DOCUMENT RESUME

ED 046 978

24

TH 000 339

AUTHOR TITLE Goolsby, Thomas M., Jr.; Darby, Barbara M. A Bibliography of Instrumentation Methodology and

Procedures for Measurement in Farly Childhood

Learning.

INSTITUTION

Georgia Univ., Athens. Research and Development

Center in Educational Stimulation.

SPONS AGENCY

Research and Development Centers Branch, DEL.

REPORT NO

BUREAU NO

BR-5-0250-014

PUB DATE

May 69

CONTRACT

OEC-6-10-061

NOTE

210.

EDRS PRICE

EDRS Price MF-\$0.65 HC-\$3.29

DESCRIPTORS

Achievement Tests, *Fibliographies, Cognitive Tests, *Early Childhood Education, Educational Programs, Educational Research, Intelligence, *Measurement, Personality Tests, Preschool "hildren, Preschool Education, Reference Materials, School Readiness Tests, Standardized Tests, *Teacher Attitudes, Teacher Evaluation, Technical Reports, *Tests

ABSTRACT

The initial phase of the University of Georgia's evaluation program in Early Childhood Education involved a search of the literature relevant to instrumentation, methodology, and procedures for measuring the growth of young children. This resulting hibliography includes reports, articles, books, and selected tests published between 1960 and 1968. It is arranged in sections which include studies in Early Childhood Learning, appropriate standardized tests, experimental instruments, studies on teacher attitudes toward Early Childhood Education, and general references. The test entries are listed by type: achievement, mental ability, personality, etc. The second phase of this project will consist of the expansion and annotation of the bibliography. (PR)



A BIBLIOGRAPHY OF INSTRUMENTATION METHODOLOGY AND PROCEDURES FOR MEASUREMENT IN EARLY CHILDHOOD LEARNING

Thomas M. Goolsby, Jr.

Barbara M. Darby

May, 1969



Research and Development Center in Educational Stimulation
University of Georgia Athens, Georgia

000339

Practical Paper No. 17

A BIBLIOGRAPHY OF INSTRUMENTATION METHODOLOGY
AND PROCEDURES FOR MEASUREMENT IN EARLY CHILDHOOD LEARNING

Thomas M. Goolsby, Jr.
Associate Director for Evaluation
and
Barbara M. Darby
Research Assistant
R & D Center in Educational Stimulation

Prepared for the Evaluation Division Research and Development Center in Educational Stimulation University of Georgia Athens, Georgia May, 1969

The research reported in this publication was performed as part of the activities of the Research and Development Center in Educational Stimulation, University of Georgia, pursuant to a contract with the United States Department of Health, Education and Welfare, Office of Education, under Provisions of the Cooperative Research Program.

Center No. 5-0250

Contract No. OE 6-10-061



U.B. DEPARTMENT OF HEALTH, EDUCATION
6 WELFARE
THIS DOCUMENT HAS BEEN REPRODUCED
EXACTLY AS RECEIVED FROM THE PERSON OF
DRIGHIELD TO MINIONS STATED ON NOT NECES
SARLY REPRESENT OFFICIAL OFFICE OF EDU
AND AND RETURN ON DE

TABLE OF CONTENTS

Introduction	ii
Organization of the Bibliography	iv
Studies in Early Childhood Learning	1
Experimental Instruments Found in Current Literature	6
Standardized Instruments Appropriate for Measurement of Young Children	10
Studied of Attitudes of Teachers Toward Early Childhood Education	13
General References	14



INTRODUCTION

The purpose of the Evaluation Division of any research group engaged in the education of young children is to answer questions concerning the outcomes of objectives proposed and carried out by means of various programs. The kind of education that is offered and its probable effects on children are the concern of all educators and particularly the evaluator.

In addition to finding subjects and eliciting their cooperation, the major problem of the evaluator is one of designing and/or finding standardized instruments appropriate to the preschool level. Abilities which are readily identifiable in older children are not so easily differentiated in young children. The evaluator must select the characteristics to be measured, investigate the attitudes of teachers toward early learning, and define "early childhood education" to the satisfaction of professional educators.

The above are only a few of the problems encountered by the evaluator in developing specific instruments for the evaluation of children's behavior. Further, there are the problems of communication between the researcher and the educational institutions in which research is to be carried out. There are also problems of scoring and analyzing the data after it has been collected.

During the early childhood years, if the evaluator is alert and skilled in the methods of observation, he will find that the children themselves will indicate or suggest solutions to some of the problems described above. From such "child watching" methods have evolved some of the most innovative techniques developed in the last decade for assessing growth in preschool children. An example of one of these techniques is the development of The Evaluation of Cognitive Development, An Observational Technique: Pre-Reading Skills developed by the University of Georgia Research and Development Center. This technique is based on observation of behavioral symptoms which, while not specifically inherent to the cognitive skills, are considered necessary in forming the foundation for later mastery of these skills.



In an attempt to define the status of learning in early child-hood aducation the initial phase of the evaluation program of the University of Georgia consisted of a search of the literature relevant to instrumentation, methodology and procedures for measuring the growth of young children. The purpose of this search was to acquaint the researchers with the current status of research and development in this area and to furnish some basis for planning an evaluation program.

The following bibliography is intended to cover reports, articles, books and selected tests published between 1960 and 1968 relevant to measurement in early childhood learning.

The second phase of this project will consist of the annotation of this bibliography and a review of the literature relevant to instrumentation, methodology and measures in early childhood learning.



ORGANIZATION OF THE BIBLIOGRAPHY

In order to facilitate reference to the bibliography, items have heen arranged in sections. These sections include articles of a theoretical and experimental nature, some books and studies dealing with specific kinds of instruments both individual and group.

SECTION I. STUDIES IN EARLY CHILDHOOD LEARNING

This section includes articles of a general nature discussing various theories, opinions and comments concerning early childhood education, and attempts at their application.

SECTION II. EXPERIMENTAL INSTRUMENTS FOUND IN CURRENT LITERATURE

Studies in this section describe the construction and evaluation of experimental devices appropriate for the evaluation of the behavior of preschool children. The scarcity of instruments at this level necessitated a search for devices that might be applied to the population selected by this Center. Some of the instruments found in literature were very helpful in serving as models for the construction of new instruments unique to the University of Georgia Program.

SECTION III. STANDARDIZED INSTRUMENTS APPROPRIATE FOR MEASUREMENT OF YOUNG CHILDREN

This section presents a number of selected standardized tests which are suitable for use with primary and preprimary children.

SECTION IV. STUDIES OF ATTITUDES OF TEACHERS TOWARD EARLY CHILDHOOD EDUCATION

Articles in this section deal with attitudes of teachers toward early childhood learning. This search evolved from an attempt to develop a scale to measure the attitude of teachers in this area. The scale will include attitudes of teachers toward children in general; problems of discipline, particularly at an early age; teacher's attitudes toward the development of learning in young children; attitudes related to philosophy of education, curriculum, and administration; and attitudes related to the personality of teachers themselves, i.e., their likes and dislikes, and sources of irritation. The development of the scale is now in progress.

SECTION V. GENERAL REFERENCES

This section was designed to list for the interested researcher some of the literature which deals with early childhood education ranging from the classic methods of Montessori and Piaget to the more current and controversial approaches to the field introduced by Bereiter and Engelmann. No attempt has been made to be either representative or exhaustive in coverage.



STUDIES IN EARLY CHILDHOOD EDUCATION

- Alberty, E. J. Toward a framework for curriculum development. TIP 1967, 6:204-8.
- Alley, G. and others. Reading readiness and the Frostig training program. Excep. Child., 1968, 35:68.
- Baldwin, J. W. Good start in school: A child's right, preschool screening programs. <u>E1. Sch. J.</u>, 1968, <u>68</u>:387-93.
- Bashaw, W. L. and Ayers, J. B. Evaluation of the norms and reliability of the PPVT for pre-school subjects. Ed. and Psychol. M., 1967, 27, pt. 2:1069-75.
- Bayley, Nancy. Mental growth in young children. In the <u>Thirty-Ninth</u>
 <u>Yearbook Nat. Soc. Study Educ.</u>, 1940, Bloomington, see: Public
 School Publishing Co.
- Bayley, Nancy. Comparison of mental and motor test scores for ages 1-15 months by sex, birth order, race, geographical location and education of parents. Child Developm., 1965, 36:379-411.
- Bayley, Nancy and Schaefer, E. S. Correlations of maternal and child behaviors with the development of mental abilities: Data from the Berkeley growth study. Monogr. Soc. Res. Child Developm., 1964, 29, (6).
- Beller, E. K. and Nash, A. Research with educationally disadvantaged preschool children. A paper presented at the annual meetings of The American Educational Research Association, Chicago, February, 1965.
- Bereiter, Carl and Engelmann, Siegfried. Observations on the use of direct instruction with young disadvantaged children. J. of School Psychology, May, 1966, 55-62.
- Bereiter C. and Engelmann, S. <u>Teaching disadvantaged children in the preschool</u>. New York: Prentice Hall, 1966.
- Bereiter, Carl. Instructional planning in early compensatory education.

 <u>Phi Delta Kappan</u>, March, 1967, 68, (7).
- Berson, M. P. Early childhood education. American Ed., 1968, 4:7-13.
- Bottrill, J. H. Effects of preschool experience on the school readiness level of privileged and under privileged children. Excep. Child., 1967, 34:275.



- Brazziel, W. F. and Terrell, Mary. An experiment in the development of readiness in a culturally disadvantaged group of first grade children. J. Negro Educ., 1962, 31:4-7.
- Bruner, J. S. The course of cognitive growth. Amer. Psychol., 1964, 19:1-15.
- Caldwell, B. M. On reformulating the concept of early childhood education, some whys needing wherefores. Young Children, 1967, 22:348-56.
- Campbell-Smith, Norma and McFarland, Margaret B. The role of the nursery school teacher in the development of child personality.

 J. Nursery Educ., 1963, 19:5-18.
- Canfield, A. A. Rationale for performance objectives. AV Instr., 1968, 13:127-9.
- Deal, T. N. and Maness, J. P. New hortzons in kindermath. Young Children, 1968, 23:354-7.
- Deutsch, Cynthia and Deutsch, M. Brief reflections on the theory of early childhood enrichment programs. A paper prepared for the Social Science Research Council Conference on Early Childhood Education, Chicago.
- Deutsch, Martin. The influence of early social environment on school adaptation. A paper presented at the Symposium on School Dropouts, Washington, D. C., 1962.
- Deutsch, M. Facilitating development in the pre-school child: Social and psychological perspective. Merrill-Palmer Quart., 1964, 10:3.
- Dilorenzo, L. T. Effects of year-long prekindergarten programs on intelligence and language of educationally disadvantaged children. J. Exp. Ed., 1968, 36:36-42.
- Dilorenzo, L. T. and Salter, R. Evaluative study of prekindergarten programs for educationally disadvantaged children: Follow up and replication. Excep. Child., 1968, 35:111-19.
- Dodwell, P. C. Children's understanding of number concepts: Characteristics of an individual and of a group test. <u>Canad. J. Psychol.</u>, 1961, <u>15</u>:29-36.
- Eisner, Elliot, W. Research in creativity: Some findings and conceptions.

 <u>Childhood Education</u>, April, 1963.
- Elkind, D. Pieget and Montessori. Harvard Ed. R., 1967, 37:535-45.
- Elkind, D. The development of quantitative thinking: A systematic replication of Piaget's studies. <u>J. Genet. Psychol.</u>, 1961, <u>98</u>:37-46.



- Fishman, J. A., Deutsch, M., Kogan, L., North, R., and Whiteman, M. Guidelines for testing minority group children. <u>J. Soc. Issues</u>, 1964, <u>20</u>:129-145.
- Fowler, W. Cognitive stimulation, I.Q. changes, and cognitive learning in three-year-old identical twins and triplets. Amer. Psychologist, 1961, 16:373.
- Fowler, W. Cognitive learning in infancy and early childhood. <u>Psychol.</u> <u>Bull.</u>, 1962, <u>59</u>:116-152.
- Fuller, Elizabeth M. Early childhood education. In C. W. Harris (Ed) Encyclopedia of educational research, 1960, New York: Mac Millan, Third Fdition, 385-396.
- Gray, Susan W. and Klaus, R. An experimental preschool program for cultually deprived children. Child Developm., 1965, 36:887-898.
- Grossman, B. D. Early childhood education and the new frontiers. El. Sch. J., 1968, 68:340-2.
- Grotberg, E. H. Role of the parent in fostering early learning. Ed., 1968, 89:35-9.
- Hartman, A. S. Preprimary programs: How to improve pre-school programs. Nations Schools, 1966, 77:57-8.
- Harvey, O. J. Teachers belief systems and pre-school atmospheres.

 <u>Journal of Educational Psychology</u>, 1966, <u>57</u>:373-38 (6).
- Hennessy, M. N. Special programmes planned for preschoolers. <u>Times</u> <u>Ed. Sup.</u>, 1968, <u>2758</u>:1087.
- Hodges, W. L. and Spicker, H. H. Effects of preschool experience on culturally deprived children. Young Children, 1967, 23:23-43.
- Hunt, J. McV. How children develop intellectually. Children, 1964, 3:11.
- Kennedy, W. A., DeRiet, V. Van and White, J. C., Jr. The standardization of the 1960 revision of the Stanford-Binet intelligence scale on Negro elementary school children in the Southeastern United States. Cooperative Research Project No. 954 (Washington, D. C.: U. S. Office of Education, Department of Health, Education and Welfare) 1961.
- Krippner, S. Specialized approaches to the instruction of young children. Ed., 1968, 89:11-17.
- Law, N. R. Are the public schools ready for pre-schoolers? Childh. Ed., 1966, 42:529-34.
- McQueen, M. Early childhood education; major goals in four areas. Ed. Digest, 1968, 33:27-30.



- Nursery school education, 1966-67; summary. NEA Res. Bul., National Education Association, Research Division, 1968, 46:54-6.
- Piers, M. Dynamics of early childhood education: A new program; new school trains teachers to understand developmental patterns.

 111. Sch. J., 1967, 47:242-9.
- Pineault, Candide. A study of the effects of kindergarten experience on vocabulary. <u>Diss. Abstr.</u>, 1967, 28 (3-A):972-973.
- Pine, P. Where education begins. Am. Ed., 1968, 4:15-19.
- Pines, Maya. A pressure cooker for four-year-old minds. Harper's, January, 1967, 55-61.
- Pines, M., Brunner, C. and Spodek, B. How and what to teach the very young child; opinions differ. NEA J., 1968, 57:43-64.
- Pitts, V. L. Investigation of the relationships between two preschool programs on the adjustment and readiness of disadvantaged pupils. Childh. Ed., 1968, 44:524-5.
- Powell, L. D. and Johnson, C. E. Clayton County seeks some answers. NEA J., 1967, 56:36-7.
- Preparation standards for teachers in early childhood education; nursery, kindergarten, primary. Association for childhood education international. Teacher education committee. Childh. Ed., 1967, 44:176f-176g.
- Read, Katherine H. The nursery school: A human relationship laboratory. Philadelphia: Saunders, 1960, (3rd ed.) 1950 (1st ed.).
- Schwertfeger, Jane and Weikart, David P. The nature of preschool bebefits.

 Michigan Education Journal, 1967, 44:18-20.
- Sister Josina. New look at school readiness. Cath. Sch. J., 1967, 67: 48-50.
- Starkweather, Elizabeth K. Problems in the measurement of creativity in preschool children. J. of Educ. Meas., 1964, 1:109-13.
- Stott, Leland H. and Ball, Rachell S. Infant and preschool mental tests review and evaluation. Monographs of the Society for Research in Child Development, 1965, Chicago: University of Chicago Press, 30:151 (3, Serial No. 101)
- Sun, H. C. Current innovations in education. Sch. and Soc., 1968, 96:402-4.
- Torrance, E. P. and Fortson, L. R. Creativity among young children and the creative-aesthetic approach. Ed., 1968, 89:27-30.



- Vitz, P. Some changes in behavior of nursery school children over a period of seven weeks. J. Nursery Educ., 1961, 16:62-65.
- Weiner, Paul, Barritt, Loren S. and Semmel, Mehvyn I. A critical evaluation of the Illinois rest of psycholinguistics. Excep. Child., 1967, 33:373-80.
- Witty, P. A. Studies of early learning: Their nature and significance. Ed., 1968, 89:4-10.



EXPERIMENTAL INSTRUMENTS FOUND IN CURRENT LITERATURE

ACHIEVEMENT TESTS

- Ahr, Edward. The development of a group pre-school screening test of early school entrance potentiality. Psychology in the Schools, 1967, 4:59-63 (1).
- Ames, Louise B., Ilg, F. L. and August, Judith. The Loewenfeld mosaic test: Norms for five to ten year old American public school children and comparative study of three groups. Genet. Psychol. Monogr., 1964, 70:57-95.
- Attwell, A. A., Orpet, R. E. and Meyers, C. E. Kindergarten behavior ratings as a predictor of academic achievement. J. of School Psych., 1967, 6:43-46 (1).
- Boldauf, R. J. A study of a measure of listening comprehension and its relation to the school achievement of fifth grade pupils.

 <u>Disst. Abst.</u>, 1961, <u>21</u>, pt. 5:2622, (9).
- Bormuth, John R. Cloze tests as measures of readability and comprehension ability. <u>Disst. Abst.</u>, 1963, <u>22</u> (11)
- Brenner, A. A new Gestalt test for measuring readiness for school.

 <u>Merrill-Palmer Quart</u>, 1959, 6:27-51.
- Doll, Edgar A. and McKnight, Edward L. A preschool educational attainment scale. Cerebral Palsy Journal, 1965, 26:3-5 (3).
- Ponnelly, R. J. The construction and validity of the Missouri test of verbal ability. <u>Disst. Abst.</u>, 1964, <u>24</u>, (11).
- Engelmann, Seigfried. The basic concept inventory. Chicago: Follett Educational Corporation, 1967.
- Goolsby, Thomas M. Jr. Evaluation of cognitive development: An observational technique, pre-reading skills. Athene, Georgia: Research and Development Center, University of Georgia, 1969 (69-2).
- Goolsby, Thomas M. Jr. Evaluation of cognitive development: An observational technique, pre-mathematics skills. Athens, Georgia: Research and Development Center in Education Stimulation, March, 1969.
- Hadley, E. E. Development of a pre-kindergarten test for predicting school achievement in the primary grades. <u>Disst. Abst.</u>, 1965, <u>25</u>, (8).



Johnson, Roger E. Study of the validity of the Clymer-Barrett prereading battery. <u>Dissert. Abst.</u>, 1968, <u>28</u>:3892-3893 (10-A).

Readiness Pre-school

Katz, L. G. et. al. Observing behavior in kindergarten and pre-school classes; behavior survey instrument. Childh. Ed., 1968, 44:400-5.

Observational rechnique Pre-school

- Manuel, Herschel T. Teaching first-grade children how to take group tests. In <u>The Twentieth Yearbook of the National Council on</u> Measurement in Education.
- McC:acken, R. A. The development and validation of the standard reading inventory for the individual appraisal of reading performance in grades 1 through 6. <u>Disst.</u> Abst., 1964, 24:5200 (12).
- Pate, John E., and Webb, Warren W. Screening beginning first graders for potential problems. Excep. Child., 1965, 32:111 (2).
- Stanford, Diane, Dember, William N. and Stanford, L. Bradley. A children's form of the Alperr-Haber achievement anxiety scale.

 <u>Child Development</u>, 1963, <u>34</u>:1027-1032.

MENTAL ABILITY TESTS

- Banta, T. J. Tests for the evaluation of early childhood education: the Cincinnati autonomy test battery (CATB). Cognitive Studies, 1968, 1.
- Ametjian, Armistre. The effects of pre-school program upon the intellectual development and social competency of lower-class children.

 <u>Disst. Abst.</u>, 1966, 27:105.
- Foster, Judilynn Theisen. Some effects of pre-school experience on the general intelligence and creativity of culturally disadvantaged children. <u>Disst. Abst.</u>, 1966, <u>27</u>:2067 (7).
- Loretan, Joseph O. Alternatives to intelligence testing. Proceedings of the 1965 Invitational Conference on Testing Problems. 1966, 19-30.
 - 1. Observation of teachers
 - Development of materials and tasks eliciting intellectual behavior
 - Appraisal, i.e., assessment designed to be integral part of teaching.

Intelligence All ages



Scott, Leland H., and Ball, Rachell Stutsman. Infant and preschool mental tests: Review and evaluation. Monographs of the Society for Research in Child Development, 1965, 30 (3) (Serial No. 101).

Three approaches:

- Review of psychological literature dealing with theoretical thinking underlying test development.
- Questionnal() survey made of current use of these tests, and opinions regarding effectiveness of these tests and what might be done to improve them.
- Singhae, Sushila. A non-language test battery for predicting primary school success. J. of Psychological Researches, 1966, 10:130-139 (3).

PERSONALITY TESTS

- DeLucia, Lenore A. The toy preference test: A measure of sex roles identification. Child Development, 1963, 34:107-117.
- Engel, Mary. The development and application of the children's insight test. <u>J. Proj. Tech.</u>, 1958, <u>22</u>:13-25.
- Lindemann, E. B., et. al. Predicting school adjustment before entry.

 J. of School Psychology, 1967, 6:24-42 (1).

School Adjustment

Patterson, G. A non-verbal technique for the assessment of agression in children. Child Develpm., 1960, 31:643-553.

TEACHER ASSESSMENT INSTRUMENTS

- Cratty, Bryant J. The assessment of teacher sensitivity. <u>J. Educ.</u> Res., 1962, <u>13</u>:72-77.
- Crawford, P. L. Evaluation of an attitude scale toward teaching. Ed. and Psychol. M., 1965, 25:535-7.
- Curran, R. L. and others. Short test of one's educational philosophy. Ed. and Psychol. M., 1966, 26:383-93.
- Medley, Donald M. and Mitzel, Harold E. Some behavioral correlates of teacher effectiveness. J. Educ. Psychol., 1959, 50:239-246.
- Popham, W. J. and Baker, E. L. Validation of an affective measuring device; teachers attitudes toward instructional principles. <u>Calit. J. Ed. Res.</u>, 1967, 18:82-6.
- Reichenberg-Hackett, Wally. Scoring teacher behavior in nursery groups.

 <u>Psychol. Rep.</u>, 1962, 11:600 (2).



- Sorenson, Garth A., Husek, T. R., and Uu, Constance. Divergent concepts of teacher role: An approach to the measurement of teacher effectiveness. <u>J. Educ. Psychol.</u>, 1963, 54:287-294 (6).
- Wade, E. W. The construction and validation of a test of ten teacher skills used in reading instruction: Grades 2-5. Disst. Abst., 1962, 22 (1).
- Willey, Darrell S., McComas, James D., and Miller, Luitt K. A suggested research model for the investigation of classroom teacher effectiveness. N. Mex. Soc. Stud. Educ. Educ. Res. Bull., March, 1963, 19-25.



STANDARDIZED INSTRUMENTS APPROPRIATE FOR MEASUREMENT OF YOUNG CHILDREN

ACHIEVEMENT

- Cooperative primary tests. Princeton, New Jersey: Educational Testing Service, 1965.
- Jastak, J. 7. and Jastak, S. R. The wide range achievement test. Wilmington, Belaware: Guidance Associates, 1965.
- Kelley, Truman L., Madden, Richard, Gardner, Eric F., Rudman, Herbert C.

 <u>Stanford achievement test.</u> New York: Harcourt, Brace and World,
 Inc., (Primary I Battery) 1964.
- Metropolitan achievement tests. New York: Harcourt, Brace and World, Inc., 1958.
- Thorpe, Louis P., Lefever, D. Welty, and Naslund, Robert A. <u>SRA</u>
 <u>achievement series</u>. Chicago: Science Research Associates, Inc.,
 1964.
- Tiegs, Ernest W., Clark, Willis W. <u>California achievement tests</u>. Monterey, California: California Test Bureau, 1957.

CREATIVITY

Torrance, E. Paul. <u>Torrance tests of creative thinking</u>. Princeton, New Jersey: Personnel Press, Inc., 1966.

INVENTORIES AND SCREENING DEVICES

- Beery, Keith E. and Buktenica, Norman. The developmental test of visual-motor integration. Chicago: Follett Publishing Company, 1967.
- Botel, Morton. <u>Botel reading inventory</u>. Chicago: Follett Publishing Company, 1966.
- Caldwell, Bettye M. The preschool inventory. Princeton, New Jersey: Educational Testing Service, 1967.
- Kirk, Samuel A., McCarthy, James J., Kirk, Winifred D. <u>Illinois test</u>
 of psycholinguistic abilities. Urbana, Illinois: University of
 Illinois Press, 1968.



- Pate, John E., Webb, Warren W. First grade screening test. Circle Pines, Minnesota: American Guidance Series, Inc., 1966.
- Schiff, Herbert J., Friedman, Myles I. Preprimary profile. Chicago: Science Research Associates, Inc., 1966.
- Spache, George D. <u>Diagnostic reading scales</u>. Monterey, California: California Test Bureau, 1963.
- Wilson, John A. R., Robeck, Mildred C. <u>Kindergarten evaluation of learning potential</u> (KELP). New York: McGraw-Hill Book Company, 1967.

MENTAL ABILITY

- Burgemeister, Bessie B., Blum, Lucille Hollander and Lorge, Irving.

 Columbia mental maturity scale. New York: Harcourt, Brace and World, Inc., 1959.
- Dunn, Lloyd M. <u>Peabody picture vocabulary test</u>. Minneapolis, Minnesota: American Guidance Service, Inc., 1965.
- Harris, Dale B. Children's drawings as measures of intellectual maturity. (Revision and extension of the Goodenough draw-a-man test) New York: Harcourt, Brace and World, Inc., 1963.
- Kuhlmann, F. and Anderson, Rose G. <u>Kuhlmann-Anderson test</u>. Princeton, New Jersey: Personnel Press, Inc., 1963.
- Otis, Arthur S. and Lennon, Roger T. Otis-Lennon mental ability test.
 New York: Harcourt, Brace and World, Inc., 1967.
- Raven, J. C. Raven progressive matrices. New York: The Psychological Corporation, 1962.
- Sullivan, Elizabeth T., Clark, Willis W. and Tiegs, Ernest W.

 <u>California test of mental maturity.</u> Monterey, California:

 <u>California Test Bureau, 1963.</u>
- Short test of educational ability. Chicago: Science Research Associates, 1966.
- Terman, Lewis M., Merrill, Maud A. Stanford-Binet intelligence scale.

 Boston: Houghton Mifflin Company, 1960.
- Thorndike, Robert L., Hagen, Elizabeth, and Lorge, Irving. Cognitive abilities test. New York: Houghton Mifflin Company, 1968.
- Thurstone, Thelma Gwinn. Primary mental abilities. Chicago: Science Research Associates, Inc., 1963.



- Wechsler, Tavid. Wechsler preschool and primary scale of intelligence.

 New York: The Psychological Corporation, 1967.
- Wechsler, Lavid. Wechsler intelligence scale for children. New York: The Psychological Corporation, 1949.

PERSONALITY

- Bellak, Lecoold and Bellak, Sonya Sorel. Children's apperception test. New York: The Psychological Corporation, 1961.
- Buck, John N. The house-tree-person technique. Beverly Hills, California: Western Psychological Services, 1966.
- Thorpe, Louis P., Clark, Willis W. and Tiegs, Ernest W. <u>California</u>

 <u>test of personality</u>. Monterey, California: California Test Bureau,
 1953.

READINESS

- Gates, Arthur I. and MacGinitie, Walter H. Gates-MacGinitie reading readiness skills test. New York: The Psychological Corporation, 1968.
- Hildreth, Gertrude H., Griffiths, Nellie L. and McGauvran, Mary E.

 Metropolitan readiness test., New York: Harcourt, Brace and
 World, Inc., 1965.
- Lee, J. Murray and Clark, Willis W. <u>Lee-Clark reading readiness test</u>. Monterey, California: California Test Bureau, 1962.
- Murphy, Helen A. and Durrell, Donald D. Murphy-Durrell reading readiness analysis. New York: Harcourt, Brace and World, Inc., 1965.
- Pintner, Rudolf, Cunningham, Bess V. and Durost, Walter N. Pintner-<u>Cunningham primary general abilities rest.</u> New York: Harcourt, Brace and World, Inc., 1966.

SOCIAL MATURITY

Doll, Edgar A. <u>Vineland social maturity scale</u>. Circle Pines, Minnesota: American Guidance Service, Inc., 1965.

VISUAL PERCEPTION

Frostig, Marianne. <u>Developmental test of visual perception</u>. Palo Alto, California: Consulting Psychologists Press, 1966.



STUDIES OF ATTITUDES OF TEACHERS TOWARD EARLY CHILDHOOD EDUCATION AND EDUCATION IN GENERAL

- Anderson, R. E. Seminar experiences for changing attitudes of graduating seniors in education. <u>J. Exp.</u> Ed., 1967, 36:87-92.
- Bloom, Richard D. and Wilensky, Harold. Four observational categories for describing teacher behavior. Research in Education, 1968, 3:95 (2).
- Brim, B. J. Attitude changes in teacher education students. J. Ed. Res., 1966, 59:441-5.
- Horm, J. L. and Morrison, W. L. Dimentions of teacher attitudes. J. Ed. Psychol., 1965, 56:118-25.
- Jeffers, V. G. Teaching as a profession; attitudes of teachers and association leaders. Nat. El. Prin., 1968, 47:26-31.
- Johnson, M.E.B. Teachers' attitudes to educational research. Ed. Res., 1966, 9:74-9.
- Kerlinger, F. N. Educational attitudes and perceptions of teachers: Suggestions for teacher-effectiveness research. <u>Sch. R.</u>, 1963, <u>71</u>:1-11.
- Lipscomb, E. E. Study of the attitude of student teachers' in elementary education. J. Ed. Res., 1966, 60:159-63.
- McCobb, P. T. Try and attitude survey. Engl. J., 1966, 55:1175-9.
- Mitzel, Earold E. Teacher effectiveness. Encyclopedia of Educational Research, 1960, New York: Macmillan Co.
- Oliver, R. A. C. and Butcher, H. J. Teacher's attitudes to education.

 <u>British J. Ed. Psychol.</u>, 1968, 38:38-44.
- Popham, W. J. and Baker, E. L. Measuring teacher's attitudes toward behavioral objectives. <u>J. Ed. Res.</u>, 1967, 60:453-5.
- Reactions to educational innovations. Ed. Digest, 1967, 33:10-13.
- Robbins, R. and Hughes, H. H. Measurement of the attitudes of teachers toward teaching as a profession. <u>J. Ed. Res.</u>, 1967, 60:243-7.
- Universal opportunity for early childhood education. Educational Policies Commission of the N. E. A. of the American Association of School Administrators. N. E. A. Journal, 1966, 55 (8).



GENERAL REFERENCES

- Bereiter, Carl and Engelmann, Siegfried. <u>Teaching disadvantaged</u> children in the preschool. Englewood Cliffs, New Jersey: Prentice-Hall, 1966.
- Bloom, B. S. Stability and change in human characteristics. New York: John Wiley and Sons, Inc., 1964.
- Buros, Oscar K., Editor. The mental measurements yearbooks. Highland Park, New Jersey: They Gryphon Press, 1938, 1940; Third, 1949; Fourth, 1953; Fifth, 1959; Sixth, 1965.
- Buros, Oscar K., Editor. Tests in print. Highland Park, N. J.: The Gryphon Press, 1961.
- Committee on Diagnostic Reading Tests, Inc. <u>Diagnostic reading tests</u>. New York: The Committee, 1963.
- Dewey, J. The school and society. Chicago: University of Chicago Press, Phoenix Books, 1900.
- Flavell, J. H. The developmental psychology of Jean Piaget. Princeton, N. J.: D. Van Nostrand Co., Inc., 1963.
- Frost, Joe L., Editor. Early childhood education rediscovered: readings.

 New York: Holt, Rinehart and Winston, Inc., 1968.
- Gray, Susan W., Klaus, Rupert A., Miller, James O., Forrester, Bettye J.

 Before first grade: The early training project for culturally
 disadvantaged children. New York: Teachers College Press, 1966.
- Hechinger, Fred M., Editor. <u>Pre-school education today</u>. Garden City, N. Y.: Doubleday and Co., 1966.
- Hess, Robert D. and Bear, Roberta Meya, Editors. Early education:

 <u>Current theory, research and action</u>. Chicago: Aldine Publishing
 Co., 1968.
- Hunt, J. McV. <u>Intelligence and experience</u>. New York: The Ronald Press Co., 1961.
- Inhelder, Barbel and Piaget, J. The growth of logical thinking. New York: Basic Books, Inc.
- Montessori, Maria. The discovery of the child. Translated from the third Italian edition of the method of scientific pedagogy applied to child education in The children houses. Wheaton, Ill.: The Theosophical Press, 1962.
- Montessori, Maria. The Montessori method. Philadelphia, Pa.: J. B. Lippincott Co., 1912.



- Piaget, J. The origins of intelligence in children. Translated by Margaret Cook. New York: International Universities Press, Inc., 1952.
- Pines, Maya. Revolution in learning: The years from birth to six.

 New York: Harper and Row, 1967.
- Pitcher, E. G., Lasher, M. G., Feinburg, S. G. and Hammond, N. C. <u>Helping young children learn</u>. Columbus, Ohio: Charles E. Merrill Books, Inc., 1966.
- Ryans, D. G. Characteristics of teachers. Washington, D. C.:
 American Council on Education, 1960.
- Sears, R. R, Maccaby, Eleanor E. and Levin, H. Patterns of child rearing. Evanston, Ill: Row, Peterson and Co., 1957.
- The evaluation of teaching. A report of The Second Pi Lamda Theta Catena. Washington, D. C.: Pi Lamda Theta, 1967.
- Watson, J. B. <u>Psychological care of infant and child</u>. London: George Allen and Unwin, Ltd., 1928.
- Willis, Clarice D., Lindberg, Lucile. <u>Kindergarten for today's</u> children. Chicago: Follett Publishing Co., 1967.
- Wylie, Joanne, Coordinating Editor. A creative guide for preschool teachers. Racine, Wisconsin: Western Publishing Co., 1966.

