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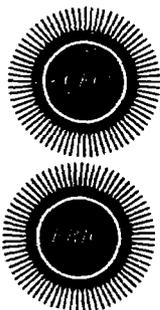
ABSTRACT

One in a series of over 50 similar selected listings relating to the education of gifted or handicapped children, the bibliography contains 81 references selected from Exceptional Child Education Abstracts on research studies of visually handicapped children. References include research reports on screening and identification, listening abilities, visual impairment. Bibliographic data, availability information, indexing and retrieval descriptors, and abstracts are included for each entry, and author and subject indexes are provided. (RD)

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VISUALLY HANDICAPPED—RESEARCH

A Selective Bibliography

February 1971

CEC Information Center on Exceptional Children
The Council for Exceptional Children
Jefferson Plaza, Suite 900
1411 S. Jefferson Davis Highway
Arlington, Virginia 22202

This bibliography is a product of the Information Processing
Unit, CEC-ERIC Information Center on Exceptional Children.

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EC 032 438E

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401- 500	\$16.45	901-1,000	\$32.90

ABSTRACTS

ABSTRACT 10059

EC 01 0059 ED 012 119
 Publ. Date Aug 66 72p.
 Dauterman, William L.; Suinn, Richard M.
Stanford-Ohwaki-Kohs Tactile Block Design Intelligence Test for the Blind, Part One of Final Report.
 Vocational Rehab. Admin., Washington, D. C.
 Stanford Univ. Sch. Of Medicine, Palo Alto, California
 EDRS mf,hc

Descriptors: exceptional child research; tests; visually handicapped; intelligence tests; blind; test construction; test reliability; adolescents; adults; performance tests; Stanford Ohwaki Kohs Tactile Block Design Intelligence Test; Stanford Kohs Block Design Test

Six hundred and thirty blind subjects 14 years of age and older were used in refining and standardizing the nonverbal performance Ohwaki-Kohs Block Design Test for use in the United States. Results indicated statistically significant correlations at the .001 level between the Stanford-Kohs and the Wechsler Adult Intelligence Scale, and between the Stanford-Kohs and Ohwaki-Kohs tests. On a retest of 50 subjects, a test-retest reliability coefficient of .86 was reported. Tables present biographical data correlations and test intercorrelations. An appendix is included. The construction of test materials is explained. Test manuals will appear as Part 2 and Part 3 of this report. A bibliography includes 84 items. (KH)

ABSTRACT 10069

EC 01 0069 ED 013 510
 Publ. Date Dec 65 147p.
 Clark, Leslie L., Ed.
Proceedings of the West Coast Regional Conference on Research Related to Blind and Severely Visually Impaired Children.
 American Foundation For The Blind, New York, N. Y.
 OEG-RD-1407-S
 EDRS mf,hc

Descriptors: exceptional child research; multiply handicapped; visually handicapped; research needs; intelligence tests; statistical surveys; reading research; adolescents; adults; auditory perception; blind; braille; children; clinical diagnosis; educational needs; partially sighted; state programs; travel training; visually handicapped mobility; visually handicapped orientation; incidence; partially sighted; records (forms); etiology; medical treatment; Ohwaki Kohs Block Test; Los Angeles; California; San Francisco State College

These proceedings were prepared from the West Coast Regional Conference on Research Related to Blind and Severely Visually Impaired Children held March 1965. Survey results were present-

ed which indicated the number of blind, severely visually impaired, and multiply handicapped children in California and the incidence of blindness in children in the Los Angeles area. Information was offered on research techniques to uncover the hidden blind population for inclusion in surveys. Various causes and treatments of blindness in children and two report forms used for children's eye examinations are presented. The following areas are examples of current research emphasis--(1) updating braille reading instruction, (2) developing an educational program for multiply handicapped blind children, (3) modifying and evaluating the Ohwaki-Kohs Block Design Intelligence Test for the Blind, (4) developing a direct translation device to allow the blind access to printed material, (5) measuring human sonar abilities, (6) developing a state wide framework of orientation and mobility instruction for blind students in public schools, and (6) various mobility projects in the Los Angeles area. Specific areas for future research are also suggested. References are listed. (RS)

ABSTRACT 10105

EC 01 0105 ED 013 512
 Publ. Date May 65 280p.
Proceedings of the Rotterdam Mobility Research Conference (Rotterdam, The Netherlands, August 3-7, 1965).
 American Foundation For The Blind, New York, New York
 EDRS mf,hc

Descriptors: exceptional child research; research needs; visually handicapped; visually handicapped mobility; mobility aids; evaluation needs; travel training; sensory aids; visually handicapped orientation; athletic activities; research projects; training techniques; problems; Haverford Bionic Instruments; Obstacle Detector

These proceedings were prepared from the Mobility Research Conference held in Rotterdam, The Netherlands, August 3-7, 1964. Progress reports are given on the following--(1) ultrasonic mobility aid, (2) ultrasonic guidance system, (3) elektroftalm mobility aid, (4) passive environment sensors, (5) ambient-light object detector, (6) travel path sounder, and (7) phonoscope. Photographs and diagrams describing each system accompany the reports. Special problems and techniques connected with mobility training, such as retraining the neuromuscular system to function with senses other than vision, teaching the art of fencing, the use of skiing as a sport, and the importance of good hearing are discussed. Research needs are identified in these areas--(1) the human skills necessary for effective mobility training, (2) the development of a readiness test to determine those persons who are ready for mobility training, (3) market research regarding the various mobility

devices. A systematic evaluation of the real utility of mobility aids to the blind is discussed as a necessary prerequisite to future development and refinement of all devices. The appendix includes specifications for the long cane, techniques for teaching cane travel, and a form for evaluating mobility training and performance. References are listed. (RS)

ABSTRACT 10113

EC 01 0113 ED 014 166
 Publ. Date 64 136p.
 Barraga, Natalie
Increased Visual Behavior in Low Vision Children. American Foundation for the Blind Research Series, No. 13.
 EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; tests; partially sighted; blind; visual perception; children; visual discrimination; visual learning; visual stimuli; test results; lesson plans; instructional materials; test reliability; learning activities

Ten pairs of blind children aged 6-13 years who had some vision were matched by pretest scores on a test of visual discrimination. A criterion group, designated the Print Comparison Group, had slightly higher recorded distance acuities and used vision as the primary means of learning. Pairs of experimental subjects daily received 45 minutes of training designed to increase functional use of remaining vision. Specific lesson plans followed the four sequential stages for discrimination and recognition of visual stimuli--geometric forms in solid black and in outline shapes, single object forms in solid black and in outline shapes, grouped objects in color and in outline with full inner details, and letter and word symbols. Materials gradually decreased in size. At completion of training sessions subjects were again tested with the test of visual discrimination. Analysis of results showed a statistically significant difference in (1) test scores of experimental group children, (2) the difference in the experimental and control groups mean gains, and (3) mean gain between experimental and print comparison groups. Near vision acuities increased in seven of the 10 subjects, but mean increase was not statistically significant, nor was there a significant difference between the two groups. The visual discrimination test yielded a test-retest stability coefficient of .98. Appendixes include the visual discrimination test, the 44 lesson plans and materials used, rating sheet for daily progress, summaries of experimental group subjects, and relevant charts. A reference list cites 76 items. This document was published by the American Foundation for the Blind, 15 West 16th Street, New York, New York 10011, and is available for \$1.50. (CG)

ABSTRACT 10136

EC 01 0136 ED 016 349
 Publ. Date Aug 67 111p.
 Joiner, Lee M.; Erickson, Edsel L.
Scales and Procedures for Assessing Social Psychological Characteristics of Visually Impaired and Hearing Impaired Students.
 Western Michigan University, Kalamazoo
 OEG-3-6-068720
 EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; aurally handicapped; tests; adolescents; blind; deaf; group tests; hard of hearing; learning theories; partially sighted; psychological characteristics; psychological tests; questionnaires; self concept; social characteristics; test construction; test reliability; test validity; Self Concept and Academic Ability Scale

This is a methodological study to determine if reliable and validly comparable data can be obtained from scales designed for use with hearing impaired, visually impaired, and non-impaired high school students. The major instruments assessed self concept of academic ability. It was concluded on the basis of cross-validation and other analytical procedures that reliable and validly comparable data can be obtained in mass testing when certain methodological procedures are followed. A subphase of the study included a comparative analysis of impaired residential and non-impaired public high school students. It was concluded that (1) self concept of ability accounts for more variation in grade point average than IQ, (2) self concept is an intervening variable between achievement and perceptions of others, (3) teachers evaluations have a greater impact on self concept of students who are impaired and in residential schools than on non-impaired students in public schools, (4) parents of hearing impaired residential students are perceived as being less concerned about how well they do in school when compared to parents of visually impaired and non-impaired students, and (5) the hearing impaired came from families with lower socioeconomic status levels. Recommendations are given for developing scales and administrative procedures for obtaining reliable and comparable social-psychological data through questionnaires and for extending social-psychological research involving hearing impaired, visually impaired, and non-impaired populations. Appendixes include questionnaire schedules, school records data, and additional tables. Forty references are given. (AA)

ABSTRACT 10256

EC 01 0256 ED 018 053
 Publ. Date 15 Dec 67 29p.
 Foulke, Emerson
The Comprehension of Rapid Speech by the Blind, Part III.
 Louisville University, Kentucky
 OEG-4-10-127
 EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; communication (thought transfer); research reviews (publications); speech compression; comprehension; methods; listening comprehension; listening; auditory perception; cognitive processes; aural stimuli; skill development; communication skills; listening skills; evaluation; blind

A review of the research on the comprehension of rapid speech by the blind identifies five methods of speech compression: speech changing, electromechanical sampling, computer sampling, speech synthesis, and frequency dividing with the harmonic compressor. The speech changing and electromechanical sampling methods and the necessary apparatus have been developed sufficiently for adequate evaluation. Two general approaches to evaluation of time compressed speech are tests of ability to repeat messages accurately and tests of comprehension of listening selections. Factors shown to affect intelligibility and comprehension include stimulus variables (the context in which the speech signal is presented as well as the characteristics of the signal itself) and organismic variables (the listener's age, sex, education, intelligence, and prior relevant experience). Results of several studies, when considered collectively, indicate that work intelligibility is hampered when words are compressed by the speech changing methods. When the sampling method is used, a compression of considerable magnitude is required before work intelligibility is substantially impaired. Perceptual and cognitive problems confronting the listener of compressed speech are discussed. A model for short term memory is used to account for the differences in the effect on word intelligibility and listening comprehension of increasing word rate. Graphs present results, and a bibliography lists 41 items. (KH)

ABSTRACT 10452

EC 01 0452 ED 015 605
 Publ. Date 66 119p.
Biennial Conference of the American Association of Instructors of the Blind (48th, Salt Lake City, June 26-30, 1966).
 American Assn. Of Instructors Of The Blind, Washington, D. C.
 EDRS mf,hc

Descriptors: exceptional child research; reading; teaching methods; braille; visually handicapped; blind; partially sighted; educational research; multiply handicapped; adolescents; children; libraries; conference reports; library services; mobility aids; preschool children; preschool programs; reading improvement; reading instruction; teaching machines; sensory aids; visually handicapped mobility; instructional materials; speech compression; secondary school students; visual stimuli; visually handicapped orientation

The theme of the convention was Research--Key to Progress, and papers were delivered in the following areas--

(1) research on the teaching of reading and improving reading skills, (2) research on independent living skills and orientation, mobility, and travel, (3) research on the child with limited but useful vision, (4) research on the multi-handicapped child, and (5) research on listening, technical devices, and teaching methods. Special papers and reports were given on (1) philosophy and goals of a preschool program, (2) how shall we serve our visually handicapped preschool children, (3) libraries and library services for visually handicapped, and (4) enrichment through a touch and learn center. Presidential, committee, and business reports are included. (MU)

ABSTRACT 10564

EC 01 0564 ED 021 373
 Publ. Date 65 151p.
 Crowley, Francis J.; And Others
A Comparison of the Listening Ability of Blind Students and the Listening Ability of Sighted Students in the Intermediate Grades.
 Fordham University, Bronx, New York
 Office Of Education (DHEW), Washington, D. C., Division Of Handicapped Children And Youth
 EDRS mf,hc
 OEG-32-42-0440-1005

Descriptors: exceptional child research; visually handicapped; communicator (thought transfer); blind; intermediate grades; listening skills; listening comprehension; intelligence level; speech comprehension; ability; average students; speech compression; communication theory; listening; Sequential Tests of Educational Progress (Listening)

To determine whether differences exist in their listening ability, 152 blind braille-reading and 152 sighted children in the intermediate grades were studied. Subjects were classified into three ability levels on the basis of their scores on individual IQ tests. The Listening Subtest of the Sequential Tests of Educational Progress was administered at rates of 175 and 225 words per minute with the four types of listening material: expository, narrative, direction, and aesthetic. The measured listening ability of the sighted subjects was generally superior to that of the blind (p equals .05), with the sighted superior in listening to expository and narrative material. Intelligence was positively related to measured listening ability. Order of administration or type of school (special school or integrated class) did not constitute a significant variable. Scores achieved at the regular rate were significantly higher than at the speeded rate (p equals .01). Neither speededness nor intelligence acted selectively in influencing the scores of the blind and the sighted. Recommendations are made for education and research. A bibliography cites 83 items; 32 tables present data. (KH)

ABSTRACT 10569

EC 01 0569 ED 021 345
 Publ. Date 63 51p.
 Bateman, Barbara D.
Reading and Psycholinguistic Processes of Partially Seeing Children.

CEC Research Monograph, Series, A, Number 5.

Council For Exceptional Children, Washington, D. C.

EDRS mf

The Council For Exceptional Children, 1201 Sixteenth Street, N. W., Washington, D. C. 20036 (\$2.00).

Descriptors: exceptional child research; visually handicapped; language; reading; partially sighted; psycholinguistics; visual acuity; reading speed; reading achievement; reading comprehension; grade 1; grade 2; grade 3; grade 4; language tests; language ability; language learning levels; intelligence; mental age; vision; reading tests; Illinois Test of Psycholinguistic Abilities; ITPA

To investigate the effects of visual defect on the reading and psycholinguistic processes, results were obtained for partially seeing children (grades 1 to 4, mean IQ 100) on the Monroe Reading Examination, Gates Speed and Accuracy Tests, Illinois Test of Psycholinguistic Abilities (ITPA), and Stanford-Binet Intelligence Scale. Reading scores were below grade level for grade 4 and at grade level for grade 3, lowest on oral reading and highest on the Gates comprehension tests, and below average for mental age, grade placement, and reading speed, but higher than average in accuracy. IQ was related positively with reading in relation to grade level, but negatively with reading in relation to mental age. The subjects made no excessive errors of any kind; error types and the degree of visual defect did not differ significantly. However, children with refractive defects read less well than the other subjects. On the ITPA, the subjects performed significantly less well than normals on visual decoding, motor encoding, visual-motor sequential, and visual-motor association subtests, but did not differ on the auditory-vocal channel subtests. ITPA performance was related to eye condition only through the indirect effect of visual acuity. Reading achievement was positively correlated with the three ITPA subtests at the automatic-sequential level. Eight figures, 12 tables, four case histories, and 32 references are provided. (JD)

ABSTRACT 10634

EC 01 0634 ED 024 19-
Publ. Date Dec 67 111p.

Martin, Clessen J.; Alonso, Lou
Comprehension of Full Length and Telegraphic Materials among Blind Children. Final Report. Educational Research Series, Number 42.

Michigan State University, East Lansing, College Of Education
Office Of Education (DHEW), Washington, D. C.; Bureau Of Research

EDRS mf,hc
OEG-32-32-0410-6004
BR-6-1179

Descriptors: exceptional child research; visually handicapped; reading; braille; prose; textbooks; reading speed; recall (psychological); retention; reading materials; blind; fiction; word lists; reading comprehension; telegraphic materials

To test the assumption that conventional textbook prose contains words and word sequences unnecessary for comprehension, 210 blind children, all braille readers in grades 6, 7, 8, and 9, were divided into three groups and tested on a fictional story written in one of three different forms. Those forms included a traditional style (1,620 words), a medium telegraphic style omitting narrative material (43% shorter), and a highly telegraphic style (72% shorter). Results indicated that subjects reading the two shorter versions required significantly less time (p less than .01). However, the reading rate in words per minute was significantly higher for the subjects reading the traditional version (p less than .01). Analysis of comprehension data revealed few significant differences among the three groups on either immediate recall or long term retention. In general, results appeared to support the feasibility of telegraphic learning materials as a method of increasing the rate of information input among blind children. (Author/JD)

ABSTRACT 10787

EC 01 0787 ED 025 067
Publ. Date May 63 61p.

Harley, Randall K., Jr.
Verbalism among Blind Children; An Investigation and Analysis. American Foundation for the Blind Research Series, Number 10.

American Foundation For The Blind, New York, New York
EDRS mf,hc
American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$0.80).

Based On Doctoral Dissertation, An Investigation And Analysis Of Verbalism Among Blind Children.

Descriptors: exceptional child research; visually handicapped; learning; perception; language; blind; personal adjustment; verbal learning; associative learning; concept formation; verbal stimuli; verbal ability; verbal development; age differences; intelligence differences; experience; sensory experience; fundamental concepts

Forty blind children (ages 6 to 14, IQ's 65 to 132) in residential schools were studied to discover the relationship of verbalism to age, intelligence, experience, and personal adjustment. The children were given 40 selected words to obtain definitions, experience claims, and visually oriented verbalism scores. They then tried to identify items representing these words. The Tuddenham Reputation Test was used for adjustment scores. Significant negative correlations were obtained between chronological age and verbalism, between IQ and verbalism, and between experience and verbalism. There were no significant negative correlations between personal adjustment and verbalism nor between chronological age, IQ, experience, or personal adjustment with visually oriented verbalism. Results suggested that interaction with the environment will reduce verbalism in blind children. (LE)

ABSTRACT 10821

EC 01 0821 ED 025 092
Publ. Date Sep 68 18p.

Grumpelt, Howard R.; Rubin, Ellen
Speed Listening Skill by the Blind as a Function of Training. Final Report. Washington College, Chestertown, Maryland

Office Of Education (DHEW), Washington, D. C.; Bureau Of Research

EDRS mf,hc
OEG-3-8-080024-0021(010)
BR-8-C-024

Descriptors: exceptional child research; visually handicapped; teaching methods; audiovisual instruction; tape recordings; blind; secondary school students; speech compression; audiovisual aids; listening comprehension; listening; listening skills; skills; auditory training; aural learning

In order to determine whether speed listening practice could improve comprehension of pitch-altered rapid speech, 66 high school students blind since at least age 6 were divided into experimental (E) and control (C) groups, matched on the basis of age (range 15 to 19 years), IQ (range 85 to 130), and pretest comprehension of material presented at normal rates. Using the pitch altering method of speeding up tape recorded material, training was given the E-group at 275 and 300 words per minute (wpm) while the C-group received similar training at the standard 175 wpm level. Subjects were administered two training sessions per day of three trials of taped material (about 875 words each) followed by 10 five-foil multiple choice questions after each trial with a maximum number of 14 sessions. The E-group did significantly better than the C-group on the comprehension posttest administered at 300 wpm (p less than .001). While a clear cut training effect was obtained, the degree of improvement due to this training (9.4%) was not large. (Author)

ABSTRACT 10855

EC 01 0855 ED 015 612
Publ. Date 30 Jun 67 7p.

Tillman, M. H.
Differential Effects of Sex, Age, and Ability on WISC Profiles of Blind Children.

Georgia University, Athens
EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; tests; cognitive processes; blind; intelligence differences; children; educational research; intelligence factors; intelligence tests; Wechsler Intelligence Scale for Children; WISC

Using a cross-sectional sampling plan, the stability of profiles on the Wechsler Intelligence Scale for Children and of mean scale scores on subtests (information, arithmetic, similarities, vocabulary, and digit span) was examined as a function of sex, age, and ability level. From 167 WISC forms (of blind boys and girls aged 8 to 12) 80 forms were used for sex and age analysis. A second group of 39 forms drawn from the same

pool were used for the ability analysis. Sex and age effects were analyzed in a 3-factor design with repeated measures on subtests, and ability effects were analyzed in a 2-factor design with repeated measures on subtests. Results showed main effects of sex and age were not significant. The main effect of subtests was significant (.001 level). These interactions were not significant: sex and age, sex and subtests, age and subtests, and sex, age, and subtests. This result attests to the accuracy of grouping procedures. The second analysis showed that main effects and interaction effects were significant: ability groups (.001 level), subtests (.001 level), was planned since groups were formed by low, average, and high IQ. Sex and age differences did not produce profile differences while grouping by low, average, and high IQ did yield different profiles. A list of five references is included. (Author)

ABSTRACT 10860

EC 01 0860 ED 014 831
 Publ. Date 18 Nov 66 90p.
Braille Research and Development Conference Proceedings (Massachusetts Institute of Technology, Cambridge, November 18, 1966), Sensory Aids Evaluation Development Center, Cambridge, Massachusetts
 EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; braille; computers; blind; media research; computer programs; conference reports; electronic equipment; machine translation; partially sighted; production techniques; programming; reading research; reading speed; research projects; tactual perception; conference reports; Sensory Aids Evaluation and Development Center; Brailletran

The conference papers include: a study of braille production, distribution, and use by Louis Goldish; automated braille and the profession of programming for the blind by Theodor D. Sterling; brailletran, a comprehensive braille transcription program by John J. Boyer; small computers and grade 2 braille by Edward L. Glaser; reading and reading braille by A.P. Brunwald; computer translation of grade 2 braille by Robert Haynes; braille research at George Peabody College by Richard W. Woodcock; the effects of pattern complexity and redundancy on the tactual recognition of metric figures by Emerson Foulke and Joel Warm; computer programming and the blind by Donald Bishop; computer production of braille at the Royal National Institute for the Blind by Clive Windebank; computer conversion of compositors tapes to grade 2 braille by Ann and Joseph Schack; braille embosser and display systems by Dwight M. Baumann; and advances in braille embossing by Ray E. Morrison. (CG)

ABSTRACT 10866

EC 01 0866 ED N.A.
 Publ. Date May 64 7p.
 man, Mary K.

Group Differences Disclosed by Inventory Items.

Personnel Research Center, Philadelphia, Pennsylvania
 EDRS not available
 International Journal For The Education Of The Blind; V13 N4 P101-6 May 1964

Descriptors: exceptional child research; visually handicapped; personality; adjustment (to environment); behavior; blind; partially sighted; adolescents; adults; males; females; behavior patterns; behavior rating scales; personality tests; personality studies; resident students; nonresident students; emotional adjustment; emotional problems; reactive behavior; self concept

The Adolescent Emotional Factors Inventory, a personality inventory for blind adolescents, was studied to determine the value of individual items and to establish norms for the inventory. Responses were obtained for four groups: 150 (75 boys and 75 girls) visually handicapped nonresidential school adolescents; 150 (76 boys and 74 girls) visually handicapped residential school students; 141 visually handicapped adults who had been students in residential schools; and 150 visually handicapped adults who had attended integrated schools and, in most cases, had lost their vision later. In each group, from 52 to 72% of the subjects had some useful vision. Responses indicated that the girls show an over-all pattern of submission whereas the boys show one of rebellion; the adults react more passively to their problems whereas youth react with more irritation and suspicion; the partially seeing reflect a greater sense of insecurity than do the totally blind; and the residential school students seem to reflect more anxiety and insecurity, more difficulty in relating to home and parents, and more problems of social and emotional adjustment than do the integrated school students. Possible reasons for these differing characteristics are suggested. The significance of the difference between percentages giving the true response to each item was calculated, contrasting boys with girls, youth with adults, partially seeing with totally blind, and residential with integrated school students. (CG)

ABSTRACT 10867

EC 01 0867 ED N.A.
 Publ. Date May 64 4p.
 Nolan, Carson Y.
Research in Teaching Mathematics to Blind Children.
 American Printing House For The Blind, Louisville, Kentucky
 EDRS not available
 International Journal For The Education Of The Blind; V13 N4 P97-100 May 1964

Descriptors: exceptional child education; visually handicapped; mathematics; curriculum; blind; children; elementary grades; intermediate grades; modern mathematics; elementary school mathematics; mathematical concepts;

teaching methods; mathematics curriculum; mechanical teaching aids

The difficulties in teaching mathematics to blind children and their resulting retardation are discussed. Of several programs in modern mathematics mentioned, emphasis is placed upon the Individualized Mathematics Curriculum developed by Andrew Schott. All three levels (grades 1-4, 5-6, and up) are described in terms of concepts taught and methods and materials used. A study of the apparent effectiveness of the first level program with blind children is reviewed. In addition, teacher training is considered and the Soroban (a type of abacus) explained. A reference list cites 12 items. (JD)

ABSTRACT 10888

EC 01 0888 ED 013 509
 Publ. Date Mar 65 86p.
 Imamura, Sadako
Mother and Blind Child; The Influence of Child-Rearing Practices on the Behavior of Preschool Blind Children. American Foundation for the Blind, Research Series Number 14.
 American Foundation For The Blind, New York, New York
 EDRS mf,hc
 American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$1.50).

Descriptors: exceptional child research; visually handicapped; preschool children; behavior; family (sociological unit); behavior development; parent child relationship; child rearing; mothers; attitudes; family relationship; behavior patterns; blind; self care skills

A systematic behavior observation technique was used to observe 19 blind and 12 sighted children, aged 3 to 6, in their home environments and to relate their and their mothers' behavior. Results showed significantly greater interaction with adults by blind than by sighted children. Although the two groups did not differ significantly in the amount of self-instigated behavior, blind children more often aimed self-instigated behavior at the mother; such behavior was categorized as 51% succorance, 30% sociability, and 14% dominance. No significant differences were found among these three types of behavior for the sighted children, who tended toward dominance and nurturance. The behavior of blind children was not as variable as that of sighted children. The two groups were most clearly distinguished by succorance: mothers of blind children complied to about half of their children's succorant behavior; mothers of sighted children complied either very much or very little. Whereas mothers of the blind used refusal and ignoring as ways of not complying, mothers of the sighted relied almost totally on refusal. Additional significant relationships were found between the behavior of blind children and their mothers. (DF)

ABSTRACT 11073

EC 01 1073 ED 023 229
 Publ. Date 14 Oct 64 15p.
 Kederis, Cleves J. And Hers
Training for Increasing Braille Reading Rates. Final Report.
 American Printing House For The Blind, Louisville, Kentucky
 Vocational Rehabilitation Administration (DHEW), Washington, D. C.
 EDRS mf,hc
 VRA-RD-1086S-53

Descriptors: exceptional child research; visually handicapped; reading; braille; motivation; tachistoscopes; reading speed; reading comprehension; pacing; reading tests; teaching machines; test results; positive reinforcement

Two studies used controlled exposure devices in attempts to improve braille reading. The three null hypotheses tested were that reading practice under controlled exposure does not increase reading rates, any increase will not be maintained, and no differences in comprehension occur because of practice. Subjects were selected by the Gates Basic Reading Test and randomly assigned to experimental and control groups. The first group of three subjects in grades 6 to 12 was divided into fast, average, and slow readers at each of three grade levels, while the second study chose the 16 highest and 16 lowest scorers. The first study trained the experimental subjects in 22 half-hour sessions on consecutive days with the tachistometer, and reading test forms were administered one month prior to training, immediately following training, and 1 to 2 months after training. In the second study, experimental subjects practiced paced reading (with attempted increases of two and one-half words per minute each day) for 20 half-hour sessions on consecutive days, using two books with vocabulary grade levels 5 to 9 and 7 to adult on the IBM Braille Reading Machine. The null hypotheses were confirmed in both studies. Significant reduction in reading time occurred on the motivated tests in both studies (p less than .001 and p less than .01 respectively) in all the experimental and control groups. (DF)

ABSTRACT 11086

EC 01 1086 ED 023 234
 Publ. Date 68 338p.
 Graham, Milton D. And Others
851 Blinded Veterans: A Success Story.
 American Foundation For The Blind, New York, New York
 EDRS not available
 American Foundation For The Blind, Inc., 15 West 16th Street, New York, New York 10011.

Descriptors: exceptional child education; visually handicapped; recreation; family (sociological unit); adjustment (to environment); males; adults; vocational adjustment; veterans education; social adjustment; organizations; socioeconomic status; participant characteristics; sociometric techniques; leisure time;

medical evaluation; military personnel; blind; physical health

A study of 851 men with a service-connected disability of 70% or greater loss of vision was made from 10 Veterans Administration clinics. Subjects were 20 to 64 years of age with a median of 46, 85% white, and 97% World War II and 3% Korean War veterans; 45% had taken advantage of the GI Bill for education, 64% were in the top half of the country's socioeconomic strata, 70% owned homes, 80% received disability compensation, and 92% lived in cities. Most lived in small primary family households, 1/4 had multihealth family problems, 1/3 had experienced marital disruption, and most considered themselves heads of their households. In general health, 20% were normal and 80% had conditions (54% mild, 11% moderate, 15% severe); 55% had a normal prognosis for life. For general activities, the radio was most used in passive entertainment, gardening and picnics were the most popular recreation activities with 52%; 65% read (double the national average), 78% voted in 1960, 91% visited, 54% belonged to organizations, 78% attended religious services, and those with some vision were frequent travelers. Of their friends, 83% were sighted. (SN)

ABSTRACT 11091

EC 01 1091 ED 025 076
 Publ. Date 67 108p.
 Hallenbeck, Phyllis N.
Dogmatism and Visual Loss. American Foundation for the Blind Research Series, Number 17.
 EDRS not available
 American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$1.50).

Descriptors: exceptional child research; visually handicapped; adjustment (to environment); behavior; attitudes; personality; counseling; dogmatism; emotional adjustment; psychological patterns; anxiety; changing attitudes; rating scales; behavior rating scales; withdrawal tendencies (psychology); inhibition; personality change; blind; adults; question answer interviews; adjustment problems; Rokeach Dogmatism Scale

Emotional reactions to loss of vision were studied with 32 adventitiously blind male subjects of average or higher intelligence, aged 18 to 61 years, who were entering active rehabilitation programs with various agencies. Subjects completed Rokeach's Dogmatism Scale and were interviewed to assess attitudes about blindness. The interviews were rated by two clinical psychologists and averaged for each subject to yield global depression and denial scores. Behavioral scales completed by two agency staff members were averaged to yield behavior depression and denial scores. Scores were then correlated. Dogmatism was found to be significantly related to denial of blindness and its effects (p less than .01) and inversely related to depression (p less than .01). Correlations between dogmatism and behavior denial scores

differed significantly for a subgroup of 16 subjects with sudden onset (p less than .02), with the sudden onset group showing less denial; however, global score correlations did not differ significantly. Implications are that acceptance of visual loss and rehabilitation are facilitated when the subject's emotions are involved in the grieving process, when the subject receives guidance during the early critical phase, and when the facts of the disability are kept in the subject's attention. (MM)

ABSTRACT 11194

EC 01 1194 ED 027 683
 Publ. Date 31 Jan 68 245p.
 Fraser, G. R.; Friedmann, A. I.
The Causes of Blindness in Childhood; A Study of 776 Children with Severe Visual Handicaps.
 Royal National Institute For The Blind, London, England;
 Royal College Of Surgeons, London, England, Department Of Research In Ophthalmology
 EDRS not available
 The Johns Hopkins Press, Baltimore, Maryland 21218 (\$12.00).
 Revised Version Of A Thesis By G. R. Fraser, Cambridge University, England.

Descriptors: exceptional child research; visually handicapped; etiology; diseases; prenatal influences; infectious diseases; rubella; premature infants; heredity; genetics; anomalies; blind; partially sighted; incidence; research problems

To investigate causes of blindness in childhood, 776 children (infancy to 20 years old) in special schools were seen in 1963. Examinations, parent questionnaires, and correspondence with health personnel were used to obtain etiological data. Causes of blindness mainly of genetic determination described are choroïdo-retinal degenerations, retinoblastoma, pseudoglioma and retinal detachment, optic atrophy, congenital, and infantile cataracts, myopia, lesions of the cornea, coloboma, microphthalmos, anophthalmos, aniridia, buphthalmos, blindness as part of a syndrome involving other malformations, and blindness secondary to malformations. Prenatally acquired blindness, retrolental fibroplasia, blindness acquired in infancy or childhood, and conclusions about the research findings and limitations are discussed. Appendixes present the parent questionnaire and data concerning the children with each condition. (RP)

ABSTRACT 11210

EC 01 1210 ED N.A.
 Publ. Date Mar 67 21p.
 Cratty, Bryant J.
The Perception of Gradient and the Veering Tendency While Walking without Vision.
 California University, Los Angeles, Department Of Physical Education
 National Institute Of Neurological Diseases And Blindness (DHEW), Washington, D. C.
 EDRS not available
 NB05577-02S1
 This Article Was Published In The

American Foundation For The Blind Research Bulletin, Number 14, March, 1967, Pp.31-51.

Descriptors: exceptional child research; visually handicapped; perception; blind; partially sighted; visually handicapped orientation; learning; haptic perception; perceptual motor learning; perceptual motor coordination; visually handicapped mobility

In order to investigate the effect of leg length, posture, stride length, and perception of gradient on the tendency of the blind to veer, 164 blind and partially blind subjects (aged 8 to 86) and 30 sighted controls were instructed to walk in a straight line on a large athletic field and on a pathway with both uphill and downhill risers graded from 1 to 6 degrees of difference. All subjects wore blindfolds and earplugs. Results indicated subjects veered an average of 1.3 inches per step. The direction of veer was predictable from first to second trial, but the amount of veer was not. Subjects blind from birth or soon thereafter were significantly more sensitive to incline and decline and veered significantly less than older subjects. Perceptual measures did not differ for the totally and the partially blind. The sighted subjects were less sensitive to decline, and veered significantly more than did a matched group of blind subjects. Since learning apparently is important in determining amount of veer, training for perceptual organization, such as what a straight pathway feels like, is suggested rather than structural measures, such as correcting postural problems. (KH)

ABSTRACT 11211

EC 01 1211 ED N.A.
Publ. Date Mar 67 11p.
Harris, Janet C.

Veering Tendency as a Function of Anxiety in the Blind.

California University, Los Angeles
EDRS not available

This Article Was Published In The American Foundation For The Blind Research Bulletin, Number 14, March, 1967, Pp.53-63.

Descriptors: exceptional child research; perception; blind; anxiety; visually handicapped orientation; emotional adjustment; emotional problems; behavior; handicapped mobility; adjustment environment)

In order to investigate the magnitude of the veering tendency in walking on a grass athletic field as it relates to the level of anxiety as measured by Taylor's Manifest Anxiety Scale (TMAS), 44 legally blind subjects aged 17 to 55 years were utilized. All subjects attempted to walk a straight line on a level grass field for 100, 200 and 300 feet and were tested on the TMAS. A significant difference (p equals .05) existed between the mean distances veered by high and low anxiety blind subjects at 100 feet; high anxiety individuals veered an average of 12 feet more. Walking speed and amount of veer at 100 feet were moderately correlated (r equals plus .51). The

difference in mean distance veered at 200 feet was not significant, although the scores of the low anxiety group were significantly more variable at 200 feet (p equals .05). Comparisons at 300 feet were not possible. (KH)

ABSTRACT 11212

EC 01 1212 ED N.A.
Publ. Date Mar 67 30p.
Schiff, William And Others

Informative Tactile Stimuli in the Perception of Direction.

Recording For The Blind, Inc.
New York City University, New York, City College

Vocational Rehabilitation Administration (DHEW), Washington, D. C.
EDRS not available
RD-1571-S

This Article Was Published In The American Foundation For The Blind Research Bulletin, Number 14, March, 1967, Pp.65-94.

Descriptors: exceptional child research; visually handicapped; perception; braille; blind; instructional materials; tactile adaptation; maps; map skills; tactile perception; time factors (learning); comprehension

Three experiments compared apprehension of directional relationships in tactile diagrams using either a special tactile symbol or a tactile form of the arrow, the standard visual symbol. In the first experiment with simple diagrams, 30 subjects (mean age 31 years) tested materials consisting of 17 simple directional relationships. Errors made totaled 5% in the visual mode and 8% in the tactual mode; the tactual mode was significantly preferred to the visual mode (p equals .001). In the second experiment, 32 blind high school students inspected diagrams of increasing complexity employing either tactual or visual symbols. A nonsignificant difference in errors favored the tactual mode and the tactual mode was associated with shorter decision times. In the third experiment, the materials of the first experiment were employed with 11 sighted college students who were blindfolded. These subjects made 4% errors in each mode and required less information for diagram interpretation than the blind, but required more time to respond. (KH)

ABSTRACT 11216

EC 01 1216 ED N.A.
Publ. Date Mar 67 20p.
Beurle, R. L.

Electronic Aids for Blind People.

St. Dunstan's, London, England, Experimental And Research Department
EDRS not available

This Article Was Published In The American Foundation For The Blind Research Bulletin, Number 14, March, 1967, Pp.123-232.

Descriptors: exceptional child research; blind; visually handicapped; reading; visually handicapped orientation; electromechanical aids; mobility aids; auditory discrimination; kinesthetic methods; sensory aids; Optophone

An electronic travel aid operating on the same principle as radar was tested with blind children, aged from 11 and under through 18, who attended schools in England. Field tests of the device were conducted on neighborhood streets, country lanes, and footpaths. Results indicated that test courses were covered at mean speed of over 2 miles per hour which is comparable to sighted walking. The aid was suggested for travel training of blind children and those recently blinded since the children's use of echoes, such as from footsteps, for location of objects improved after using the aid. In a second study, four blind subjects with a mean IQ of 139 used an electronic aid, an optophone, which counts print to a sound code. Average reading speed after extensive training was 20 words per minute. Thus the device, like the travel aid, was not expected to achieve wide popularity. (KH)

ABSTRACT 11234

EC 01 1234 ED 003 298
Publ. Date 64 118p.
Woodcock, Richard W.; Bourgeault, Stanley E.

Construction and Standardization of a Battery of Braille Skill Tests.

Colorado State College, Greeley
Office Of Education (DHEW), Washington, D. C.

EDRS mf,hc
CRP-1650

Descriptors: exceptional child research; visually handicapped; braille; tests; achievement; blind; testing; achievement tests; standardized tests; reading tests; test construction; Colorado Braille Battery

A battery of tests was developed and standardized to measure mastery of two braille codes: the grade 2 literary code and the Nemeth code for mathematical notation. Designated as the Colorado Braille Battery, these tests provided objective measurement data regarding a student's overall development in braille, as well as a means of analyzing specific strengths and weaknesses in braille skills. The battery should find use with blind children and adults, with sighted persons required to have knowledge of the braille codes, and as a research tool. (JM)

ABSTRACT 11258

EC 01 1258 ED N.A.
Publ. Date Mar 67 10p.
Tillman, M. H.

The Performance of Blind and Sighted Children on the Wechsler Intelligence Scale for Children: Study I.

Georgia University, Athens, Research And Development Center in Educational Stimulation

Vocational Rehabilitation Administration (DHEW), Washington, D. C.

EDRS not available

International Journal For The Education Of The Blind; V16 N5 P65-74 Mar 1967

Study Based On A Doctoral Dissertation.

ABSTRACT 11402

EC 01 1402 ED N.A.
 Publ. Date Mar 66 5p.
 Dupress, John K.

Braille Research and Development: Progress and Predictions.

Massachusetts Institute Of Technology, Cambridge, Sensory Aids Evaluation And Development Center
 EDRS not available

International Journal For The Education Of The Blind; V15 N3 P74-8 Mar 1966

Descriptors: exceptional child research; braille; visually handicapped; blind; books; computer programs; instructional materials; teaching aids

Developments increasing the availability of braille material, especially for educational and vocational needs, include computer translation of braille, special braille displays, equipment for generating embossed pictures and other graphic forms, generation of grade 2 braille from publishing tapes, and the development of the nine-dot braille (especially useful in mathematics). The computer is already in use to emboss braille books, and soon will be used to convert monotype and teletypesetter tapes to braille books via the telephone system. Additional braille codes and code compatibility may be developed. They, along with the interaction of braille, embossed pictures, and sound recording media, would allow for increasing educational and vocational opportunities for the blind. A bibliography lists 26 selected references from the Massachusetts Institute of Technology. (KH)

ABSTRACT 11457

EC 01 1457 ED N.A.
 Publ. Date May 67 9p.
 Kederis, Cleves J. And Others

The Use of Controlled Exposure Devices to Increase Braille Reading Rates.

American Printing House For The Blind, Louisville, Kentucky, Educational Research Department
 Rehabilitation Services Administration (DHEW), Washington, D. C.
 EDRS not available
 RD-10865-63

The International Journal For The Education Of The Blind; V16 N4 P97-105 May 1967

Descriptors: exceptional child research; visually handicapped; braille; reading; motivation; reading speed; electromechanical aids; reading improvement

Two studies were made using controlled exposure techniques to increase braille reading rates. In the first, braille words, phrases, and short sentences were read at diminishing time intervals on the tachistotactometer, a rapid exposure device. In the other, literary material was read at increasing word rates on a pacing device, the IBM Braille Reading Machine. Two groups of 15 students each were divided by reading rate levels: fast, average, and slow in the first study and fast and slow in the second. A

monetary reward was used to control motivation on the criterion tests. The results of both studies, as measured by the Gates Basic Reading Test, were similar. No statistically significant effects on test reading rates resulted from reading practice under conditions of controlled exposure; but control and experimental groups reduced their reading times by 24%. However, there was a possible differential effect of controlled reading practice favoring the fast readers: the fast experimental readers made a greater reduction than their controls. (CG)

ABSTRACT 11461

EC 01 1461 ED N.A.
 Publ. Date May 67 7p.
 Tillman, M. H.

The Performance of Blind and Sighted Children on the Wechsler Intelligence Scale for Children. Study I.

Georgia University, Athens, Research And Development Center In Educational Stimulation

Rehabilitation Services Administration (DHEW), Washington, D. C.
 EDRS not available

The International Journal For The Education Of The Blind; V16 N4 P106-12 May 1967

Descriptors: exceptional child research; visually handicapped; tests; cognitive processes; blind; test interpretation; test validity; intelligence tests; factor structure; factor analysis; Wechsler Intelligence Scale for Children; WISC

Interrelationships between items on five verbal subtests of the Wechsler Intelligence Scale for Children (WISC) were studied in 110 blind and 110 sighted children (mean age 9.9). The mean score of 97 for the sighted group and 92 for the blind group differed significantly at the .05 level. The factor solutions showed a general pattern of the very easy and very difficult items tending not to show any factor loadings, with remaining items dividing into a two-factor solution. Of these remaining items, the first factor picked up the easier items and the second factor picked up the more difficult items. Thus, proximity-difficulty described all of the factor solution results. Varimax factor loadings of items on the five subtests for the two groups of subjects indicated that the blind had fewer factor loadings and weaker communalities on the subtests of information, comprehension, similarities, and vocabulary. Hence, the evidence supported the notion that intellectual abilities in blind children have greater specificity than in sighted children. Conclusions are stated in terms of educational objectives for the blind. (KH)

ABSTRACT 11652

EC 01 1652 ED 030 224
 Publ. Date Mar 63 83p.

Karnes, Merle B.; Wollersheim, Janet P. An Intensive Differential Diagnosis of Partially Seeing Children to Determine the Implications for Education.

Champaign Community Unit 4 Schools, Illinois, Department Of Special Services EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; achievement; adjustment (to environment); partially sighted; clinical diagnosis; individual differences; peer relationship; underachievers; reading achievement; intelligence; visual perception; arithmetic; case studies (education); interpersonal relationship; personal adjustment; psycholinguistics; memory; social adjustment

Sixteen partially seeing children in grades 1 to 8 who were enrolled in a special resource room program were selected for differential diagnosis; their characteristics as a group and as individuals were delineated. Tests administered were the Stanford Binet Intelligence Scale, Illinois Test of Psycholinguistic Abilities, Wechsler Intelligence Scale for Children (verbal section), Benton Visual Retention Test, Vineland Social Maturity Scale, a sociometric technique, California Test of Personality, and Michigan Picture Test. Each subject's mental age was used in the Horn formulas (1947) to determine reading and arithmetic expectancies; the Stanford Achievement Test in large and regular size type was used to determine actual achievement; and oral reading was measured by Gray's Oral Reading Paragraphs tests and four subtests of the Monroe Diagnostic Reading Examination. The following hypotheses regarding the partially seeing were upheld: they are not achieving at a level equal to their abilities (discrepancies at .05 level); their psycholinguistic processes which involve visual and motor abilities are inferior to their auditory and vocal abilities; they are less well accepted in class than normal seeing peers. The data did not support the hypotheses that, compared to the seeing, partially sighted children have inferior visual memory, are less socially mature, or show poorer personality adjustment. Three case studies are provided. (LE)

ABSTRACT 11678

EC 01 1678 ED 030 233
 Publ. Date 67 128p.

Juurmaa, Jyrki. Ability Structure and Loss of Vision. Research Series, Number 18.

Institute Of Occupational Health, Helsinki, Finland
 National Institutes Of Health, Bethesda, Maryland;

Public Health Service (DHEW), Washington, D. C.
 EDRS not available

American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$2.00).

Descriptors: exceptional child research; visually handicapped; testing; cognitive ability; verbal ability; arithmetic; memory; kinesthetic perception; psychomotor skills; tactual perception; auditory perception; visually handicapped orientation; sex differences; blind; partially sighted; etiology; factor structure; cognitive processes

In the analysis of ability structure and loss of vision, 228 blind persons (153 male, 75 female) heterogeneous in respect to chronological age, sex, degree of blindness, age at onset, and duration, were compared to sighted controls. A test battery was administered which included tests for verbal comprehension, mental arithmetic, spatial ability, arithmetic reasoning, memory, dexterity, kinesthetic memory, and tactual discrimination. Factor analysis indicated the following: blindness did not hinder the differentiation of mental abilities; tests which formed a visualization factor with the sighted determined a factor when performed tactually by the totally blind; and visual and spatial tests performed by the sighted, the first normally and the second tactually, formed two mutually wholly independent factors. Also, for the totally blind, the mutually analogous tests measuring tactual and auditory discrimination sensitivities formed a factor on their own; for the partially sighted, the two correlated significantly negatively with each other. A larger proportion of the variance of test performances of the blind was due to the memory for meaningless, rather than meaningful, word pairs. (LE)

ABSTRACT 11694

EC 01 1694 ED 030 249
Publ. Date Jun 69 178p.

Nolan, Carson Y.; Kederis, Cleves J.
Perceptual Factors in Braille Word Recognition.

American Printing House For The Blind, Louisville, Kentucky, Department Of Educational Research National Institute For Neurological Diseases And Blindness, Bethesda, Maryland

EDRS not available

American Foundation For The Blind, Inc., 15 West 16th Street, New York, New York 10011 (\$3.00).

Descriptors: exceptional child research; visually handicapped; braille; word recognition; tactual perception; research reviews (publications); readability; context clues; orthographic symbols; reading speed; slow learners; training

A description of braille and a review of research on this topic are discussed. Summaries are presented of nine research studies which are also presented in full; conclusions and duplication of the research are considered. The nine reports cover the following topics: effects of word length, familiarity, and orthography, influence of numbers and position of dots, and influence of braille contractions on recognition thresholds; effects of context on recognition thresholds for words varying in length, familiarity, and orthography; effects of context on recognition times for the stimulus words of the second study; effects of familiarity, length, and orthography on the recognition thresholds of braille words at the elementary school level; braille word recognition by low intelligence readers; and the effect of character recognition training on braille reading. Appendixes include stimulus words used

in the studies, stimulus words for Study 5 in context, and a short story with stimulus words in italics. (RJ)

ABSTRACT 11858

EC 01 1858 ED N.A.
Publ. Date Feb 67 113p.

Lowenfeld, Berthold; Abel, Georgie Lee
Methods of Teaching Braille Reading.
San Francisco State College, California, Frederic Burk Foundation For Education

Office Of Education (DHEW), Washington, D. C.

EDRS not available
OEC-5-10-009

BR-5-0332

Descriptors: exceptional child research; visually handicapped; blind; braille; reading instruction; reading speed; reading; reading tests; age differences; average students; grade 4; grade 8; residential schools; public schools; intelligence differences; reading comprehension; reading skills; etiology

To determine the status of braille reading instruction in 1965, 382 letters were sent to all residential schools and to local classes for blind children. A response of 88% indicated similarity in teaching methods, materials, and onset of instruction. Two hundred blind students (100 each in fourth and eighth grades and from residential and local schools), with a visual handicap of 5/200 or less and no other handicaps, were then studied. They were administered the reading tests from the Sequential Tests of Educational Progress (STEP) and the Stanford Achievement Tests (SAT). Fourth grade blind children in public schools were 0.8 years older and in residential schools 1.2 years older than their seeing peers. At the eighth grade level age differences were small. The mean IQ levels for fourth graders in local and residential schools were close to 100 while eighth graders were on the average 10 points above 100. Test data showed that in reading comprehension blind children were equal to seeing children in fourth grade and superior in eighth grade. Mean reading rates were significantly different between eighth grade blind children favoring those in local schools (p less than .01). Sighted children read about twice as fast as non-sighted. Retrolental fibroplasia was the main cause of blindness, most students were blind from birth, 70% used both hands in reading, and about one-half read occasionally outside the classroom. (Author/RP)

ABSTRACT 12099

EC 01 2099 ED N.A.
Publ. Date 68 11p.

Kederis, C. J. And Others
Bibliography of Research on Braille.
American Printing House For The Blind, Louisville, Kentucky, Department Of Educational Research
EDRS not available
American Printing House For The Blind, Inc., P. O. Box 6085, Louisville, Kentucky 40206.

Descriptors: exceptional child research; visually handicapped; braille; bibliographies

A 90-item bibliography contains references to research on braille and includes journal articles, theses and dissertations, unpublished documents, reports, and manuals. (RJ)

ABSTRACT 20143

EC 02 0143 ED N.A.
Publ. Date Mar 69 4p.

Tillman, M. H.; Osborne, R. T.
The Performance of Blind and Sighted Children on the Wechsler Intelligence Scale for Children: Interaction Effects.

EDRS not available
Education Of The Visually Handicapped; VI N1 P1-4 Mar 1969

Descriptors: exceptional child research; visually handicapped; intelligence tests; profile evaluation; blind; test interpretation; Wechsler Intelligence Scale for Children

To determine whether blind and sighted children from 7 through 11 years have similar Wechsler Intelligence Scale (WISC) profiles when both groups are equated on total verbal IQ, 167 WISC forms were collected from residential schools for the blind. A larger number was collected from sighted children. Sixty were drawn from each group and divided into equal samples of age and mean IQ. The results of the analysis were that the effects of group and age were not significant, the blind scored lower on similarities but higher on digit span subtests, and the pattern of scores held within each age level. The conclusion was that while the blind and sighted do not have the same WISC profiles, the higher scores of the blind on the digit span test could lead to research into the differences between the blind and sighted in conceptual development and in short term memory. (JM)

ABSTRACT 20145

EC 02 0145 ED N.A.
Publ. Date Mar 69 8p.

Mills, Robert J.; Adamshick, Donald R.
The Effectiveness of Structured Sensory Training Experiences Prior to Formal Orientation and Mobility Instruction.

EDRS not available
Education Of The Visually Handicapped; VI N1 P14-21 Mar 1969

Descriptors: exceptional child research; visually handicapped; sensory training; program descriptions; auditory training; visually handicapped orientation; visually handicapped mobility; nonverbal tests; intelligence tests

To develop non-visual perceptions in small group settings in order to accelerate the ability of the blind to learn travel skills, 44 blind students were given a sensory training program. Each student was evaluated, assigned to groups, and instructed in body awareness, posture, physical fitness, auditory training, and orientation and pre-cane skills. These students then took a 5-week orientation

and mobility program along with 38 others who had not had previous training. A comparison of the two groups showed that the pretrained group had more skills, and higher proficiency ratings, performance averages, and percentile ratios than the untrained group. (JM)

ABSTRACT 20158

EC 02 0158 ED 031 826
Publ. Date 68 289p.
Research Bulletin, Number 18, December 1968.
American Foundation For The Blind, New York, New York
EDRS mf,hc
American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$1.50).

Descriptors: exceptional child research; visually handicapped; visual learning; visually handicapped mobility; audition (physiology); visually handicapped orientation; doctoral theses; tactile adaptation; sensory aids; auditory discrimination; auditory perception; visual discrimination; visual perception; laboratory experiments

Papers included are the following: aspects of mobility in the blind by J.A. Leonard; the development and analysis of tactual measures of intelligence for the adolescent and adult blind, a summary of a doctoral dissertation by Eoline Christine Cull; an investigation of human visual information transmission, a doctoral dissertation by Ronald Joseph Massa; and the vestibular system and human dynamic orientation, a paper derived from a doctoral dissertation by Jacob L. Meiry. Fifteen research suggestions and 24 publications are listed, and a research bulletin supplement describes 36 products devised for the blind. (LE)

ABSTRACT 20199

EC 02 0199 ED 031 867
Publ. Date Feb 69 126p.
Newland, T. Ernest
The Blind Learning Aptitude Test.
Illinois University, Urbana
Office Of Education (DHEW), Washington, D. C., Bureau Of Research
EDRS mf,hc
OEG-3-6-061928-1558
BR-6-1928

Descriptors: exceptional child research; visually handicapped; tests; tactile adaptation; aptitude tests; testing; intelligence tests; test validity; test construction; tactual perception; individual tests; research methodology; sampling; achievement tests; racial differences; sex differences; age differences; geographic location; test reliability; Blind Learning Aptitude Test

A Blind Learning Aptitude Test (BLAT) was developed on the basis of sense of touch rather than on conventional experience, fine sensory discrimination, or verbal competency. From a pool of about 350 items, most of them used in testing intelligence in the sighted, a pool of 94 was selected and embossed after the manner of braille. A residual pool of

49 test and 12 training items was selected through the responses of some 500 blind children. Normative data were gathered on the responses of 961 subjects. Analyses of the data indicated the following correlations for the BLAT: internal consistency, .934; test-retest reliability over 7 months, .865; and Hayes Binet mental ages, and Wechsler Intelligence Scale for Children verbal ages, .89 for the 420 children for whom preceding scores were available. Although the BLAT was found to lose discriminative power at or near the 12-year level, it was suggested as being more valuable than the Hayes Binet or the Wechsler for younger children since it tests process rather than product behavior. (JD)

ABSTRACT 20201

EC 02 0201 ED N.A.
Publ. Date Jul 65 75p.
Nye, P. W.
An Investigation of Audio Outputs for a Reading Machine.
American Foundation For The Blind, New York, New York;
California Institute Of Technology, Pasadena, B. Computation Laboratory
Rehabilitation Services Administration (DHEW), Washington, D. C.
EDRS not available
The American Foundation For The Blind, 15 West 16th Street, New York, New York 10011.
American Foundation For The Blind Research Bulletin Number 10, July 1965.

Descriptors: exceptional child research; visually handicapped; tests; reading; electronic equipment; blind; auditory perception; aural stimuli; reading processes; audiovisual aids; artificial speech; Parametric Artificial Talking Device

Three experiments compared a data compression to a speech-like output in a reading machine for the blind. Fifty subjects, aged 16 to 26, tested the codes associated with the Parametric Artificial Talking Device (PAT), Multidimensional Optaphone (MDO), Variable Volume Optaphone (VVO), Wuhzi Natural Speech Source, and the conventional Optaphone. Comparison of recognition accuracy of sounds, similar and dissimilar words, and the substitution of nonsense words with similar vowel-consonant make-up for regular words indicated that the MDO and PAT outputs were significantly superior to the optaphone and the VVO signals. Results further demonstrated that, the more speech-like the sounds produced, the easier they were to understand but the technical problems of production were more difficult. One subtest tested the speed of discrimination for signals of five dimensions (direction, noise, modulation, intensity, and frequency) compared to the speed of comprehension on the last three dimensions. The five dimension signals were perceived more quickly and accurately than the three dimension ones. Another subtest constructed a flexible system to provide a range of different outputs when two kinds of input signals

(letter scanning and feature detection) were used. (KH)

ABSTRACT 20298

EC 02 0298 ED N.A.
Publ. Date Nov 69 9p.
Nolan, Carson Y.; Morris, June E.
Learning by Blind Students Through Active and Passive Listening.
EDRS not available
Exceptional Children; V36 N3 P173-81
Nov 1969

Descriptors: exceptional child research; visually handicapped; listening; speech compression; listening comprehension; learning characteristics

Studies were conducted comparing learning achieved by blind students at different grade levels for 3 types of material presented at normal and compressed rates under conditions of active and passive listening. Findings of the research lend support to the theory that active participation in the listening process results in greater learning. A secondary finding was that comprehension of uncompressed material was superior to comprehension of compressed material under conditions of motivation. (Author)

ABSTRACT 20335

EC 02 0335 ED N.A.
Publ. Date Oct 69 5p.
Hammill, Donald; Crandell, John M., Jr.
Implications of Tactile-Kinesthetic Ability in Visually Handicapped Children.

EDRS not available
Education Of The Visually Handicapped; V1 N3 P65-9 Oct 1969

Descriptors: exceptional child research; visually handicapped; perception tests; tactual perception; test reliability; kinesthetic perception; socioeconomic status; Tactile Kinesthetic Form Discrimination Test

Fifty randomly selected subjects were studied to examine the reliability, validity and relationship between the Tactile Kinesthetic Forms Discrimination Test (TKT) and CA, MA, IQ, abstracting ability, sound discrimination ability, visual acuity, fathers occupation, and Braille reading ability. The subjects were administered the TKT, the Abstraction Test, and the Sound Discrimination Test; in addition, the father's occupation (an indicator of socioeconomic status) was obtained from school records. The results indicated the TKT cannot be used as a substitute for IQ Tests with the visually impaired: TKT performance is not significantly related to CA; socioeconomic status is not related to TKT performance, and the relationship between TKT performance and level of residual vision was not significant. (JP)

ABSTRACT 20336

EC 02 0336 ED N.A.
Publ. Date Oct 69 8p.
Gore, George V.
A Comparison of Two Methods of Speeded Speech.

EDRS not available
Education Of The Visually Handicapped; V1 N3 P69-76 Oct 1969

Descriptors: exceptional child research; visually handicapped; speech compression; listening comprehension; recall (psychological); learning characteristics

Thirty-two blind students with an average of more than 3-year's experience in listening to recorded educational materials were tested to examine comprehension and recall of speeded speech. Sixteen subjects were used to test accelerated versus compressed methods and 16 were tested on normal versus speeded methods, accelerated and compressed. The results indicated that students achieved higher comprehension by listening to compressed rather than accelerated material (significant at the .05 level), and that students will achieve higher recall scores on compressed material rather than accelerated material (significant at the .05 level). Results concerning the type of material presented and the cognitive skills involved were varied but seemed most negative under accelerated conditions. (JP)

ABSTRACT 20339

EC 02 0339 ED N.A.
Publ. Date May 69 4p.

Blackhurst, A. Edward And Others
Relationship between Mobility and Divergent Thinking in Blind Children.

EDRS not available
Education Of The Visually Handicapped; V1 N2 P33-6 May 1969

Descriptors: exceptional child research; visually handicapped; divergent thinking; blind; visually handicapped mobility; testing

To determine if a relationship exists between mobility and divergent thinking in blind children, 76 students from day school programs and 76 residential school children (ages 10 to 12 years) were scored on six tests. The tests used were Word Fluency, Product Improvement, Unusual Uses, Ideational Fluency, and Seeing Problems. The highest correlation between mobility and divergent thinking (.33) was found among the day school students, while no significant correlation was found in the residential group. The conclusion was that if a relationship exists between mobility and divergent thinking in day school students it is a slight one at best. (JM)

ABSTRACT 20340

EC 02 0340 ED N.A.
Publ. Date May 69 4p.
Avery, Constance D.; Streitland, Julian W.

An Abbreviation of the Haptic Intelligence Scale for Clinical Use.

EDRS not available
Education Of The Visually Handicapped; V1 N2 P37-40 May 1969

Descriptors: exceptional child research; intelligence tests; visually handicapped; haptic perception; blind; correlation; Haptic Intelligence Scale for Adult Blind

To discover whether a shortened version of the Haptic Intelligence Scale (HIS) could be an effective testing instrument, 32 blind and partially sighted subjects were administered a test which contained only 46% of the original. Since the subjects had already taken the original the two scores were correlated. The correlations ranged from .81 through .98 (average .90) with the correlation of overall IQ's for the two forms being .99. The conclusion was that the shortened form of the HIS is a sufficiently accurate instrument and is practical because of the time saved in application. (JM)

ABSTRACT 20385

EC 02 0385 ED N.A.
Publ. Date Oct 69 5p.
Lord, F. E.

Development of Scales for the Measurement of Orientation and Mobility of Young Blind Children.

EDRS not available
Exceptional Children; V36 N2 P77-81 Oct 1969

Descriptors: exceptional child research; visually handicapped; visually handicapped mobility; visually handicapped orientation; behavior rating scales; test construction; test reliability

Due to the growing interest in extending orientation and mobility instruction to include elementary school age blind children, research was carried out to define the behavioral components in orientation and mobility which are relevant for young blind children, and to develop scales for the measurement of these skills. The construction of the scales is described. A short form was administered to 173 blind children; the test reliability was above .90, and pupil performance on the majority of items correlated above .70 with the total score. Blind subjects were significantly better than those with light perception on pointing out cardinal directions, traveling using cardinal directions, demonstrating parts of a door, and using a door key. Additional results are reported. (Author/RJ)

ABSTRACT 20425

EC 02 0425 ED N.A.
Publ. Date Feb 67 6p.
Trismen, Donald A.

Equating Braille Forms of the Sequential Tests of Educational Progress.

EDRS not available
Exceptional Children; V33 N6 P419-24 Feb 1967

Descriptors: exceptional child research; visually handicapped; blind; achievement tests; tactile adaptation; braille; residential schools; intermediate grades; secondary grades; test interpretation; standardized tests; academic achievement; Sequential Tests of Educational Progress

Social studies, science, and mathematics Sequential Tests of Educational Progress (STEP) were adapted and translated

into braille to compare academic achievement of blind and sighted students. Because certain items proved inappropriate for translation, the braille forms contained fewer items. The braille STEP tests were administered to all classes (257 or more students per grade group) of the appropriate grades (5 to 11) in 29 of 48 residential schools for the blind. STEP were also administered to sighted groups, and blind and sighted groups were compared on items common to STEP and braille STEP, and appearing early in each separately timed part of STEP. In general, the blind samples used in the study were roughly comparable in achievement level to the national norms samples when tested under untimed conditions with instruments adapted for their use. Tables of results are included as are five references. (LE)

ABSTRACT 20502

EC 02 0502 ED N.A.
Publ. Date Oct 69 13p.
Flanigan, Patrick J.; Joslin, Elizabeth S.
Patterns of Response in the Perception of Braille Configurations.
EDRS not available
New Outlook Blind; V63 N8 P232-44 Oct 1969

Descriptors: exceptional child research; visually handicapped; tactual perception; programed materials; braille; tachistoscopes; discrimination learning; reading speed

To examine the relationship between stimulus presentation and response on a programed tachistoscopic instructional device, and the effect of a remediation program on this relationship and on the speed of braille reading, 27 subjects in grades 3 through 9 were studied (ages ranged from 110 to 212 months, mental ages from 93 to 269 months, and IQ's from 65 to 144). The subjects were divided into two groups, one using a programed learning device, the other traditional braille materials. The results indicated reading errors increased as speed of presentation increased; subjects with higher IQ's made fewer errors on programed material than those with lower IQ's; certain letters in traditional braille were more difficult than others (R, Z, and N) seemingly due to lack of characteristic forms; and the group using the remediation device demonstrated an increase in reading rate of three and one half words per minute over the control group. (JP)

ABSTRACT 20541

EC 02 0541 ED N.A.
Publ. Date Jul 66 196p.
Clark, Leslie, Ed.

Research Bulletin, Number 13.
American Foundation For The Blind, New York, New York
Vocational Rehabilitation Administration (DHEW), Washington, D. C.

EDRS not available
American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$2.50).

Descriptors: exceptional child research;

visually handicapped; multiply handicapped; aurally handicapped; perception; deaf blind; adults; auditory perception; haptic perception; sensory experience; aural stimuli; visually handicapped mobility; visually handicapped orientation; mobility

Four articles report research on facial vision. Michael Lupa, Milton Cotzin, and Karl M. Dallenbach consider the perception of obstacles by the blind; Philip Worchel and Dallenbach treat obstacle perception by the deaf-blind. Cotzin and Dallenbach define the role of pitch and loudness; and Carol H. Ammons, Worchel, and Dallenbach discuss the perception of obstacles out of doors by blindfolded and blindfolded-deafened subjects. Forty-four references are listed. (JD)

ABSTRACT 20596

EC 02 0596 ED 012 132
Publ. Date 64 64p.

Rubin, Edmund Joseph

Abstract Functioning in the Blind.

American Foundation For The Blind, New York, New York
EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; cognitive processes; blind; abstract reasoning; concept formation; abstraction tests; comparative testing; visual learning; intelligence tests

Hypothesizing that congenitally blind adults would score lower on tests of abstraction than adventitiously blind or sighted adults, the study tested 25 congenitally blind, 25 adventitiously blind, and 25 sighted subjects. The Wechsler Adult Intelligence Scale (WAIS) Vocabulary Test was administered to each group; results showed no significant difference in intellectual level among the groups. Subjects were tested by the Similarities Test, the Proverbs Test, the Kahn Test of Symbol Arrangement, and the Number Series Completion Test. Mean scores for the congenitally blind were the lowest of the three groups in three of the four tests of abstraction (p less than .10), thereby supporting the hypothesis. On the Number Series Completion Test, the adventitiously blind group scored significantly below the sighted group, perhaps because of the importance of visual imagery on the test. The age of onset of blindness was thus suggested as an important factor in interpretation of test scores. A 79-item bibliography is included. (DF)

ABSTRACT 20696

EC 02 0696 ED N.A.
Publ. Date Jan 70 6p.

Thurrell, Richard J.; Rice, David G.

Eye Rubbing in Blind Children: Application of a Sensory Deprivation Model.

EDRS not available
Exceptional Children; V36 N5 P325-370
Jan 1970

Descriptors: exceptional child research; visually handicapped; behavior patterns;

eyes; sensory deprivation; visual acuity; age differences

Eye rubbing is one of the stereotyped behaviors occurring in blind children and is of concern to those who work toward the acceptance and adjustment of the blind in the sighted world. It is relevant to other issues, such as child development, sensory deprivation, and critical periods. Confirmatory evidence for hypotheses drawn from sensory and social deprivation studies was found; children with capacity for only minimal, unpatterned visual input were rated significantly higher in eye rubbing than either the totally blind or those with more usable, patterned vision. An additional finding, that similar significant differences persisted but in diminished degree in older children compared to younger, was related to both training effects and critical period concepts. (Author)

ABSTRACT 20720

EC 02 0720 ED N.A.
Publ. Date 67 59p.

Nolan, Carson Y., Comp.; Morris, June E., Comp.

Bibliography of Research on the Visually Handicapped 1953-1967.

American Printing House For The Blind, Inc., Louisville, Kentucky
EDRS not available
American Printing House For The Blind, Inc., 1839 Franfort Avenue, P. O. Box 6085, Louisville, Kentucky 40206.

Descriptors: exceptional child research; visually handicapped; bibliographies; partially sighted; blind; learning characteristics; sensory aids; adjustment (to environment); intelligence level; academic achievement; tests; vocational rehabilitation; perception; educational programs; attitudes

This supplement to Lende's 1953 bibliography on research on the visually handicapped cites only articles reporting research in which empirical data were collected. References from various sources are included; those searched systematically through 1967 are Psychological Abstracts, Dissertation Abstracts, International Journal for the Education of the Blind, New Outlook for the Blind, and Exceptional Children. Over 750 citations are given. (JD)

ABSTRACT 20811

EC 02 0811 ED 032 674
Publ. Date Jun 69 248p.

Clark, Leslie L., Ed.

The Research Bulletin, No. 19, June, 1969.

American Foundation For The Blind, New York, New York
EDRS mf,hc

Descriptors: exceptional child research; multiply handicapped; visually handicapped; aurally handicapped; partially sighted; deaf blind; deaf; blind; perception; auditory perception; tactual perception; braille; mentally handicapped; incidence; visually handicapped mobility; contagious diseases; behavior pat-

terns; eye fixations; educational technology; closed circuit television; sensory aids; hearing loss; medical research

Articles report surveys and research studies as well as describe systems in educational technology. Areas treated include the following: multihandicapped blind and deaf blind children in California, by B. Lowenfeld; modern trends in mobility, by J.A. Leonard; factors in the definition of deafness as they relate to incidence and prevalence, by J.D. Schein; trachoma, by G.H. Werner and others; and learning eye fixation without visual feedback, by B.L. Toonen and J.P. Wilson. Also considered are the effect of signal strength on reaction times to auditory signals in noise, by D. Liddle; a closed circuit television system for the visually handicapped, by S.M. Genensky and others; devices for communication through tactile perception, by J.C. Bliss and H.D. Crane; and altered levels of consciousness in blind retarded children, by A.C. Stone. Current research notes are provided along with information on autobraille, the automated braille system. (JD)

ABSTRACT 20844

EC 02 0844 ED 020 592
Publ. Date Mar 67 151p.

Clark, Leslie L., Ed.

Research Bulletin, Number 14.

American Foundation For The Blind, New York, New York
EDRS mf,hc

The American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$1.50).

Descriptors: exceptional child research; visually handicapped; perception; braille; research reviews (publications); visually handicapped mobility; anxiety; tactual perception; machine translation; aurally handicapped; ability; electronic equipment; longitudinal studies; screening tests; academic ability; mobility aids

The following articles concerning research with the visually handicapped are presented in this bulletin--Trends of the Research and Development Process on the Sensorily Impaired--Europe and the U.S.A. 1966 by M.D. Graham and L.L. Clark, The Perception of Gradient and the Veering Tendency While Walking Without Vision by B.J. Cratty, Veering Tendency as a Function of Anxiety in the Blind by J.C. Harris, Informative Tactile Stimuli in the Perception of Direction by W. Schiff and others, The German System of Contracted Braille--Some Critical Points of View by K. Britz, Automatic Translation of Inkprint to Braille by Electronic Data Processing Systems by H. Werner and others, The Ability Structure of the Blind and the Deaf--Final Report by J. Juurmaa, Electronic Aids for Blind People by R.L. Beurle, Use of Telephone Interviews in a Longitudinal Fertility Study by L. Coombs and R. Freedman, and Screening for Visual Impairment by E. Josephson. Bibliographies are included for most of the reports. (RS)

ABSTRACT 20850

EC 02 0850 ED 020 613
 Publ. Date Jan 66 79p.
 Clark, Leslie L., Ed.

Research Bulletin, Number 12.
 American Foundation For The Blind,
 New York, New York
 EDRS mf,hc
 American Foundation For The Blind,
 15 West 16th Street, New York, New
 York 10011.

Descriptors: exceptional child research; visually handicapped; perception; adjustment (to environment); blind; emotional experience; tactual perception; visual perception; anxiety; community; community involvement; personal adjustment; social adjustment; social development; emotional adjustment; personality

Six papers of I.D. Cutsforth were chosen for posthumous republication on the criterion of relevance to current research. The articles include The Synaesthesia of a Blind Subject with Comparative Data from an Asynaesthetic Blind Subject--chapters 5 through 7 (coauthored with R.H. Wheeler), Role of Emotion in an Synaesthetic Subject--Summary and Discussion, An Analysis of the Relationship between Tactual and Visual Perception, Blindness is an Adequate Expression of Anxiety, Personality and Social Adjustment Among the Blind, and Are We Truly Part of the Community. Reference lists, diagrams of experimental apparatus, and tables are provided for the six papers. Also cited are 22 works by Cutsforth. (CF)

ABSTRACT 20853

EC 02 0853 ED 020 616
 Publ. Date Oct 65 111p.
 Clark, Leslie L., Ed.

Research Bulletin, Number 11.
 American Foundation For The Blind,
 New York New York
 EDRS mf,hc
 American Foundation For The Blind,
 15 West 16th Street, New York, New
 York 10011.

Descriptors: exceptional child research; visually handicapped; multiply handicapped; music; visually handicapped mobility; mobility aids; verbal ability; research needs; simulation; blind; language; tests; behavior patterns; perception; achievement; intelligence; auditory discrimination; individual characteristics; auditory perception

Four research studies on the blind are presented--Cane Travel--Techniques and Difficulties by D. Liddle, The Musical Ability of Blind Children by Derek J. Pittman, The Evaluation of Verbal Performance in Multiply-Handicapped Blind Children by W. Scott Curtis, and The Evaluation and Simulation of Mobility Aids for the Blind by Robert W. Mann. Several of the articles provide tables, outlines, and reference lists. (JD)

ABSTRACT 21226

EC 02 1226 ED 002 872
 Publ. Date 59 87p.
 Garry, Ralph; Ascarelli, Anna

An Experiment in Teaching Topographical Orientation and Spatial Organization to Congenitally Blind Children.

Boston University, Massachusetts
 EDRS mf,hc
 CRP-424

Descriptors: exceptional child research; perception; visually handicapped; tactual perception; space orientation; adolescents; blind; organization; orientation; learning experience; sensory experience; group instruction; perceptual development

The study attempted to establish a better understanding of the problems of congenitally totally blind children and to test the possibility of meeting these problems with a special training program in general orientation and space perception. Subjects were 60 children, aged 5 to 14, who had no additional physical handicaps. Those children who were unable to explore and investigate environmental stimuli in a spatial relations test were selected through supervisory observation for special training in an experimental group. Those who were more or less adequate in the testing and proved to be developing normally were selected for the control group. The effects of the training program were measured by tests, observations, and ratings. The total sample was divided almost in half between the two groups. The following aspects of space organization were selected for the experimental group: awareness of postural changes, concept and manipulation of extended surfaces, and object perception and language. Statistically significant gains over the control group were shown by the experimental group after the training program was completed. However, the level attained was not yet equal to the control group. Further study was recommended to develop a more effective approach to spatial perceptual patterns. (JH)

ABSTRACT 21252

EC 02 1252 ED 003 003
 Publ. Date 61 46p.

Bixler, Ray H. And Others
Comprehension of Rapid Speech by the Blind, Part I.
 Louisville University, Kentucky
 Office Of Education (DHEW), Washington, D. C.
 EDRS mf,hc
 CRP-1005-PT-1

Descriptors: exceptional child research; visually handicapped; reading; braille; communication (thought transfer); blind; audition (physiology); oral communication; instruction; reading instruction; reading speed; listening; speech compression; instructional innovation; instructional technology; listening comprehension; reading comprehension; comprehension

Reading comprehension of blind children reading braille selections was compared with comprehension of blind children who had heard the same selections at varied rates. Changes in word

rates were accomplished with speech compression techniques. Approximately 290 braille readers of both sexes from the sixth, seventh, and eighth grades at residential schools for the blind were subjects for the study. Atypical (newly enrolled or newly blinded) subjects were excluded from the sample. Subjects were randomly divided into seven groups. One group read two braille selections, and another was used as a control for prior learning. Subjects listened to the selections presented at assigned word per minute rates (175, 225, 275, 325, 375). The selections presented included a scientific and a literary passage from controlled seventh grade texts. Subjects listening to words at accelerated rates were given initial and controlled practice. All subjects were tested with highly reliable braille multiple choice tests. Data were treated by analysis of variance. Interactions among the types and modes of presentation were significant. Braille readers indicated no significant loss of literary comprehension through 225 words per minute at the .01 level. There was no significant loss of scientific comprehension through 275 words per minute. (WN)

ABSTRACT 21272

EC 02 1272 ED 003 089
 Publ. Date 65 35p.

Ashcroft, Samuel C. And Others
Study II, Effects of Experimental Teaching on the Visual Behavior of Children Educated as Though They Had No Vision.
 George Peabody College For Teachers,
 Nashville, Tennessee
 EDRS mf,hc
 OEG-32-52-0120-1034
 BR-5-0973

Descriptors: exceptional child research; teaching methods; perception; visually handicapped; partially sighted; visual discrimination; special programs; experimental programs

The specific objectives of the study were to confirm that a short period of experimental teaching enhances the visual behavior of partially sighted children to the extent that there are significant increases in visual discrimination test scores, and that there is a significant increase in recorded near-vision acuity of experimental subjects as determined by an ophthalmologist. This was a repetition of an earlier experiment. Experimental groups were constituted at schools for the blind in Kentucky, Tennessee, and Virginia. Control groups were constituted in Arkansas, Illinois, and Texas. Teachers were given lesson plans and other materials, and were instructed in their use. Significant gains resulted in visual functioning as measured by the visual discrimination test. Thus, positive findings of the previous study were confirmed. (LB)

ABSTRACT 21384

EC 02 1384 ED N.A.
 Publ. Date Sep 68 10p.
 Witkin, Herman A. And Others

Cognitive Patterning in Congenitally Totally Blind Children.

EDRS not available
Child Development; V39 N3 P767-86
Sept. 1968

Descriptors: exceptional child research; visually handicapped; blind; cognitive ability; tactual perception; perception tests; auditory tests; body image; comparative analysis; intelligence

Because lack of vision is likely to hamper development of articulation and to foster dependence on others, congenitally totally blind children may be expected to show less differentiated cognitive functioning than their sighted peers. This hypothesis was confirmed in a study using a special battery of perceptual and problem-solving tests and clay models of the human figure to assess articulation of body concept. In addition to being inferior in analytical competence, the blind children were strikingly superior to the sighted in capacity for sustained auditory attention and about equivalent in verbal-comprehension ability. The picture in the blind is one of unevenness in level of functioning from one cognitive area to another. (Author)

ABSTRACT 21607

EC 02 1607 ED N.A.
Publ. Date Mar 70 8p.

Franks, Frank L.; Nolan, Carson Y.
Development of Geographical Concepts in Blind Children.
EDRS not available
Education Of The Visually Handicapped; V2 N1 P1-8 Mar. 1970

Descriptors: exceptional child research; visually handicapped; geographic concepts; geography; space orientation; concept formation

To explore geographical concepts of blind students, 15 subjects each from grades 4, 6, 8, 10 and 12 were tested. Prior to this, 10 children were tested for directional concepts, and it was discovered that the fourth grade should be used as the lowest grade in testing geographical concepts. The geographical test consisted of 70 terms which each student was to define and explain. The results indicated that grades 6, 10, and 12 had the highest overall scores; some of the concepts are unknown to several grade levels; higher scores appear to reflect a repetition of terms in school curriculum; increased repetition of terms contributed to higher overall gains; gains due to repetition decreased when repetition was reduced; gains due to repetition and reintroduction of terms in differing contexts were the greatest but also decreased over short time periods; and presence of patterns of increased learning through repetition is supported. Tables of results are included. (JM)

ABSTRACT 21681

EC 02 1681 ED N.A.
Publ. Date Apr 70 15p.

Juurmaa, Jyrki
On the Accuracy of Obstacle Detection by the Blind--Part 2.

EDRS not available
New Outlook For The Blind; V64 N4
P104-18 Apr 1970

Descriptors: exceptional child research; visually handicapped; visually handicapped mobility; mobility aids; travel training; auditory discrimination; Ultrasonic Mobility Aid

To discover the reliability of an ultrasonic mobility aid developed by Teslic Kay for obstacle detection (when stationary or when moving), for judging obstacle size or type of material, and for judging size, distance, and material simultaneously, seven blind male subjects were tested with one group (E) using the aid and a control group (C) relying on the natural functions of the ear. The results were that the E group did no better than the C group in distinguishing materials; the judgement of size was also the same but the E group was not as confused by more cluttered tasks; the E group performed significantly better on distance estimation; and the E group was not as distracted by multiple factor tests. The author feels that the aid has not yet proven itself, although it is effective in some areas and that mobility training should still investigate the natural auditory capabilities of the blind. (JM)

ABSTRACT 21737

EC 02 1737 ED 035 116
Publ. Date 69 544p.

Goldberg, Maxwell H., Ed.; Swinton, John R., Ed.
Blindness Research: The Expanding Frontiers; A Liberal Studies Perspective.

EDRS not available
Pennsylvania State University Press,
University Park Station, Pennsylvania
16802 (\$12.50).

Proceedings Of The National Consultation Concerning Needed Research In The Behavioral Sciences And The Humanities With Reference To Problems Related To Blindness (University Park, Pennsylvania, Apr. 9-128 1967).

Descriptors: exceptional child research; visually handicapped; multiply handicapped; adjustment (to environment); counseling; family relationship; vocational adjustment; vocational rehabilitation; parent child relationship; adolescents; older adults; social attitudes; educational research; personal adjustment; agency role; occupational guidance; services; technological advancement; motivation; social life; research needs

Papers presented during a national conference on research on blindness are concerned with the following: the individual, stress, and the new world of social and technological change; parent-child relationships; old age; childhood and adolescence; social participation and citizenship; motivation; and education. Also discussed are stress and reaction to loss, counseling, the agency and the person, placement and occupation, the multiply handicapped blind (4 presentations) and the human values of the research frontier. Two contributions

by major speakers in each area are followed by sessions reports; references are listed after each chapter. (LE)

ABSTRACT 21769

EC 02 1769 ED 035 148
Publ. Date Sep 69 35p.

Harley, Randall K.
Comparison of Several Approaches for Teaching Braille Reading to Blind Children. Final Report.

George Peabody College For Teachers,
Nashville, Tennessee
Office Of Education (DHEW), Washington, D. C., Bureau Of Education For The Handicapped

EDRS mf,hc
OEG-2-7-002975-0453
BR-6-2975

Descriptors: exceptional child research; visually handicapped; braille; reading instruction; blind; partially sighted; program development; program evaluation; instructional materials; reading materials; beginning reading; research needs; initial teaching alphabet

To develop and test materials to be used in a later 2-year study to compare six approaches in teaching braille reading, materials in grade 1 and grade 2, braille, and phonemic braille media (both analytic and synthetic approaches), 39 subjects from six residential schools were evaluated. Special books were embossed in grade 1 and phonemic braille, and phonemic codes were prepared for use with the analytic and synthetic readers. The teachers were given a 3-day workshop preceding the program. They made daily progress reports and their reactions were used in the evaluation of each approach. At the end of the 1-year program the results indicated that phonemic braille could be used with beginning braille readers; the analytic approach appeared to function more effectively for the phonemic materials than the synthetic approach; grade 1 approaches were not adequately measured; and further research is necessary with development of more adequate materials utilized to make generalizations concerning approaches in braille reading. (Author/JM)

ABSTRACT 21774

EC 02 1774 ED 035 153
Publ. Date Jul 68 70p.

Cratty, Bryant J.; Sams, Theresa A.
The Body-Image of Blind Children.
California University, Los Angeles, Department Of Physical Education;
Los Angeles City Schools, California,
Special Education Branch
American Foundation For The Blind,
Inc., New York, New York
EDRS mf,hc

Descriptors: exceptional child research; visually handicapped; body image; testing; visually handicapped orientation; space orientation; kinesthetic perception; perceptual motor coordination; sex differences; age differences; intelligence level; evaluation techniques

To develop an assessment device for the evaluation of body image, to evaluate

ABSTRACT 22161

EC 02 2161 ED N.A.
 Publ. Date May 70 5p.

Harley, Randall K.; Rawls, Rachel
**Comparison of Several Approaches
 for Teaching Braille Reading to Blind
 Children.**

EDRS not available
 Education Of The Visually Handi-
 capped; V2 N2 P47-51 May 1970

Descriptors: exceptional child research;
 visually handicapped; reading instruc-
 tion; braille; teaching methods; phonem-
 ics; instructional materials

To determine the best approach to the teaching of beginning braille reading, the study used grade 1, grade 2, and phonemic braille media in both the synthetic and analytical approaches in each for six classes of visually handicapped children (mean IQ 82, median age 7.7 years). The Slosson Oral Reading Test and the Gilmore Oral Reading Test were administered at the end of 1 year of training with the following results: synthetic-grade 2 approaches appeared to be superior to the synthetic-phonemic; the analytic approach appeared to function more effectively for the phonemic materials; the effectiveness of grade 1 approaches was not adequately measured; and a longer study with more subjects is necessary to determine more accurately the best approach to braille reading. (Author/JM)

ABSTRACT 22607

EC 02 2607 ED N.A.
 Publ. Date 66 104p.

**Proceedings of the Biennial Confer-
 ence of the American Association of
 Instructors of the Blind (48th, Salt
 Lake City, Utah, June 26-30, 1966).**

American Association Of Instructors Of
 The Blind, Inc., Washington, D. C.

EDRS not available
 American Association Of Instructors Of
 The Blind, Inc., 711 14th Street, N. W.,
 Washington, D. C. 20005 (\$1.00).

Descriptors: exceptional child research;
 visually handicapped; reading; multiply
 handicapped; visually handicapped mobi-
 lity; visually handicapped orientation;
 speech compression; reading skills; lis-
 tening; sensory aids; braille; large type
 materials; preschool children; partially
 sighted; blind; library services; tactual
 perception; teaching methods; instruc-
 tional materials; special services

The 48th convention of the American Association of Instructors of the Blind (AAIB) focused on research projects and findings. Papers were presented in six research areas: reading skills, including studies on college braille, rate of braille character recognition, and perceptual factors in braille word recognition; living skills and orientation, mobility and trance for young blind children and high school students; the child with limited but useful vision, including reports on a perspective on the field, teacher guides, experimental teaching in visual stimulation, and adaptation of materials; the

the body image of blind children, to make comparisons between subgroups (sex, age, IQ) and to derive sequences of tasks related to body image training, 91 children (mean age 10.06 years, mean IQ 88.32) were evaluated by a body image survey form. Analysis of the data indicated that a score combining the subscores from the body-part and laterality sections was predictive of the total battery score (r equals .92); no significant sex differences were obtained, but those with IQ's above 80, the totally blind, and children above 13 years scored generally superior to lower IQ, younger, and partially sighted children; the IQ and total test battery score were related (.40); and the total population was incapable of projection into the tester's reference system. Conclusions were that body image may be reliably assessed and that there were significant intragroup differences which have educational implications. Implications of the findings, a bibliography, and tables of results are included. (Author/JM)

ABSTRACT 22007

EC 02 2007 ED 036 020
 Publ. Date Nov 69 221p.

**A Study of the Vocational Success of
 Groups of the Visually Handicapped.
 Final Report.**

Michigan University, Ann Arbor,
 School Of Education
 Social And Rehabilitation Service
 (DHEW) Washington, D. C.
 EDRS mf, hc

Descriptors: exceptional child research;
 visually handicapped; vocational adjust-
 ment; followup studies; participant char-
 acteristics; case records; success factors;
 intelligence; personality; vocational inter-
 ests; socioeconomic status; predic-
 tion; academic achievement; interviews;
 interest tests; unemployment

The purpose of this project was to examine factors that seem to contribute to the vocational success of a group of visually handicapped. The population included 939 subjects for whom test data were available; 644 were interviewed and 207 were retested on various standardized measures. Instruments were developed to obtain initial data from school and agency records and current data from the subjects themselves. The typical subject was male, between the ages of 23 and 42, of average intelligence, lost vision before the age of five, and could not see sufficiently to read large print. Findings showed a high percentage unemployed; those employed had in general an annual income below the median for the general population and were engaged in a narrow range of occupations. Variables that seemed to be most related to vocational success included IQ, sex, other disabilities, travel ability, and level of education. Except for IQ, and certain subsets of vocational interest tests, results of personality and vocational aptitude tests were not highly related to vocational success. Additional data analyses and implications for educators and rehabilitation counselors are discussed. (Author)

multi-handicapped child, relating serv-
 ices; current practices, recent literature,
 and the St. Joseph School program;
 listening, technical devices, and teaching
 methods, discussing sensory aids and
 computers, reading and listening effi-
 ciency for braille and large type readers;
 and reports, considering philosophy of a
 preschool program, services for pre-
 school children, library services, enrich-
 ment, and conference plans. Association
 business and reports are included. Con-
 vention officers, committees, workshops,
 personnel, exhibitors, past meetings, and
 a brief history of the AAIB are listed.
 (JD)

ABSTRACT 22615

EC 02 2615 ED N.A.
 Publ. Date 61 239p.

Cowen, Emory L. And Others
**Adjustment to Visual Disability in
 Adolescence.**

Rochester University, New York
 EDRS not available
 American Foundation For The Blind,
 15 West 16th Street, New York, New
 York 10011 (\$4.50 HC, \$2.50 PB).

Descriptors: exceptional child research;
 adolescents; visually handicapped; ad-
 justment (to environment); parent atti-
 tudes; parent child relationship; mother
 attitudes; measurement instruments;
 measurement techniques; day schools;
 residential schools; sex differences; fath-
 ers; prediction; self concept; attitude
 tests

After instruments and techniques were developed, the study collected data concerning adjustment, parental attitudes, and parental understanding of visually handicapped adolescents and sighted adolescents. Results showed no differences in adjustment among the larger groups of visually handicapped in day schools, visually handicapped in residential schools, and sighted controls; no overall significant differences among subgroups in larger visual disability samples concerning relation between degree of disability and adjustment; sex differences in adjustment only in residential sample where males were better adjusted; no differences among mothers' attitudes about child rearing, authoritarianism, minority groups and blindness; low correlations between maternal attitude and child adjustment; largest number of significant attitude-adjustment correlations occurred in residential sample; attitude measures did not relate to adjustment indices; no differences among mothers on understanding; strong relationships between maternal understanding and child adjustment; relationships between maternal attitude and maternal understanding did not exceed chance; basic relationships among variables of mothers were evident in fathers. A multiple regression formula for prediction of good adjustment as reflected by the self concept measure was developed. Indices related to a cluster of variables reflecting good adjustment and healthy parent-child relationships were identified. Additional findings are noted. (MS)

ABSTRACT 22741

EC 02 2741 ED 039 683
 Publ. Date Dec 69 79p.

Flannagan, Clara H. Robertson
A Concentrated Mobility and Orientation Approach for the Improvement of Education for Partially Seeing and Blind Children in Day School Settings. Final Report.

Kansas State Department Of Education, Topeka, Division Of Special Education Office Of Education (DHEW), Washington, D. C., Bureau Of Education For The Handicapped

EDRS mf,hc
 OEG-32-26-0000-1013
 BR-5-0963

Descriptors: exceptional child research; visually handicapped; visually handicapped mobility; consultation programs; visually handicapped orientation; blind; partially sighted; teaching methods; demonstration projects

An interdistrict project provided a mobility and orientation instructor to work with blind and partially sighted children. The instructor was also involved in consultation and cooperative planning with school personnel and in resource room programs. Training was given to 36 children, 15 of whom required formal instruction. Services were extended in various areas. Results were positive and demonstrated the need for mobility and orientation instruction beginning in infancy and continuing throughout the school years. (JD)

ABSTRACT 22796

EC 02 2796 ED N.A.
 Publ. Date Mar 70 149p.

Clark, Leslie L., Ed.
Research Bulletin.
 American Foundation For The Blind, New York, New York

EDRS not available
 Research Bulletin; N20 P1-149 Mar 1970

Descriptors: exceptional child research; deaf blind; visually handicapped; blind; teaching methods; special schools; itinerant teachers; resource centers; resource teachers; elementary grades; regular class placement; sociometric techniques; interpersonal relationship; social relations; social integration; socialization; reading; bibliographies; reading speed; media research; equipment; Sweden

Three research reports contained in this issue are: A Descriptive Study of Blind Children Educated in the Itinerant Teacher, Resource Room, and Special School Settings by the Very Rev. Richard M. McGuiness, the Sociometric Status of Visually Handicapped Students in Public School Classes by Stephen J. Havill, and Results of Effect of Window Size on Visual Reading Speed by Benjamin W. White. Also included are an article on Socialization and Segregated Education by Irving F. Lukoff and Martin Whiteman and the references and bibliography from The Influence of Vision Training Upon the Subsequent Reading Achievement of Fourth Grade

Children by Charles B. Huelsman, Jr. Additional items included are information on activities for the deaf-blind in 1968 in Sweden; description of a Swedish research project on the learning situation of the blind; equipment for the blind; and publications of note. (MS)

ABSTRACT 22926

EC 02 2926 ED N.A.
 Publ. Date 59 83p.

Axelrod, Seymour
Effects of Early Blindness: Performance of Blind and Sighted Children on Tactile and Auditory Tasks.
 EDRS not available

American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$1.00).

Descriptors: exceptional child research; visually handicapped; sensory experience; tactual perception; auditory discrimination; research reviews (publications); task performance; stimulus generalization

The study investigated the effects of blindness on functioning in the remaining sense modalities. Eighty-two school aged children with blindness of early onset (18 months or earlier) were matched for chronological age and mental age with 82 sighted children and were used in the study of light touch and two-point thresholds on fingers of the preferred hand, performance on two complex tactile tasks and one complex auditory task involving the ability to derive relationships among stimuli presented, the ability to transfer a solution from a problem presented in one sense modality to its analogue presented in another, and the relationship between tactile thresholds and complex tactile test performances. Results indicated that early-blind subjects did have lower two-point limens than sighted subjects on the index finger; early-blind subjects performed significantly less well than sighted subjects; and late-blind subjects did not differ significantly from sighted subjects on either the abstraction or matching tests. The theories of compensation and that blindness causes a generalized use of limens were not supported. (LE)

ABSTRACT 23029

EC 02 3029 ED N.A.
 Publ. Date Mar 61 55p.

Norris, Miriam
The School Age Blind Child Project.
 EDRS not available
 American Foundation For The Blind, 15 West 16th Street, New York, New York 10011 (\$.70).

Descriptors: exceptional child research; visually handicapped; environmental influences; learning processes; followup studies; emotional problems; learning experience; evaluation; educational experience; early experience; family relationship; adjustment (to environment)

The purpose of the followup study of 62 blind children in the intensive group of

the University of Chicago and of other blind children also studied as preschoolers was to further understanding of the young blind child. Data were collected in the areas of continued evaluation of the child's experiences and relationships within the family, evaluation of the child's experiences and relationships in school, and evaluation of the child's experiences and relationships in the community. Seventy-one percent of the children were making satisfactory progress in school but the remainder had learning problems, some so severe that they were placed in residential programs for the blind, residential programs other than schools for the blind, and day school programs. Many of the learning problems resulted from emotional disturbances. The project suggests that defects usually attributed to blindness are related primarily not to the physical handicap but to limitations in the opportunity for learning which are experienced by the child. Rating scales and data collection forms are included. (LE)

ABSTRACT 23057

EC 02 3057 ED N.A.
 Publ. Date 55 109p.

Mackie, Romaine P.; Dunn, Lloyd M.
Teachers of Children Who are Blind.
 Office Of Education (DHEW), Washington, D. C.

EDRS not available
 Superintendent Of Documents, U. S. Government Printing Office, Washington, D. C. 20402 (\$.40).

Descriptors: exceptional child research; visually handicapped; professional education; teacher background; teacher characteristics; teaching skills; teacher evaluation; special education teachers

The study, part of a larger nationwide study on the Qualification and Preparation of Teachers of Exceptional Children, reports on the distinctive competencies and experiences needed by teachers of blind children. The findings include a statement of competencies needed by teachers as determined by a committee of seven leaders in the education of the blind. A series of inquiry forms gathered opinions from 201 special educators (100 superior classroom teachers of the blind, 56 state and 45 local directors and supervisors of special education), which are reported. The list of competencies are evaluated by the 100 teachers, and a comparison is made of competencies described by committee members and those rated by the teachers. Also included is an appraisal of the effectiveness of some inservice teachers of the blind (by the teachers themselves and by supervisors of special education), an evaluation of professional experiences needed, a summary of findings, and some implications for planning and additional research. Appendixes include information related to the larger study on the preparation of teachers of exceptional children, information about the 100 teachers of the blind queried, information on statistical procedures and results, and excerpts from inquiry forms. (KW)

ABSTRACT 23331

EC 02 3331 ED N.A.
 Publ. Date Oct 65 19p.
 Pitman, Derek J.

The Musical Ability of Blind Children.

Vocational Rehabilitation Administration (DHEW), Washington, D. C.

EDRS not available

VRA-RD-1407-S

American Foundation For The Blind, 15 West 16th Street, New York, New York 10011.

Research Bulletin No. 11, October 1965, Pp. 63-80.

Descriptors: exceptional child research; music; visually handicapped; ability; ability identification; testing

The musical ability and general ability of a group of 90 blind children (ages 8 to 11) and a matched group of 130 sighted children was measured by the Wing Test of Musical Intelligence and the Murray Test of English Attainment. An indication of the musical ability of blind children compared to sighted children and a comparison of general and musical intelligence in the blind children were sought. Results showed that the sighted group excelled significantly (p less than .01) in English attainment and that the blind group was significantly superior (p equals .05) in music. This superiority was in two tests of the Wing Battery where perception was of particular importance. Perhaps the musical ability of the blind children may have been better developed because of the blind's dependence on aural communi-

cation rather than on abilities in other areas such as English. (CG)

ABSTRACT 23339

EC 02 3339 ED 010 274
 Publ. Date 66 166p.

Birch, Jack W. And Others

School Achievement and Effect of Type Size on Reading in Visually Handicapped Children.

Office Of Education (DHEW), Washington, D. C.

EDRS mf,hc

OEC-4-10-028

CRP-1766

Descriptors: exceptional child research; visually handicapped; partially sighted; large type materials; reading materials; reading skills; elementary school students; demography; visual acuity; academic achievement

To study school achievement to establish criteria for type size to be used, data was collected on an original sample of 1,084 partially sighted children in grades 5 and 6, and five equivalent forms of a standardized test containing school-like reading tasks, each form in a different type size, were administered. A best size type for each child was determined. A standardized achievement test in appropriate type sizes was then administered, additional data collected, and a statistical analysis performed. Results and conclusions relative to demographic data, intelligence, visual acuity, reading speed and comprehension, school achievement, reading distance, type size, and

relationships of certain disabilities and selected educational variables are presented. Stated are implications for special education practices, vocational rehabilitation, teacher education, and research. A separate summary of the project accompanies the text. (KW)

ABSTRACT 23470

EC 02 3470 ED 041 431
 Publ. Date Feb 70 42p.

Foulke, Emerson; Robinson, Jacques

The Development of Accelerated Speech as a Useful Communication Tool in the Education of Blind and Other Handicapped Children. Progress Report.

Louisville University, Kentucky, Perceptual Alternatives Laboratory Office Of Education (DHEW), Washington, D. C., Bureau Of Research

EDRS mf,hc

OEG-0-8-071254-3527(032)

BR-7-1254

Descriptors: exceptional child research; visually handicapped; speech compression; research projects; blind; handicapped children; time factors (learning); interval pacing; listening comprehension

As part of the compressed speech project, a research institute and laboratory were established. Research was completed concerning aural tests and the use, methods, and variables of compressed speech. Research in progress involved the same areas. In addition, a new speech compressor was utilized, and reports of a conference and various other activities were presented. (JD)

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