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ABSTRACT

The annotated bibliography on research concerned with the aurally handicapped contains approximately 100 abstracts and associated indexing information for documents selected from the computer file of the Council for Exceptional Children's Information Center and published from 1965 to 1973. It is explained that the documents were chosen according to criteria of availability of document to user, current applicability, information value, author reputation, and classical content. Preliminary information explains how to read the abstract (a sample is included for identification of abstract parts), how to use the author and subject indexes, how to order documents through the ERIC Document Reproduction Service (EDRS), and how to order "Exceptional Child Education Abstracts" in which the abstracts were originally published. Also provided are a list of terms searched to compile the bibliography and a list of journals from which articles were abstracted. References included treat of aspects such as testing, identification, speech, visual learning, and school performance. (DB)

AURALLY HANDICAPPED-RESEARCH

A Selective Bibliography

November, 1973

CEC Information Center on Exceptional Children
ERIC Clearinghouse on Handicapped and Gifted Children
The Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091

Exceptional Child Bibliography Series No. 625

The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Prior to publication, the manuscript was submitted to The Council for Exceptional Children for critical review and determination of professional competence. This publication has met such standards. Points of view or opinions, however, do not necessarily represent the official view or opinions of either The Council for Exceptional Children or the National Institute of Education.

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With a grant from the US Office of Education, the CEC Information Center was established at The Council for Exceptional Children to serve as a comprehensive source of information on research, instructional materials, programs, administration, teacher education, methods, curriculum, etc. for the field of special education. The Center functions as the Clearinghouse on Exceptional Children in the Educational Resources Information Centers (ERIC) program and also as a member center in the Special Education IMC/RMC Network. In addition, the CEC Center's program includes a commitment to a concentrated effort towards the development of products which will interpret research results into educational methods and practices.

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The *Exceptional Child Bibliography Series* was initiated by the CEC Information Center to answer the need for rapid responses to specific requests for information. The volume of information requests received by the Center is analyzed and used as a guide in preparing special topic bibliographies in the field of exceptional child education. Abstracts contained in the bibliographies are drawn from the computer file of abstracts which represents the CEC Information Center's complete holdings as of the date indicated on each bibliography.

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Documents with an ED number and EDRS availability indicated may be purchased from the ERIC Document Reproduction Service (EDRS). For your convenience an order form is provided on the back cover of this bibliography.

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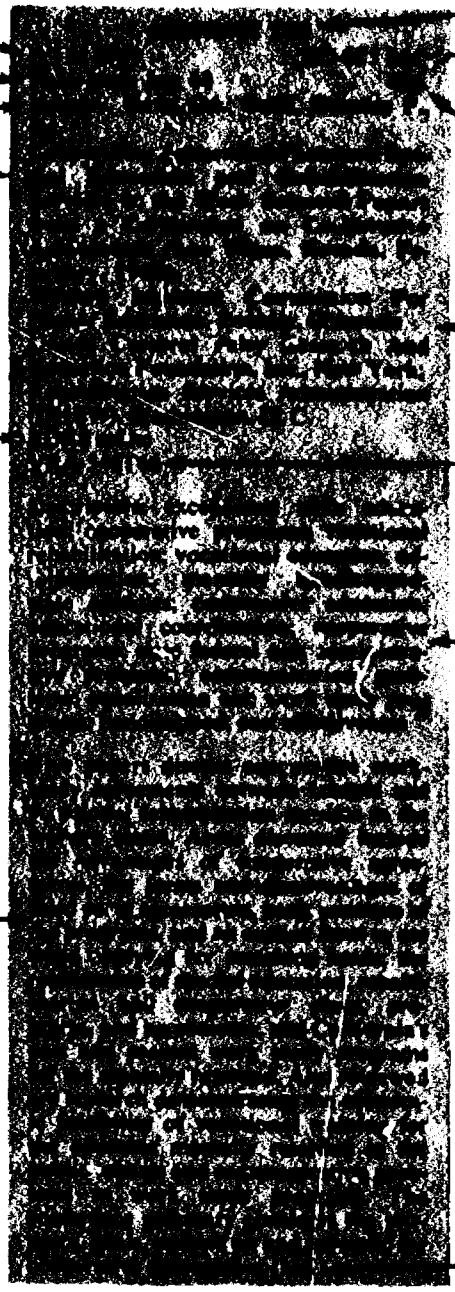

Clearinghouse accession number

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Author(s)

Title

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Summary

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Institution(s)

Contract or grant number

Descriptors—subject terms which
characterize content

Abstractor's initials

*NOTE: EDRS mf indicates microfiche reproduction only.

INDEXING TERMS SEARCHED

Indexing terms used to retrieve information on *Aurally Handicapped Research* from the Center's computer file of abstracts are listed alphabetically below:

Audiometric Tests
Audition (Physiology)
Auditory Evaluation
Auditory Tests
Aurally Handicapped
Cued Speech
Deaf
Deaf Education
Deaf Interpreting
Exceptional Child Research
Finger Spelling
Hard of Hearing
Hearing Aids
Hearing Loss
Hearing Therapists
Hearing Therapy
Manual Communication
Sign Language
Visible Speech

JOURNALS USED

Abstracts of articles from the following periodicals appear in this bibliography:

American Annals of the Deaf, 5034 Wisconsin Avenue, N.W., Washington, D.C. 20016

Child Development, 5801 Ellis Avenue, Chicago, Illinois 60637

Excpetional Children, Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091

Journal of Auditory Research, Box N, Groton, Connecticut 06340

Journal of Learning Disabilities, 5 North Wabash Avenue, Chicago, Illinois 60602

Journal of Rehabilitation of the Deaf, Box 125, Knoxville, Tennessee 37901

Journal of Special Education, Buttonwood Farms, Inc., 3515 Woodhaven Road, Philadelphia, Pennsylvania 19154

Journal of Speech and Hearing Disorders, American Speech and Hearing Association, 9030 Old Georgetown Road, Washington, D.C. 20014

Journal of Speech and Hearing Research, American Speech and Hearing Association, 9030 Old Georgetown Road, Washington, D.C. 20014

Teacher of the Deaf, 54 Northbrook Street, Berkshire, England

Volta Review, 3417 Volta Place, N.W., Washington, D.C. 20007

The abstracts in this bibliography were selected from *Exceptional Child Education Abstracts*, Volume I-V, No. 1.

ABSTRACT 10410

EC 01 0410 ED 013 000
Publ. Date 66 7p.
Furth, Hans G.
Development of Thinking in the Deaf; Implications for the Relation of Thinking and Language. Paper Presented at 1966 International Congress of Psychology.
Catholic Univ., Washington, D. C., Cent. Think. and Lang.
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; cognitive processes; deaf; language development; intellectual development; culturally disadvantaged; learning processes; children; concept formation; logical thinking; personality development

Based on experimentation examining the thinking capacities of deaf children, this paper reports findings about the relationship of ability to linguistic experience. Performance of deaf children on tasks involving concept formation and logical thinking was found to be comparable to that of matched hearing subjects when verbalization was not required. The deaf performed poorer on tasks based on verbal habits, and culturally deprived hearing children performed more like the deaf than like advantaged hearing children. The author concluded that intellectual and personality development are not dependent on linguistic competence but on exposure to real life situations. Language provides intellectual benefit during early development only if it is the means of intellectual stimulation. (HK)

ABSTRACT 10443

EC 01 0443 ED 014 836
Publ. Date 65 89p.
Bornstein, Harry
Reading the Manual Alphabet, a Research Program for Developing a Filmed Program for Teaching the Manual Alphabet.
Gallaudet College, Washington, D. C.
OEG-7-18-0070-180
EDRS mf,hc

Descriptors: exceptional child research; communication (thought transfer); aurally handicapped; programed instruction; deaf; manual communication; instructional films; adults; college students; educational research; finger spelling; programed materials

A programed film course was developed to teach persons how to read the manual alphabet. The effects of the following programing conditions were studied--manner of stimulus repetition, rate of stimulus presentation, and mode of response. The project was done in two phases. In the first phase, subjects were 42 deaf Gallaudet College preparatory students, 26 hearing faculty and staff members of the New Mexico School for the Deaf, and 14 hearing graduate students at Gallaudet. Their programs consisted of 17 lessons and two filmed tests. A relationship of .90 or above (with one exception) was obtained between pretest and posttest scores. Analysis of variance on scores from variations in rate of presentation and amount of repetition of the stimulus material for the preparatory students showed none of the experimental treatments were significantly effective, but there was an overall mean gain (statistically significant, p is less than .01) for reading words and for reading sentences. For the hearing faculty group and the graduate student group, differences in response method (oral, written, or manual) failed to achieve statistical significance. Improvement in reading words achieved statistical significance (p is less than .01) for both groups, but mean gain for reading sentences was not statistically significant for either group. The film course was judged an ineffective instructional tool. The second phase utilized a change in presentation and a revised, expanded film program (24 lessons) and two film tests. Forty-eight hearing college students served as subjects. Analysis of variance showed repetition was the only experimental treatment significantly affecting scores for words and for sentences (p is greater than .01 and less than .05). Data for both phases are presented tabularly. Appendixes include (1) captioned instructions and scripts for reading the film course and the two revised tests, and (2) copies of forms used for written responses. A reference list cites 12 items. (MK)

ABSTRACT 10450

EC 01 0450 ED 013 009
Publ. Date Jul 67 64p.
Silver, Rawley A.
A Demonstration Project in Art Education for Deaf and Hard of Hearing Children and Adults.
New York Society for the Deaf, New York
OEG-1-7-008598-2038
EDRS mf,hc

Descriptors: exceptional child research; art; aurally handicapped; deaf; hard of hearing; handicrafts; art education; employment opportunities; children; adolescents; adults; aptitude; interests; demonstration projects; questionnaires; aptitude tests; visual arts; Torrance Test of Creative Thinking

In order to assess aptitudes, interests, and vocational opportunities for the hearing impaired in the visual arts and to identify effective methods of teaching art, a group of 54 deaf and hard of hearing children and adults attended experimental art classes. Three rating scales and the Torrance Test of Creative Thinking were the instruments used to assess aptitude. Student interest was measured by questionnaires. Craftsmen, employers, and art school administrators completed questionnaires designed to measure vocational opportunities. Conclusions were (1) aptitude and interest in the visual arts is as high for the deaf as for the hearing, (2) a talented deaf person can succeed as a craftsman, (3) some people working with the deaf tend to underestimate the aptitudes, interests, and vocational opportunities for the deaf in the visual arts, and (4) art techniques and concepts can be conveyed to deaf students without the use of language. Questionnaire response tabulations are presented along with sample questionnaires and responses. Eleven references are cited. (MW)

ABSTRACT 10547

EC 01 0547 ED 023 248
Publ. Date Sep 68 26p.
Ross, Mark; Lerman, Jay
A Picture-Identification Test for Hearing-Impaired Children. Final Report.
Connecticut University, Storrs
Office of Education (DHEW), Washington, D. C., Bureau of Research
EDRS mf,hc
OEG-1-7-008038-0504
BR-7-8038

Descriptors: exceptional child research; aurally handicapped; tests; identification; hard of hearing; nonverbal tests; auditory discrimination; test reliability; correlation; word recognition; word lists; test results; deaf

The Word Intelligibility by Picture Identification Test (WIPI) was developed to measure speech discrimination ability in hearing impaired children. In the first phase of development, the word stimuli were evaluated to determine whether they were within the recognition vocabulary of 15 hearing impaired children (aged 6 to 12) and whether the pictorial representations of the words were adequate. The test was revised prior to the second phase to consist of 25 plates with six pictures on each plate, with only four of the pictures on each plate utilized as test stimuli. These four lists were given to 61 hearing impaired children (a mean age of 10-2 with a range from 4-7 to 13-9 years; a hearing level in excess of 30 decibels at one or more of the speech frequencies; and an average speech threshold of 52.2 decibels) on two separate occasions. There was a learning effect (p less than .01) for three of the lists in the 1- to 3-week interval between tests. The results indicate reliability coefficients in excess of .87 for all four lists, with mean differences of less than 3% and correlation coefficients between lists greater than .84. (Author/JD)

ABSTRACT 10682

EC 01 0682 ED 012 540
Publ. Date Jan 67 68p.
Silverman, Toby Rosalyn

Categorization Behavior and Achievement in Deaf and Hearing Children. Final Report.
EDRS mf,hc
OEG-32-42-0930-6030-P6-8024

Descriptors: exceptional child research; aurally handicapped; tests; language; cognitive processes; psycholinguistics; reading achievement; response mode; language development; achievement; academic achievement; pictorial stimuli; deaf; cognitive tests; cognitive development; cognitive ability; abstract reasoning; forced choice technique; classification; Triple Mode Test of Categorization

The Triple Mode Test of Categorization (TMT-CAT) was constructed and validated to measure three major modes of categorization postulated by Vygotsky; superordinate, functional, and associative. The TMT-CAT contains 131 test items which are pictures in forced choice pair comparisons. The child must indicate placement of a stimulus picture in one picture of the pair. This instrument, along with the Stanford Achievement Reading Test, was administered to 313 hearing children, 225 typically deaf, and 27 special class deaf children. With increasing age as well as increasing grade average, superordinate and associative responding decreased while functional responding increased in deaf children. For hearing children, the factors of grade average and modes of categorization were accompanied by increased superordinate responding, decreased associative responding, and stable functional responding. When deaf and hearing children were matched on reading achievement scores, all differences in categorization behavior disappeared. Vygotsky's model was partially confirmed by the results, which also suggested that the deficiencies in categorization behavior may contribute to deficient language performance in the deaf child. (Author/SN)

ABSTRACT 10320

EC 01 0920 ED 026 763
Publ. Date 68 40p.
Amcoff, Sven
Intelligibility of the Speech of Deaf Children.
Uppsala University, Sweden, Institute of Education
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; speech handicapped; communication (thought transfer); speech tests; speech evaluation; evaluation techniques; research reviews (publications); testing; listening comprehension; hearing loss; deaf; hard of hearing; speech skills; elementary school students; articulation (speech); educational experience

To develop a simple, inexpensive technique to quantify speech comprehension of pupils (aged 7 to 13) in special schools for the deaf, the verbal responses to pictures by 111 deaf pupils were judged for intelligibility by untrained listeners. Pupils were asked to identify 30 pictures; their taped replies were judged by listeners who wrote down what they thought they heard. The recording phase gave a measure of spoken vocabulary (SV) while the playback phase yielded a score for numbers of words correctly understood by the judges (UV). The ratio UV/SV gave a measure of speech comprehensibility (SC). Analysis of the data revealed that vocabulary and speech intelligibility increased with number of years in school (UV, p less than .001; SV and SC, p less than .005). Rank orders of speech quality were positively correlated with scales UV and SC; a moderate correlation existed between scales UV and SC and amount of residual hearing. The investigators concluded that judgment of speech intelligibility could be done reliably by untrained listeners, that quantity of speech production had little connection with speech comprehension within each grade, that results were similar for both understood vocabulary and speech comprehensibility, and that the magnitude of residual hearing is a poor predictor of both vocabulary and speech comprehension. (JB)

ABSTRACT 11154

EC 01 1154 ED 026 335
Publ. Date 66 8p.
Hiskey, Marshall S.
A Summary Report on the Revision and Restandardization of the Hiskey-Nebraska Test of Learning Aptitude.
Nebraska University, Lincoln, Educational Psychology Clinic
Vocational Rehabilitation Administration (DHEW), Washington, D. C.
EDRS mf,hc
VRA-RD1173-S

Descriptors: exceptional child research, aurally handicapped; tests; deaf; aptitude tests; intelligence tests; individual tests; test reliability; test validity; Hiskey Nebraska Test of Learning Aptitude; HNTLA

The revision of the Hiskey-Nebraska Test of Learning Aptitude (H-NTLA) was undertaken to modernize the test materials, to extend the test, and to provide up to date norms on deaf subjects and hearing subjects. The items considered for the revision were administered to normal hearing, deaf, and retarded subjects aged 3 to 17 years. Following the analysis, the retained items were grouped into 12 power subtests. Final samples contained 1,079 deaf children, mostly from schools for the deaf, and 1,074 hearing children, selected on the basis of parental occupation, over a 10-state area. Information is provided concerning normative, reliability, and validity data, and the performances of deaf and hearing children on other tests and on the H-NTLA. (MK)

ABSTRACT 11253

EC 01 1253 ED 026 797
Publ. Date Jan 68 39p.
Goldman, Ronald
Using the Initial Teaching Alphabet to Improve Articulation. Final Report.
Vanderbilt University, Nashville, Tennessee
Office of Education (DHEW), Washington, D. C., Bureau of Research
EDRS mf,hc
OEG-2-3252-0450-6011
BR-6-2417

Descriptors: exceptional child research; speech handicapped; speech therapy; auditory training; preschool children; research reviews (publications); visual discrimination; initial teaching alphabet; speech improvement; articulation (speech); auditory discrimination; visual stimuli; phonemics; instructional materials; parent participation; multisensory learning; auditory tests; phonetic analysis; phonetics

Twenty-four preschool children (aged 3-3 to 5-6) were studied to test the efficacy of newly developed phonemic-visual-oral materials in the correction of articulatory problems. All subjects were given an articulation test and a battery of five tests to measure auditory memory span and intelligence. Twelve children received 50 sessions of instruction, 1 hour long, using the new materials based on the Initial Teaching Alphabet and structured to cover auditory discrimination, sound sequencing, visual discrimination, phonemic synthesis and analysis, and rhyming. A control group of 12 was exposed to traditional articulation therapy procedure. The experimental group made significantly fewer errors in articulation after therapy than the control group based on the Goldman-Fristoe Filmstrip Articulation Test (p equals .05). No significant difference was found between groups in auditory memory skills and intelligence scores. Conclusions were that the experimental, visual-symbol approach has great potential in the modification of misarticulation. (RP)

ABSTRACT 11519

EC 01 1519 ED 029 419
Publ. Date Jul 68 33p.
Lowell, Edgar L.
Home Teaching for Parents of Young Deaf Children. Final Report.
John Tracy Clinic, Los Angeles, California
Office of Education (DHEW), Washington, D. C., Bureau of Education for the Handicapped
EDRS mf,hc
OEG-32-14-0000-1014
BR-5-0362

Descriptors: exceptional child research; aurally handicapped; parent education; teaching methods; program evaluation; preschool children; deaf; language instruction; rating scales; tutoring; parent attitudes; language development; speech clinics; Boone Infant Speech and Language Development Scale; John Tracy Clinic

To explore and evaluate the feasibility of providing language instruction to parents of young deaf children in a home-like environment, a demonstration home was established at a clinic. Parents were invited to attend weekly meetings which were reduced to 1/2 hour in length during the course of the project. Parents could bring other siblings, family members, and materials from their own home. A

single tutor worked with each family in separate rooms in language building activities. Fifty-two families who visited the demonstration home for 10 weekly visits were compared with 25 families who were enrolled in the John Tracy Clinic traditional service program. Language development in the children was assessed with the Boone Scale and changes in the parents' information and attitudes were assessed by scales previously developed at the Clinic. The language scales were too unreliable to be satisfactory, but all showed substantial gains for the demonstration home children. The parent information scores showed that the demonstration home parents did slightly better than the control group of parents. There was no change in the parent attitude scales. Experience with the program was judged so satisfactory by the staff of John Tracy Clinic that the program is being continued as a Clinic function after the expiration of federal grant and has been extended to two similar branch programs. (RJ)

ABSTRACT 11539

EC 01 1539 ED 029 441
Publ. Date Dec 65 280p.
Stewart, Joseph L.
Effectiveness of Educational Audiology on the Language Development of Hearing Handicapped Children. Final Report.
Denver University, Colorado
Office of Education (DHEW), Washington, D. C.
EDRS mf,hc
OEC-SAE-9966 CRP-969
BR-5-0377

Descriptors: exceptional child research; aurally handicapped; preschool children; auditory training; testing; hearing aids; parent counseling; multisensory learning; language development; articulation (speech); nursery schools; hard of hearing; program evaluation; parent participation; speech skills; group therapy; preschool programs

Two groups of hard of hearing children entered educational audiology programs between the ages of 6 to 42 months. Of these, 12 children in a unisensory program (U-) and 16 in a multisensory program (M-) were evaluated for speech and language development after they had reached their fifth birthdays. Children in the experimental U-group were first tested for hearing and fitted with an aid, then were given auditory training at home and group therapy sessions. At age 3, they were evaluated for placement in an enriched nursery school program, which also trained them primarily through the auditory sense. Guidance and psychological counseling were provided for the parents. Results indicated that the U-group was markedly superior on all measures of speech and language acquisition, although less so on the Templin-Darley articulation test. On all other measures (mean length of responses, mean of five longest responses, number of one-word responses, number of different words, and structural complexity score), results for the U-group appeared to indicate the advisability of unisensory management. Findings suggested that U-management may be of most benefit to children whose residual hearing extends into the high frequencies and whose hearing losses are relatively flat. (JD)

ABSTRACT 11699

EC 01 1699 ED 030 254
Publ. Date Dec 68 57p.
Resta, Lillian C. R.
Identification, Assessment and Prediction of Reading Competency in Deaf Children. Final Report.
Lexington School for the Deaf, New York, New York
Office of Education (DHEW), Washington, D. C., Bureau of Research
EDRS mf,hc
OEG-32-42-0000-6032
BR-6-1203

Descriptors: exceptional child research; aurally handicapped; reading ability; reading skills; reading difficulty; abstraction levels; memory; visual discrimination; serial ordering; linguistic competence; tests; visual perception; cognitive processes

To investigate the underlying factors of visual discrimination, memory, rule abstraction, language, and serial ordering in reading success, 79 poor and 65 good deaf readers were administered a battery of tests. Poor readers were deficient in lower-order visual discrimination and memory abilities; higher-order visual discrimination skills were important to success for good readers. Higher-order rule abstraction skills were important for continued progress by the relatively successful readers; however, lower-order rule abstraction was important to successful visual discrimination at initial levels of reading for poor readers as well. Successful rule abstraction was significant at all levels of reading; and visual discrimination (visual search and sequencing) was significant to the advanced reader for the processing of higher-level printed text. Implications were that rule abstraction is important at all levels of the reading process, visual discrimination activities at prereading and higher reading levels should be re-evaluated, and investigation is needed to determine sentence structures that are obstacles to progress beyond intermediate levels of reading. (Author/RJ)

ABSTRACT 11851

EC 01 1851 ED 015 574
Publ. Date Nov 66 55p.
Withrow, Frank B.
The Development of a Receptive Communication Scale for Deaf Children.
Illinois School for the Deaf, Jacksonville

Office of Education (DHEW), Washington, D. C.
EDRS mf,hc
OEG-32-23-0000-1027

Descriptors: exceptional child research; tests; communication (thought transfer); aurally handicapped; deaf; manual communication; language tests; test construction; lipreading; adolescents; auditory evaluation; children; communication skills; deaf children; evaluation techniques; finger spelling; listening skills; rating scales; sign language

The Illinois Communication Scale was developed on 16mm color film to assess the receptive communication abilities of deaf children between 6 and 14 years. Forms were constructed to measure auditory reception, lipreading and listening, lipreading only, fingerspelling, and language of signs. Each form had five subparts: vocabulary, simple sentences, stories, narrations, and random sentences and phrases. The scale (with the exception of the first form which could not be administered as a group test) was given to 417 deaf subjects. Relationships between test results and age, number of years in school, IQ, achievement test scores, paragraph meaning scores, deafness of relatives, status of hearing loss, and school entrance age were investigated. Test results were compared with teacher ratings as a criterion measure. Two Varimax Rotated Factor Matrices were obtained from each of the two schools in the study. One used the subtests as a factor. Results indicated that the two lipreading forms were valid using the criterion of teacher ratings. However, the lipreading only form was not found to be significantly different from the lipreading and listening form. Elimination of the former was thus recommended. Performance on the fingerspelling and language of signs forms were more closely related to age, years in school, and achievement test scores than to teacher ratings. It was suggested that a better criterion for rating ability in fingerspelling and the language of signs be found since teacher ratings of these items were more highly correlated with age, years in school, and deafness of relatives than with performance on these items. Analysis of data indicated that subparts 1, 2, and 5 were evaluating the same factor and parts 3 and 4 another. It was recommended that parts 1, 2, and 5 be combined and that either part 3 or part 4 be eliminated. No reliability information is available as yet. Figures, tables, and test items are included in the appendixes. There are 6 references. (HK)

ABSTRACT 12008

EC 01 2008 ED 010 107
Publ. Date Dec 65 299p.
Stepp, Robert E.
A Feasibility Study to Investigate the Instrumentation, Establishment, and Operation of a Learning Laboratory for Hard-of-Hearing Children. Final Report.
Nebraska University, Lincoln, Extension Division
Office of Education (DHEW), Washington, D. C.
EDRS mf,hc
OEC-3-16-044 NDEA-VIIB-404
BR-5-1356

Descriptors: exceptional child research; aurally handicapped; programed instruction; lipreading; audiovisual instruction;

repetitive film showings; learning laboratories; evaluation; student teacher relationship; instructional films; audiovisual aids

Ten deaf and hard of hearing children, aged 5 to 8, were selected to test a self-instructional, self-operating system to develop lipreading skills. The system consisted of three study carrels, an 8-mm cartridge-loading sound motion picture projector, and an observation booth utilizing a one-way mirror. Twenty-five sound and color films stressing single-word, associated-word, and multiple-word instructional patterns, and a series of film tests to measure ability to lipread the vocabulary presented were produced. Each instructional pattern contained presentation, review, and response elements. The system was evaluated through student case histories consisting of nearly 1,000 observations. A second evaluation technique consisted of periodic filming of the reactions of the student while viewing the film and using it to produce a 16-mm split-frame production for studying the stimulus (teacher) and the response (student). The results showed that it is possible to establish a teacher rapport similar to that which currently exists in face-to-face teaching. (HS)

ABSTRACT 20983

EC 02 0983 ED 033 523
Publ. Date Sep 69 50p.
Academic Achievement Test Performance of Hearing Impaired Students, United States: Spring 1969. Data from the Annual Survey of Hearing Impaired Children and Youth.
Gallaudet College, Washington, D. C., Office of Demographic Studies
Office of Education (DHEW), Washington, D. C.
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; academic achievement; national surveys; statistical data; test validity; test reliability; age differences; deaf; hard of hearing; achievement tests; Stanford Achievement Tests

The objectives of the annual survey of hearing impaired children and youth which are presented are to collect, process, and disseminate statistical information on characteristics of all hearing impaired individuals through college age. One aspect of this work is described through results of the administration of the Stanford Achievement Tests (Form W) to about 12,000 hearing impaired children from 70 schools and 39 classes. a description of the tests, the methodology and sources of the data, and the qualifications and limitations of the data are included. Also provided are detailed tables of the results of the test batteries and a description of these tables. It was noted that the test results should be considered limited because the Stanford Achievement Tests were developed for hearing students. Appendixes include an annual census form, a description of the sub-tests of the Wechsler, and a list of participating schools. (JM)

ABSTRACT 21489

EC 02 1489 ED 034 367
Publ. Date Jun 69 100p.
Craig, William N.; Collins, James L.
Communication Patterns in Classes for Deaf Students. Final Report.
Pittsburgh University, Pennsylvania, School of Education
Office of Education (DHEW), Washington, D. C.
EDRS mf,hc
OEG-0-8-000640-1863(032)
BR-7-0640

Descriptors: exceptional child research; aurally handicapped; classroom communication; classroom observation techniques; interaction process analysis; student teacher relationship; age differences; communication (thought transfer); teaching methods; oral communication; manual communication

To develop a system for making systematic observations of classroom communicative interaction, to provide guidelines for its utilization, and to suggest applications of this system to problems in the development of communication skills, 94 deaf children were directly observed in class interaction. An evaluation instrument was developed from the Flanders system and employed 20 categories and 11 modes of description. Results showed that in all grade levels the majority of communication was teacher initiated, but that at higher levels there was a gradual increase in student response and initiation. Questioning and informing were the two most frequently observed categories used by teachers in both language-dependent and specialized instruction; these categories were also the ones used most frequently by students in initiating communication. The oral mode was predominant at primary and intermediate levels in the day and residential schools in which data was gathered, but non-oral modes increased noticeably on the high school level in the residential school but not in the day school. Suggestions were that this instrument be used in further research in an effort to adjust the behavior of students and teachers. (JM)

ABSTRACT 21792

EC 02 1792 ED N.A.
Publ. Date Feb 65 5p.
Anderson, Duane
The Effect of Climate on the Incidence of Hearing Loss.
EDRS not available
Journal of Speech and Hearing Disorders; V30 N1 P66-70 Feb 1965

Descriptors: exceptional child research; medical evaluation; hearing loss; auditory evaluation; etiology; incidence; aurally handicapped; climatic factors; environmental influences; Oregon

Results of the audiometric testing and medical diagnoses done on children in six Oregon counties were compared according to geographic region. Conductive type hearing losses were significantly more prevalent in the coastal regions, which receive greater annual rainfall. The drier eastern part of the state had a higher incidence of sensorineural type hearing loss, suggesting a link between the type of loss and the significantly higher rate of encephalitis antibodies observed in the sera there. (Author/MK)

ABSTRACT 21846

EC 02 1846 ED N.A.
Publ. Date May 70 8p.
Moores, Donald F.
An Investigation of the Psycholinguistic Functioning of Deaf Adolescents.
EDRS not available
Exceptional Children; V36 N9 P645-52 May 1970

Descriptors: exceptional child research; aurally handicapped; psycholinguistics; reading ability; reading achievement; cloze procedure; adolescents; language development

The ability of cloze procedures to assess morphologico-syntactic and semantic differences between deaf and hearing groups matched on reading achievement scores was investigated. The experimental group consisted of 37 students, average age 16-10, mean grade reading score 4.77 on the Stanford Achievement Test, attending a residential school for the deaf. The control group, 37 fourth and fifth grade hearing children, had a mean reading score of 4.84 and an average age of 9-10. Passages of 250 words were developed from fourth, sixth, and eighth grade textbooks. The performance of the hearing subjects was superior on all measures for each passage, supporting the thesis that standardized tests spuriously raise estimates of reading ability of the deaf and that the relative inferiority of the deaf can be traced to both grammatical and semantic inadequacies. The sensitivity of cloze procedures to these factors was established and future applications of the technique discussed. (Author)

ABSTRACT 21985

EC 02 1985 ED 035 998
Publ. Date Jun 69 106p.
Quigley, Stephen P.
The Influence of Fingerspelling on the Development of Language, Communication, and Educational Achievement in Deaf Children.
Illinois University, Urbana, Institute for Research On Exceptional Children
Rehabilitation Services Administration (DHEW), Washington, D. C.
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; finger spelling; language development; communication skills; manual communication; oral communication; sign language; language ability; reading ability; academic achievement; deaf; teaching methods; Rochester Method

Two studies were made of the Rochester Method of combining fingerspelling with speech and of its effects on development of language and communication in profoundly, prelingually deaf children. A survey tested school performances of 200 subjects from six residential schools for the deaf, three of which used the Rochester Method and three which used

various combinations of oral and manual communication methods. An experimental study compared two matched groups of 16 deaf children, one using the Rochester and the other the oral method, after 4 years on measures of language and communication. The survey showed children using the Rochester Method were superior on mersures involving meaningful language. The experimental study also indicated that those using the Rochester Method exceeded the other on reading, written language, and speechreading abilities. It was thus concluded that the Rochester Method can lead to higher scholastic achievement, need not deter acquisition of oral skills, and is more beneficial when started with younger children. (JB)

ABSTRACT 22158

EC 02 2158 ED N.A.
Publ. Date May 70 9p.
Thomas, Ian B.; Snell, Ronald C.
Articulation Training through Visual Speech Patterns.
EDRS not available
Volta Review; V72 N5 P310-8 May 1970

Descriptors: exceptional child research; aurally handicapped; articulation (speech); speech therapy; teaching methods; auditory perception; visual stimuli

The testing and evaluation of a machine which provides a real-time visual display of first versus second formant frequencies is described. In a pilot test, hearing subjects were trained to identify visual patterns corresponding to 20 monosyllabic English words enunciated by a male speaker. An average identification score of 97% was obtained by five subjects after a training period of less than one hour. Subsequently, three profoundly deaf male subjects attempted, during training periods of two or three hours, to match visual patterns corresponding to 16 correctly articulated monosyllabic English words. The intelligibility of the words spoken by the deaf subjects after training was found to be considerably higher than the intelligibility of the same words recorded prior to training. (Author)

ABSTRACT 22438

EC 02 2438 ED 033 833
Publ. Date 67 68p.
Flowers, Arthur; Crandell, Edwin W.
Relations Among Central Auditory Abilities, Socio-Economic Factors, Speech Delay, Phonic Abilities and Reading Achievement: A Longitudinal Study.
Grand Blanc Community Schools, Michigan
Office of Education (DHEW), Washington, D. C., Bureau of Research
EDRS mf,hc
OEG-3-6-068313-1569
BR-6-8313

Descriptors: exceptional child research; speech handicapped; academic achievement; auditory evaluation; auditory perception; auditory tests; language handicapped; longitudinal studies; phonics; reading achievement; socioeconomic background

Three auditory perceptual processes (resistance to distortion, selective listening in the form of auditory dedifferentiation, and binaural synthesis) were evaluated by five assessment techniques: low pass filtered speech, accelerated speech, competing messages, accelerated plus competing messages, and binaural synthesis. Subjects were 287 kindergarten students who were divided into speech-delayed and normal speaking subsamples. Twenty-five stimulus sentences for each of the five tests were taped under carefully controlled conditions and presented on a 1 to 1 basis in a sound-treated room. The children responded to spoken sentences by pointing to one of three pictures intended to represent the word which completed the sentences. A longitudinal analysis was made of the relationship between performance on these central auditory ability measures and first- and second-grade academic achievement, IQ, phonic ability, family socioeconomic status, and spontaneous speech improvement. The Gates Primary Reading Tests, the Stanford Achievement Test (Primary I and II), the Peabody Picture Vocabulary Test, and the Templin-Darley Screening and Diagnostic Tests of Articulation were among the testing measures used. All 132 correlation coefficients obtained for academic achievement were statistically significant. Many other significant correlations were found. Tables and references are included. (CM)

ABSTRACT 22742

EC 02 2742 ED 039 684
Publ. Date Aug 69 202p.
Taylor, Louise Todd
A Language Analysis of the Writing of Deaf Children. Final Report.
Florida State University, Tallahassee, Department of English
Office of Education (DHEW), Washington, D. C., Bureau of Education for the Handicapped
EDRS mf,hc
OEG-4-9-192057-0009-032
BR-19-2057

Descriptors: exceptional child research; aurally handicapped; language development; written language; generative grammar; deaf; transformation generative grammar; child language; language usage; sentence structure; language patterns; syntax; composition skills (literary)

Samples of written language were collected from 140 congenitally deaf children at grade levels 3, 5, 7, and 9. The samples were then subjected to error, quantitative, and transformational analysis. Findings suggested a relationship between the order in which the deaf child acquires the rules of his language and the ordering of rules in a theoretical description of the generative process, with rules occurring early in the generative process generally being acquired earlier than rules occurring later. Furthermore, the order in which the deaf child acquired rules seemed similar to that observed in much younger hearing children. In the early stages of language development both hearing and deaf children reduced the frequency of errors in their writing more quickly than in later stages. Other findings suggested that, although the levels of performance of deaf and hearing differed markedly, differences in rate of development were not great. (Author/JD)

ABSTRACT 22809

EC 02 2809 ED N.A.
Publ. Date May 66 13p.
Goetzinger, C. P.; and Others
A Study of the S.O. Rorschach with Deaf and Hearing Adolescents.
EDRS not available
American Annals of the Deaf; V111 N3 P510-22 May 1966

Descriptors: exceptional child research; aurally handicapped; personality; tests; cognitive processes; adolescents; personality tests; cognitive tests; personality assessment; personality studies; comparative testing; sex differences; behavior patterns; Structural Objective Rorschach Test (SORT)

The Structural Objective Rorschach Test (SORT) was used to compare the responses of deaf and hearing adolescents, to determine whether differences were reasonably in accord with past research, and whether the results furthered exploration of the deaf with the SORT. Two groups of subjects were used, one deaf (12 males and 12 female, median age 18, median period of attendance at the school for the deaf 12 years) and one with normal bilateral hearing (12 male and 12 female, otherwise chosen randomly). All subjects were required to have no mal vision. The SORT, which requires 10 responses to 10 cards, was administered individually using the standard Rorschach Inkblots, the Preliminary Non-Illustrated Edition of the test stimuli, and standard response sheets. Its advantages in use with deaf students were that spontaneous language was not required (the subject chose responses from triads) and that the response items in large measure were single words, or, at most, short phrases. Results concerning mental functioning showed that the deaf were inferior to the hearing in theoretical function, and in inductive reasoning, but superior to them in practical function and structuring; no differences were found in interest range and human relationships; on the Popular Attribute the deaf gave more original responses than the hearing; concerning Temperament Attributes, the deaf manifested higher aggression, less cooperation, above average tendencies in consistency of behavior, less anxiety, and less conformity than the hearing subjects (despite the significant differences, however, the deaf deviated from the normal range in only one instance); females were significantly more rigid, less persistent, and more socially aware than males. Two tables and one graph present data. (SN)

ABSTRACT 22976

EC 02 2976 ED N.A.
Publ. Date Sum 70 7p.
Lowenbraun, Sheila; Affleck, James Q.

The Ability of Deaf Children to Use *Syntactic Cues in Immediate Recall of* Speechread Material.
EDRS not available
Exceptional Children; V36 N10 P735-41 Sum 1970

Descriptors: exceptional child research; aurally handicapped; language instruction; recall (psychological); oral expression; lipreading; sentence structure

A study investigated the ability of profoundly deaf children, CA 6-0 through 13-11, to use grammatical cues in the oral reproduction of speechread material. Shifting patterns of significant results on the indicator variables of number of omissions, additions, substitutions, and word order reversals; correct reproduction; and length of production proved in part the hypothesis that grammatical structure influences the ability to reproduce speechread material. (Author)

ABSTRACT 23311

EC 02 3311 ED N.A.
Publ. Date 70 5p.
Pfau, Glenn S.
Reinforcement and Learning--Some Considerations with Programed Instruction and the Deaf Child.
EDRS not available
Volta Review; V72 N7 P408-12 Oct 1970

Descriptors: exceptional child research; aurally handicapped; programed instruction; adolescents; reinforcement; feedback; learning; deaf

An investigation was conducted to determine the influence of different types of immediate reinforcement upon programed learning by severely hearing impaired adolescent deaf students. A group of 208 subjects, aged 11 to 16 years, from three schools for the deaf, were asked to learn ten different animals by means of a program of instruction under varying conditions of immediate feedback. Results indicated that the type of immediate reinforcement had little effect upon errors either within, or at the termination of, the program. Findings and implications are discussed as related to classroom instruction. (Author/KW)

ABSTRACT 23372

EC 02 3372 ED N.A.
Publ. Date Jun 70 6p.
Abbs, James H.; Smith, Karl U.
Laterality Differences in the Auditory Feedback Control of Speech.
EDRS not available
Journal of Speech and Hearing Research; V13 N2 P298-303 Jun 1970

Descriptors: exceptional child research; aurally handicapped; auditory discrimination; feedback; auditory perception; electronic equipment; articulation (speech)

Proceeding from prior experimental evidence that better speech-sound identification most often occurs with right-ear presentation, an experiment was conducted to test for differences in speech production with right-ear and left-ear auditory feedback of one's own speech. A hybrid-computer system and techniques of experimental programing were employed to control the intervals of aural delay. Presentation of delayed auditory feedback to the right ear during speech, with white noise masking the left ear, resulted in a significantly greater number of articulatory errors than did delayed feedback to the left ear with white noise masking the right ear. With a measure of total speaking time, however, similar differences between ears during delayed hearing were not found. The findings were interpreted as an indication of differences in aural function during auditory feedback control of speech. Such differences are consistent with aural laterality differences reported with speech identification. (Author)

ABSTRACT 23500

EC 02 3500 ED N.A.
Publ. Date Sep 70 4p.
Lawson, Lawrence J.; Myklebust, Helmer R.
Ophthalmological Deficiencies in Deaf Children.
EDRS not available
Exceptional Children; V37 N1 P17-20 Sep 1970

Descriptors: exceptional child research; aurally handicapped; ophthalmology; vision tests; visual measures

The ophthalmological status of school aged deaf children was studied with control of age, sex, type of school, and success in learning. The incidence of eye defects was twice that found for hearing children. These deficiencies were equally distributed by age and school but were not directly related to success in learning. It appears that children with deafness also tend to have defects in vision. However, the precise nature of the association between visual deficiencies and deafness is not clear. (Author)

ABSTRACT 23561

EC 02 3561 ED 042 294
Publ. Date Jun 68 53p.
Withrow, Frank B.; Brown, Donald W.
An Experimental Program of Language Development Using a Systematic Application of Audio-Visual Aids to Reinforce the Classroom Teacher's Program for Children with Impaired Hearing. Final Report.
Illinois School for the Deaf, Jacksonville

Office of Education (DHEW), Washington, D. C., Bureau of Research
EDRS mf,hc
OEG-6-19-074

Descriptors: exceptional child research; aurally handicapped; language development; audiovisual instruction; lipreading; instructional films; teaching methods; program descriptions; Illinois Communication Scale

Three hundred and six 8mm cartridge-type films were produced to provide deaf children instruction in and practice with noun vocabulary, question forms, prepositions, and speechreading. Films were placed in 12 classes. Method of presentation and time spent was determined by individual teachers, most of whom had attended a three-day orientation workshop. Group I, consisting of 38 children (*median age 8.6*) worked with the projectors and language films similar to but not a part of the experimental films for one year. Group II (43 children, median age 7.6) used the experimental films for one year. Group III (29 children, median age 6.6) used both groups of films during two years. To determine progress in speechreading ability, the Illinois Communication Scale (Form B) was administered to each class before and after each year. Group III showed a 50% improvement in speech reading ability over the two years. Group I improved 21.74% while Group II showed 12.00% improvement. Reasons suggested for this are differences in intelligence, previous education, and age, and greater similarity than had been thought between the experimental and non-experimental films. The major criticism related to content (unrelated noun vocabulary). Appendixes include the Illinois Communication Scale and the Evaluation questionnaire. (KW)

ABSTRACT 23565

EC 02 3565 ED 042 298
Publ. Date Dec 69 174p.
Scherer, Patricia A.
Visual Learning Processes in Deaf Children. Final Report.
Northwestern University, Evanston, Illinois
Office of Education (DHEW), Washington, D. C., Bureau of Education for the Handicapped
EDRS mf,hc
OEG-3-6-068664-1595
BR-6-8664

Descriptors: exceptional child research; aurally handicapped; reading; teaching methods; reading instruction; lipreading; deaf education; language development

To compare three processes for teaching deaf children to read, 54 deaf children (ages six, eight, and 10 years) were matched according to age, sex, hearing level, intelligence, socioeconomic level, and reading abilities, and were randomly assigned to one of three groups. Group A subjects were given a stimulus which consisted of the read form, the speechread form, and an illustrative picture. Group B presentation included only the read word and a picture. Group C subjects were given the read word and the speechread word. A filmed teaching machine procedure was used (10 presentations over two weeks). A battery of posttests measured changes in learning among 27 variables. Results showed Situation A superior to B on Sentence and Paragraph Comprehension in reading (no differences between B and C). Group A was superior to C in speechreading and error scores, indicating that all three cues (read form, speechread form, and picture) provided for most effective learning, and that speechreading is a noteworthy factor in learning to read. Appendixes include the film format, tests of word recognition, sentence comprehension, and paragraph comprehension, and a bibliography. (KW)

ABSTRACT 23591

EC 02 3591 ED N.A.
Publ. Date Mar 70 5p.
Odom, Penelope B. and Others

Coding Medium and Word Recall by Deaf and Hearing Subjects.
EDRS not available
Journal of Speech and Hearing Research; V13 N1 P54-8 Mar 1970
Descriptors: exceptional child research; aurally handicapped; memory; word recognition; fingerspelling; sign language; manual communication; stimulus behavior; response mode
Forty deaf subjects were compared with 40 fifth graders with normal hearing on the learning of 16 English words. Eight of the words had sign equivalents; eight did not. The task consisted of eight study-test trials. Analysis of the mean number of correct responses showed higher recall of signable than unsignable words. The deaf recalled all words better than the hearing, but this advantage was due primarily to the deaf's superior recall of the signable words. It was concluded that having a single sign equivalent for a word facilitated its recall. (Author)

ABSTRACT 30018

EC 03 0018 ED 043 144
Publ. Date May 70 6p.
Asp, Carl W.
The Effectiveness of Low-Frequency Amplification and Filtered-Speech Testing for Pre-School Deaf Children. Interim Report.
Tennessee University, Knoxville
Office of Education (DHEW), Washington, D. C., Bureau of Education for the Handicapped
EDRS mf,hc
OEG-0-9-522113-3330(032)
BR-52-2113
Paper Presented at the Meeting of the Acoustical Society of America (79th, Atlantic City, New Jersey, April 22, 1970).

Descriptors: exceptional child research; aurally handicapped; hearing aids; auditory training; preschool children

To evaluate the effectiveness of low-frequency amplification, three classrooms were equipped in an experimental design in which the teacher spoke simultaneously through two different amplifying systems, a low-frequency auditory training unit (Suvag I) and a conventional unit (Warren T-2). Thirty preschool deaf children were matched and assigned to either unit. The same type of output transducers were utilized for all the children. Teachers used the Verbo-tonal Method (primarily an auditory program) for habilitation. The low-frequency unit produced a greater acoustic response below 500 Hz. Hearing aids were selected that produced frequency responses similar to the training units (the Mini Suvag for children on the low-frequency unit, the Zenith Vocalizer II for the conventional unit). A Bruel and Kjaer test system was used to evaluate the training units and hearing aids. The Mini Suvag, capable of simultaneously driving a vibrator and a headset, had a greater low-frequency response. (KW)

ABSTRACT 30086

EC 03 0086 ED N.A.
Publ. Date Sep 70 6p.
Lach, Rosemary and Others
Early Speech Development in Deaf Infants.
EDRS not available
American Annals of the Deaf; V115 N5 P522-6 Sep 1970

Descriptors: exceptional child research; aurally handicapped; speech; infants; phonology; deaf, developmental vocabulary

The study recorded the phonological development of seven deaf children, initially aged 11 to 32 months, during the first year of a parent-guidance program emphasizing vocalization and optimal use of residual hearing. Tape-recorded samples of 30 vocalizations were periodically transcribed and analyzed. Results show that central vowels tended to predominate at all stages. Phonemes used by the children increased during training, though performance remained inferior to that of hearing children previously studied. Significant gains made through training indicate that early speech rehabilitation can be advantageous to the young deaf child. (KW)

ABSTRACT 30087

EC 03 0087 ED N.A.
Publ. Date Sep 70 10p.
Vernon, McCay; Koh, Soon
Early Manual Communication and Deaf Children's Achievement.
EDRS not available
American Annals of the Deaf; V115 N5 P527-36 Sep 1970

Descriptors: exceptional child research; aurally handicapped; manual communication; finger spelling; sign language; oral communication; social adjustment; academic achievement, communication skills; deaf

Research on the effects of fingerspelling and the language of signs on the educational and social development of deaf children is summarized. Reported is a study comparing deaf students who were exposed to manual communication from infancy with students exposed to oral communication alone (speech, speech reading, and amplification). Areas of comparison were academic achievement, communication skills, and psychological adjustment. It was found that the early manual communication students exhibited better overall educational achievement (including superiority in reading skills and written language). No differences were found in speech intelligibility and speech reading, or in psychological adjustment. It is concluded that early manual communication facilitates educational achievement and linguistic development, and does not hurt speech and speechreading skills or psychological adjustment. (KW)

ABSTRACT 30098

EC 03 0098 ED 043 172
Publ. Date Dec 69 38p.
Matkin, Noel D.
Analysis of a Recorded Test for the Measurement of Hearing in Children.
Northwestern University, Evanston, Illinois. Department of Communicative Disorders
Office of Education (DHEW), Washington, D. C., Bureau of Education for the Handicapped
EDRS mf,hc
OEG-0-8-080156-3526(032)
BR-8-0156

Descriptors: exceptional child research; aurally handicapped; audiometric tests; auditory evaluation; clinical diagnosis; tape recordings; preschool children; aural stimuli; auditory perception

To study the feasibility of using filtered environmental sounds as test stimuli to determine the auditory sensitivity of young children, a tape recorded test was prepared using environmental sounds which retain their identity when filtered. Twenty normal-hearing preschoolers and 40 hearing impaired children (20 with flat sensori-neural hearing losses, 20 with high frequency impairments) were evaluated during test and retest sessions. The sound test yielded auditory thresholds for both groups of subjects which were judged as valid and reliable as those obtained from pure tone testing. Further testing is recommended before the test's potential as a clinical tool is determined. (KW)

ABSTRACT 30512

EC 03 0512 ED 015 603
Publ. Date 66 132p.
Karlsen, Bjorn
Teaching Beginning Reading to Hearing Impaired Children, Using a Visual Method and Teaching Machines. Final Report.
Minnesota University, Minneapolis
Office of Education (DHEW), Washington, D. C.
EDRS mf,hc
OEG-7-33-0400-230
BR-1204
University of Minnesota Bookstore, Minneapolis, Minnesota 55455.

Descriptors: exceptional child research; aurally handicapped; reading materials; teaching methods; beginning reading; teaching machines; programed instruction; reading instruction; programed materials; Honeywell University of Minnesota Teaching Device (HUMID)

To teach beginning reading to hearing impaired children through visual presentations, the project designed and built a teaching machine, generated programs, and tested the system (Honeywell University of Minnesota Teaching Device or HUMID). Programs incorporated various techniques and new approaches. To test one of the programs with deaf and hard of hearing children, a group of 10 first graders and a group of 9 and 10 year old students from a remedial class were taught 34 programs. Control groups were also formed. Results of a test on the concepts of the programs showed the first grade experimental group scored significantly better (at the .01 level) than its control group; the remedial experimental group scored better (not significantly) than its control group. On standardized tests the first grade experimental group approached a difference of statistical significance with scores higher than

their control group, but no significant differences were found between the remedial experimental and control groups. Additional studies are reported. It was concluded that an automated system to teach reading non-orally can be developed and that teaching machines have a place in classrooms for the deaf. (MS)

ABSTRACT 30584

EC 03 0584 ED 044 001
Publ. Date 70 13p.
Boothroyd, Arthur
Sensory Aids Research Project--Clarke School for the Deaf.
Clarke School for the Deaf, Northampton, Massachusetts
EDRS mf,hc
Prepared for the Pre-Congress Symposium, Speech Communication Ability and Profound Deafness, International Congress of Education of the Deaf (Stockholm, Sweden, August, 1970).

Descriptors: exceptional child research; aurally handicapped; sensory aids; sensory training; hearing aids

Described is a program of research into sensory aids for the deaf, emphasizing research on factors involved in the effective use of sensory aids rather than evaluation of particular devices. Aspects of the program are the development of a programed testing and training unit, the control of fundamental voice frequency using visual feedback, and tactile stimulation using a wearable hearing aid. The experiments conducted in each of these three areas are detailed. (KW)

ABSTRACT 30838

EC 03 0838 ED 044 869
Publ. Date (69) 23p.
Quigley, Stephen P.; Thomure, F. Eugene
Some Effects of Hearing Impairment Upon School Performance.
Illinois University, Urbana, Institute for Research On Exceptional Children
Illinois State Office of the Superintendent of Public Instruction, Springfield, Division of Special Education Services
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; performance factors; academic achievement; regular class placement; hard of hearing; identification; student evaluation

To determine the effects of hearing impairment on school performance of students for whom no special educational provisions had been made, 116 students (ages 7 through 17 in public school grades 2 through 10) were evaluated for auditory impairment, IQ, and educational achievement. Findings of the study showed that even mild hearing impairment resulted in educational retardation. The study also indicated the need for early and improved screening for auditory handicaps, and the lack of educational provisions for the mildly impaired. (RD)

ABSTRACT 30851

EC 03 0851 ED N.A.
Publ. Date Dec 70 7p.
Craig, William N.; Collins, James L.
Communication Patterns in Classes for Deaf Students.
EDRS not available
Exceptional Children; V37 N4 P283-9 Dec 1970

Descriptors: exceptional child research; aurally handicapped; classroom communication; classroom observation techniques; interaction process analysis; student teacher relationship; Flanders Category System

In order to describe more objectively the classroom communication of deaf children, an instrument for making systematic observations of this communication was developed and tested. This technique, based on the Flanders category interaction analysis system, was adapted specifically for use with the deaf and included notations both for communication purposes and communication modes. When applied to 12 selected classes of deaf children (94 subjects) the instrument proved sensitiv to differences in classroom interaction and provided a systematic record of these communicative exchanges between the teacher and student and among students within classes. (Author)

ABSTRACT 31178

EC 03 1178 ED N.A.
Publ. Date Dec 70 10p.
Flynn, Pauline T.; Byrne, Margaret C.
Relationship Between Reading and Selected Auditory Abilities of Third-Grade Children.
EDRS not available
Journal of Speech and Hearing Research; V13 N4 P731-40 Dec 1970

Descriptors: exceptional child research; auditory perception; reading ability; socioeconomic influences; primary grades; auditory tests

The project studied auditory abilities of a selected group of advanced and retarded third-grade readers from high and low socioeconomic environments. Two general hypotheses were posed: advanced and retarded readers perform differently on auditory tasks; and socioeconomic environment affects auditory ability. A one-hour battery of auditory tests was administered to 39 third-grade children, all of whom were at least one year ahead or one year behind grade level in reading achievement. The research indicated that significant differences existed between advanced and retarded readers on the auditory tasks. Socioeconomic environment alone did not affect auditory ability. The advanced readers from both levels performed similarly, and so did the retarded readers. Significant differences were more frequently found when the groups had more widely divergent mean IQ scores. (Author)

ABSTRACT 31181

EC 03 1181 ED N.A.
Publ. Date Dec 70 9p.
Speaks, Charles and Others
Measurement of Hearing Handicap.
EDRS not available
Journal of Speech and Hearing Research; V13 N4 P768-76 Dec 1970

Descriptors: exceptional child research; aurally handicapped; audiometric tests; measurement techniques

The relation between Hearing Handicap Scale (HHS) scores and selected measures of both sensitivity loss and speech discrimination loss was studied on 60 hearing-impaired patients (five conductive, six mixed, and 49 sensorineural). Correlations of HHS with sensitivity indices were moderately high (about 0.65), in contrast to the low correlations (about 0.35) with measures of discrimination. Use of a new index that incorporates information about both sensitivity and discrimination yielded a correlation no higher than the sensitivity measures alone. (Author)

ABSTRACT 31184

EC 03 1184 ED N.A.
Publ. Date Dec 70 23p.
Tillman, Tom W. and Others
Hearing Aid Efficiency in a Competing-Speech Situation.
EDRS not available
Journal of Speech and Hearing Research; V13 N4 P789-811 Dec 1970

Descriptors: exceptional child research; aurally handicapped; hearing aids; auditory tests; auditory perception

Discrimination for monosyllabic words heard against competing sentences was measured at the same sensation level during unaided and aided listening using four types of subjects: normal hearers, conductive loss cases, nonpresbycusic sensorineurals, and presbycusics. Unaided measures, including SRT and monosyllabic discrimination, were obtained by sound field testing conditions; aided measures were obtained with the subject in a separate room wearing the hearing aid receiver and earmold while the hearing aids were mounted on an artificial head placed in the sound field test chamber. The main findings were that the hearing-impaired required more of an increase in SPL re performance in the sound field, to achieve spondee threshold via the hearing aid than can be accounted for by the difference in methodology alone, that intelligibility of monosyllabic words in quiet was somewhat poorer during aided listening than during unaided listening even though sensation level was held constant, that subjects with presbycusis and other sensorineural losses were less resistant to masking by competing sentences during unaided listening than were subjects with normal hearing or with conductive loss, and that all groups exhibited reduced intelligibility for a constant sensation level. (Author)

ABSTRACT 31186

EC 03 1186 ED N.A.
Publ. Date Dec 70 3p.
Weber, Bruce A.
Comparison of Two Approaches to Behavioral Observation Audiometry.
EDRS not available
Journal of Speech and Hearing Research; V13 N4 P823-5 Dec 1970

Descriptors: exceptional child research; audiometry; evaluation methods; aurally

handicapped; behavior; observation; behavioral observation audiometry

Thirty children below the age of six years were tested using two observers in behavioral observation audiometry (BOA). Observer 1 knew which sounds were being presented to the child; Observer 2 did not. Though Observer 2 was more conservative in his judgments of response, the two observers yielded similar test results. The results are interpreted as supporting the BOA modifications suggested by Weber (1969). (Author)

ABSTRACT 31235

EC 03 1235 ED N.A.
Publ. Date 68 311p.
Rosenberg, Sheldon, Ed.; Koplin, James H., Ed.
Developments in Applied Psycholinguistics Research.
EDRS not available
Macmillan Company, 866 Third Avenue, New York, New York 10022 ($8.95).

Descriptors: exceptional child research; psycholinguistics; language handicaps; language research; second language learning; aurally handicapped; aphasia; mentally handicapped; schizophrenia; conference reports

The text contains seven articles based on presentations from a summer institute in applied psycholinguistics sponsored by the department of psychology of the George Peabody College for Teachers. The topics discussed in the papers include the objectives and current status of applied psycholinguistics, the development of syntactic control in children, research on second-language learning, and language learning in relation to the deaf. Also described are studies on the grammar of aphasics, a disattention interpretation of schizophrenic language, and environmental factors in the language development of mentally handicapped children. A general overview of the collection is provided by Sheldon Rosenberg. (RD)

ABSTRACT 31366

EC 03 1366 ED N.A.
Publ. Date Feb 71 6p.
Chovan, William L.; McGettigan, James F.
The Effects of Vocal Mediating Responses on Visual Motor Tasks with Deaf and Hearing Children.
EDRS not available
Exceptional Children; V37 N6 P435-40 Feb 1971

Descriptors: exceptional child research; aurally handicapped; mediation theory; perceptual motor coordination; aural stimuli; memory; recall (psychological)

The research investigated the effects of vocal labeling on short-term memory with two MA levels of deaf and hearing children. The purpose of the investigation was to determine the nature of the interaction among vocal labels, age levels, and a design arrangement task. It was found that 6 year old deaf and hearing children performed the same while 9 year old hearing children showed better recall than their deaf peers, with and without vocal labels. For the deaf, vocal labeling tended to have an interfering effect at the older levels, in part because of the competing stimuli in vocal auditory and visual-motor responses. (Author)

ABSTRACT 31473

EC 03 1473 ED 046 208
Publ. Date 70 62p.
Babbini, Barbara E.; Quigley, Stephen P.
A Study of the Growth Patterns in Language, Communication, and Educational Achievement in Six Residential Schools for Deaf Students.
Illinois University, Urbana. Institute for Research On Exceptional Children
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-0-9-232175-4370
BR-23-2175

Descriptors: exceptional child research; aurally handicapped; academic achievement; communication skills; language ability; longitudinal studies; sex differences; reading ability; speech skills; lipreading; mathematics; finger spelling

Communication skills, language abilities, and educational achievement of 163 subjects from six residential schools for deaf students were studied. Subjects were tested yearly from 1963 to 1967 on speech reading, fingerspelling, speech intelligibility, reading achievement, arithmetic achievement, and written language. Both males and females and the combined group showed significant improvement in all areas except speech intelligibility, speechreading, and vocabulary usage. Females were consistently superior in receptive communication ability, reading achievement, and most language ability measures. No differences between the sexes were found any year in arithmetic ability, or in educational achievement in the last 2 years of the study. For both sexes, growth in educational achievement ranged from 1/3 grade per year in reading and language to 1/2 grade per year in arithmetic. In 1963, the average subject showed a battery median of four grades lower than the average nondeaf student. In 1967, battery medians were nearly 6 grades below the Stanford Achievement Test norms. (Author/KW)

ABSTRACT 31570

EC 03 1570 ED N.A.
Publ. Date Feb 71 15p.
Eachus, Todd
Modification of Sentence Writing by Deaf Children.
EDRS not available
American Annals of the Deaf; V116 N1 P29-43 Feb 1971

Descriptors: exceptional child research; aurally handicapped; behavior change writing skills; deaf; reinforcement

The effects of token reinforcement and verbal remediation on the rate, accuracy, and length of sentences written by ten deaf children were assessed. The subjects were fourth grade students in a residential school for the deaf. Forty-one experimental sessions, 50 minutes long, were run in which subjects wrote sentences. Subjects worked in the Mediated Interaction Visual Response System, each subject utilizing an overhead projector so that his writing was directly visible to facilitate immediate consequation. The results were felt to demonstrate that effective control was established over behavior. Instatement of reinforcement and remediation as consequences for appropriate composition established and maintained high response rates and high levels of accuracy. Reversal of the effects were obtained through withdrawal of the consequences and later reinstatement. Researchers felt the results of the experiment suggested that contingencies could be established and procedures developed which lead to the establishment and maintenance of sustained high output from deaf children. (Author)

ABSTRACT 31571

EC 03 1571 ED N.A.
Publ. Date Feb 71 5p.
Bornstein, Harry
Some Effects of Verbal Load on Achievement Tests.
EDRS not available
American Annals of the Deaf; V116 N1 P44-8 Feb 1971

Descriptors: exceptional child research; aurally handicapped; achievement tests; language ability; test evaluation

It was argued that the language used in multiple choice achievement test items should be no more complex than is necessary to test the examinee's knowledge of the subject matter. Excessive complexity might constitute a source of bias against people with limited verbal skills. A test of the hypothesis was made by comparing a simplified language version of STEP social studies test items against an original language form with 184 deaf Gallaudet preparatory students. The simplified language form was found to yield small but significantly higher scores than did the original language form. However, because the preparatory students were a relatively homogeneous group in their language skills, the relationships with other variables of interest were thought to be sharply reduced. It was not felt possible, therefore, to conduct an adequate test of differential relationships with grades and with reading comprehension. (Author)

ABSTRACT 31574

EC 03 1574 ED 046 210
Publ. Date Aug 70 489p.
Silverman-Dresner, Toby; Guilfoyle, George R.
The Deaf Child's Knowledge of Words: Volume I, Final Report.
Lexington School for the Deaf, New York, New York
Office of Education (DHEW), Washington, D. C., Bureau of Research
EDRS mf,hc
OEG-0-8-000419-1792
BR-7-0419

Descriptors: exceptional child research; aurally handicapped; vocabulary; word

recognition; vocabulary development; reading tests

To assess the reading vocabulary knowledge of deaf children, a vocabulary pool of 14,852 words was reduced to 7,300 words. These words were fed into a computer to produce 73 sets of 100 randomly selected words each. The 73 sets were converted into vocabulary tests which were randomly administered, two per child, to 13,207 deaf students, ages 7-17 years, in 89 schools for the deaf in the United States. Results indicated that girls, in general, seem to know more words than do boys, and that older children seem to know more words in common than do younger ones. The major portion of the report consists of a list of the 7,300 words, with definitions, and with the percentages of children in each of five age groups who knew the word. A summary of words known by 67% of deaf children at the various age levels is also presented. Appended are statistical characteristics, such as times administered and mean scores, of the 73 test forms, and statistics on the frequency of occurrence and percentage of correct responses for each of the 7,300 words for the total group of subjects and for just the 7-year-old subjects. Appended information continues in Volume 2 of the report (see EC 031 575), which includes an alphabetical list of the test forms and instructions to teachers for test administration. (Athor/KW)

ABSTRACT 31579

EC 03 1579 ED N.A.
Publ. Date Feb 71 5p.
Balow, Bruce and Others
Reading Comprehension Skills Among Hearing Impaired Adolescents.
EDRS not available
Volta Review; V73 N2 P113-9 Feb 1971

Descriptors: exceptional child research; aurally handicapped; reading comprehension; reading tests; reading skills; adolescents; time factors (learning); testing; New Developmental Reading Test; Metropolitan Reading Test

One hundred fifty-seven hearing impaired adolescents in Minnesota who attend residential schools or special day school programs for the hearing impaired were given two reading tests to determine their reading levels--the New Developmental Reading Test (NDRT) and the Metropolitan Reading Test (MRT). Comparisons made between scores of various age groups, ranging from age 13 to age 21 years, showed only limited improvement in the mean scores. Comparisons are made between scores obtained under standard time limits and under unlimited time conditions, and between literal reading comprehension skills and interpretive reading comprehension skills. The Literal Comprehension mean grade equivalent score was almost one full grade higher than the Creative Comprehension mean. Even unlimited time did not raise the inferential-interpretive reading ability to the level of the reading for specific factual information. On the NDRT, timed and unlimited scores on Creative Comprehension tests show little difference, but extended time improved the Literal Comprehension scores. Scores of the small group of mildly hearing impaired students were more than one grade above the same test means of the total sample. Good agreement was found between the mean vocabulary scores on the NDRT and MRT, but a higher mean score for General Comprehension is shown on the NDRT. (Author/KW)

ABSTRACT 31946

EC 03 1946 ED N.A.
Publ. Date Mar 71 7p.
Blake, Kathryn A. and Others
Paired Associate Rote Learning in Deaf and Hearing Subjects.
EDRS not available
Journal of Speech and Hearing Research; V14 N1 P106-12 Mar 1971

Descriptors: exceptional child research; aurally handicapped; paired associate learning; rote learning; memorizing

Ninety-two deaf and 92 hearing subjects were administered a four-pair and an eight-pair word-numeral task under three methods for demonstrating the correct pairs. On each task, the deaf and hearing groups did not differ in number of pairs learned. Neither did they respond differentially to the three methods. For both groups, the effects of the methods varied with task length. On the four-pair task, list-demonstration and item-demonstration were similarly effective, while both methods were more effective than no-demonstration; on the eight-pair task, list-demonstration was most effective, while item-demonstration and no-demonstration did not differ in effectiveness. (Author)

ABSTRACT 32424

EC 03 2424 ED 050 539
Publ. Date Jun 70 42p.
Additional Handicapping Conditions, Age at Onset of Hearing Loss, and Other Characteristics of Hearing Impaired Students--United States 1968-69: Data from the Annual Survey of Hearing Impaired Children and Youth.
Gallaudet College, Washington, D. C., Office of Demographic Studies
Office of Education (DHEW), Washington, D. C.
EDRS mf,hc
Gallaudet College Bookstore, Gallaudet College, Washington, D. C. 20002 ($1.00).

Descriptors: exceptional child research; aurally handicapped; demography; national surveys; statistical data; auditory perception; age groups; sex differences

Data contained in the report were collected by the Annual Survey of Hearing Impaired Children and Youth on 25,363 hearing impaired children enrolled in participating special education programs during the 1968-69 school year. Data describe the following characteristics of such children: additional handicapping conditions, age at onset of hearing loss, audiometric findings on hearing threshold levels, age, and sex. Seventy-nine schools and 63 special classes participated in the survey. The students for whom data are presented represent about one half of the total number of hearing impaired students receiving special educational services. In addition to presenting detailed statistical tables, qualifications and limitations of the data are pointed out. (KW)

ABSTRACT 32493

EC 03 2493 ED N.A.
Publ. Date Jun 71 4p.
Lloyd, Lyle L.; Price, Joan G.
Sentence Familiarity As a Factor in Visual Speech Reception (Lipreading) of Deaf College Students.
EDRS not available
Journal of Speech and Hearing Research; V14 N2 P291-4 Jun 1971

Descriptors: exceptional child research; aurally handicapped; lipreading

Deaf college students were used to determine quantitative sentence familiarity and lipreading values of the John Tracy Clinic Filmed Test of Lipreading (Taaffe, 1957). There was a low positive correlation between sentence familiarity and the lipreading values. The familiarity and lipreading values of the hearing-impaired subjects were compared with those previously obtained from normal-hearing college students (Lloyd, 1964; Taaffe, 1957). (Author)

ABSTRACT 32904

EC 03 2904 ED N.A.
Publ. Date Aug 71 9p.
Stark, Rachel E.
The Use of Real-Time Visual Displays of Speech in the Training of a Profoundly Deaf, Nonspeaking Child: A Case Report.
EDRS not available
Journal of Speech and Hearing Disorders; V36 N3 P397-409 Aug 1971

Descriptors: exceptional child research; aurally handicapped; speech improvement; deaf; visible speech; speech therapy; visual stimuli; expressive language

Real-time amplitude contour and spectral displays were used in teaching speech production skills to a profoundly deaf, nonspeaking boy. This child had a visual attention problem, a behavioral problem, and a poor academic record. In individual instruction, he was first taught to produce features of speech, for example, friction, nasal, and stop, which are present in vocalizations of 6- to 9-month-old infants, and then to combine these features in syllables and words. He made progress in speech, although sign language and finger spelling were taught at the same time. Speech production skills were retained after instruction was terminated. The results suggest that deaf children are able to extract information about the features of speech from visual displays, and that a developmental sequence should be followed as far as possible in teaching speech production skills to them. (Author)

ABSTRACT 32947

EC 03 2947 ED N.A.
Publ. Date Aug 71 7p.
Vegely, Ann B.

Performance of Hearing-Impaired Children on a Non-Verbal Personality Test.
EDRS not available
American Annals of the Deaf; V116 N4 P427-33 Aug 1971

Descriptors: exceptional child research; aurally handicapped; personality assessment; nonverbal tests; Missouri Children's Picture Series

Test results are reported for 160 severely hearing impaired children between the ages of 10 and 16 years. Scores of hearing impaired girls did not differ significantly from those of normally hearing girls. Test scores for hearing impaired boys were slightly depressed on the masculinity and maturity scales and slightly elevated on the aggressivity, inhibition, hyperactivity and psychosomatization scales. There was no indication that the hearing impaired children interpreted the pictured situations in a consistently different manner than normally hearing children. For example, their responses to hearing related items did not differ. Unfortunately, the validity of the Missouri Children's Picture series for hearing impaired children is uncertain. Correlations between teacher ratings and children's scores were generally low, and the source of this poor correspondence is unknown. (Author)

ABSTRACT 33236

EC 03 3236 ED N.A.
Publ. Date Oct 71 11p.
Owrid, H. L.
Studies in Manual Communication with Hearing Impaired Children.
EDRS not available
Volta Review; V73 N7 P428-38 Oct 1971

Descriptors: exceptional child research; aurally handicapped; manual communication; research design; research reviews (publications); fingerspelling; Rochester method

Reviewed and analyzed are three sets of studies dealing with manual communication and hearing impaired children. Focused upon are the research subjects and design and the significance of each study. Covered are: the study by Marshall S. Hester (1964) on the use of the Rochester method of communication (speech used together with single-handed fingerspelling) with very young students at the New Mexico School for the Deaf; the study by Stuckless and Birch (1966) on the influence of early manual communication upon linguistic development of deaf children, in which scholastic achievement of deaf children of deaf parents was found to be slightly better than that of deaf children of hearing parents; and the Stephen P. Quigley studies (1969) on manual communication, specifically the Rochester method. Pointed out are some common features of these studies and some considerations which cause the author to doubt whether manual communication does best prepare hearing impaired children for the hearing world, as the studies would imply. (KW)

ABSTRACT 40033

EC 04 0033 ED N.A.
Publ. Date Sep 71 17p.
Erber, Norman P.
Auditory and Audiovisual Reception of Words in Low-Frequency Noise by Children with Normal Hearing and by Children with Impaired Hearing.
EDRS not available
Journal of Speech and Hearing Research; V14 N3 P496-512 Sep 1971

Descriptors: exceptional child research; aurally handicapped; auditory perception; aural stimuli; lipreading; noise levels

Common words (monosyllables, trochees, spondees) were presented in low-frequency noise to children who attempted to detect their acoustic patterns or to recognize them under a range of acoustic speech-to-noise (S/N) ratios. Both profoundly deaf (minus 10 dB) and severely hearing-impaired children (minus 17 dB) required higher S/N ratios for auditory detection of words than did children with normal hearing (minus 23 dB). The normals (92%) were superior to the severely hearing-impaired group (57%) in auditory recognition of words in noise, while the deaf group (3%) were unable to recognize words by ear alone. The deaf group were poor even at classifying the stimulus words by stress pattern. Provision of acoustic cues increased the audiovisual (AV) scores of normal-hearing and severely hearing-impaired subjects 54% and 33% respectively above lipreading alone, but it improved the lipreading performance of profoundly deaf subjects only 9%. Improvement in AV recognition depended for all groups upon their detection of acoustic cues for speech. The profoundly deaf children achieved their maximum AV scores only at a higher S/N ratio (plus 5 dB) than that for the severely hearing-impaired group (0 dB), who in turn required a higher S/N ratio for maximum AV recognition than did the normals (minus 10 dB). (Author)

ABSTRACT 40039

EC 04 0039 ED 054 585
Publ. Date Sep 71 112p.
Sachs, David A. and Others
Strengthening the Visual Perception of Deaf Children. Final Report.
New Mexico State University, Las Cruces
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEC-4-7-000269(019)

Descriptors: exceptional child research; aurally handicapped; preschool children; visual perception; problem solving; learning processes; visual learning; statistical analysis; Frostig Developmental Test of Visual Perception; Illinois Test of Psycholinguistic Abilities

Learning sets programs were administered to preschool deaf children from a variety of representative educational programs throughout the southwest to improve their visual perception skills. The concept of learning sets was described as progression from trial-and-error learning to immediate problem solving by insight. The project consisted of six 1-year phases. Documentation of deficits in visual perception of preschool deaf children occurred during the initial phase. Phases II through V comprised the development of a treatment program for strengthening visual perception by problem solving and free play. Problem solving involved the child's discriminating commonalities and differences within stimulus sets to earn reinforcement. Free play included the child's exposure to eye-hand coordination toys in a free play setting. Phase VI featured identification of variables, compilation of descriptive data, statistical and test consultation, and data analysis. Main independent measures were five subtests of the Frostig Developmental Test of Visual Perception and the four subtests from the Illinois Test of Psycholinguistic Abilities. The study's important finding was the statistically significant increment in visual perception skills of the problem solving group relative to the control group as assessed by performance on the Frostig. (CB)

ABSTRACT 40040

EC 04 0040 ED 054 586
Publ. Date 71 10p.
Allen, Doris V.
Color-Word Interference in Deaf and Normal Children.
Wayne State University, Detroit, Michigan
EDRS mf,hc
Paper Presented to the Midwestern Psychological Association (Detroit, Michigan, May, 1971).

Descriptors: exceptional child research; aurally handicapped; verbal tests; reading ability; verbal ability; reading speed

Strategies for apprehending and processing verbal material were studied in deaf and normal children by using color-word interference tasks. Color-word interference task was described as a method of apprehension evaluation with minimum memory contribution. The task involved three cards: one containing color patches, one containing printed names of colors, and one containing a color name printed in conflicting ink color. Seven deaf children and 17 normal-hearing children (age range 9-15 years) identified by good academic achievement were asked to name each card upon presentation. The task criterion was reading speed and thus, stimuli perception was the major variable studied. Data on time in seconds for subjects to complete the color-word interference task indicated that the deaf seemed able to view verbal material as objects without attending to its verbalness. Normal-hearing children, in contrast, had great difficulty in responding to anything other than the word itself. Results suggested that deaf children used qualitatively different strategies for apprehending and processing verbal material than did normal-hearing children. (CB)

ABSTRACT 40195

EC 04 0195 ED N.A.
Publ. Date 70 200p.

Lehman, Jean Utley, Ed.
Selected Readings in Language for Teachers of the Hearing Impaired.
EDRS not available
Simon and Schuster, Inc., Rockefeller Center, 630 Fifth Avenue, New York, New York 10020 ($4.75).

Descriptors: exceptional child research; aurally handicapped; language development; language instruction; speech habits; research reviews (publications); learning processes

Presented are 11 papers on language development, instruction, and learning for teachers of the hearing impaired. Philip J. Schmitt reviews pertinent literature on language instruction for the deaf. Then Eric H. Lenneberg explains the development of language, stating that traditional learning theory involves neither a specific description of the brain's biochemical behavior nor its physical constitution, but rather the brain's use. A longitudinal study of normal first language learning stressing advantage of joint behavioral and linguistic study of speech development is reported by Margaret Bullowa, Lawrence G. Jones, and Audrey R. Duckert. David McNeill discusses the capacity for acquisition of syntax. The possibility of learning grammatical structure by contextual generalization is explored by Martin D.S. Braine. Roger Brown and Ursula Bellugi discuss progressive differentiation in word usage and progressive syntactic classes. A transformational model of syntactic structures used to describe children's grammar from 3 to 7 years of age as a self-contained system indicating developmental trends is reported by Paula Menyuk. Precedence of understanding over production in language development of 3-year old children is discussed by Colin Fraser, Ursula Bellugi, and Roger Brown. Laura L. Lee examines developmental sentence types, a method for comparing normal and deviant syntactic development. Paula Menyuk then reports the comparison of grammar of children with functionally deviant and normal speech habits. Finally, Audrey Ann Simmons examines the teacher's task of conveying the essential nature of language to hearing impaired children in a meaningful and rich experience. (CB)

ABSTRACT 40393

EC 04 0393 ED N.A.
Publ. Date Nov 71 11p.
Erber, Norman P.
Evaluation of Special Hearing Aids for Deaf Children.
EDRS not available
Journal of Speech and Hearing Disorders; V36 N4 P527-37 Nov 1971

Descriptors: exceptional child research; aurally handicapped; hearing aids; equipment evaluation; research reviews (publications)

Two types of special hearing aids have been developed recently to improve the reception of speech by profoundly deaf children. In a different way, each special system provides greater low-frequency acoustic stimulation to deaf ears than does a conventional hearing aid. One of the devices extends the low-frequency limit of amplification; the other shifts high-frequency energy to a lower frequency range. In general, previous evaluations of these special hearing aids have obtained inconsistent or inconclusive results. The paper reviews most of the published research on the use of special hearing aids by deaf children, summarizes several unpublished studies, and suggests a set of guidelines for future evaluations of special and conventional amplification systems. (Author)

ABSTRACT 40473

EC 04 0473 ED 056 433
Publ. Date Jan 70 238p.
Krug, Richard F.; Hawkins, Frances P.
A Project to Develop and Evaluate the Effectiveness of Instructional Materials for the Deaf, Designed to Emphasize the Syntactical Meaning of Words. Final Report.
Colorado University, Boulder
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-32-15-0180-1019
BR-5-0418

Descriptors: exceptional child research; aurally handicapped; preschool children; word recognition; sentence structure; demonstration projects; teaching methods; guidelines; instructional materials

The demonstration project was designed to develop a teaching method and instructional materials that would emphasize syntactic meanings of words for deaf preschool children, the teaching method was developed with a group of six deaf preschool children, and then demonstrated and modified in five other schools for the deaf. The teaching method was found to be suitable for deaf children, 3 and 4 years old, with no previous knowledge or skills in speechreading, speech, reading, writing, or manual communication. The teaching method consisted of the use of print as the major input for the child, preprinted vocabulary as the leading means of demonstrating or expressing syntactic understanding, and child participation and control over classroom activities during project sessions. The project emphasized the power one can exert over people through proper use of language. Guidelines were provided for making print become symbolic for the children and for demonstrating syntactic functions of words within various sentence structures. An appendix of six stories concerning reactions of both children and teacher to the project teaching method suggested that the method was applicable to analysis of a wide variety of sentence structures and to deaf children at various grade levels. (CB)

ABSTRACT 40659

EC 04 0659 ED N.A.
Publ. Date Dec 71 5p.
Ross, Mark; Giolas, Thomas G.
Effect of Three Classroom Listening Conditions on Speech Intelligibility.
EDRS not available
American Annals of the Deaf; V116 N6 P580-4 Dec 1971

Descriptors: exceptional child research; aurally handicapped; auditory perception; listening comprehension; audio equipment; equipment evaluation; hearing aids

Speech discrimination scores were measured in a normal classroom for thirteen hard-of-hearing children under three listening conditions: the child's usual listening condition (seven of the children used personal hearing aids and six did not); a binaural listening situation using an auditory trainer/FM receiver with the wireless microphone transmitter turned off; and a binaural listening condition using the inputs from both the auditory trainer/FM receiver and the wireless microphone/FM transmitter. Eighteen normal hearing children served as controls. The results indicated that the use of the wireless microphone/FM transmitter substantially improved the hearing-impaired children's speech discrimination scores over those obtained in the children's usual listening condition or with the binaural auditory trainer. These findings were attributed to the decreased speaker/microphone distance when using the wireless microphone/FM transmitter. (Author)

ABSTRACT 40818

EC 04 0818 ED 057 538
Publ. Date Jun 71 32p.
Dolansky, Ladislav and Others
Demonstration of the Instantaneous Pitch Period Indicator in Classrooms of Deaf Children. Final Report.
Northeastern University, Boston, Massachusetts
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-0-9-312139-4094(032)
BR-312139

Descriptors: exceptional child research; aurally handicapped; electromechanical aids; language instruction; equipment evaluation; equipment

A visual rhythm-intonation-duration display called Instantaneous Pitch-period Indicator (Amplitude-Intonation, Duration) (IPPI-AID) was used in several classrooms in a school for the deaf to determine its usefulness as an electromechanical aid for classroom language instruction with speech/language materials. It was found in all classroom levels, from early childhood education to junior high school, that the IPPI-AID motivated the children to increase both quality and variety of their vocalizations. Teacher and student response was enthusiastic. Classroom materials derived from preplanned speech/language lessons were more effective than expressions developed from spontaneous language activities. Spoken expressions using mostly voiced speech sounds, and permitting prolonged phonations in stressed syllables and words, produced the clearest oscilloscope traces and most discernible rhythm and intonation patterns. Corrective individual instruction during group

classroom use was not effective, indicating the need for separate individual instruction for selected children experiencing difficulty learning intensity, rhythm, or intonation aspects of spoken language. Occasional equipment malfunctions indicated the need for a constant availability of engineering assistance for periodic checks, adjustments and redesign of certain parts of the equipment. (Author)

ABSTRACT 40908

EC 04 0908 ED N.A.
Publ. Date Feb 72 7p.
Schlesinger, Hilde S.; Meadow, Kathryn P.
Development of Maturity in Deaf Children.
EDRS not available
Exceptional Children; V38 N6 P461-7 Feb 1972

Descriptors: exceptional child research; aurally handicapped; immaturity; maturation; family influence; child psychology; child development

Cited research findings reporting teacher-counselor ratings of deaf children from differing home and school settings show significant differences in assessments for maturity. An analysis of various developmental crises for which deafness has a definite impact is presented, based on Erikson's theory of epigenetic development. Both research findings and theoretical analysis point to the conclusion that immaturity is not a necessary consequence of auditory deprivation. (Author)

ABSTRACT 40961

EC 04 0961 ED N.A.
Publ. Date Jan 72 6p.
Bowe, Frank G.
Educational, Psychological, and Occupational Aspects of the Nonwhite Deaf Population.
EDRS not available
Journal of Rehabilitation of the Deaf; V5 N3 P33-9 Jan 1972

Descriptors: exceptional child research; aurally handicapped; Negroes; educational opportunities; employment opportunities; research reviews (publications); psychological characteristics

Research was briefly reviewed on educational opportunities, psychological characteristics, and employment opportunities of the nonwhite deaf population, with focus on the Negro deaf population. Research cited indicated that black deaf persons received inferior education, when compared with education provided for white deaf persons. The major psychological influence on the Negro hearing impaired person was found to be the inability to communicate well and the resulting social isolation. Concerning employment opportunities, research findings connected severe under-education with under-employment and high unemployment found among nonwhite deaf persons. (CB)

ABSTRACT 41102

EC 04 1102 ED N.A.
Publ. Date Feb 72 6p.
VandenBerg, D. Marjorie
The Relationship Between Extent of Hearing-Aid Use and Language and Academic Achievement.
EDRS not available
American Annals of the Deaf; V117 N1 P14-9 Feb 1972

Descriptors: exceptional child research; aurally handicapped; hearing aids; academic achievement; language development

The subjects for this study were a national group of normal orally-taught deaf children with English-speaking parents and early onset of deafness; all wore an individual hearing aid and used it daily for at least part of the school day. The relationship between hearing aid use and language and academic achievement was examined in terms of the degree to which an aid was worn in class (continuously vs. non-continuously) and out of class (continuously vs. non-continuously). Those who wore an aid continuously out of class used one continuously in class so they were termed the constant hearing aid users. Results indicated that extent of hearing aid use in class was unrelated to teacher ratings of academic achievement, speechreading, scores; or to any of the five Picture Story Language Test measures. Extent of hearing aid use out of class was related to some aspects of written language, and to academic achievement. Four non-language variables were found to differentiate the constant hearing aid users from the remainder. The educational implications of the results of this investigation are given. (Author)

ABSTRACT 41106

EC 04 1106 ED N.A.
Publ. Date Feb 72 4p.
Boyd, J.; Vader, E. A.
Captioned Television for the Deaf.
EDRS not available
American Annals of the Deaf; V117 N1 P34-7 Feb 1972

Descriptors: exceptional child research; aurally handicapped; televised instruction; adolescents; films; deaf

This study matched two groups of 20 deaf pupils on their pre-exposure knowledge of information contained in a televised film. Group A was shown the program, without audio and without captions. No gain in test scores resulted. Group B was shown a captioned version and their test scores improved significantly. Later Group A saw the captioned version and their scores improved significantly. Group B was shown the captioned version again. No improvement was noted. The results indicated that appropriate captioning does significantly improve the amount of information obtained from a visual presentation. Simple exposure to a picture added nothing to the knowledge gained as evaluated by multiple choice questions. (Author)

ABSTRACT 41329

EC 04 1329 ED N.A.
Publ. Date Mar 72 11p.
Roche, Adam, Jr.; Neal, W. R., Jr.
State Certification Policies and Services for the Hearing Impaired.
EDRS not available
Volta Review; V74 N3 P150-60 Mar 1972

Descriptors: exceptional child research; aurally handicapped; certification; state standards; audiology; national surveys; state departments of education; school services

A national survey was conducted to determine the extent to which state departments of education are recognizing, through appropriate certification practices, the different areas of specialty serving hearing impaired children in the schools. Questionnaires were mailed to state departments of education in each of the 50 states to collect data on the certification requirements, use of consultants, speech therapy services, and audiological services. Results ndicated that, although public schools are continuing to improve the quality and quantity of services for handicapped children, there are considerably fewer services available to the hearing handicapped child than to the child having only speech disorders. It is suggested that audiological services for hearing handicapped children might be increased if states would offer certification in audiology. (Author)

ABSTRACT 41336

EC 04 1336 ED N.A.
Publ. Date Mar 72 9p.
Carpenter, Robert L.; Willis, Diane J.
Case Study of an Auditory Dyslexic.
EDRS not available
Journal of Learning Disabilities; V5 N3 P121-9 Mar 1972

Descriptors: exceptional child research; learning disabilities; reading difficulty; dyslexia; auditory perception; case studies; auditory tests

A case study with a severe reading disorder of an auditory nature is presented. Intellectual and visual factors appeared to be intact, whereas very poor achievement was evidenced on a variety of auditory tasks. Evaluation of auditory functioning, the relationship of auditory perception to reading, and the numerous forms that disturbed auditory perception can take are emphasized. (Author)

ABSTRACT 41361

EC 04 1361 ED N.A.
Publ. Date Jan 72 8p.
Markides, A.
Home Atmosphere and Linguistic Progress of Pre-School Hearing-Handicapped Children.
EDRS not available
Teacher of the Deaf; V70 N411 P7-14 Jan 1972

Descriptors: exceptional child research; aurally handicapped; preschool children; language development; family influence; family problems; home visits; family environment

Compared was the linguistic progress of two groups of very young aurally handicapped children whose families were visited weekly by the investigator for guidance in home training of the child. Group I was composed of 19 children from sta-

ble, secure, and loving home backgrounds. Group 2 consisted of 16 children from homes with severe social and emotional problems (financial, housing, marital, and/or other family problems). Evaluation with Owrid's (1958) developmental schedules showed that linguistic progress of Group 1 children was significantly better than that of Group 2 children. It was argued that families in the latter group need more help from social workers and/or psychiatrists before they are able to benefit from the guidance provided by a teacher of the deaf. (KW)

ABSTRACT 41448

EC 04 1448 ED N.A.
Publ. Date Mar 72 12p.
Reivich, Ronald S.; Rothrock, Irvin A.
Behavior Problems of Deaf Children and Adolescents: A Factor-Analytic Study.
EDRS not available
Journal of Speech and Hearing Research; V15 N1 P93-104 Mar 1972

Descriptors: exceptional child research; aurally handicapped; behavior problems; behavior patterns; emotional problems; factor analysis; personality problems

Using the Behavior Problem Checklist, teachers rated 327 students (ages 6-20 years) in a state school for the deaf. Traits rated as present in at least 10% of the students were intercorrelated, then a principal-component factor analysis and an orthogonal rotation of the factor matrix were accomplished by electronic computer. Five factors were rotated in accordance with Kaiser's varimax criteria. The first three factors extracted--which accounted for approximately 70% of the common factor variance and the preponderance of disturbed behavior--were strikingly similar to the conduct, personality, and immaturity dimensions consistently identified in previously studied normal and disturbed populations. Two other factors, labeled isolation and communication problem, were also extracted. These may represent a more or less deafness-specific cluster of behavior problems. (Author)

ABSTRACT 41551

EC 04 1551 ED 060 601
Publ. Date Jan 72 80p.
Stuckless, E. R.; Enders, M.
Three Studies of the Structural Meaning of English for Postsecondary Deaf Students.
National Technical Institute for the Deaf, Rochester, New York
Department of Health, Education, and Welfare, Washington, D. C.
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; language ability; language tests; cloze procedure; college students; diagnostic tests; sentence structure

Three studies were conducted concerning the skills of deaf postsecondary students in recognizing and manipulating linguistic structures in written language. The first study was a pilot study dealing with the deaf student's ability to identify structural units in written language. The second two studies, concerning the cloze procedure, examined the technique as a possible adjunct to a battery of language assessment instruments and assessed its usefulness as an instructional tool for possible incorporation in remedial language programs. Conclusions were that syntax recognition was too simplistic an approach to assessing linguistic ability of the students, and that the cloze technique, while more inclusive, was too general an indicator of overall language proficiency. Cloze was seen as a useful adjunct to, but not replacement for, a battery of tests for assessing language skills of deaf students. As an instructional technique, it was concluded that use of cloze should be left to the discretion of the teacher and tailored to the student's needs as interpreted by the teacher. (KW)

ABSTRACT 41722

EC 04 1722 ED N.A.
Publ. Date May 72 9p.
Lewis, Dorothy Noto
Lipreading Skills of Hearing Impaired Children in Regular Schools.
EDRS not available
Volta Review; V74 N5 P303-11 May 1972

Descriptors: exceptional child research; aurally handicapped; lipreading; regular class placement; siblings

A pilot study was conducted to compare the lipreading skills of a small group of hearing impaired children attending regular schools and a group of their normal hearing siblings with a peer group of hearing impaired children in 10 New Mexico schools for the deaf. Forty-nine hearing impaired children ages 3 through 9 years who were receiving therapy at the New York League for the Hard of Hearing, and 32 normal hearing siblings, were evaluated as to their lipreading skill on the Children's Speechreading Test. For both these groups attending schools for normal hearing children, the scores revealed lipreading skills superior to those of the youngsters tested in the New Mexico schools for the deaf, on whom the test had been standardized. The integrated hearing impaired children also did better on the tests than did their own normal hearing siblings.

ABSTRACT 41724

EC 04 1724 ED N.A.
Publ. Date Apr 72 13p.
Stojnic, Dusan
A System of Professional Guidance: Results of Observation and Experimental Samplings.
EDRS not available
Journal of Rehabilitation of the Deaf; V5 N4 P12-24 Apr 1972

Descriptors: exceptional child research; aurally handicapped; vocational counseling; vocational interests

A study that investigated the kinds of jobs yeilding the highest level of achievement for deaf workers employed in 20 occupations was used to develop a vocational counseling procedure for the deaf. The procedure involved four phases of initial inquiry into the deaf person's vocational interests, provision of occupational information to the deaf person so that he may become acquainted with various occupations new or relatively unknown to him, final inquiry into the deaf person's vocational interests, and initiation of the rehabilitation process. Study of deaf students who did and did not receive professional vocational counseling showed that those students receiving professional vocational counseling gained in efficiency of performance and achieved success more rapidly than did those students not receiving vocational counseling.

ABSTRACT 41969

EC 04 1969 ED N.A.
Publ. Date Jun 72 8p.
Klopping, Henry W. E.
Language Understanding of Deaf Students under Three Auditory-Visual Stimulus Conditions.
EDRS not available
American Annals of the Deaf; V117 N3 P389-96 Jun 1972

Descriptors: exceptional child research; aurally handicapped; listening comprehension; oral communication; manual communication; adolescents; lipreading

Investigated was the level of comprehension of language by deaf students in a state residential school for the deaf under three auditory-visual stimulus conditions: lipreading with voice, the Rochester method, and total communication. Subjects were 30 deaf students, ages 13-20. It was found that total communication conditions produced the best comprehension scores (76% comprehension), followed by the Rochester method (55%). Lipreading with voice was the least adequate method of communication (35% comprehension). There were no significant differences in the ability of the subjects to understand language under the three conditions when sex, level of intelligence (average or above-average), or type of student (day or full-time residential) were factors considered. (KW)

ABSTRACT 42340

EC 04 2340 ED N.A.
Publ. Date Aug 72 4p.
Howse, Jean M. DeSalle; Fitch, James L.
Effects of Parent Orientation in Sign Language on Communication Skills of Preschool Children.
EDRS not available
American Annals of the Deaf; V117 N4 P459-62 Aug 1972

Descriptors: exceptional child research; aurally handicapped; preschool children; parent role; sign language; communication skills

Studied were the effects of a parent orientation program in manual communication on the communication functioning of preschool children. The parameter of communication functioning chosen to be examined in this study was communication elicited with minimal cues. In a pretest and posttest format, children's responses to pictures were broken down into four categories of signs, spoken words, natural gestures, and total com-

munication. Only those responses understood by at least two of the three recorders were used in the data breakdown. Results suggested that deaf children of hearing parents who have been exposed to manual communication skills made greater gains in expressive skills than a control group. (CB)

ABSTRACT 42410

EC 04 2410 ED N.A.
Publ. Date Jun 72 10p.
Erber, Norman P.
Auditory, Visual, an Auditory-Visual Recognition of Consonants by Children with Normal and Impaired Hearing.
EDRS not available
Journal of Speech and Hearing Research; V15 N2 P413-22 Jun 1972

Descriptors: exceptional child research; aurally handicapped; auditory perception; visual perception; phonetics; articulation (speech)

The consonants /b, d, g, k, m, n, p, t/ were presented to normal hearing, severely hearing impaired, and profoundly deaf children through auditory, visual, and combined auditory-visual modalities. Through lipreading alone, all three groups were able to discriminate between the places of articulation (bilabial, alveolar, velar) but not within each place category. When they received acoustic information only, normal hearing children recognized the consonants nearly perfectly, and severely hearing impaired children distinguished accurately between voiceless plosives, voiced plosives, and nasal consonants. However, the scores of the profoundly deaf group were low, and they perceived even voicing and nasality cues unreliably. Although both the normal hearing and the severely hearing impaired groups achieved nearly perfect recognition scores through simultaneous auditory-visual reception, the performance of the profoundly deaf children was only slightly better than that which they demonstrated through lipreading alone. (Author)

ABSTRACT 42414

EC 04 2414 ED 064 827
Publ. Date 71 18p.
Evaluation of the 1970-71 ESEA, Title VI-A, Cued Speech Program for Aurally Handicapped Children.
Sacramento City Unified School District, California;
Gallaudet College, Washington, D. C.
Bureau of Elementary and Secondary Education (DHEW/OE), Washington, D. C.
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; program effectiveness; cued speech; nonprofessional personnel; preschool children; educational programs; early childhood education; primary grades; language development

Reported was program effectiveness for a cued speech program for aurally handicapped children in nursery and primary classes. Project objectives were explained to be training teachers and tutors (paraprofessionals) of the classes for the aurally handicapped and the parents of the pupils enrolled in the techniques of cued speech and to employ these techniques with children in nursery and primary levels. Participating were 15 teachers, 10 tutors, 60 children, and a limited number of parents. During the first year of the project, three areas of cued speech training were emphasized: development of vocabulary lists from which an instrument was designed to assess language acquisition by the children in receptive and expressive areas; training of all staff members in cued speech method of teaching language; and classes conducted for parents and other interested groups. The data regarding the language development of the children showed that receptive and expressive language acquisition could be measured with the test instrument developed and that these data clearly indicated the child's language growth. It was concluded that for cued speech to serve children to the greatest degree possible, more parents needed to participate in the program. (CB)

ABSTRACT 42583

EC 04 2583 ED 064 845
Publ. Date Jul 71 196p.
Blanton, Richard L. and Others
Symbolic and Linguistic Processes in the Deaf. Final Report.
Vanderbilt University, Nashville, Tennessee
Social and Rehabilitation Service (DHEW), Washington, D. C.
EDRS mf,hc
RD-2552-S

Descriptors: exceptional child research; aurally handicapped; linguistics; cognitive development; psycholinguistics; psychology; perceptual development; language ability; immaturity

Reported were over 20 related studies that were intended as attempts to discover the psychological implications of deafness, with an emphasis on the perceptual-cognitive manifestations. The report was divided into three sections: the first reported the results of many studies investigating mainly the relationship between language and perception and language and cognition and which use memory as the vehicle of experimentation. The second chapter focused on results of psycholinguistic studies. The third section reported a series of interrelated studies investigating the causes behind the emotional or affective immaturity found to be frequently displayed by a large number of deaf persons. Selected general findings were that the deaf may have problems with sequencing information where nonverbal forms are involved, that auditory input is not necessary for the learning of perception of rhythms, that the deaf show superior performance for signable words but do not differ from the hearing on words that do not have sign equivalents, and that the deaf show better reading performance level when written materials are presented in sign order rather than in English order. (CB)

ABSTRACT 42708

EC 04 2708 ED N.A.
Publ. Date Sep 72 14p.
Hoemann, Harry W.
The Development of Communication Skills in Deaf and Hearing Children.
EDRS not available
Child Development; V43 N3 P990-1003 Sep 1972

Descriptors: exceptional child research; aurally handicapped; deaf; communication skills; manual communication; language ability; peer relationship; childhood; task performance; performance factors

Peer communication in 8- and 11-year old deaf children using manual methods was compared with that in hearing children using spoken English. Tasks assigned included describing pictured referents, describing referents from a receiver's perspective, and explaining the rules of a game. Questioned was whether the poorer performance of the deaf subjects is attributable to channel properties of a gesture language since gesture communications were found to present difficulties when a frame of reference and a perspective of orientation were required for descriptions of object size and position, respectively. A general experiential deficit due to linguistically impoverished preschool environments and highly structured classrooms which do not encourage spontaneous communication or train in formal communication tasks, is posited to explain the overall poorer performance of deaf subjects. The role of experience in developing communication is indicated for both deaf and hearing samples. (Author/GW)

ABSTRACT 42712

EC 04 2712 ED N.A.
Publ. Date Jul 72 8p.
Hoffmeister, Robert J.; Farmer, Alvirdo
The Development of Manual Sign Language in Mentally Retarded Deaf Individuals.
EDRS not available

Journal journal of rehabilitation of the deaf; v6 n1 p19-26 jul 1972
descriptors mentally handicapped; aurally handicapped; sign language; institutionalized (persons); receptive language; expressive language

A brief review of pertinent literature preceded the study, which was designed to investigate the extent to which institutionalized hearing impaired nonverbal mental retardates could acquire communication skills by means of sign language. Sixteen subjects participated, ranging in age from 12 to 62 years and ranging in IQ from 12 to 88 points. Training consisted of 24, 2 1/2 hour weekly sessions. Results showed that two subjects began the project with a good working knowledge of sign language, that four subjects increased their receptive and expressive vocabulary by over 200 signs, that three subjects increased their receptive and expressive vocabulary by 150 signs, that one subject increased his receptive and expressive vocabulary by 100 signs, that two subjects increased their receptive

and expressive vocabulary by 75 signs, that one subject learned 10 signs, and that two subjects did not learn signs. Improved communication skills were found to help the employment potential of four subjects. (CB)

ABSTRACT 42713

EC 04 2713 ED N.A.
Publ. Date Jul 72 15p.
Spidal, David A.; Pfau, Glenn S.
The Potential for Language Acquisition of Illiterate Deaf Adolescents and Adults.
EDRS not available
Journal of Rehabilitation of the Deaf; V6 N1 P27-41 Jul 1972

Descriptors: exceptional child research; aurally handicapped; adolescents; handicapped; language development; linguistics; communication skills; programed instruction

The article summarizes aspects of the problem of language acquisition for illiterate deaf adolescents and adults, discusses theoretical constructs related to linguistic development in the deaf, and reports on a program that incorporated a structured approach to teaching communication skills. Discussion of related literature focuses on the reading ability of aurally handicapped persons, which is shown to be inferior to comparable hearing persons, and on testing of hearing impaired persons with standardized tests designed for hearing individuals. The main linguistic consideration covered is the stated concurrence among linguists that there are optimal periods for language learning which may peak at 3 to 4 years of age. The study reported involved 14 persons aged 16 to 53 years. The study was designed to determine if a highly structured instructional program could improve the language and communicative skills of subjects classified as illiterate deaf adults. The study used the Language Improvement to Facilitate Education, which enabled self pacing programed instruction. Each of the subjects was found to vary in progress during the 6-month reporting period, but each was found to make substantial gains in linguistic competencies and communication skills. (CB)

ABSTRACT 42794

EC 04 2794 ED 066 847
Publ. Date Apr 72 31p.
Zakia, Richard D.
Fingerspelling and Speechreading as Visual Sequential Processes.
EDRS mf,hc

Descriptors: exceptional child research; aurally handicappped; finger spelling; speech skills; reading ability; undergraduate study; college students; sequential learning; visual perception

The pamphlet focused first on questions concerned with the relative ability of deaf and hearing students to visually process words when presented letter by letter, and with relationships existing among deaf students between the ability to process words presented tachistoscopically, letter by letter, and the ability of the same students to process words through finger spelling and through speech reading. Then reported was a study involving 33 deaf and 19 hearing students at the post secondary level in which the processing of verbal information (words) visually and the relationship of the deaf students' ability to identify words presented in rapid letter-by-letter graphic sequence and ability to read finger spelling and to speech read were investigated. A comparison of the relative ability of deaf and hearing post secondary subjects to correctly identify printed meaningful words when their letters were presented sequentially indicated that the deaf subjects were superior under all conditions tested. Lack of a statistically significant correlation between the ability to read printed words whose letters are presented sequentially, and to read words formed by speech suggested that the perception of these two tasks was different. (Author/CB)

ABSTRACT 42890

EC 04 2890 ED 065 977
Publ. Date Mar 72 303p.
Asp, Carl W.
The Effectiveness of Low-Frequency Amplification and Filtered-Speech Testing for Preschool Deaf Children.
Tennessee University, Knoxville
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-0-9-522113-3339 (032)

Descriptors: exceptional child research; deaf; preschool children; auditory training; speech tests; aurally handicapped; auditory perception; auditory tests; statistical data

In order to study effectiveness of low-frequency amplification and filtered-speech testing for preschool deaf children, an experimental design permitting the teacher to speak simultaneously through two different amplifying systems, a low-frequency auditory training unit (Suvag I) and a conventional auditory training unit (Warren T-2), was used with 30 children. All teachers utilized the Verbo-tonal Method for habilitating the children, who were assigned to one of the two amplifying systems. Speech samples were tape-recorded at 4-month intervals, judged, and analyzed statistically. Significant improvement over testing times for both groups was found, although the Suvag group demonstrated a greater rate of improvement than the Warren group. The condition of visual and auditory clues with amplification was reported to be the best experimental condition for most children. Significant differences between the groups in terms of vocalization was found, with the Suvag group vocalizing more times per minute than the Warren group. Significant correlation was also reported between rating value and hearing level. Electrical and acoustic responses of the Suvag I unit indicated that the unit passed more low-frequency energy than the Warren unit. Reporting of related research concluded the interim report. (Author/CB)

ABSTRACT 50009

EC 05 0009 ED N.A.
Publ. Date Oct 72 2p.
Hoemann, Harry
Children's Use of Fingerspelling Versus Sign Language to Label Pictures.
EDRS not available
Exceptional Children; V39 N2 P161-2 Oct 1972

Descriptors: exceptional child research; deaf; fingerspelling; elementary school students; language ability; aurally handicapped

The study involved measurement of deaf, elementary school children's reliance on fingerspelling versus gesture symbols to label pictures of common objects. Seventy-four students were tested individually in a description task, while 86 subjects served as senders in a communication task. Results revealed a contribution from fingerspelling to deaf children's mastery of English. (Author/CB)

ABSTRACT 50085

EC 05 0085 ED 067 802
Publ. Date Aug 72 64p.
Academic Achievement Test Results of a National Testing Program for Hearing Impaired Students United States: Spring 1971.
Gallaudet College, Washington, D. C. Office of Demographic Studies
Office of Education (DHEW), Washington, D. C. Div. of Handicapped Children and Youth
EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; academic achievement; test interpretation; achievement tests; standardized tests; trend analysis; reading comprehension; mathematics

Reported were results of 17,000 Stanford Academic Achievement Tests administered to students enrolled in primary and secondary educational programs for the hearing impaired. Test results were presented according to student age and three classifications of hearing loss levels. Bar graphs and tables showed subtest patterning trends for the learning processes of hearing impaired students. Examined was a series of modifications in testing procedures that were implemented to standardize test administration practices with hearing impaired students. Data showed an overall trend for hearing impaired students to achieve better in reading than in other academic areas during the first 1 to 3 years of education. Thereafter, hearing impaired students achieved better in mathematics and in low verbal subject areas. Data indicated that the severity of hearing loss affected reading comprehension most directly. Students with the greatest hearing loss performed best in low verbal and nonverbal academic areas such as spelling and arithmetic computation. (Author)

ABSTRACT 50274

EC 05 0274 ED 070 230
Publ. Date Feb 72 156p.
Kates, Solis L.
Language Development In Deaf and Hearing Adolescents.

Clarke School for the Deaf, Northampton, Mass.
Social and Rehabilitation Service (DHEW), Washington, D. C. Div. of Research and Demonstration Grants
EDRS mf,hc
RD-2555-S

Descriptors: exceptional child research; aurally handicapped; language development; oral communications; manual communication; adolescents; finger spelling; verbal ability; memory; educational background

Investigated were aspects of language development (association, mentory, comprehension, and production) in three groups (50 individuals per group) of deaf adolescents who were variously trained by the pure oral method, the combined oral-manual method, and the Rochester fingerspelling method. One hearing group was matched with the deaf in age, and another in comprehension of written language. All groups were reported to be equal on a verbal recognition memory test, but the deaf trained in the combined method showed poorer recall on the same test. The Noun Pairs Memory test showed all groups equal on the number correct and on most error categories, except that both hearing groups and the oral group imported more incorrect words from outside the test to complete the sentences. The orally trained deaf were reported to be more like both hearing groups in their comprehension of multi-meaning words and in their control over distracting associations when questions on meaning were asked. The orally trained deaf were also found to be similar to the hearing in their ability to select meaning and in choosing fewer associations when the multi-meaning words were presented in sentences. (Author/GW)

ABSTRACT 50514

EC 05 0514 ED 071 239
Publ. Date Dec 71 139p.
Moores, Donald F.; McIntyre, Cynthia K.
Evaluation of Programs for Hearing Impaired Children: Report of 1970-71. Research Report /27.
Minnesota University, Minneapolis
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OE-09-332189-4533(032)

Descriptors: exceptional child research; aurally handicapped; early childhood education; educational programs; program descriptions; preschool children; program evaluation; oral communication; manual communication; educational facilities; equipment utilization; personnel; administrative organization; student evaluation

The study, based on L. Cronbach's Characteristics by Treatment Interaction model, investigated seven preschool programs for aurally handicapped children which variously employed the oral-aural method, the Rochester method, or the total communication method. Equipment, materials, grouping procedures, and activities were indicated for each program. Programs were compared for degree of parent involvement, adequacy of facilities and personnel, administrative organization of services, pupil populations, and degree of program structure. One hundred and two children from the programs were selected as the sample population. Data were reported from the Leiter Performance Test, the Illinois Test of Psycholinguistic Abilities, classroom observation, communication analysis, pupil records, the Brown Parent Attitude Scale, and a semantic differential measuring parent attitudes towards concepts related to deafness. Conclusions such as the following were drawn: children in structured programs tended to have higher IQ scores than those in unstructured programs; gestures were the most common mode of communication between children, regardless of the program's official methodology; communication from child to teacher most frequently involved the oral-aural mode; and no differences were found in speechreading abilities in the oral-combined and structured-unstructured comparisons. (GW)

ABSTRACT 50522

EC 05 0522 ED 071 247
Publ. Date Apr 72 267p.
Kretschmer, Richard R.
A Study to Assess the Play Activities and Gesture Output of Hearing Handicapped Preschool Children. Final Report.
Cincinnati Speech and Hearing Center
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-0-9-452109-2467

Descriptors: exceptional child research; aurally handicapped; preschool children; social relations; play; behavior patterns; communication (thought transfer)

The individual play habits and social interaction styles of 71 hearing impaired and 71 normally hearing preschool children were studied. Children were individually placed in a television studio constructed to resemble a nursery school, and videotape cameras were situated to record all activity occurring within the set. Evaluation of the 142 videotapes concerned both activities performed and objects engaged. Results indicated that hearing impaired children were more active, displayed more scanning behaviors using all sensory modalities, displayed more fearful behaviors, and engaged in little actual play. The social interaction study consisted of and evaluation of three triads each of normally hearing and hearing impaired children by means of an interaction rating scale. Researchers found that the hearing impaired groups were less cohesive and produced fewer successful social contacts than the normally hearing children. Gesturing as a communication device was more evident in hearing impaired children than was speech. (Author/GW)

ABSTRACT 50525

EC 05 0525 ED 071 250
Publ. Date Sep 71 103p.
Nober, E. Harris
The Development of Audiologic Criteria to Differentiate Between Auditory Thresholds and Cutile Thresholds of Deaf Children. Final Report.
Massachusetts University, Amherst
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-0-8-080321-4463(032)

Descriptors: exceptional child research; aurally handicapped; auditory tests; audition (physiology), audiology; adolescents; testing problems; cutaneous sense; deaf

Researchers investigated a variety of audiologic procedures to determine whether they could differentiate between auditory thresholds and cutile (cutaneous-tactile) thresholds of 32 deaf adolescents. Ss were classified into one of the following three groups: a cutile group with no pure tone thresholds beyond 750 Hertz (Hz); a group of questionable classification with responses at 1000 Hz; and Ss designated partially deaf with elicited thresholds at 2000 Hz or above. The responses of the Ss were statically analyzed to ascertain if the groups were functionally related or differentiated relative to a number of psychophysical auditory procedures. All Ss were profoundly deaf, had normal intelligence, good emotional stability, and no history of brain damage. Instrumentation included a Beltone 150, Maico M-24, Grason-Stadler Bekesy audiometer, Grason-Stadler speech audiometer, Bruel and Kjar sound level meter, Sony tape recorder, and rubber ear inserts. Numerous tests were administered including tests of pure tone air conduction thresholds, pure tone bone conduction thresholds, mastoid versus forehead bone conduction, and occlusion thresholds. Conclusions were said to support the thesis that audiograms of deaf children could be designated as cutile to indicate a total hearing loss or classified as partially deaf to indicate some auditory reserve. (GW)

ABSTRACT 50526

EC 05 0526 ED 071 251
Publ. Date Dec 71 123p.
Furth, Hans G.
A Thinking Laboratory Adapted for Deaf Children.
Catholic University of America, Washington, D. C.
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-0-9-182044-0784(032)

Descriptors: exceptional child research; aurally handicapped; learning processes; language role; concept formation; childhood; thought processes; cognitive processes; verbal learning; nonverbal learning; learning laboratories; kindergarten children; Piaget (Jean)

Elementary school (kindergarten through sixth grade) deaf children were exposed to varied thinking activities based on J. Piaget's principle of action rooted intelligence to determine if thinking might be successfully encouraged in the classroom through activities which were not highly

dependent on verbal performance. Each class of approximately eight students was divided in half, with one half being placed in the experimental thinking lab and the other half in the control language lab. Each child attended one of the labs for one half hour once a school day. The experimental group was engaged in thinking games involving classification, perspective, symbol-picture logic, and probability. The control group was trained in areas such as vocabulary, sentence structure, and conversational skills. Results of testing were inconclusive since both groups improved on thinking skills and neither showed improvement on measured verbal tests. Reasons thought to account for the results were that the skills to be tested develop only gradually and cannot be readily assessed and that the training period was short (1 1/2 years). (Author/GW)

ABSTRACT 50606

EC 05 0606 ED N.A.
Publ. Date Win 71 7p.
Wilson, Earl D.
A Comparison of the Effects of Deafness Simlation and Observation upon Attitudes, Anxiety, and Behavior Manifested toward the Deaf.
EDRS not available
Journal of Special Education; V5 N4 P343-49 Win 1971

Descriptors: exceptional child research; aurally handicapped; attitudes; simulation; observation; college students

Compared were the effects of deafness simulation and observation of the deaf upon the expression of attitudes toward the deaf, expressed anxiety toward interacting with the deaf, and behavior manifested toward the deaf. College sophomores, most of whom majored in education, were assigned randomly to two experimental groups and one control group. One experimental group was assigned 2 1/2 hours of directed activities under conditions of simulated deafness. The other experimental group observed interactions between a deaf undergraduate female and a female graduate student who was just learning to communicate manually. Significant differences were found between groups on semantic differential ratings of self and of persons who are deaf with the simulation group rating the deaf lower than did the other two groups. No significant differences in manifest anxiety or in behavior toward the deaf were found either before or after interaction with the deaf. However, when the deaf were active during the interaction, postanxiety scores were lower. (GW)

ABSTRACT 50637

EC 05 0637 ED N.A.
Publ. Date Jan 73 9p.
Schiff, William
Social Perception in Deaf and Hearing Adolescents.
EDRS not available
Exceptional Children; V39 N4 P289-97 Jan 1973

Descriptors: exceptional child research; aurally handicapped; adolescents; perception; perception tests; films

Slides containing facial caricatures and six social interaction cartoon films were presented to 113 deaf and 48 hearing adolescents (12 to 19 years old). Results indicated few age related differences in perceptual reports. Hearing Ss were found to give more attention to the eyes than deaf Ss. Differences between deaf and hearing Ss were also noted for the extraction of social information from gross motor activity. Findings were discussed in relation to recent literature. (Author/GW)

ABSTRACT 50832

EC 05 0832 ED N.A.
Publ. Date Jan 73 7p.
Bender, Patricia
The Thresholds of Hearing of Normal, Deaf, and Hard of Hearing Children with and without a Supplementary Tactile Vibrator.
EDRS not available
Volta Review; V75 N1 P47-53 Jan 1973

Descriptors: exceptional child research; aurally handicapped; auditory perception; sensory aids; tactual perception; electromechanical aids; aural stimuli

Thresholds of aural detection were obtained for 26 normal, 15 deaf, and 15 hard of hearing children, 7 to 14 years of age, with and without a supplementary tactile vibrator at selected points of the body. The results of the study indicate that the stimulation of the tactile sense of hearing impaired children with speech stimuli can aid the children in the auditory awareness of the stimuli. It was concluded that it is likely that the use of the tactile sense to aid the impaired auditory sense would be beneficial to deaf and hard of hearing persons in programs of auditory training. (Author)

ABSTRACT 51093

EC 05 1093 ED N.A.
Publ. Date Feb 73 4p.
Higgins, Earl
An Analysis of the Comprehensibility of Three Communication Methods Used with Hearing Impaired Students.
American Annals of the Deaf; V118 N1 P46-9 Feb 73

Descriptors: exceptional child research; aurally handicapped; college students; manual communication; communication (thought transfer); sign language; finger spelling

Each of three experimental groups of 18, 19, or 20 aurally handicapped undergraduate students was tested for the ability to understand one of three different manual communication methods. Performances on multiple choice questions after viewing each of two brief videotape passages indicated that the sign language approximation to English was superior to both the total finger spelling of the Rochester method and to colloquial idiomatic signing. (Author)

ABSTRACT 51134

EC 05 1134 ED N.A.
Publ. Date Apr 71 4p.
Roach, Robert E.; Rosecrans, C. J.
Intelligence Test Performance of Black Children with High Frequency Hearing Loss.
EDRS not available
Journal of Auditory Research; V11 N2 P136-9 Apr 1971

Descriptors: exceptional child research; aurally handicapped; Negro youth; hearing loss; intelligence quotient; performance tests; verbal tests; correlation

The relation between verbal and performance IQ scores were studied in 18 black students with reduced auditory acuity for discrete high frequency sounds. Data showed significant relationships between reduced auditory thresholds at 1.5 and 2 kilocycles/second (kc/s) on both verbal and performance IQ scores on the Wechsler Intelligence Scale for Children, and a significant correlation between the hearing level at 3 kc/s and the verbal IQ score. Performance IQ scores at the 0 kc/s level and verbal IQ scores at the 4 kc/s level also approached significance. (GW)

ABSTRACT 51184

EC 05 1184 ED N.A.
Publ. Date Mar 73 3p.
Anderson, Norman O.; Gustafson, Monty C. F.
A Co-Parent Program for Hearing Impaired Children.
Volta Review; V75 N3 P161-73 Mar 73

Descriptors: exceptional child research; aurally handicapped; elementary school students; foster family; program evaluation

Evaluated was a co-parent program for hearing impaired elementary school children attending a state school for the deaf but unable to reside with their parents. Co-parents were said to be selected on the basis of their ability to provide a wholesome environment for the students. Information about the coparents was gathered by group discussion meetings, an attitude inventory, a problem check list, psychological measurements, and a biographical questionnaire. It was found that co-parents used child rearing methods typical of middle and upper class parents, were relatively free of emotional maladjustment, and had high verbal IQ's. The problem check list and attitude inventory were given in full with responses summarized. It was thought that the co-parent program is less expensive than a residential program. (DB)

ABSTRACT 51310

EC 05 1310 ED 072 608
Publ. Date (73) 36p.
Gengel, Roy W.
Research on Frequency Transposition for Hearing Aids. Final Report.
Gallaudet College, Washington, D. C.
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc
OEG-2-7-070070-1522
BR 182071

Descriptors: exceptional child research; aurally handicapped; hearing aids; auditory perception; discrimination learning; speech habits

Reported were studies measuring residual auditory capacities of deaf persons and investigating hearing aids which transpose speech to lower frequencies where deaf persons may have better hearing. Studies on temporal and frequency discrimination indicated that the duration of a signal may have a differential effect on its detectability by sensorineural hearing-impaired persons compared to normal, but that temporal effects on frequency discrimination and perception of temporal order seem normal, and therefore provide scant explanation of low speech discrimination abilities. Problems involved in doing research with long-term hearing impaired Ss were identified. Studies of speech pattern perception yielded the following conclusions: sensorineural hearing-impaired listeners have better residual reception for low-frequency speech patterns than the middle- and high-frequency patterns; and the superiority of low-frequency pattern reception holds over a rather wide range of degrees and types of sensorineural impairment. Data was reported concerning the hypothesis that acoustic transposition of phonemic differences, could make them indistinguishable at least until discrimination could be retrained. Also presented were data showing that speech discrimination performance is higher for transposer amplification than for conventional amplification. Theoretical aspects of frequency transposition were discussed. (GW)

ABSTRACT 51424

EC 05 1424 ED 074 652
Publ. Date Aug 71 63p.
Project LIFE, Visual-Perceptual Training.
National Education Association, Washington, D. C.
Bureau of Education for the Handicapped (DHEW/OE), Washington, D. C.

EDRS mf,hc

Descriptors: exceptional child research; aurally handicapped; data; audiovisual aids; Project LIFE (Language Improvement to Facilitate Education

Reported were performance data for over 350 hearing impaired children who were exposed to the perceptual training filmstrips from the Language Improvement to Facilitate Education (LIFE) program. Research on the visual perception of deaf persons was reviewed and found to support the following conclusions: there appears to be a relationship between hearing loss and deficient visual perceptual abilities; decreased visual perception skills have a positive relationship with poor reading abilities; remedial training in perceptual skills can enhance reading abilities; and the theoretical framework proposed to explain these effects involves a breakdown in sensory integration between the visual and auditory sensory mode. It was explained how visual perceptual skills form an important part of a language development program. Data for each filmstrip was tabulated to indicate the number of students (3- to 13-years-old) on which the data was tabulated, the mean number of errors, the standard deviation of errors, and the range of errors. Other data indicated the percentage of 6-year-old children making a specific number of errors and the cumulative percentages by units and sections of the LIFE program. Appendixes included outlines of field test filmstrips, the perceptual training contents of the field test filmstrips, examples of association frames in visual perceptual areas, field test reporting forms, revisions made on the visual perceptual filmstrips following field evaluation, and a comparison of the field test filmstrip identification and the General Electric/LIFE filmstrip identification. (GW)

ABSTRACT 51483

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West, Jacqueline J.; Weber, Jack L.
A Phonological Analysis of the Spontaneous Language of a Four-Year-old, Hard-of-Hearing Child.
Journal of Speech and Hearing Disorders; V38 N1 P25-35 Feb 73

Descriptors: exceptional child research; aurally handicapped; hard of hearing; early childhood; females; speech evaluation; linguistics; phonetics; language patterns; speech therapy

A linguistic analysis of the phonological system of a 4-year-old, hard of hearing girl was undertaken to clarify what phonological structures the child used, and thereby to demonstrate the efficacy of a linguistic analysis. The phonetic structure of nonintelligible utterances was analyzed separately from the phonemic analysis of the intelligible, or so-called comparative, data. For the comparative data, specific phonemes were termed fairly well established when the child used a number of appropriate allophones, although these same allophones may have appeared in other classes; and not established when allophones were not appropriately used. For example, in manner of articulation only the stop/resonant constrast was present; and in place of articulation, only the gross labial-nonlabial distinction was consistent. An important discovery from the noncomparative data was that w and ? were used as coarse phonetic representatives of possible syllabic or syntactic configurations. Therapy was suggested as a means of more firmly establishing stop/resonant contrasts, teaching the concept of frication, and encouraging further development of primitive linguistic stages. (Author)

AUTHOR INDEX

SUBJECT INDEX