

# **Interaction between AAC <sup>1</sup>Users and their Peers in a Residential Environment.**

## **Final Report to the Gannochy Trust - January 1998**

**Ivana Marková, Professor of Psychology  
Joan Murphy, Research Speech and Language Therapist  
Martha Lester-Cribb, Research Assistant**

### **INTRODUCTION:**

In January 1996 Ivana Marková, Joan Murphy and Martha Lester-Cribb received a grant from the Gannochy Trust to carry out a research project to examine the interaction between AAC users and their peers in a residential environment.

This study has now been completed and the researchers believe that not only have they successfully fulfilled the aims of the original proposal but they have also produced additional materials and information which are of value to people with communication disabilities, their peers, their carers and the organisations who provide services to them. The following is a list of all the stages of the project which have been successfully completed as well as the materials which have been produced:

- Detailed coded observations of nine AAC users' interaction with others
- Detailed field notes of these observations
- In depth interviews with the nine AAC users, six members of staff and three peers
- Qualitative and quantitative analysis of all data
- Feedback of findings to all participants, both individually and in groups
- Workshops with participants in order to validate findings
- Publication of findings and recommendations in the form of an interactive document - ***Improving Augmented Communication within an Organisation: A Workbook***
- Development and publication of an interview tool for people with severe communication difficulties - ***Talking Mats***
- Development and production of a video to accompany the interview tool
- Production and mailing of fliers for ***Workbook*** and ***Talking Mats***
- Presentation of papers at conferences
- Presentation of workshops on the use of ***Talking Mats***

This project has generated a great amount of interest not only at Upper Springland, where the research was carried out, but also throughout the AAC community in the UK and abroad. Capability Scotland has expressed considerable interest in the Recommendations Document and it is expected that other organisations will also make use of it. Speech and language therapists have encouraged the researchers to publish the ***Talking Mats*** package and several professional groups including teachers, nurses, social workers, counsellors, occupational therapists, physiotherapists and psychologists wish to use it.

---

<sup>1</sup> AAC stands for Augmentative and Alternative Communication and describes any method of communication which supplements impaired speech or handwriting e.g. a symbol book or an electronic aid.

## **BACKGROUND:**

Many people with disabilities still live in environments in which they have limited opportunities to communicate and a restricted number of communication partners. In their previous studies the researchers found that many people with disabilities live and associate predominantly with other people with disabilities and with people who are paid to care for them (Marková, Jahoda and Cattermole, 1988). In particular, within the residential care setting, people with communication difficulties appear to have little interaction with their peers. It appears likely that the restrictions on the types of social contacts and conversations available to AAC users may limit their ability to communicate as fully as possible and to realise their intellectual and emotional potential (Murphy, Marková, Collins and Moodie, 1996).

With the advent of AAC systems, people with little or no useful speech can now express their thoughts and feelings and can provide invaluable insights into their experiences which can be used to inform decisions both at personal and policy levels.

An examination of the literature showed a dearth of research into interactions between AAC users and other people who have disabilities. The researchers believed that the findings of such research would be of great practical value in improving the daily communication opportunities available to AAC users, particularly with their peers.

## **AIMS:**

The project had three main aims:

- 1) To explore the content, strategies and quality of interaction available to AAC users with the following groups of people:
  - a) other AAC users and people with severe communication difficulties;
  - b) other people with disabilities who have no communication difficulties;
  - c) staff\*.

\*Following the pilot study, it was decided to code *all* interactions involving the nine AAC users (including those with staff) in order to provide data for comparison. This was not included in the original proposal.

- 2) To examine the factors (e.g. attitudes, environment, time, motivation) which determine the existing communication opportunities available to AAC users in this setting.
- 3) To make recommendations to managers, relevant professionals, staff and residents concerning how the communication experiences of AAC users within residential environments can be improved.

## **PARTICIPANTS:**

Upper Springland is an establishment run by Capability Scotland which provides residential care and a variety of other services for people with disabilities. Nine AAC users who live at Upper Springland agreed to be the focus of this research. Throughout the project a number of peers and

staff members also participated. The nature of the research was explained and consent was obtained from all those involved at the various stages of the project.

## **METHODS AND RESULTS:**

We used a range of research methods which complemented each other, produced validated results and enhanced the quality of the project.

### **1. Observations:**

Detailed observations were made of the communication interactions of nine communication aid users in their everyday environments. Each person was observed during three different daytime activities, one evening activity and three mealtimes. The observations were coded and statistical analysis was carried out on this data. Individualised data was collated to produce an overall picture of the communication patterns observed at Upper Springland. Although we identified many significant communication patterns, the relatively small population sample of nine AAC users displayed a wide range of behaviours which inevitably distort the averages derived from this data. To illustrate this, the average results also incorporate the *ranges* of interaction behaviour which had been observed.

The most significant patterns of communication behaviour obtained from the observations are as follows (see appendix I for charts):

**Communication Partners:** We began by examining the proportion of AAC users' interactions (both initiations and responses) with staff members compared to interaction with peers.

- AAC users interacted much more with members of staff than with their peers - 72.4% of their interactions were with staff compared to 27.6% with peers [range: 7% - 45%] [*chart 1*].

**Initiations:** We found a similar pattern when examining only those interactions initiated by AAC users.

- Where AAC users initiated interaction with others, they did so much more with staff than with peers - 73% initiated with staff compared to 27% with peers. Some AAC users **never** initiated any interaction with peers [range: 0% - 57.5%] [*chart 2*].

- Where there was interaction between AAC users and peers, peers tended to initiate more [62%] than AAC users [38%] [range 0% - 77%] [*chart 3*].

**Non-Responses:** We examined how many of the attempts, both by AAC users and peers, to initiate an interaction with each other were not responded to.

- Where peers initiated interaction with AAC users, 10% of these initiations were not responded to. Although one AAC user never ignored peer initiation another AAC user ignored 50% of peer initiations with him [range: 0% - 50%] [*chart 4*].

- Where AAC users initiated interaction, 16% of these initiations were not responded to by peers and for one AAC user half of his attempts to initiate interaction with peers was ignored. [range: 0% - 50%] [chart 5].

**Elaborations:** We wished to examine how many of the AAC users' interactions (with both staff and peers) consisted of more than one simple exchange and how many of these involved the use of communication aids rather than non-verbal communication methods.

- Most of the AAC users' interactions consisted of only one exchange with the communication partner. Only 40% of AAC users' interactions were elaborated (i.e. more than one exchange): [range: 27.7% - 54.4%] [chart 6].

- On average 47% of these elaborated interactions involved the use of an AAC system. There was a wide discrepancy in how much AAC systems were used - one AAC user only used his communication aid for 2.8% of his elaborated interactions whereas another used his communication aid for almost all his elaborated interactions [range: 2.8% - 95.4%] [chart 7].

**Topic:** We obtained a broad notion of the topic of the AAC users' interaction with their peers by noting whether each interaction was primarily a) for exchanging information, b) for care needs or c) for social interaction.

- By far the most frequent topic of AAC user - peer interaction was related to **social interaction** -72% [range: 36%- 100%]. Next came **information exchange** 24% [range: 0% - 57%]. Only 4% [range: 0% - 13%] of AAC user-peer interaction was related to **care needs** [chart 8].

We did not attempt to draw any conclusions from this data at this stage until we had conducted interviews with participants.

## **2. Field notes:**

During the observations we took detailed and confidential field notes which were analysed by both researchers independently using cognitive mapping (see Jones 1985). This analysis resulted in a consensus of seven significant **issues** in terms of communication within Upper Springland for the nine communication aid users:

- meal times
- activities
- starting conversations
- talking to staff
- ignoring each other
- being reluctant to use communication aid
- conversation topic

## **3. Interviews:**

Following the observational stage of the study we conducted semi-structured interviews with the AAC users, their peers and staff. The interviews were designed to enable us to gather

participants' different perspectives on why the communication patterns we observed exist at Upper Springland and on how they felt about these patterns. The interview schedule, (appendix II ) which included picture symbols, was based on the seven issues identified above.

#### **i) Interviews with AAC Users:**

The individualised results from our observational data were used to give the AAC users feedback about their own personal communication patterns. To make this data easily accessible to those with low literacy levels, it was presented in the form of pie charts. In addition, to allow the users to think about their communication patterns and then comment on them, we devised '*Talking Mats*' as an interview tool using picture symbols<sup>2</sup> (made using the software package Boardmaker™) to assist the AAC users. This was designed to overcome the potential problem that AAC users (even those who were competent with their AAC systems) might have difficulty in discussing some of these issues because:

- a) they might not have the relevant vocabulary in their communication aids
- b) they might not have considered these issues in this way before.

#### **ii) Interviews with Staff and Peers:**

The same interview was carried out with three staff members from the residential units, three staff members from the Skill Centre and three peers - all chosen by the AAC users. The manager was also interviewed. These interviews were tape recorded and transcribed.

We used some of the graphs from our generalised results during our interviews with staff and AAC users' peers in order to give them an indication of the communication patterns we had observed without breaching confidentiality.

### **4. Feedback workshops:**

Having analysed the data from the observations, our field notes and all the interviews, we drew up a booklet containing our findings, the perceptions of the participants and draft recommendations. These were presented in the form of a workbook illustrated with the same picture symbols as had been used successfully in the interviews. We were anxious to obtain the views of the participants about our findings. In order to do this fifty copies of the workbook were circulated for the residents and staff to consider. Once the participants had read and discussed the book, their comments were collected and two workshops were organised to gather feedback. These workshops were very successful and included AAC users, peers, staff from transport, administration, housekeeping, residential units, skill centre and management. The feedback workshops produced a number of amendments and additions.

---

<sup>2</sup> The Picture Communication Symbols (PCS) are ©1981-1997 Mayer Johnson Co. and are used with permission - Mayer-Johnson Co., P.O. Box 1579, Solana Beach, CA 92075, USA

This resulted in the production of a workbook titled '*Improving Augmented Communication within an Organisation*'. The researchers, residents and staff at Upper Springland believe that this document has implications not only for Upper Springland but also for other centres within Capability Scotland, and users of AAC elsewhere. Upper Springland will propose that the recommendations made in this book be incorporated into the organisation's Standards and Guidance for Good Practice Document.

## **OUTCOMES:**

### **1. Packages**

This project has resulted in the publication of the following two packages which have already received considerable interest both from Capability Scotland and from speech and language therapists in a range of work places. Fliers have been produced and mailed to approximately 500 people on our mailing list. Winslow Press, which has marketed previous AAC training materials which we have published, has once again been approached.

*Talking Mats* is a framework which uses picture symbols to help people with severe communication difficulties communicate about particular issues relevant to them. It has potential for a wide range of people and is an approach which may help them to think about issues in a different way and provide them with a means of expressing their views more easily. The package includes a booklet explaining how to use the mats, as well as several pages of examples to help people get started. There is also a video accompanying the booklet which shows how three people used the *Talking Mats*.

*Improving Augmented Communication within an Organisation* is a workbook in which the findings from the project are presented in an interactive format. The workbook contains data from the researchers, the AAC users involved, their peers and staff. It contains information about **22 issues** which emerged as being significant for the interaction of AAC users. Each issue is presented in three ways: firstly from the perspective of the researchers' observations; secondly as commented on by residents and staff during detailed interviews and finally in the form of a set of recommendations. These recommendations (**154 in total**) will be of value not only to AAC users but also to other people with disabilities, to the staff and carers who work with them and especially to managers. The workbook is illustrated with picture communication symbols and can be used in many different ways - e.g. simply for discussion in a one to one setting or in a group; for awareness raising; for training purposes. In its entire form it could be taken on as a policy statement of an organisation.

### **2. Presentations:**

Findings from the project have been presented at the following workshops:

Murphy, J & Lester-Cribb, M. Piloting Boardmaker™ as an Interview Tool  
Chatterbox Workshop - Perth - March 1997

Murphy, J. *'Talking Mats'*.

Link Therapy Meeting - SCTCI, Glasgow - May 1997

Murphy, J. Training in AAC.

Practical Communication Training Day, Newcastle, May 1997

Murphy, J. Practical Communication Problems -

GP Study Day - Strathcarron Hospice - September 1997

Murphy, J. AAC Users' Interaction with Peers

Communication Matters Symposium - Lancaster -September 1997

Murphy, J. Helping People with Severe Communication Difficulties : A Low-tech Interview Tool

Communication Matters Symposium - Lancaster -September 1997

Murphy, J. Augmentative Communication for People with Cerebral Palsy

Fifth National Seminar on Cerebral Palsy - Malaysia - November 1997

Murphy, J. Augmentative Communication for Adults with a Physical Disability.

Area Rehabilitation Service - Stirling Royal Infirmary - January 1998

The following papers have been submitted for presentation at the ISAAC International Conference in Dublin in August 1998:

i) *'Talking Mats'*: An Interactive , Low-tech Discussion Framework

ii) AAC Users' Interaction with their Peers

A further four papers based on the observational data and field notes are planned for submission to academic and professional journals.

## **CONCLUSION:**

One of the most satisfying outcomes from this research project has been the response from the participants. The researchers placed great emphasis on participants being involved at all stages and having ownership of the recommendations for change. This happened from the very start of the project and as a result, the attitudes and practice of the staff and residents at Upper Springland began to change well before the project ended. Attached are some of the comments received from participants at the Feedback Workshops(appendix III).

We are particularly gratified that the management at Upper Springland is proposing that the recommendations made in the *Workbook* be incorporated into Capability Scotland's Standards and Guidance for Good Practice Document.

We have also been greatly encouraged by the response of those who were involved in the piloting of the '**Talking Mats**' and the speech and language therapists who were involved in the various '**Talking Mats**' workshops. It was felt that the framework has potential for different client groups, in different situations and for different purposes. As a result of this encouragement we have produced the booklet and video.

## **REFERENCES:**

Jones,S. (1985). The Analysis of Depth Interviews in :R Walker (ed.) Applied Qualitative Research. London: Gower. pp.56-70.

Marková,I., Jahoda,A. & Cattermole,M. (1988). The Meaning of Independent Living for People with a Mental Handicap. Scottish Office Health Bulletin, 46, 4.

Murphy,J., Marková,I., Collins,S., & Moodie,E. (1996). AAC Systems: Obstacles to Effective Use. European Journal of Disorders of Communication 31, 31-44.

## **ACKNOWLEDGEMENTS :**

We are very grateful to The Gannochy Trust for their support for this research project. We wish to thank all the residents and staff at Upper Springland for their time, humour and insights which they gave to us so generously. Thanks to Frances Davidson, Betty Firth and Jamie McCall for agreeing to feature in the video. We also wish to thank those who commented on our results and shared their views with us - particularly Janet Scott, Joyce Seaward, Fiona McCall, Eleanor Moodie and participants at the various workshops we presented. Final appreciation to our Administrative Assistant, Barbara Kettlewell, for her advice, tolerance and good humour.