Imagine being told that something you carry every day, such as your watch, was recording everything that you said, and that furthermore your doctor could listen to the recordings! This is similar to the situation that AAC users face when a data logger records what they say, and there are significant concerns about this.<sup>3</sup>

There are some steps that can be taken to address these privacy issues, and some of these are already in place where data collection is used.<sup>4</sup> Current strategies are

based on the principle of informed consent.

It is important that AAC device users, or their guardians where appropriate, understand what data is being collected, who can access it and what it will be used for. This may require symbol-supported explanations. They will then be in a position to consent to having data recorded on their devices. Examples of consent forms exist<sup>5</sup> but the language used is somewhat loaded.

In addition to obtaining consent, it is desirable that AAC users can see when recording is active, and can turn recording on and off at their discretion – not all systems currently offer this functionality. It is also worth noting that data collection should always be off by default.

Researchers analysing the data need to be aware of the nature of the data, taking care to maintain privacy when sharing the data with other researchers or in publication.

It could also be considered necessary for other people involved in conversations with the AAC user to provide consent; one proposed solution for this is to offer a sticker to go on a wheelchair, warning them that a data logger may be active.<sup>6</sup>

#### COLLECTING NON-PRIVATE DATA

Whilst obtaining informed consent does offer some safeguards, it does not address the main privacy issue: that people do not normally want their communication recorded. In fact, these solutions require individuals to accept an invasion of their privacy and by arguing that this is outweighed by the potential benefits.

I suggest that a more acceptable approach is to collect non-private data; that is data other than the content of conversations. For many purposes, it is not necessary to record exactly what is spoken by a communication aid. Non-private data still offers information that can be used towards the goal of improving communication systems.

#### DATA COLLECTION IN THE GRID 2

Up to this point, this article has been a general introduction to data recording and some of the privacy issues. This article will now move on to look at the way in which data recording is implemented in The Grid 2. We will see that it can collect non-private data, and also provides other tools that do not require any data collection at all.

When someone uses an AAC system to communicate, the interaction with the computer can be broken down into 3 steps:

INPUT -> SELECTION -> OUTPUT

INPUT is the way that the user controls the system. This could be pressing a switch or touch screen, moving a mouse or joy-

stick, using headpointer or eyegaze, or any of the other interactions available.

SELECTION is the term for which cells are selected as a result of the input.

OUTPUT occurs as a result of some selections. Output is usually speech, but could also indicate an error (e.g. deleting) or use of other software options such as environment control or emails.

Rather than recording what is spoken, The Grid 2 records data from each of these steps in isolation. For example, for input data, The Grid 2 records *when* input occurs, but it does not correlate this to the results of the input. For selection data, The Grid 2 records *how often* each grid is accessed and each cell is used, but it does not record the sequence of selections.

By isolating the data collected in this way the content of conversations is not recorded, but there is still a lot that can be learnt from this data.

#### VISUALISING DATA

One of the main obstacles to making effective use of collected data is conducting the analysis. Tools have been developed in the past to allow statistical methods to be applied to data. Such quantitative analysis can be useful in detailed studies, but could also be a deterrent to people interested in collecting data.

The Grid 2 includes a number of visualisation tools to allow quick visualisation of the data that is collected. We will look at a couple of examples of this, and consider how the data can be used and to what extent the user's privacy is maintained.

The first example that we will consider is a chart visualising some input data. Figure 1 shows a chart which looks at how input activity varies throughout the day.

When analysing this data, we can see that the system is used primarily between

10am and 6pm, with no usage recorded between 2pm and 3pm. This in turn could lead to some interesting questions, for example: are other forms of communication being used when the device is not in use – at lunch time and in the evenings? Such a graph might also reveal that a device always runs out of batteries by mid afternoon, or doesn't get used at weekends. Of course, it could also be that the data logger is only used in school – the data needs to be considered in context!

The second example is of some selection data. Recall that selection data refers to the number of times different grids and cells are used. Figure 2 shows a keyboard grid which has been colour-coded to reflect the selection data.

The four empty cells on the left are used for prediction – and we can see that these, along with the space bar, are used the most, followed by the letters a, e, h, o and s.

Let's consider how this data visualisation might prove useful if we wanted to improve this grid for a switch user. We could rearrange the letters by putting those used most often nearer the top left corner, as this makes them more accessible with switches.

We have seen that 'non-private' data is useful; now let us consider to what extent it preserves privacy.

The first example showed variations in input data throughout the day. From a privacy viewpoint this seems to be acceptable: we cannot determine what was being said when the system was in use.

The second example showed keys on a keyboard. We cannot determine what was written on this keyboard, so for this kind of grid the user's privacy is maintained. However, it is possible to envisage a scenario in which this might reveal limited information about what was communicated. If we think of a symbol grid

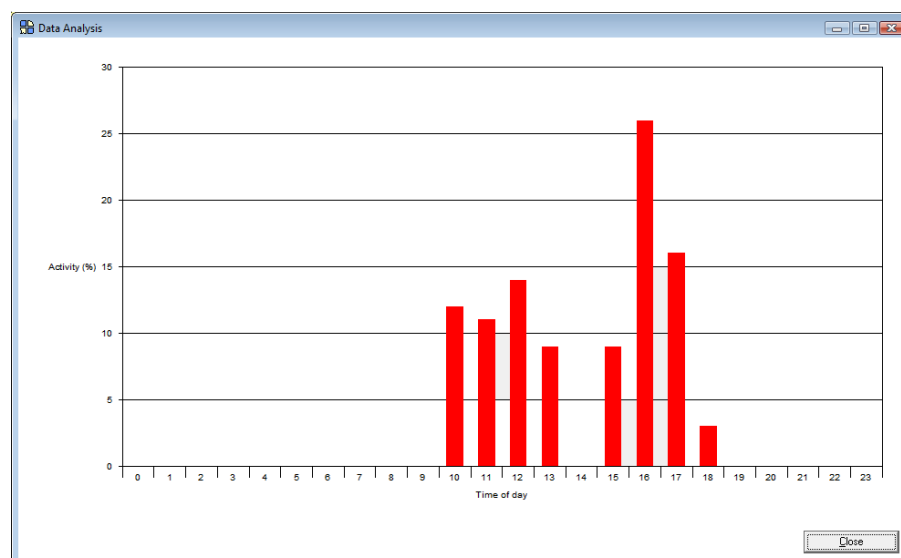


Figure 1 Variation in input activity during the day

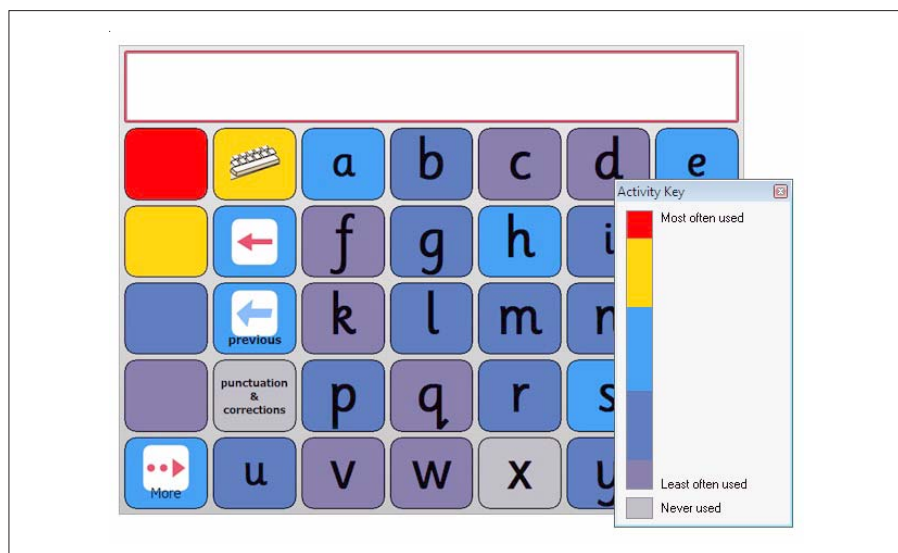


Figure 2 A keyboard showing frequency of use data

containing individual words, we would be able to see which words are being used, but not the order in which they are used. This could perhaps reveal a popular topic of conversation. Consider also a grid on which individual cells contain whole sentences. In this case we can see which sentences have been selected most often. In these last two examples, the analysis may reveal some of the content of the users' communication, and are therefore the 'non-private' status of the data is a little less clear-cut.

#### OTHER DATA ANALYSIS

For those who are prepared to get their hands dirty, the raw data collected by The Grid 2 is also available for analysis that goes beyond the scope of the built-in visualisation tools. For example, by comparing data collected about input (number of switch presses) and output (number of words spoken), we can get a measure of how efficiently a system is being used.

With data collected at different times, it would be possible to see how this efficiency changes in response to specific interventions such as adjustments to the system or extra training. This is just one example of the data could be used; there are many more possibilities.

#### ANALYSIS WITHOUT DATA COLLECTION

Analysis techniques can also be used to improve communication systems without recording any usage data. The arrangement of cells and grids on an AAC system (variously referred to as grid sets, vocabularies, profiles or users) is in itself a data set that can be analysed.

This can be useful for the designer of a communication system, who can check for inconsistencies or ways to improve the system. It can also be useful for users of the system – for example, for a therapist

helping a user to learn to navigate through a large number of pages.

No usage data needs to be recorded because the data is contained in the design of the grids: how the grids link together and what the cells contain. Figure 3 shows an automatically generated chart that shows how to navigate to each grid in a collection of grids.

We can see that the start grid, "Page 1", links to 10 pages with topical vocabulary ("about me", "body", etc). Some of these link to further grids – for example the "clothes" grids links to a further grid called "colours", and there are a number grids accessible from the "fun" grid. For someone designing and maintaining a set of grids, this is a valuable tool for getting an overview of the arrangement of pages.

Another useful tool is the ability to compile a list of the vocabulary cells in a set of grids. Figure 4 shows a section of such a list. This particular example shows all the places that the word "house" appears in CALLtalk (a popular communication vocabulary available on many AAC systems). We can see that there are 4 different places where the word "house" can be found. For each occurrence of the word, we can see which grid it is located on and the exact coordinates of the cell. We can also see the most direct way to get to that grid from the start grid.

The first item has an animal house as the symbol. It is on the grid "baby animals.pop" at location (4,5). To get to this grid from "page 1" you need to go via the "animals" grid.

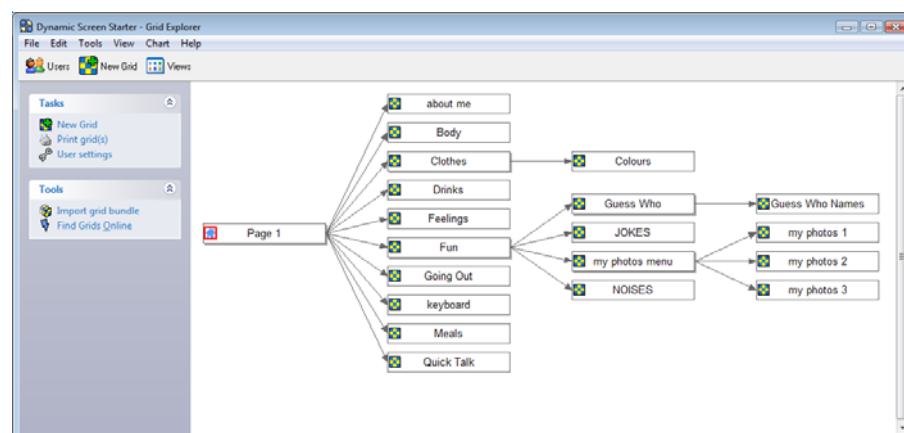


Figure 3 Chart showing the relationship between grids

Caption	Location	Route
house	Baby Animals.pop (4,5)	page1 > animals > baby animals.pop
house	Buildings.pop (2,5)	page1 > place > buildings.pop
house	House (1,4)	page1 > house
house	Place (4,5)	page1 > place

Figure 4 Locating the word "house" in CALLtalk

This information could be very useful for an individual providing support to a user of the CALLtalk vocabulary. A printed copy of the full list of vocabulary would provide a useful reference for quickly locating new vocabulary.

## SUMMARY

Data collection is a very useful tool, but it raises serious concerns about privacy. The Grid 2 addresses these concerns head on by taking a novel approach to data collection. By limiting the scope of data recorded, it tries to ensure that no private data is stored. In this aim it is almost entirely successful: it is possible to contrive situations in which someone's conversation subject could be inferred, but this is very unlikely.

Built-in visualisation tools make data analysis more accessible to those who do not want to analyse raw data. There are also useful ways to visualise the arrangement of grids and cells without recording any data from the individual communicators.

## LOOKING AHEAD

The field of computer-based AAC is rapidly advancing, as developments in technology allow new possibilities. These

developments bring with them new ways to collect and analyse data, along with new concerns for privacy.

One example of a privacy concern arises from the proliferation of computer tools available in modern AAC software. The Grid 2 allows access to web pages, email, mobile phone, SMS, Skype and environment control, and other AAC software offer some of these possibilities. All of these tools involve personal data, such as history of web pages visited or emails received: AAC systems may contain the same personal information found on a home computer.

Despite these concerns, the new possibilities are also exciting. One proposed study is planning to use an eye-gaze system to record where someone is looking while using other input methods such as switches or a touch screen, which could lead to improvements in grid design.

Significantly, this study (and others like it) is not being conducted by an AAC manufacturer. At the beginning of this article we saw that much of the development of data logging and analysis tools has been driven by manufacturers, and there has not been a large take-up of these tools by AT professionals.

With the introduction of better privacy safeguards and easy-to-use tools, data collection could become more a widely used tool – and that could result in providing better communication systems. \*

Barney Hawes

Sensory Software International Ltd

## REFERENCES

- <sup>1</sup> Higginbotham, D.J., Leshner, G.W., & Moulton, B.J. (1999). Development of a voluntary standard format for augmentative communication device logfiles. *Proceedings of the RESNA 1999*, 25-27.
- <sup>2</sup> Hill, K. J. & Romich, B. A. (2001). A language activity monitor for supporting AAC evidence-based clinical practice. *Assistive Technology*, 13, 12-22.
- <sup>3</sup> Forster, C. & Caryer, K. (2007). Do utterances from a VOCA receive the same respect as spoken language. *Communication Matters* 21(3), 5-7.
- <sup>4</sup> Hill, K., Romich, B., Botten, S. (2002). Rights and privacy in AAC evidence-based clinical practice. *Proceeding for Technology and Persons with Disabilities (CSUN)*.
- <sup>5</sup> [www.aacoinstitute.org/Resources/RightsAndPrivacy/consentandcommunicationform.html](http://www.aacoinstitute.org/Resources/RightsAndPrivacy/consentandcommunicationform.html)
- <sup>6</sup> [www.aacoinstitute.org/Resources/RightsAndPrivacy/NoticeLabel.html](http://www.aacoinstitute.org/Resources/RightsAndPrivacy/NoticeLabel.html)

...continued from page 30 AAC City & Guilds Course: From Qualification to Therapy Tool

organising venues, food and music and this leads to much argument, discussion and heated debate.

Inviting guests into the group has been popular and has a dual purpose. Students enjoy thinking about and discussing who they would like to invite. Being young people who use AAC, they may not have the opportunity to have spontaneous interactions with members of staff so inviting them into the group makes our students feel valued. Additionally, therapists are able to use this opportunity to show those members of staff how to adapt their communication to interact effectively with people who use AAC.

## AAC CITY & GUILD SESSION

Before planning, we review the evidence sheets and identify evidence required; the session will then be planned. When new students arrive, planning can be more flexible but, as the students accumulate their evidence planning, has to become more targeted to the individual. Within a session a therapist may be helping students to work on three or four different criteria. As stated previously the expectation

at the beginning of the session is that the students will come into the classroom and chat with each other. This initial conversation the students have can lead or can be allowed to flow and develop thereby giving the students valuable, practical and functional experience boosting their ability to interact. In this way the therapist has to be flexible and be prepared to deviate from the session plan. Admittedly, by following this approach the conversation can fail and then the therapist needs to explain and follow their session plan. Often students can experience technical difficulties with their equipment so these have to be identified and solved or another form of AAC used, such as an alphabet board or wordbook.

Following the session the staff have a brief review commenting on aspects that went well and those that did not. The written evidence sheets are collected and the evidence is assessed by referring to the progress sheets, Units, Elements and Criteria. Marked evidence is then checked by an internal verifier. Annually, once the Certificates have been completed, an external verifier from City and Guilds visits

Treloar to ensure that the quality of evidence collected is of the appropriate standard.

## CONCLUSION

Running this course proves to be time consuming but it is not obligatory to run the course in the way that has been outlined in this article. At Treloar there are many students who are interested in gaining this qualification, so a high level of support is needed. It would be possible to run sessions with fewer students or even on an individual basis with a true understanding of Criteria.

Changing the delivery of this course from gaining a qualification to becoming a therapy tool has been a gradual process and this continues to develop and evolve. It is hoped that this article will act as guidance as a record of one institution's development of the AAC City & Guilds Qualification course and its increased enthusiasm in being involved. \*

Mary Lass & Trudy Bore

Speech & Language Therapists



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# Disambiguation (Predictive Texting) for AAC

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**‘Predictive texting’ can be used for AAC** and originated in the Assistive Technology field. Commonly called predictive texting but properly called disambiguation, this paper presents the method of text entry used frequently on mobile phones and suggests its use for AAC. The basic theory of disambiguation as a text entry method is presented as well as a summary review of research and development, including the technique’s roots in Assistive Technology and more recent developments. Finally, the use of disambiguation as an augmentative communication, or text entry method is investigated and the set of currently available systems is reviewed.

## THEORY OF DISAMBIGUATION

The word ‘disambiguation’ is in the dictionary:

*“disambiguate verb to make something unambiguous; to remove ambiguity from it. disambiguation noun. ETYMOLOGY: 20c.”*

(Chambers 21<sup>st</sup> Century Dictionary, 2007)

Within the context of this paper, we are discussing disambiguation for character entry, in other words – typing with keyboards. We should not ignore, however, that although this paper will mostly discuss letters and keyboards, the process is applicable to any alphabet and language – including those represented by symbols.



An ambiguous keyboard is one where the number of possible selections is less than the number of possible characters – i.e. the number of keys on a keyboard is less than the number of letters in the alphabet. Ambiguous keyboards have recently come into the popular domain through the popularisation of mobile phones for SMS messages. In AAC we are very familiar with ambiguous keyboards – many AAC systems allow a user to say a larger number of things than there are keys.

If you type with an ambiguous keyboard, you will most likely end up with gibberish on your screen, you need a disambiguation process for it to make sense. Disambiguation looks at what key presses you have made (for example, using the above keyboard: ‘3def’, ‘6mno’, ‘4ghi) and works out what you wanted to say (‘dog’) – it does this by having some knowledge about the language and using this to guess the most likely thing you

could have said. The ambiguity is completely removed when you look at the word and confirm it is correct (or select another word from the list).

This is the disambiguation process commonly used on mobile phones (called T9 and patented by Tegic, 1985); however, there are other ways of disambiguating. It is also possible to have any number of keys – down to 3 – rather than the 12 you normally use on a mobile. These topics are discussed later on in this paper.

## A SHORT HISTORY OF DISAMBIGUATION

One of the interesting things about disambiguation is that it originated in Assistive Technology (AT) and AAC and made its way most thoroughly into the mainstream – 41.8 billion messages were sent in 2006, 5.3 billion in October 2007 alone (Text.IT, 2007). This cannot be said for many Assistive Technology concepts and what is disappointing is that it is not now commonly used for AAC/AT, something the authors hope to change.

Initial work on ambiguous keyboards was carried out in the early 80s and driven by the desire to allow deaf people to communicate over the telephone network. The telephone keyboard (or dial) presented a challenge to researchers wanting to use the system to transmit text. Glaser (1981) looked at encoding methods for the tel-

ephone keypad for deaf people – encoding required the user to dial two numbers for each letter, they would look up which numbers to dial on a chart. Encoding is an Assistive Technology access method and has also featured in recent work in text entry for handset computers (e.g. Perlin (1998) on stylus entry). Johnson and Hagstad (1981) also looked at similar encoding methods, and are the first to consider the application for people with speech impairments.

Some of these authors discuss language based disambiguation systems, however the methods they propose for removing ambiguity in the keypad use key encoding, not a language model. This work, however, formed the basis for the next developments in ambiguous keyboards – the use of a language models in the disambiguation process.

Witten (1983) discusses the possibility of a word-level disambiguation system, though does not detail one, he also introduces ambiguous keyboard entry combined with speech synthesis as an output (over the telephone network). In his book, Witten also discusses the ‘disambiguation accuracy’ for keystrokes on a telephone keypad. Disambiguation accuracy is a measure of how many times the disambiguation system will correctly predict the desired word. Witten reported that only 8% of words in a 24,500 word dictionary would be ambiguous. Witten also proposed a feedback mechanism to allow the user to discriminate between possible duplicate words as well as describing other entry methods for an ambiguous telephone keypad – including the method known today as ‘Multitap’. This book is, thus described many of the techniques now employed and used everyday by people using mobile phones to send text messages.

Although Witten describes a language based disambiguation method, he does not propose a particular system to achieve this. Minneman (1985) is the first to document a system for disambiguation of an ambiguous keyboard. Minneman describes a system developed called the ‘T decoder’ and reports a disambiguation accuracy of 95%. Minneman’s system uses both word and character level disambiguation and also allows for the adding of novel words into the dictionary. Minneman does not present a method for distinguishing between ambiguous words but does refer to AAC applications, suggesting the use of the DECTALK speech synthesiser in the context of speech problems associated with hearing impairment.

Minneman also describes a small study (n=12) comparing the disambiguation system to coded entry and Multitap. The

results of the study report a novice typing rate of 11wpm and a preference for the disambiguation entry method.

Minneman’s work is quickly built upon, with Kondraske and Shennib (1986), Levine, et al. (1987), Foulds (1987), Kreifeldt, Levine, and Lyengar (1989), Levine and Goodenough-Trepagnier (1990) and Arnott (1992) investigating the topic. Areas investigated by these authors include using syllable level disambiguation (i.e. looking up pairs of syllables instead of waiting until the end of the word); the use of a ‘Retry’ button; optimising the layout of the letters on the keys; modelling input rates for different methods and varying the number of keys. Throughout this period there is a recognition in the literature that this work is orientated towards text-input or communication for people with disabilities.

In this midst of this work, in 1996, the first patent was registered by Tegic, the company that license the T9 disambiguation technique (Reduced keyboard disambiguating system, Patent - US6307549, 1995) and a similar patent in 1996. The work by Tegic (Kushler 1998), and James and Long (2000) describes the T9 system, also mentioning use in AAC as an original motivation for development.

More recently the rising importance of mobile communications especially for short text messages has made such systems familiar to many more people – reviews of mobile text input methods in: Starnier (2004), Johansen and Hansen (2006), Mackenzie and Soukoreff (2002). Research into the area has mostly moved into the field of Human Computer Interaction and the interest in language based disambiguation for AAC/AT has reduced.

## RECENT RESEARCH TOPICS

**Word and character level disambiguation:** mobile phone systems are mainly based on word-level disambiguation, i.e. the probability of words, not characters, are stored. Although the very first systems (Minneman, 1985) suggested word-level systems, further early work tended to be on character level systems since these used less memory. Recent work, following the explosion of such systems on mobile phones, has mostly further examined word-level systems, looking at improving disambiguation accuracy and dictionary size.

**Use for AAC/AT:** The main work in this area recently has been by Harbusch K, Kuhn M (2003) who developed a disambiguation system that can be used with switches and scanning. With this system they investigated its use with different layouts and variations on disambiguation methods. Their system,

UKO-II is available and detailed in the ‘Current Systems’ section below.

**Letter distribution:** Conventionally, letters are arranged alphabetically on a telephone keypad, this arrangement is purely conventional and is not optimal for using disambiguation. Work investigating this has shown some small change in typing rate using alternative layouts (Foulds, 1987) on a phone keypad. There are significant changes between layouts as the number of keys is reduced and scanning as an access method considered (Venkatagiri 1999). In addition, optimising layouts on reduced key sets can allow ambiguous text entry to approach 1 key-stroke per character (Arnott 1992). Goodman, et al. (2002) also found that using a language model to predict letter sequences though not leading to significantly faster input did reduce error rates and was preferred by users.

**Corpus:** The generation of word frequency measures – on which disambiguation relies – requires a corpus (examples of written text) to be examined, and the choice of corpus can greatly alter input efficiency (Tanaka-Ishii, Inutsuka, and Takeichi 2002). Ideally a large representative volume of texts should be considered, but in some cases it is better to examine fewer documents more directly related to the domain in which the user will be writing – be it conversation or a scientific article. Word prediction by partial matching can be used to decrease the overall number of keystrokes required.

**Man-Machine Interface:** Finally overall good design and HCI must not be forgotten, as (Johansen and Hansen 2006) point out, though theoretically efficient key sets and selection techniques can be used often more humble factors of interface design can be more important in determining input efficiency.

## CURRENT AVAILABLE SYSTEMS

It may be a surprise to some that a few ‘predictive text’ AAC systems exist and can be used for communication or text input. These systems and their different features are summarised below. It should be noted that a number of hardware solutions exist – either to provide access to a mobile phone with predictive texting, or using disambiguation – only software solutions are covered below.

### Tapir

Developed by Piotir Zielinski of the Cambridge Inference Group, this system was optimised for use with eye-gaze, however it will work with any mouse input. It uses a novel form of disambiguation (Zielinski P, 2006) however, it behaves as you would expect it to if you are used to T9 on a

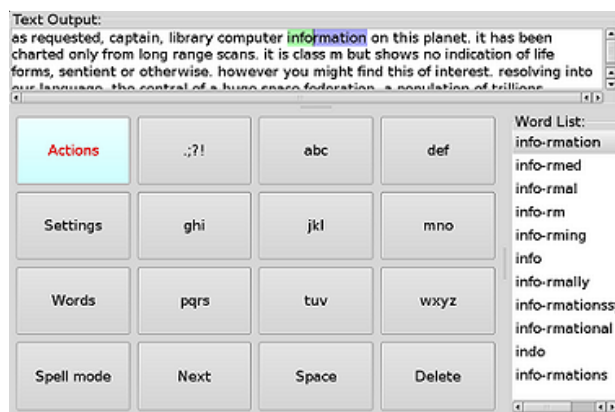


Figure 1 Tapir

mobile phone. The main difference from mobiles is the addition of the word list - making it seem more like 'standard' word prediction. This software is free and open source and will run on any operating system, however the down side of this is that it does not currently send text to other applications (you can, however, copy and paste the text). The window size can be dragged to any size/shape and font altered, however the keyboard layout and dictionary are not configurable. It is possible to switch to 'spell mode' for Multi-tap entry. Further information available from: [www.inference.phy.cam.ac.uk/tapir](http://www.inference.phy.cam.ac.uk/tapir)

### Enkidu Impact XL

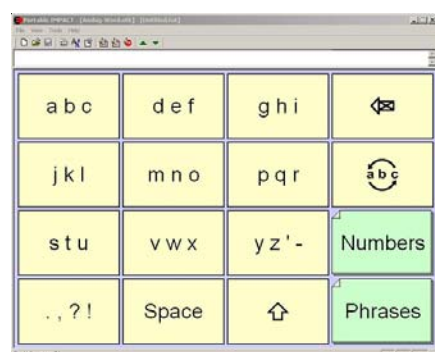


Figure 2 Enkidu Impact XL

The only current commercially support software system known to the authors, this is with the Impact XL product sold by Dynavox systems. The Impact XL package is an AAC package with a number of different layouts and the ability to edit layouts and pages. Impact XL comes with two disambiguation layouts - Ambig-word and Ambig-char (word and character level disambiguation respectively). The software can be used with a mouse, or switch input and works similarly to a mobile phone, with no word list and a 'retry' button for other words. Text can be spoken, but not output to other programs (other than copying and pasting it). It is possible to edit pages and layouts (e.g. to add phrases, link to another communication package), however it does not appear to be possible to edit the disambiguation key-

board setup or layout. This software is free to download as a demo, the demo restricts the use of symbols (not relevant to this) and the synthesised voice (for 60 days) - other than that, the software works fully - the full version can be purchased from Dynavox Systems UK. More details available at: [www.dynavoxtech.com/products/impact\\_pcdemo.aspx](http://www.dynavoxtech.com/products/impact_pcdemo.aspx)

### UKO-II

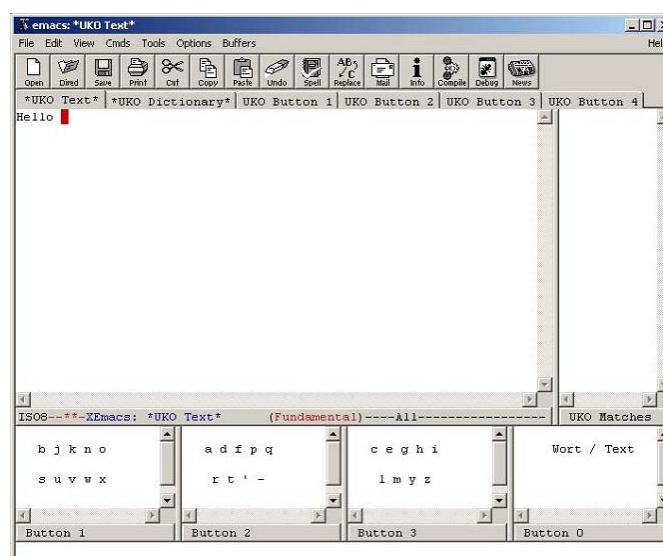


Figure 3 UKO-II

This software was written by Kuhn & Harbush for their research. It is predominately designed with switch input and a small number of keys (e.g. 4) in mind, however it can be used with mouse input too.

The free and open source software runs through xEmacs - an open source text editor, normally used in the Linux operating system. This makes it quite difficult and 'techy' to configure (instructions: [www.assistech.org.uk/doku.php/research:setting\\_up\\_uko-ii](http://www.assistech.org.uk/doku.php/research:setting_up_uko-ii)). Once setup, the character and key layout can be configured as can the input method and the dictionary. Like Tapir, UKO also features a word list on the right hand side and a button to choose the word or select a new one on the list. Text is sent to the text area of the screen and can be copied and pasted into other programs. More details available from:

[www.cogain.org/results/applications/uko-ii](http://www.cogain.org/results/applications/uko-ii)

### DKey

This program was written by the second author of this article to allow people using a physical keyboard with a computer



Figure 4 DKey

to use disambiguation. This software allows someone to use the number pad keyboard as an ambiguous keyboard. This could be useful for people who are able to use a keyboard (maybe with a keyguard) but would rather not move across the full keyboard - e.g. people with tremor, ataxia, mouth stick users or people with weak

movements such as spinal muscular atrophy. In addition it is hoped to be able to use the software for research. The keyboard layout and dictionary are configurable as are the keys used to access it. The window size, font size and colour can all be adjusted. The software is only accessed using a keyboard, and not using a mouse or scanning. Currently this can be obtained on a restricted license from

the author, although the plan is to release it as free and open source software.

### GazeTalk and Dasher

Although not strictly disambiguation, these are both based on the same work by Shannon and Weaver (1963) on Information Theory that disambiguation relies on.

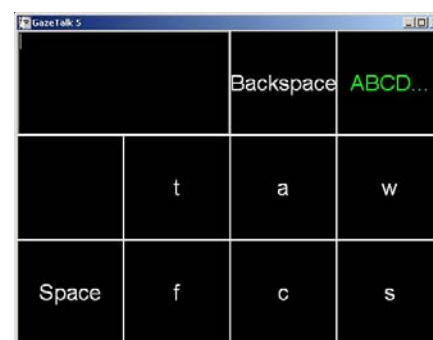


Figure 5 GazeTalk

GazeTalk presents a list of the 6 most probable letters and the option to find the letter with A-Z. This generally allows typing without frequent page changes and minimal movement. The software inte-



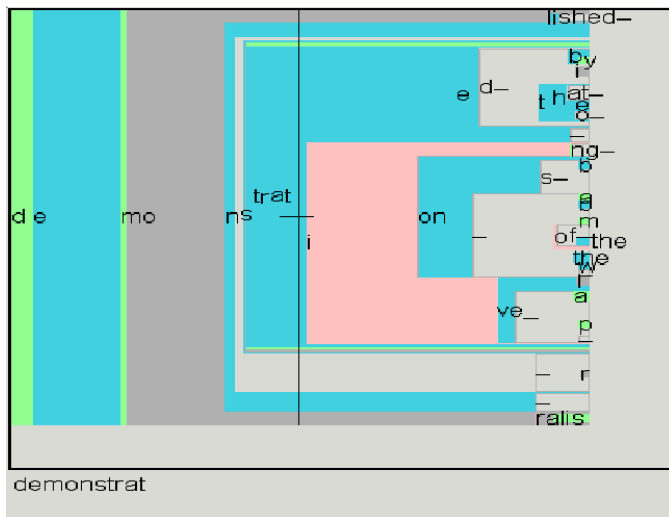


Figure 6 Dasher

grates access to speaking, typing, internet and email. This free and open source software was developed by ITU (Hansen JP et al, 2004) originally for use with eye-gaze, although it works with any mouse input and now integrates switch access. Details: [www.cogain.org/results/applications/gazetalk](http://www.cogain.org/results/applications/gazetalk)

### Dasher

Dasher, developed by the Inference Group at Cambridge University, also uses language information to present the next most likely characters. To select letters in Dasher, however, you 'drive' through them with the cursor. The most likely letters are displayed larger and so the system often looks as if it is predicting whole words. Dasher allows relatively high typing rate (Ward DJ et al, 2000) with minimal movement of the cursor and a switch access variant has also been developed as well as a variant that is used in conjunction with voice access. Further information from: [www.inference.phy.cam.ac.uk/dasher](http://www.inference.phy.cam.ac.uk/dasher)

### SUMMARY

Predictive texting, known as disambiguation, originated in the AAC and AT field a long time before mobile phones even existed. It allows efficient and quick entry of text for recording or speaking since it uses information about language to reduce the number of keys required for input. Research and development on disambiguation methods has been carried out since the early 80s and continues today, although now it is mainly in the Human Computer Interaction field with relation to text entry to handheld computers.

A number of software systems, detailed in the paper, exist that can be used today to allow someone to use disambiguation for text input or communication. It is hoped that as awareness of this method increases, in parallel with the acceptance of it as a method of text entry for mobile

phones, it will allow more people using AAC to communicate more efficiently. \*

Simon Judge, Senior Clinical Scientist  
Mark Landeryou, Research Associate

### REFERENCES

See also: [www.citeulike.org/user/simonjudge/tag/disambiguation](http://www.citeulike.org/user/simonjudge/tag/disambiguation)

- Arnett, John (1992). Probabilistic character disambiguation for reduced keyboards using small text samples. *Augmentative & Alternative Communication*:238-253. [www.ingentaconnect.com/content/tandf/taac/1992/00000008/00000003/art00004](http://www.ingentaconnect.com/content/tandf/taac/1992/00000008/00000003/art00004).
- Foulds, Richard (1987). Statistical disambiguation of multi-character keys applied to reduce motor requirements for augmentative and alternative communication. *Augmentative & Alternative Communication*:192-195. [www.ingentaconnect.com/content/tandf/taac/1987/00000003/00000004/art00004](http://www.ingentaconnect.com/content/tandf/taac/1987/00000003/00000004/art00004).
- Glaser, R. E. (1981). A telephone communication aid for the deaf, ". *Proceedings of the Johns Hopkins First National Search for Applications of Personal Computers to Aid the Handicapped*.
- Goodman, Joshua; Venolia, Gina; Steury, Keith; and Parker, Chauncey. (2002). Language modeling for soft keyboards. *IUI '02: Proceedings of the 7th international conference on Intelligent user interfaces*. [portal.acm.org/citation.cfm?id=502716.502753](http://portal.acm.org/citation.cfm?id=502716.502753).
- Harbusch, K., Kuhn, M. (2003) An Evaluation Study of Two-Button Scanning with Ambiguous Keyboards. *AAATE 2003*. Available from: [www.uni-koblenz.de/~harbusch/harbusch-kuehn-aaate-2003.pdf](http://www.uni-koblenz.de/~harbusch/harbusch-kuehn-aaate-2003.pdf).
- Hansen J.P., T K Johansen AS, Itoh, K., Aoki, H. (2004) Gaze typing compared with input by head and hand. In: *ETRA '04: Proceedings of the 2004 symposium on Eye tracking research & applications*. New York, NY, USA: ACM; 2004. p. 131-138. Available from: [portal.acm.org/citation.cfm?id=968363.968389](http://portal.acm.org/citation.cfm?id=968363.968389).
- James, Christina, and Long, Michael. (2000). Bringing text input beyond the desktop. *CHI '00: CHI '00 extended abstracts on Human factors in computing systems*. [portal.acm.org/citation.cfm?id=633324](http://portal.acm.org/citation.cfm?id=633324).
- Johansen, Anders S., and Hansen, John P. (2006). Augmentative and alternative communication: the future of text on the move. *Universal Access in the Information Society* V5, no. 2: 125-149. [dx.doi.org/10.1007/s10209-006-0033-0](http://dx.doi.org/10.1007/s10209-006-0033-0).

- Johnson, A. B, and Hagstad, R. F. (1981). DTMF telecommunications for the deaf and speech impaired, ". *Proceedings of the Johns Hopkins First National Search for Applications of Personal Computers to Aid the Handicapped*.
- Kondraske, G. V, and Shennib, A. (1986). Character pattern recognition for a telecommunication aid for the deaf. *IEEE Trans Biomed Eng* 33, no. 3 (March): 366-370. [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3957391](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3957391).
- Kreifeldt, J. G, Levine, S. L., and Iyengar, C. (1989). Reduced keyboard designs using disambiguation. *Proceedings of the Human Factors Society 33rd Annual Meeting* 1:441-444.
- Kushler, Cliff (1998). AAC USING A REDUCED KEYBOARD. *CSUN 98*. [www.dinf.ne.jp/doc/english/Us\\_Eu/conf/csun\\_98/csun98\\_140.htm](http://www.dinf.ne.jp/doc/english/Us_Eu/conf/csun_98/csun98_140.htm).
- Levine, S. H, and Goodenough-Trepagnier, C. (1990). Customised text entry devices for motor-impaired users. *Appl Ergon* 21, no. 1 (March): 55-62. [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=15676760](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=15676760).
- Levine, S. H, Goodenough C Trepagnier, C. O Getschow, and S. L Minneman (1987). Multi-character key text entry using computer disambiguation. *RESNA 10th Annual Conference, San Jose, California*:177-178.
- Mackenzie, and Soukoreff (2002). Text entry for mobile computing: Models and methods, theory and practice. *Human-Computer Interaction* 17:147-198. [www.yorku.ca/mack/hci3.html](http://www.yorku.ca/mack/hci3.html).
- Minneman, S. L. (1985). A simplified Touch-Tone telecommunication aid for deaf and hearing impaired individuals. *Proceedings of the 8th Annual Conference on Rehabilitation Technology*.
- Perlin, Ken (1998). Quikwriting: continuous stylus-based text entry. *UIST '98: Proceedings of the 11th annual ACM symposium on User interface software and technology*. [dx.doi.org/10.1145/288392.288613](http://dx.doi.org/10.1145/288392.288613).
- Starner, T. (2004). Keyboards redux: fast mobile text entry. *Pervasive Computing, IEEE* 3, no. 3: 97-101. [ieeexplore.ieee.org/xpls/abs\\_all.jsp?arnumber=1321035](http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=1321035).
- Shannon, Claude E., and Weaver, Warren (1963). *A Mathematical Theory of Communication*. [cm.bell-labs.com/cm/ms/what/shannonday/paper.html](http://cm.bell-labs.com/cm/ms/what/shannonday/paper.html).
- Tanaka-Ishii, K., Inutsuka, Y., and Takeichi (2002). Entering Text with a Four Button Device. *Procs. of the 19th International Conference on Computational Linguistics*. [acl.ldc.upenn.edu/C/C02/C02-1149.pdf](http://acl.ldc.upenn.edu/C/C02/C02-1149.pdf).
- Text.IT (2007): [www.text.it/mediacentre/sms.figures.cfm](http://www.text.it/mediacentre/sms.figures.cfm)
- Venkatagiri, Horabail (1999). Efficient keyboard layouts for sequential access in augmentative and alternative communication. *Augmentative & Alternative Communication*:126-134. [www.ingentaconnect.com/content/tandf/taac/1999/00000015/00000002/art00004](http://www.ingentaconnect.com/content/tandf/taac/1999/00000015/00000002/art00004).
- Ward, David J., Blackwell, Alan F., and Mackay, David J. C. (2000). Dasher - a data entry interface using continuous gestures and language models. *UIST '00: Proceedings of the 13th annual ACM symposium on User interface software and technology*. [portal.acm.org/citation.cfm?id=354427](http://portal.acm.org/citation.cfm?id=354427).
- Witten, Ian H. (1983). *Principles of Computer Speech*. Orlando, FL, USA: Academic Press, Inc. [portal.acm.org/citation.cfm?id=538758](http://portal.acm.org/citation.cfm?id=538758)
- Zielinski P. (2006) Optimal codes for human beings. Available from: [www.cl.cam.ac.uk/~pz215/files/t9.pdf](http://www.cl.cam.ac.uk/~pz215/files/t9.pdf)



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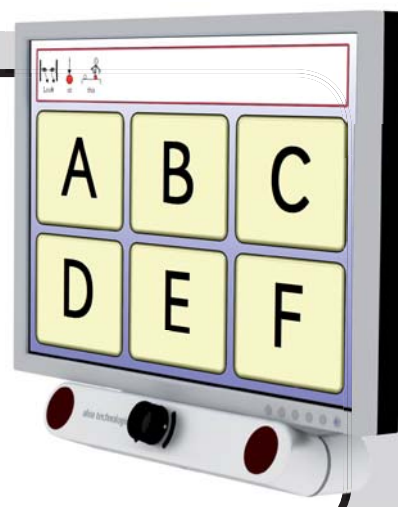
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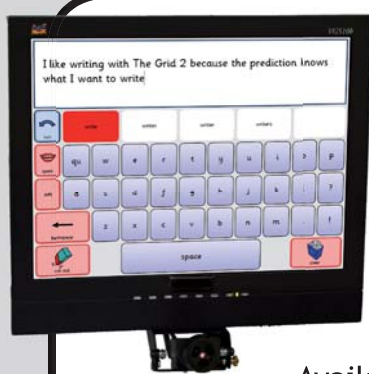
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