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**REVIEWS, SURVEYS AND BIBLIOGRAPHIES  
OF RESEARCH INTO NONSPEECH SYSTEMS**

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## REVIEWS OF RESEARCH INTO NONSPEECH SYSTEMS

### Reviews of Sign Language Research

Kiernan, C (1978)

Alternative to speech: a review of research on manual and other forms of communication with the mentally handicapped and other non-communicating populations Brit. J. Mental Subnormality, 23, 6-28

A comprehensive review of published research on non-verbal systems up to 1976.

Concludes that evidence suggests that non-communicating students can learn to communicate by alternative methods, but that further evidence is needed to demonstrate how, why and to what extent this occurs. Criticises inadequacies in studies to date and discusses questions that remain to be answered. Extremely useful paper: research orientated, but practical applications are made. An updated version has been submitted for publication:

Kiernan, C.C., Reid, B. & Jones, L. (1980)

Signs and Symbols: A review of literature and survey of the use of non-vocal communication systems (no more details available).

Both these papers are of great value to everyone whose work involves the use of non-verbal systems. Especially useful to anyone with research projects in mind.

Bailey, R. (1978)

Makaton Success: Fact and Artefact

Apex Vol.6, No.2, 1978, 18-19

The Makaton : In Perspective (letter)

Apex Vol.7, No.2, 1979, 69

Walker, M. (1979)

The Makaton: In Perspective

Apex Vol.7, No.1, 1979, 12-14

Critical discussion of Walker's published work, which highlights many of the difficulties involved in planning and executing pioneering research. Of value to prospective researchers, illustrating some of the strategies to adopt when presenting data.

Fristoe, M. & Lloyd, L.L. (1979)

Non-speech communication

in N.R. Ellis (Ed) Handbook of Mental Deficiency:

Psychological Theory and Research, Second Edition, Lawrence Erlbaum 1979 Ch.11, pp.401-430

Compares the alternative communication systems available in the United States and assesses their relative strengths and weaknesses for use with various types of client.

Sixteen reasons are adduced for why non-verbal systems should be effective:

- (1) Pressure for speech is removed
- (2) Problems with auditory Short Term Memory (STM) and auditory processing are circumvented
- (3) Vocabulary is limited and functional - concept formation is stressed
- (4) Structure of language input is simplified
- (5) Verbiage (noise) is reduced (refers to clinician patter!)

- (6) Rate of presentation is adjustable
- (7) Client's attention is easier to determine
- (8) Figure-ground differential is enhanced
- (9) Physical manipulation is facilitated
- (10) Clinician's observation of shaping is facilitated
- (11) Stimulus consistency is optimised
- (12) Paired associate and match to sample learning is facilitated
- (13) Object-symbol associations are simplified, perhaps because they are in the same modality
- (14) Supplementary representation is possible
- (15) Duration of symbols is adjustable
- (16) Visual representation is possible, with all the aids of meaning such as placement, direction, iconicity

There are hypotheses which remain to be tested, some could serve as the basis for research projects. They could also provide very useful subjects for discussion in parent/staff signing groups.

Fristoe & Lloyd go on to consider selection of candidates and systems. They are unable to offer precise guidelines re candidates. The main criterion should be use; therefore potential for acceptance is an important consideration. Choice of initial sign vocabulary is discussed with reference to recent research, which suggests that signs involving touching, and iconic signs may be the easiest for mentally handicapped subjects to learn (see See MVDP Research Information Issue - TEACHING METHODS).

This is a useful chapter to read if you can get hold of the book. Try university libraries.

\* Bonvillian, J. & Nelson, K. (1978)

Development of sign language in autistic children and other language handicapped individuals

In P. Siple (Ed) Understanding language through sign language research. Academic Press, New York, 1978 pp.187-213, see See MVDP Research Information Issue - AUTISM

\* Siple, P. (Ed)

Understanding language through sign language research Academic Press, New York, 1978  
This book contains a number of readable important papers relating to all aspects of sign language research.

## **SURVEYS OF RESEARCH INTO NONSPEECH SYSTEMS**

\*Fristoe, M. & Lloyd, L.L. (1978)

A survey of the use of non-speech systems with the severely communication impaired  
Mental Retardation, 1978, 16, 99-103

\*Goodman, L., Wilson, P.S. & Bornstein, H. (1978)

Results of a national survey of sign language programmes in special education  
Mental Retardation, 1978, 16, 104-106

These two surveys, taken together, present information about how non-vocal systems are selected and implemented in the States. The first looked at all non-speech systems and the second focuses on manual signing programmes, principally with the retarded; it is more detailed and offers interesting comparisons with the Thomas Coram Research Unit survey reviewed below.

Findings include:

- (1) An apparent confusion over terminology: most respondents claimed to be using ASL when in fact it was obvious from their answers elsewhere, that some form of signed speech was employed.
- (2) Respondents were evenly divided over the question of whether or not to teach comprehension of signs as a separate step.
- (3) Reported benefits included increased attention span, motivation and articulation of speech; and fewer behaviour problems.

As always when dealing with data that is reported, the findings are open to a number of interpretations and are likely to tell you more about what needs further exploration than what has actually been achieved.

Survey findings in the U.S. cannot be generalised to Britain, although they can suggest what to look out for when assessing and implementing programmes here, e.g. how alerted staff are to the need to assess and teach comprehension.

Kiernan, C.C., Reid, B. & Jones, L. (1980)

Signs & Symbols - Who uses what?

Special Education : Forward Trends, Vol.6, No.4, 32-34

(1979) Survey of the use of signing and symbol systems

Thomas Coram Research Unit, University of London

Institute of Education (Chips Newsletter - available from: T.C.R.U.)

The first article summarises some of the findings from questionnaires which are detailed in the 1979 paper. Schools which participated in the survey should have received a copy of this, which provides valuable background information and statistics for talks and lectures, and also suggests factors to consider in relation to the success of signing programmes. In this respect the 1979 paper is more useful than the 1980 summary, but it is extremely difficult to digest and interpret the figures. A full report has been submitted for publication.

Points to consider

- (1) Only schools (hospital and community) were surveyed; findings are not necessarily applicable to work with adults with retardation or other communication problems.

- (2) The term BSL as used in the report needs clarification; it appears to refer to the use of British Sign Language signs in programmes used with the retarded, physically handicapped and language disordered populations under consideration, rather than to BSL as used by the prelingually deaf. Most of the programmes described used BSL signs in conjunction with Makaton and were thus using signed speech.
- (3) Bear in mind that here again, the findings refer to reported data, rather than to observed facts, especially when interpreting results for teaching methods and children's progress.
- (4) Also remember that one of the disadvantages in the design of questionnaires is that it is almost impossible for the designers to pose questions which can anticipate events and trends unknown to them. There is therefore the risk that the questions will not provide sufficient scope or flexibility to give a complete picture.

#### Conclusions include

- (1) An overall increase in the use of sign and symbol programmes in all types of school. The authors suggest that in view of this increase, Local Education Authorities should consider adopting a general policy with regard to whether systems should be used, and if so, which system.
- (2) No evidence was found to support the notion that one sign system was 'better' than another in terms of number of signs reported to be used and understood by children. Nor did different ways of teaching Makaton (following stages strictly or using signs as a 'bank' according to need) appear to have an effect (although following the stages strictly did appear to facilitate the development of comprehension more than a flexible use of the system. The authors suggest that this may be an artefact of the way of assessing the children).

This finding is of interest to Makaton teachers, and needs to be investigated more carefully; we need to know exactly how programmes are being used and with what type of child, since whereas a 'flexible' approach could be appropriate to certain clients, it could be very undesirable to others, placing too great a demand on a child's understanding of concepts.

- (3) A majority of schools are using structured teaching with non-speech systems, and this - together with teacher skill and enthusiasm - is likely to be a major variable in the success of such systems.
- (4) More work is necessary to determine which of the many ways of combining signing with speaking ("key word" signing → whole sentences signed and spoken) are appropriate. Barbara Reid is following this up in her own research.
- (5) Difficulties in transferring programmes from classroom to home/ hospital ward, are indicated and need further investigation.

(The figures reported here illustrate the difficulty of interpreting findings from questionnaires: Only 63% of mothers of ESN (S) community children used the system, which is a cause for concern. However, since elsewhere it is reported that 21 % of community school children are living away from home, depending on the relationship between the figures, it could be that only 16% of mothers whose children are living at home are not using the system.)

- (6) A large number of non-vocal children in these schools are still not being catered for by non-speech systems; the reasons for this need to be explored and ways of extending the systems found.

This finding serves to remind us of the necessity of constantly re-assessing the needs of all non-verbal clients in the schools, to determine how appropriate communication can be established.

Thomas Coram Research Unit have recently sent out another questionnaire which follows up some of these questions and we can look forward to another valuable report once the findings have been collated.

Thomas, E. (1979)

Some aspects of the application of three alternative methods of communication: The Paget-Gorman Sign System, The Makaton Vocabulary and The Bliss Symbol System

Dissertation as part of the Diploma in Educational Studies, Leicester Polytechnic  
Available from Leicester Polytechnic, Scraftoft Campus (Library), Scraftoft, Leicester LE7 9SU

The strengths and weaknesses of these three systems are compared across a number of factors; origin, character and functions; range of application and geographical distribution; obstacles to methods and results.

This study provides useful background reading for anyone considering research into any of the systems, or wanting information for a lecture. The section on obstacles to methods could be useful as a discussion point for groups, or to teachers encountering opposition to the use of non-verbal systems.

## **BIBLIOGRAPHY OF RESEARCH INTO NONSPEECH SYSTEMS**

Lloyd, L.L.

Unaided non-speech communication for severely handicapped individuals: an extensive bibliography

E.T.M.R. - In press

A goldmine of references from the States on sign and gesture systems with all types of communication handicap.