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MULTIPLE HANDICAP AND NONSPEECH SYSTEMS OF COMMUNICATION

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MULTIPLE HANDICAP & NONSPEECH SYSTEMS OF COMMUNICATION

INTRODUCTION

Multiple Handicap

In this context, the term implies any combination of handicap - mental, perceptual, or emotional, with severe physical disability. The term does not necessarily imply mental handicap. A deaf cerebral palsied child of normal intelligence could be appropriately described as multiply handicapped, as could a cerebral palsied child with intellectual functioning in the mildly or severely retarded range.

Blissymbolics

Most of the references included in this issue describe programmes involving the use of Bliss symbols. My thanks are due to Ena Davies, for lending me several books produced by the Institute and Patricia Bailey, for sending me the booklet Happy Talking - and for their time on the telephone - and not least to Shirley McNaughton, for sending so many materials, and excellent bibliographies.

For anyone interested in finding out more about Blissymbolics, the booklet "Happy Talking" is an invaluable free reference source for books, teaching materials and communication aids published by Blissymbolics and available through Living and Learning.

"Happy Talking" available free from:
Living and Learning
Duke Street
Wisbech
Cambs. PE13 2AE
(they might appreciate an SAE (24 x 16 cm)).

General enquiries to:
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As from June 1981, the RNID Library will no longer supply loan copies of articles - although any articles in their lists prior to June will still be supplied on loan as before. Instead, RNID will provide photocopies for sale only. The old system was simply not

cost-effective, and waiting lists built up for popular items. Their charges are very reasonable indeed.

In addition, RNID will obtain copies of any article required, through inter-library loan. The procedure for this facility is different from that for the journals/books in RNID's own library. Copies will be requested by RNID through the inter-library loan system and will then be available on loan from RNID. Copies may be purchased if required, but costs will be subject to charges set by the inter-library system.

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NOTATIONS USED THROUGHOUT ISSUES

* Papers/Books available for reference from:
Royal National Institute for the Deaf, Library
105 Gower Street, London WC1E 5AH
Tel: 01-387-8033

° Papers/Books available for reference from:
Mr. Roger Tallis, BIMH Information & Resource Centre
Wolverhampton Road, Kidderminster, Worcs
Tel: Kidderminster 850251

* Archer, L.A (1977)

Blissymbolics - a nonverbal communication system

J. Speech & Hearing Disorders, 1977, 42 (4) 568-579

Summary

Early paper describing the system and suggesting areas for future application and development.

* Davies, E. (1979)

Say it with symbols

Nursing Times, 1979, 75, 44, 1900-1901

Summary

Brief introduction to Blissymbolics.

Elder, P.S. & Bergman, J.S. (1978)

Visual symbol communication instruction with non-verbal multiply handicapped individuals

Mental Retardation, 1978, 16, 107-112

Cross-Reference

MVDP Research Information Service: TEACHING METHODS

Summary

This is a two part report. Part I: Receptive Instruction, designed to teach and enhance retention of visual symbols by individuals who have a reasonable level of receptive language. Blissymbol instruction through a series of sequential learning tasks was implemented with five non-verbal mentally retarded individuals, all of whom used eye pointing. The board displays up to four items at one time, with a pointer light underneath which the instructor flashes as the client indicates, to provide reinforcement and feedback.

The structured learning programme was highly efficient in establishing symbol discrimination and retention, over eleven months. Part II, Expressive Instruction is underway.

Critical Points

It would be relevant to know which symbols were selected for teaching, and how and also whether there was any generalisation outside the teaching session.

Clinical Relevance

This paper underlines the value of systematic structured programmes in teaching.

Galloway, P. (1978)

Blissymbolics in the classroom

Special Education: Forward Trends, 1978, 5 (2) 19-21

Summary

This is a brief article describing the use of Blissymbols in a Spastics Society School. It includes useful discussion of common problems which arise:

- the time involved for the teachers in producing symbols, and games to go with them, and adapting communication boards as a child expands his system
- the necessity for message receivers to realise the importance of spontaneous communication, and to be prepared to spend the time in waiting for a long message to be completed, and giving proper feedback by recording the child's message immediately for him
- the difficulties in creating a "total Bliss environment" when other non-Bliss users remove the symbols and communication boards are often cumbersome to manipulate
- the difficulties that occur sometimes in integrating Blissymbols with English grammar, with regard to reading.

The greatest success was achieved with children who were well motivated, and making efforts to communicate before the introduction of Blissymbols. This fits in with the findings of the Toronto research study (see Silverman et al 1978, this Issue).

Clinical Relevance

This paper is helpful and increases awareness of the difficulties which are likely to arise in using a Blissymbol programme, so that you can try to plan solutions.

Blissymbolics, through Living and Learning, are producing an increasing number of resource materials to save on teacher time. Very good suggestions for games are to be found in Silverman et al, 1978 - this Issue.

* Harris-Vanderheiden, D. (1976)

Blissymbols and the mentally retarded

in Vanderheiden, G.C. & Grilley, K. (Eds) 1976

Nonverbal communication techniques and aid, for the severely physically handicapped
University Park Press, Baltimore, pp.120-131

The project written up by Harris Vanderheiden et al. 1975 is approached more discussively in this paper.

Summary

Five nonverbal, physically handicapped and mentally retarded children learned with varying degrees of success to communicate through Blissymbols:

'Children at a 5 year old level of cognitive ability were expected by staff to pick up only a couple of concrete symbols, yet at the end of the programme some were using 80 symbols, and four symbol combinations. Children at a 2 year level were not expected to be able to learn the symbols, but these learned from 7-30 symbols and used them for respondent communication...'

Criteria for entering the programme were:

1. establishment and maintenance of eye contact
2. competent performance of skills associated with the six stages of sensori motor development - specifically object permanence
3. ability to attend to a task for approximately five minutes
4. ability to follow oral directions (n.b.: less ambiguity would have been welcome here - it seems to imply a fairly high level of language comprehension was required, its role is not adequately considered)
5. a desire to communicate (observation was used here)
6. no functional speech

Details are given of teaching procedures, and of successful initiatives to interest sceptical ward staff and teachers (including regular written reports from sessions, and an "idea exchange letter" between teachers and ward staff). Case studies of the five children involved are provided.

* Harris-Vanderheiden, D., Brown, P., MacKenzie, P., Reinen, S. & Scheibel, C. (1975)
Symbol communication for the mentally retarded
Mental Retardation, 13, 1975, 34-37
See this Issue.

Harris D. & Vanderheiden G.C. (1980)
Enhancing the development of communicative interaction
in Schiefelbusch, R.L. (Ed) Nonspeech Language and Communication Analysis and Intervention
University Park Press, Baltimore, ch.11 pp.228-257
Cross-Reference
MVDP Research Information Service, Vol.1, No.8 - COMMUNICATION AIDS
TEACHING METHODS

Summary

This chapter presents and discusses a treatment ideology for developing communication in nonverbal, severely physically handicapped children. The approach is grounded in a working knowledge of the needs of such clients, and relates strategies to the development of symbolic communication skills, verbal and nonverbal, in young normal children. The importance is stressed of viewing non-speech techniques as augmentative - employed to facilitate and enhance communication at all levels - rather than as alternatives - to be employed only when other approaches have failed.

Clinical Relevance

Useful theoretical background, which could provide arguments, where needed, to justify the introduction of a non-speech system.

* MacDonald A. (1977)

Some specific applications of the Bliss Symbol Communication System
Bulletin (College of Speech Therapists), 1977, 308, 3-5

Summary

Presents three case studies where Blissymbols have been used successfully, including a pre-school dyspraxic child.

McDonald, E.T. (1980)

Teaching and using Blissymbolics

Blissymbolics Communication Institute, Toronto

Available from: Living and Learning, Duke Street, Wisbech, Cambs PE13 2AE

Cross-Reference

MVDP Research Information Service: TEACHING METHODS

Summary

This is a good, practical, although selective, introduction to the use of Blissymbolics, which summarises much of what is taught in the workshops run by the organisation. It complements the Handbook (Silverman et al 1978, this Issue) and in some areas extends it (e.g. the assessment procedure is not as comprehensive as in the Handbook, but covers some aspects of behaviour not included there).

It is a very good basic guide, but access to the Handbook would also be necessary for Blissymbols users.

* McNaughton, S. & Kater, B. (1980)

The application of Blissymbolics

In Schiefelbusch, R.L. (Ed) Nonspeech Language and Communication Analysis and Intervention

University Park Press, Baltimore, ch.13, pp.304-321

Summary

Offers a brief introduction to Blissymbolics, and then considers issues relating to application - general approach; type of model appropriate to the client; programme considerations - the most important being a "total immersion" environment; skills required by the learner. These points are very general. The strengths and weaknesses of the system are outlined.

A similar article by McNaughton can be found in Vanderheiden & Grilley (1976) Nonvocal communication techniques and aids for the severely physically handicapped, University Park Press, Baltimore.

Reid, D.H. & Hurlbut, B. (1977)

Teaching nonvocal communication skills to multihandicapped retarded adults

J. Applied Behav. Analysis, 1977, 10, 591-603

Cross-Reference

MVDP Research Information Service, Vol.1, No.8 - COMMUNICATION AIDS
TEACHING METHODS

Summary

A three stage training programme to train four severely disabled retarded adults to use a communication board is evaluated. Three used headpointers, and one his fist. In baseline sessions, they were unable to point accurately to different areas of the board, and the first stage of the programme used co-ordination training successfully to establish this skill. In the next baseline sessions, three out of four could not consistently identify the word photographs on the board (pictures of leisure-areas which they could choose to visit). Identification training was successful in improving this. The third experiment demonstrated that the subjects were able to communicate their wishes to unfamiliar volunteers, who could not understand their other attempts to communicate.

Clinical Relevance

This paper demonstrates the obvious fact that the skills involved in using a communication board - co-ordination and ability to identify - must perhaps be separately evaluated and separately trained.

* Silverman, F.H. (1980)

Communication for the Speechless
Prentice Hall, 1980

Cross-Reference

MVDP Research Information Service, Vol.1, No.8 - COMMUNICATION AIDS

Silverman, H., McNaughton, S. & Kates, 3. (1978)

The Handbook of Blissymbols for Instructors, Users, Parents and Administrators
Blissymbolics Communication Institute, Toronto
Available from Living and Learning, Duke Street, Wisbech, Cambs. PE13 2AE

Cross-Reference

MVDP Research Information Service, Vol.1, No.8 - COMMUNICATION AIDS
TEACHING METHODS: ASSESSMENTS

Summary

The Handbook, a large looseleaf format in a ring binder, is divided into two sections. Part I offers practical guidelines to implementing Bliss programmes, and Part II is a report of the evaluation study carried out from 1974-5 which has provided the data base for most of the recommendations regarding assessment and implementation. These two sections will be reviewed separately.

Part I

The system is described in some depth, and then application issues are discussed.

Assessment

There is an excellent chapter on the reflexes of cerebral palsy, and how to handle seating and positioning for these clients. A detailed assessment of relevant areas of

functioning is presented - here an inventory to summarise the assessment would have been welcome.

Formal assessments on the market which should be used to complement systematic observation, are described.

Programming

Suggestions for implementation presented here are based on clinical experience, supplemented by the statistical findings of the evaluation study. These chapters include:

- an introductory programme, and suggestions for its extension
- special considerations in planning for particular groups (e.g. mentally retarded, severely disabled, normally intelligent preschooler)
- teaching techniques
- recording and evaluation of ongoing progress
- implementation of programmes in the school and home
- increasing community awareness

Appendices

These include:

- display types and coding
- interfaces (i.e. means of indication for severely disabled clients)
- teaching aids and materials
- games and puzzles
- worksheets
- techniques and articles for promoting acceptance of Blissymbols in the community at large, and a very useful outline of answers to common misconceptions about symbols
- sources of material
- and a very good section on how to train eye pointing

This section of the Handbook is a really excellent teaching manual, although it should not be used as a substitute for going on a Workshop. It is an invaluable aid to anyone using Bliss, but also has a lot to offer anyone interested in assessing, developing communication with physically handicapped, nonverbal clients - and ought to be on the bookshelves of all Schools with a special care class.

Part II

The formative evaluation of the Ontario Crippled Children's Centre Symbol Communication Programme.

The evaluation study was carried out over one year, with a population of 157, mainly cerebral palsied children. The majority were aged between 6-15 years; approximately 1/3 were in institutions; 76% were wheelchair dependent. The mean assessed IQ for the group was in the mildly retarded range, and 63% were functioning at least two years below their age level in terms of language comprehension. (N.B. IQ tests used are not stated.)

Only 15% of the group were assessed formally as severely retarded - this group is quite high level. Details are given of types of educational setting, symbol instructors, and experience of instructors (roughly 1/3rd of the instructors fell into each category of 0-6 months, 6 months - 1 year; 1 - 2 years experience; 15% had over 2 years experience). Forty percent of the children had 3 months or less experience with Blissymbols, 60% had 4 months - 3 years experience.

The researchers obtained very detailed records on the children's background, and areas of functioning related to symbol use. Comparison of the assessments at the beginning and end of the programme enabled them to draw inferences about predictor variables, vocabulary selection, factors operating in regression, and the effects of improved communication on speech and language, and social and psychological functioning.

As regards instructors, they kept records relating to the programmes they used and the factors affecting usage. Questionnaires and a sample of interviews were used to obtain further details.

A questionnaire was also sent to parents to explore the family population, and communication in the home setting.

Results

The study yielded numerous specific results which cannot be adequately summarised in this review. They include the following:

1. Changes due to the programme

In the total population, there was positive change in 32 of the 49 variables studied, including, interest in communication, attitude to new symbols, number of symbols related to, nature of social interaction, reading skills, integration of symbol communication, and ability to deal with listener misunderstanding. In the retarded group, observed IQ and alertness also showed a significant increase. Change was more pronounced for the younger, inexperienced, retarded and moderately-severely disabled subjects.

2. Predictor variables

IQ and Age were the most important factors.

The effect of Experience was present in 1974, but had all but vanished in 1975. The effect of Disability was generally as expected, in that moderately and severely disabled subjects often performed better than the mildly involved group. (There are no reasons given for this - it could perhaps have been because this group had sufficient ability to communicate verbally.)

It is important not to overgeneralise these findings, since not all the variables were intercorrelated, e.g. IQ level does affect interest in communication, but Age does not.

Predictors of skill in symbol use

Short term, among a number of variables, overall the ability to deal with listener's misunderstanding, and number of symbols related to were very consistent.

Long term, for the inexperienced group the three most important were attitude to learning new symbols, ability to learn auditorily and number of symbols related to.

For the experienced group, future performance skill with symbols was predicted by their present ability, as measured by number of symbols used in a typical sentence, types of statements made, and number of settings in which symbols were used.

Factors affecting limited achievement and regression

Instructors supplied reasons why they felt children should not have been started on a symbol programme (including lack of readiness; behaviour problems; lack of family support; adequacy or improvement in speech skills).

A subgroup of twenty-two whose symbol skill scores regressed over the period were reviewed. Over twice as many were described by factors dependent on others - change in instructor and/or setting; irregularity of programme; need for electronic equipment and/or seating - than factors relating to the child - poor ability to attend; visual recognition skill limited to concrete objects, symbols used as complement to speech and/or with mobile child.

Effect of programme on speech and language

The verbal abilities of the majority remained at the same level, but 21% improved their use of functional speech, and there was an overall trend towards improved intelligibility. (Unfortunately, there is no qualitative analysis which would indicate which groups of children progressed in what direction.)

Other findings relate to: evaluation of vocabulary usage; use of Bliss symbol strategies; syntax. Effects of Blissymbol communication on reading and reading activities. Response of the family.

In the programming chapters of Part I, findings from the research are directly incorporated into the suggestions for planning and teaching.

Critical Points

1. It is extremely difficult to interpret the results as they are presented, because of the lack of adequate summary, conclusion and discussion sections which are needed to draw all the several threads together. Individual groups of results are briefly discussed, but rarely in relation to one another. The authors seem to have chosen to confine the therapeutic implications of the findings to Part I, and because they are rarely presented in the context of the actual research, there is an absence of critical argument, or explicit rationale, which is disturbing. Lack of an overall perspective is reflected too in the absence of a literature review which would have placed the study in the wider context of research into nonverbal communication generally.
2. Although we are told that the study evaluates the year long symbol communication programme, it is never made explicit what the programme actually comprised. For example, we know that 60% of the children had 4 months - 3 years exposure to Blissymbol training prior to the onset of the programme. What was different about the programmes of 1974-5, to those of 1972-4?

In their introductory workshop, research instructors were given an overview of the study, and given detailed explanation of recording methods. It is probable that through participating in the research, the instructors refined their skills in assessing, monitoring ongoing progress, and adapting to new levels of achievement - in other words they became better teachers. The contribution of this factor to the positive changes in behaviour consequent on the programme, is never evaluated. Nor are the effects explored of the many changes which instructors listed at the outset of the study, which result from the introduction of a symbol programme - such as increased facility by instructors to programme other areas, additional preparation time, additional resources, and last but not least, extra personnel.

3. In the section which assesses the relationship between symbolic skill and amount of change in symbolic skill, there is only one subject in one of the groups, and only four in another ($n = 21$). Reliable information from such small samples approached in this manner is reduced, you cannot talk about mean age levels with only one subject. The authors themselves describe their results as suggestive only.

In conclusion, the evaluation study has obviously yielded results which have been of great practical significance in the development of Blissymbolics Programmes, and have implications more generally for the study of nonverbal communication. It is to be hoped that the findings will at some stage be made more widely available, since at present there is very little established research into the learning of Blissymbols.

The Blissymbolics Communication Resource Centre (UK) has been conducting its own research in collaboration with the Linguistics Department at Reading University. They feel the findings will be more applicable here than the Toronto study, and are hoping to publish them this autumn.

* Smith, J.M. & Murphy, J.W. (1978)

Nonvocal communication with the multiply handicapped child

Apex, 1978, 6, 3, 16-17

Cross-Reference

MVDP Research Information Service: TEACHING METHODS

Summary

Describes a Rebus programme used for teaching language concepts, with an electronic communication board. Rebuses were chosen in preference to Blissymbols because of the children's low ability. Of the three children involved, one progressed to a vis-play board with 100 symbols (devised by one of the teachers - the input switch illuminates the appropriate symbol). Two others made some progress with eye pointing.

Clinical Relevance

A simple programme using Rebuses which could be easily followed, although its overt rationale is educational rather than the provision of functional communication.

The importance is stressed of writing down the teaching units and questions in order to ensure that teaching is properly structured.

* Tew, B., Davies, E. & Fletcher, P. (1980)

Parental attitudes towards Blissymbolics: A preliminary report
Bulletin (College of Speech Therapists), 334, 8-10

Summary

Describes the results from a survey by questionnaire of parental attitudes to Blissymbolics. Most were favourable, citing improved opportunities for communication, and in a small number of cases, increased vocalisation. A smaller proportion of parents expressed qualified support - interestingly, these were fathers rather than mothers (perhaps less realistic about their children's handicap). Only 8 out of 108 were unfavourable.