ASSESSMENT INSTRUMENTS FOCUSING ON PRESCHOOL CHILDREN'S ABILITIES

by

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B. S. Kansas State University, 1979

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Family and Child Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1984

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Acknowledgements

Many colleagues contributed in the completion of this report. Special thanks go to Dr. Robert Poresky who served as my committee head and worked with me in making revisions and checking the final draft. Credit also goes to Dr. Susan Wanska and Dr. Marjorie Stith for their participation on my committee and input into the final draft of the report. I also wish to thank all of the authors and publishers of instruments and my colleagues who provided the assessment instruments to review and include.

Invaluable assistance and encouragement was received from my family and friends. First, I would like to thank my mother for her patience, time, and typing skills in the rough draft preparation of this report. Secondly, the prayers and words of encouragement from my family and friends was greatly appreciated. Last, but not least, my husband, Randy, deserves a special acknowledgement for the sacrifices he made, as well as the patience, understanding, and support he showed throughout.

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Chapter 1

INTRODUCTION

Information on 14 criterion-referenced preschool assessment instruments is provided through detailed descriptions of each instrument and two tables which highlight their characteristics. The emerging trend in early childhood education towards program-oriented assessments of preschool children's abilities and its role is presented. This type of assessment serves the purpose of facilitating relevant curriculum development documenting children's developmental changes and enhancing communication and knowledge of child development to parents. It is the responsibility of early childhood educators to be informed about general and specific sequences of developing skills and behaviors in children. The identification of children's level of development should be done in a thorough, systematic and accurate manner using assessment instruments rather than based on "gut-level" feelings. General assessment guidelines and aspects of assessment instruments are presented to guide early childhood educators in making informed decisions concerning the selection and use of developmental assessment instruments. Elements of each instrument included in the analyses are: (a) identification information; (b) a description of the measure including purpose, recommended ages, method and developmental areas; (c) administration procedures which also include scoring and interpretation information; (d) technical aspects covering the instruments' item selection, reliability and validity;

(e) additional comments and; (f) additional relevant references. Several criteria (e.g. focuses on three to five year olds, accessible for review, etc.) were used for selecting the 14 instruments reviewed in the body of the paper using the systematic outline. Some overall strengths and weaknesses of the assessment instruments are highlighted in the summary.

Chapter 2

PRESCHOOL ASSESSMENT

A major role of the early childhood educator is to facilitate the total growth of young children by providing a variety of learning experiences relevant to the child's current developmental level (Drouin, Brekken, Nelson, Neuman, Reed & Selden, 1979). However, what are considered to be relevant learning experiences for individual preschool children are largely influenced by the early childhood educator's knowledge of the stages and sequences of development. In early childhood education many people perform many jobs at different skill levels, but not all possess contemporary knowledge of content and methods (Davis & Alexander, 1982). Early childhood teaching began as an occupation and is becoming a profession as the early childhood educator chooses to acquire the kinds of knowledge and develop the expertise that characterizes the "true" professional (Almy, 1975). "A genuine professionalism is essential for the development and maintenance of effective programs for early education and care" (Almy, 1975, p. 32).

"Early childhood educators are, of course, not unaware that the collection of facts constituting their knowledge of child development has been expanded and modified during the years. But they are not always eager to examine the significance of new findings" (Almy, 1964, p. 42), as they relate practical implications for planning curriculum. One reason for the reluctance may be in part due to the fact that training courses

have tended to neglect the emerging issue of developmental assessment that co-exists with the freedom to determine early childhood curriculum (Wiseman & Pidgeon, 1972). On the other hand, one can become so engrossed by the new ideas as to appear to neglect findings and theories that are older, less glamorous, but still relevant. Many preschool teachers rely on their intuition for their curriculum practices to further a child's development; others may rely on their "gut-feelings" about a child's stage of development. Although gut-level feelings should not be ignored, there is no compelling evidence for any consistent accuracy in intuitive judgments (Goodwin & Driscoll, 1980).

A natural hesitancy exists and the realization and acceptance of the notion that teaching is to be informed by research, and not solely by intuition, is overlooked. "It is obvious that no one can ever hope to become an expert in all areas of child development" (Cohen & Gross, 1979, p. 8). "Nevertheless, full realization of the potentialities in early childhood is contingent on a wider range of supporting knowledge and skills than the typical early childhood teacher has" (Almy, 1975, p. vii). One emerging trend is the use of preschool assessment instruments.

"When a school, center or other program takes the facilitation of the child's development as an aim, it commits itself to the assessment of development" (Almy, 1975, p. 220). Instead of viewing the process of assessment as a dreaded responsibility and intrusion, hopefully, early childhood educators will feel that any systematic assessment of children in terms of

skills and concepts acquired during the preschool years would be both necessary and desirable for teachers, children and parents.

"It is one thing to be committed to the assessment of development, quite another to do it well" (Almy, 1975, pp. 220-221). There are a large number of instruments being developed by a wide range of individuals and the quality is varied (Cross & Goin, 1977). Unfortunately, assessment instruments do not come with an implicit or explicit guarantees for users. Furthermore, the "perfect" instrument has not been developed (Hallau, 1977); nor is it likely to be, considering the variables and complexity of children's development and measurement purposes and procedures. It is generally recognized by the profession that there are many poor assessment measures (Nikto, 1980), which makes it imperative that early childhood teachers make informed decisions concerning the selection and use of developmental assessment instruments (Doucette & Freedman, 1980). However, teachers are often inadequately informed about the range of criteria that should be considered in the selection of an instrument (Southworth, Burr & Cox, 1980).

Chapter 3

THE ROLE OF ASSESSMENT INSTRUMENTS

"From the teacher's point of view, the most significant functions of evaluation procedures are to diagnose growth patterns and achievement levels of her class and establish learning objectives for both individual children and the group" (Hess & Croft, 1971, p. 316). The aim of early childhood education should not be to fit the children into the curriculum, but rather to concentrate the curriculum on the present and emerging skills and behaviors of the preschool child so the curriculum fits the child. "Many early childhood educators fail to assess, but rather teach a curriculum without determining the child's present level of functioning" (Cross & Goin, 1977, p. 36). A survey of 10 day care centers concerning how time was wasted showed that 70% of the programs wasted time as a result of the activities being in appropriate to the child's age level. "Frequently the activity was too complex, too structured, involved too many children or required skills that children of that age would not yet have gained" (Davidson, 1980, p. 19). In order to know what activities to offer and what kind of performance to expect from preschool children, teachers must be thoroughly familiar with children's levels of development. As the teacher in a preschool classroom plans instructional activities, she needs to consider many questions about each child, e.g. Can a child plan a project and carry it out? Can a 3-year-old be expected to cut a line? Straight or curved lines? Is the child ready for puzzles with

more pieces?, etc. The first and sometimes least obvious implications of criterion-referenced tests for classroom teachers involves the isolation of what opportunities/activities ought to be available.

> Far more clearly than any of its measurement predecessors, a criterion-referenced test describes an intended competency . . . Because of the greater clarity associated with the description of criterion-referenced measures, educators have a far better opportunity to scrutinize potential instructional targets according to their appropriateness. thus, even before considering their instructional dividends, we will find that certain criterion-referenced tests can contribute substantially to curricular decision making. By isolating potential topics with clarity, those that should be pursued can be selected and those that should be excised can be dropped from the teacher's curriculum. (Popham, 1978, p. 219)

With on-going assessment of children's skills and behaviors, curriculum planning becomes more than an "act of faith" (Vacc, 1982).

However, "assessment is not a one-time occurrence" (Cross & Goin, 1977, p. 36). When developmental assessment occurs throughout the year, the children not only benefit from truly relevant learning experiences, but in addition, the teacher has a tangible record of children's progress. Reliance on one's memory for recalling past events and details has shown its inadequacy time and again. The concrete evidence of children's performance

acquired in developmental assessment at one point in time as compared to a later date can result in increasing the teacher's morale and satisfaction from the results of her efforts to accomplish assessment and plan relevant learning experiences.

Parents, too, may also benefit from the use of developmental assessment in early childhood education. Pilot data from a study of parental beliefs about children's developmental process revealed two things. First, parents' belief systems about how children develop were complex. The basis for their beliefs ranged from "well-articulated theoretical statements to intuitive comments regarding their ideas about children's intellectual and social development" (McGillicuddy-DeLisi, 1982, p. 193). Secondly though, the study found that parents' beliefs were subject to change over time in the course of their interactions with objects, events and people (McGillicuddy-DeLisi, 1982). The process of reporting to parents can be enhanced by the use of developmental assessment because it not only provides information on behavior and skill sequences of child development but relates their child's strengths and weaknesses. Some assessment instruments require either interviewing the parents concerning their child or allowing parents to observe the assessment process, or both. In addition, developmental assessment of children may provide early childhood programs with a means of accountability, reinforcing the benefits of preschool education. "A tangible record of the child's progress through the nursery, which can be shown to the parent, may make the parent more aware of the nursery's objectives and the means by which these are attained" (Tyler & Foy, 1979, p. 221).

Although several advantages of developmental assessment in early childhood education have been noted, "assessment, recording and reporting children's progress is one of the most controversial aspects of program development for young children" (Goodwin & Driscoll, 1980, p. 383). The degree to which the process is systematic, thorough and accurate determines the degree to which teachers, children and parents benefit (Cross & Goin, 1977).

Chapter 4

ASSESSMENT GUIDELINES

In any evaluation process, there exists the problem of determining the best assessment method. Each method, whether formal or informal observation or interview (report) has advantages and limitations. These will be considered further in describing specific measures. An important component of any method is that it be systematic. Many people collect information in a haphazard manner which creates incomplete inaccurate data and results (Cross & Goin, 1977). Regardless of the assessment technique chosen, Goodwin and Driscoll (1980) recommend the following advice regarding assessment procedures:

1. Establish a relaxed informal situation to ensure that children are comfortable rather than anxious during assessment.
2. Utilize . . . measures that match the important objectives of the program--cognitive, affective, and psychomotor.
3. Utilize measures with a range of difficulty levels, including assessment of higher-order skills.
4. Present tasks to children in a standard way; during the individual testing of many children, any variations in assessment procedures by the teacher can reduce the comparability and meaning of the data obtained.
5. Avoid the "getting-better-and-better" syndrome; if assessing the same child several times during the year,

the teacher may be biased toward viewing the child's behavior and performance as improved with each assessment when, in fact, this is not always the case.

6. Conduct evaluations on a timely, reasonable schedule; somewhere between the extremes of one-a-year evaluation, which is usually too little, and "continuous" evaluation, which is usually unfeasible, a balance should be sought that encourages evaluation at those times during the year when data can affect instructional planning and decision making.
7. Treat data obtained on children confidentially and professionally; data on children, whether based directly on their performances or secured from reports of parents or others, should be used for its intended purposes of facilitating their learning and development (pp. 383-384).

Developmental information may be collected systematically and thoroughly, but the data and products accumulated should be recorded and stored in an easily retrievable and well-organized form. One of the most common approaches to recording and storing assessment information is the use of individual booklets for each child. A second, and less frequently used organizational approach is to list and record each individual child's scores by developmental domain sheets. Each identified domain contains data of each individual child's performance and/or summary statistics for the entire group. A functional approach that provides ready access to important data is vital to efficient use of developmental information.

Brief consideration has been given to the issues of assessment methods and record systems, but of equal importance is the utilization of assessment results for curriculum planning. Utilizing data for curriculum decisions is not only affected by the number of children, but also by the scope of skills and behaviors or developmental areas assessed. Furthermore, early childhood educators must make decisions regarding "the problem of 'what' and 'how much' to communicate to parents who are not professionally trained in interpreting assessment results and who are emotionally involved in their children's development" (Goodwin & Driscoll, 1980, p. 383). Minimal advice exists on the relative weight that should be given to the child's cognitive, affective and psychomotor development (Goodwin & Driscoll, 1980). Although it is generally felt that all areas should be given equal emphasis to portray a "total" picture of the child, caution might be noted in the cognitive domain with respect to possible parental confusion with intelligence.

Chapter 5

ELEMENTS OF ASSESSMENT INSTRUMENTS

Some attempts have been made to develop sets of guidelines or standards for early childhood educators to use in evaluating instruments (Goodwin & Driscoll, 1980; Hambleton & Eignor, 1978; Coordinating Office for Regional Resource Centers, University of Kentucky, 1976). The following elements for describing and analyzing instruments are adapted from a list developed by Goodwin and Driscoll (1980): Identification, Description, Administration, Technical Aspects, Additional Comments, and References.

The following explanation of this systematic outline for describing and analyzing the instruments is intended to help the reader accomplish a personal instrument evaluation and to also understand the written instrument evaluations in this report. Each instrument described in the body of this report uses this format.

Identification

Each instrument evaluation includes the basic information that would be necessary for obtaining the assessment instrument: title and/or acronym, author, publisher, date, publisher address, and approximate costs. The cost of obtaining an instrument and its parts in terms of a dollar figure is an important consideration in relation to one's budget; however, it should not be a major factor influencing its selection and use, but rather weighed in relation to other significant factors such as usability and technical aspects of item selection, reliability and

validity. The sources used in the review procedure are identified so that one knows exactly what was used as a basis for descriptions and analysis in this report.

Description

Purpose

Assessment involves a question-asking process (Cohen & Gross, 1979); a systematic process of gathering information and using it to make decisions. Assessment in early childhood focuses on the child and his or her development. A multitude of measures have been developed for use with children and these measures can be categorized according to several aspects.

The most common distinction among assessment instruments is to consider whether an instrument is criterion-referenced or norm-referenced. By definition, "In a norm-referenced test, a student's performance is compared with that of other students . . . norm-referenced tests show how the student performs in comparison with outside norm groups" (Goodwin & Driscoll, 1980, p. 58). On the other hand, "In a criterion-referenced test, the student's performance is compared against predetermined levels of mastery. Criterion-referenced tests show whether or not a child can do a certain thing . . . Criterion-referenced achievement tests are becoming quite popular as replacements for norm-referenced achievement tests" (Goodwin & Driscoll, 1980, p. 58). The choice between criterion-referenced and norm-referenced measures depends primarily on the required information. A norm-referenced measure produces a score, developmental age or percentile rank which would be desired if children with learning

problems or gifted children need to be identified and/or selected for special programs. However, a criterion-referenced test would be favored to determine the extent to which children have mastere various aspects of development and what skills and behaviors he will probably learn next (Goodwin & Driscoll, 1980).

The definitions appear clear and concise; however, there are some tests which exhibit features of both referencing systems. Although many instruments tend to be classified as criterion-referenced measures they are frequently developed on the basis of several standardized norm-referenced developmental tests (Cross & Goin, 1977) and serve one of the most important purposes of child assessment: to provide information that can be used to facilitat young children's learning and development (Goodwin & Driscoll, 1980).

There can be no rational basis for selecting an instrument without the knowledge of its purpose and a 'match' to the purpose needed (Doucette & Freedman, 1980). The degree to which an instrument meets the demands of the situation and fulfills the intended application for program planning affects its suitability. It is up to the user to determine which of a number of potentially useful scales is most appropriate for their particular program planning needs and early childhood situation.

Recommended Ages

The usefulness of a scale also depends upon a match between the age range of children for which the test was developed and th ages for which the test is used. "Most instruments are designed for a particular reference population, whether that group is

explicitly defined or only hinted at by the authors" (Doucette & Freedman, 1980, p. 17). Since the population for which an instrument was designed sets certain expectations for the functioning of the children to be assessed, it is important that these expectations be understood by the test administrator and appropriate to their population (Doucette & Freedman, 1980).

Method

The methodology is an important aspect of an instrument as it directly relates to the feasibility and accuracy of an instrument. The method section has two main components: (1) the approach to information gathering, i.e. how the data are obtained and by or from whom and (b) the approach to information recording. The methods most commonly used in developmental assessment are formal observation (direct administration), informal observation, and interview (report).

Observational methods. The literature gives much attention to the use of observational procedures for generating knowledge of human behavior. "The ways in which observation methods might be adapted for practical measurement in early childhood education are almost limitless" (Goodwin & Driscoll, 1980, p. 143). Formal and informal methods of observation can be differentiated by two characteristics, the setting and administration procedures. A formal observational approach to assessment is characterized by a testing situation to elicit and record the skills and behaviors of interest. It provides a sequence for administering items and specific instructions of what should be said by the assessor and how the assessor may interact with the child. Informal

observation, on the other hand, uses the classroom environment and everyday behavior as it occurs in the natural setting to complete child assessments. Minimal, if any, structure and guidelines are imposed in terms of the setting and administration procedures in informal observation.

The use of observational measurement in early childhood education has advantages and limitations. Goodwin and Driscoll (1980) list seven general advantages of both formal and informal observation methods in their discussion.

1. It gives a direct measure of actual behavior.

2. It avoids several limitations of other measurement methods.

3. It has widespread applicability. Virtually every natural setting is open to observation of some sort.

4. It generates extensive and detailed data.

5. It has marked appropriateness for young children.

6. It is uniquely suited to measure ongoing, interactive processes.

7. It matched well with the inclinations and preferences of most early childhood educators.

Observational measures are valuable in their own right but the limitations of their procedures must also be realized. The following limitations listed are directly related to both formal and informal methods of observational measurement.

1. It has cost limitations either in terms of time and resources for developing formal observational measurement or in

terms of shortcomings of quick, inexpensively developed informal observation approaches.

2. It is selective in terms of what behavior is attended to or what aspects of recorded behavior are analyzed.

3. It has shortcomings of subjectivity, bias and possible inaccurate inferences on the part of the observer(s).

4. It has the disadvantage of being affected by the observer's obtrusiveness.

5. It can result in an artificiality of the data generated as it attempts to preserve the realness of any behavior observed (Goodwin & Driscoll, 1980).

Interview (report) method. Interviews with parents or an informant who is familiar with a child's abilities is another approach to gathering developmental information about a child. "The parent interview remains one of the outstanding means of collecting information about the child. Some information may be obtained in a written form, but some is best gathered by means of personal interviews" (Hendrick, 1975, p. 284). Interviews can either have a structured or unstructured format. "Structured interviews have fixed questions and sequencing, with little opportunity provided for interviewer deviation to other topics or questions. Unstructured interview schedules are much less systematic in wording, directions to the interviewer and phrasing of questions" (Goodwin & Driscoll, 1980, p. 72). An interview approach to assessment can include not only current behavior of children but also their past experience and behavior in almost any content area (Vacc, 1982). Furthermore, an interview provides

information on the child's development from a perspective other than the teacher's. However, interview gathered information can be colored by perceptions and personal biases as well as being inaccurate because of inadequate memory on the part of the informant.

Another approach to accomplishing developmental assessment involves a report on the part of the teacher or parent using some type of systematic record. The report method has similar limitations to the interview method in that teachers and parents are not exempt from personal perceptions and biases or poor recollections.

The selection of an appropriate assessment method should result from weighing the strengths and weaknesses of a method in relation to the feasibility in a particular situation with the basic understanding that there is no absolute superiority of one method over another (Vacc, 1982).

Qualifications of the assessor. The qualifications of the person who carries out the assessment may range from a specialist to a teacher, a parent, or a volunteer. From a practical viewpoint, the teacher is the best and most logical person to administer developmental assessment instruments because she is the person who will be using the assessment information to determine current levels of mastery and develop relevant learning experiences (Cross & Goin, 1977). Three basic concerns are raised when deciding who will administer an assessment: (1) the necessary qualifications of the instrument administrator; (b) the

feasibility of having a specialist, teacher or volunteer conduct the assessment and; (c) the resulting quality of assessment.

Recording system. Another aspect of the method is the approach used to record the information gathered. Checklists and rating scales provide a convenient way of recording developmental information from observation or interview methods. To be most valuable, checklists and rating scales should deal with important behaviors and be organized in a useful manner, e.g. within developmental domain sequences. Furthermore, "Both the behaviors and, for rating scales, the response categories should be fairly explicit to reduce later subjectivity" (Goodwin & Driscoll, 1980, p. 71). The typical checklist format simply provides spaces for the teacher or other assessor to check "yes" or "no" indicating whether or not the student demonstrates the behavior. A rating scale format for recording information allows for more specific descriptions of the behavior in the record since it includes grades of frequency or quality.

Developmental Areas

To facilitate examination and selection of an evaluation tool, the next aspect of the description of a measure identifies the developmental areas or domains the instrument claims to assess. A classification scheme of skills and behaviors assessed is helpful for organizational purposes and it communicates to test users what developmental areas are measured. In order to select an instrument for any purpose, it is obvious that one must ascertain its basic content, particularly in terms of the number and type of behavior domains covered by the instrument (Doucette &

Freedman, 1980). Some instruments may assess a variety of domains but not in depth; others may focus on only a few domains more extensively. In addition, some instruments may divide the developmental areas into sub-domains and/or provide a definition or description of the domain. To date, a standard taxonomy of developmental domains in early childhood is non-existent (Evans, 1982). Likewise, many tests may include domains which have similar labels but differing content, or different labels but similar content. The assignment of items to a domain is addressed as content validity in the examination of an instrument's technical aspects of validity.

Administration

The administration of an assessment instrument presents aspects which describe how to implement the method of assessment (observational methods or interview (report) methods). The following aspects of test administration are identified and discussed: the setting, the estimated time, the administration procedures, the scoring procedures, and the test score interpretation.

Setting

The setting for assessment has two components that may indicate an instrument's applicability to users. First, assessment group size, whether individually or in large or small groups, is a notable feature that could affect accuracy as well as the time of administering the instrument. Secondly, the context of observational assessment environments, either in the natural preschool setting (informal) or direct testing situation (formal)

also has implications for the validity and utility of the instrument for a particular situation.

Estimated Time

The amount of time required for administration is an important usability feature, especially with measures for young children. Consideration must be given to the attention span of preschool children in addition to one's own time constraints. On the other hand, too much restriction on the time given to assessment may have ramifications with respect to quality of the assessment and its usefulness. "A test that can be administered in several short testing sessions, with a few hours or a day intervening between sessions, is a reasonable compromise between technical and practical considerations when testing young children" (Goodwin & Driscoll, 1980, p. 104).

Administration Procedures

Provisions of complete administration procedures in terms of training, directions, and coordination with a recording form, with specification of necessary equipment, help insure correct assessment and validity of results.

> Instruments vary in the degree to which their administration procedures are standardized, that is, clearly defined, detailed, and explicit. Some instruments will be accompanied by a comprehensive manual or set of administration procedures . . . Other manuals will provide only general guidelines under the assumption that the instrument administrator will have had the necessary training or experience to administer the instrument. Instructions also

> vary in the discretion they permit administrators to develop rapport and encourage attention, motivation and task persistence. The degree to which the examiner is free to manipulate these attitudinal factors has important implications for the behavior demonstrated and the scores obtained on the instrument. (Doucette & Freedman, 1980, p. 21)

In addition, assessment administration is facilitated by the provision of detailed listing and the availability of necessary equipment. The ease of administration is enhanced when the recording form is either incorporated in the explanation of specific items or in a separate form which is closely coordinated with the administration procedures.

Scoring Procedures

Performances and responses are commonly recorded as a success or failure on a checklist or rated by a criterion such as frequency or quality. Regardless of the scoring system, criteria or standards for making scoring decisions within the system need to be addressed. "Perhaps the most difficult and controversial problem in criterion-referenced testing is the establishment of the standards or criteria" (Goodwin & Driscoll, 1980, p. 59). A standard is a description, usually relative to a particular skill or behavior item, that is used to classify the child's response into the scoring categories. Just as there are differences in measure procedures, labels for developmental areas, administration procedures and types of scoring, there are also different procedures available for setting scoring criteria. Criteria for

scoring commonly involve setting a permissible error rate (i.e. 3 or 4 trials or X percent of the time) and/or a list of factors associated with an acceptable or unacceptable product or performance. However, widespread variability exists in the determination of mastery levels on criterion-referenced tests because of the difficulty in justifying a certain criterion for mastery. Furthermore, specifications for determining scoring criteria are weak. ". . . Although the decision . . . requires judgment, it should not be an arbitrary decision" (Curlette, 1979, p. 146), since scoring criteria provide a basis upon which assessments are interpreted.

Test Score Interpretation

An important consideration in interpretation is the type of score yielded by the instrument. Frequently, normative developmental assessment instruments may yield age-equivalent scores which represent the typical performance of children at different chronological ages. "A preschool developmental test might convert raw scores to age-equivalent scores; to know that a child's performance is better or poorer than the average for his own chronological age might be very helpful in planning the instructional program for that child" (Goodwin & Driscoll, 1980, p. 46). However, age conversions are likely to be misinterpreted because children with the same age equivalent score do not necessarily pass the same items and have the same developmental strengths and weakness but rather simply pass about the same fraction of skills and behaviors at that age (Goodwin & Driscoll, 1980). On the other hand, criterion-referenced developmental

assessment instruments do not necessarily produce a "score" but show what skills the child has at present and what skills will probably be learned next. Any test score report should include a section describing the types of inferences that are possible. "Failure to provide such information invites over- or under-interpretation of the scores" (Mills & Hambleton, 1980, p. 32). Test scores are often plotted or charted to develop graphic representations which can be helpful in "picturing development" and communicating results to other staff and parents (Doucette & Freedman, 1980).

Another important consideration in the interpretation of the assessment results is the provision or availability of developmental activities. When an assessor determines what skills the child has at present and what skills and behaviors the child can be expected to learn next, relevant curriculum planning can occur for the child's developmental level. Some assessment instruments include or have available developmental activities that suggest activities and materials to provide for the child to attain the higher level skills or behaviors.

Technical Aspects

Item Selection

Assessment instruments which are designed to identify children's developmental levels and to be used for program planning purposes basically rely on two approaches to item selection. One method of generating items is studying standardized norm-referenced developmental tests (Cross & Goin, 1977). However, a limitation of this approach is that

". . . many norm-referenced devices have a limited number of items which are not in developmental sequences" (Cross & Goin, 1977, p. 41). A second approach to item selection involves constructing items from an overall conception of early childhood educational objectives (Hallau, 1977). "Yet for a substantial part of early childhood education there is no set or established curriculum . . . " (Goodwin & Driscoll, 1980, p. 172). In addition to being informed about the process of selecting items for an instrument, item analysis information should be reported in the manual to document an instrument's construction. Item analysis provides information and data concerning the accuracy of the sequence of items in terms of difficulty and also the accuracy of the age placements of items (with respect to being too easy or too difficult for a particular developmental age).

Reliability

One of the qualities of a "good assessment device is high reliability, which refers to the accuracy or consistency of the scores it yields. Since criterion-referenced developmental assessment often depends on the judgment of the assessor, it is important to determine interobserver and intra-observer reliability. The procedure for determining different assessors' agreement (interobserver reliability) involves having two persons observe the same events and independently record their impressions using checklists, rating scales, or whatever form the recording schedule takes. Intra-observer reliability involves only one person making two observations, within a short time interval, of one child and recording the data using the specified record

system. Then the interobserver or intra-observer results are compared to produce a reliability co-efficient or percent of agreement. Then their results are compared to produce a reliability co-efficient or percent of agreement. The degree of reliability is expressed in numerical terms as a reliability coefficient between zero and one. "It has been well established that the extent of observed agreement is highly dependent on the degree of complexity of the coding system and the discriminations required of the observers" (Goodwin & Driscoll, 1980, p. 130).

Validity

Closely related to reliability, but of greater importance, is the issue of an instrument's validity. "The validity of a measure is the degree to which it fulfills its intended purposes" (Goodwin & Goodwin, 1982, p. 528). "A measure fulfills its intended purpose when its scores permit valid inferences to be made . . . " (Goodwin & Driscoll, 1980, p. 77), such as determining a child's present level of functioning. The documentation for an instrument should describe the validation studies that have been conducted regarding the instrument (Doucette & Freedman, 1980). Three major types of validity can be identified: content, criterion-related and construct.

In relation to curricular decision making, "Content validity is immensely important because the content of the criterion-referenced assessment device becomes the basis of the child's educational program" (Cross & Goin, 1977, p. 41). Content validity is "the extent to which test items or tasks represent the content or processes of a given curricular universe or

domain . . . Content validity is always determined in relation to a particular curriculum or set of objectives; to the extent that a test represents the objectives of a specific school or curriculum, it has content validity for use in that setting" (Goodwin & Driscoll, 1980, p. 78). A systematic, logical analysis of test items of developmental assessment instruments to establish content validity involves both the examination of whether each item fits into the specified domain and whether the combination of items in a domain are representative of components of the domain. Goodwin & Driscoll present several essential elements of the validation process if a manual of a test claims content validity:

1. A clear definition of the universe or domain of content and processes represented by the test.
2. A description of the procedures followed in sampling from the domain.
3. An indication of the number of items in each category of content and process covered by the test.
4. A description of the qualifications of any experts asked to judge the items.
5. A description of the procedures used by judges to rate items and an indication of the extent of interjudge agreement.
6. A list of relevant dates such as the dates of any expert reviews, and the copyright or publication dates of any textbooks, syllabi or objectives that were consulted during the test construction. (1980, p. 82)

Furthermore, when the content of a criterion-referenced instrument is at least in part derived from norm-referenced measures, a test user must consider whether the test is valid for the group of children. A norm is a description of the performance of a defined group and "norms are useful to the extent that the normative group is truly representative of a definable group and that it makes sense to compare others performance on the test with the results from that group" (Goodwin & Driscoll, 1980, p. 58). Detailed descriptions of the characteristics of a norm sample should include a breakdown on the normative groups age, sex, geographic location, ethnicity, socio-economic status and other relevant variables. When logical analysis is not conducted to show content validity, but an instrument appears to be appropriate and adequate, it can be said to have face validity. However, face validity is based on loose subjective judgments and is an insufficient basis for instrument selection.

Criterion-related validity and construct validity are not addressed as thoroughly in relation to criterion-referenced measures, as they are to norm-referenced measures, because the purposes of the instruments differ.

> Operationally, construct validity often resembles criterion-related validity. Both emphasize obtaining substantial correlations with other measures of the same trait, ability, or behavior. The difference between construct and criterion-related validity involves purpose and, . . . scope. Criterion-related validity, . . . tells how well a measure correlates with other indexes of performance. Construct

validity, however, addresses a broader question: how to psychologically interpret the scores from a measure (Goodwin & Driscoll, 1980, pp. 87-88).

Criterion-related and construct validity data may be obtained on criterion-referenced instruments by determining the correspondence between the criterion-referenced scores and scores on other measures (Goodwin & Driscoll, 1980). Various correlational procedures and expectancy tables are available for assessing the extent of correspondence between criterion-referenced test scores and scores on other measures (Goodwin & Driscoll, 1980).

Additional Comments and References

Further statements or impressions of the instrument are included. A list of reviews of some instruments are also included to provide the use with sources that may offer additional perspectives.

Chapter 6

ASSESSMENT INSTRUMENT SELECTION

The knowledge necessary to make curricular decisions regarding children's present developmental levels is provided by the assessment process. The discussions in the previous chapters focused on the need for on-going developmental assessment of children and the characteristics of an appropriate instrument. There are a number of instruments which are intended to meet a variety of needs. Many assessment devices are reviewed in reference books; however, there has been no collective resource that specifically focuses on identifying, describing and analyzing only developmental assessment instruments.

In an effort to simplify the selection process and make it more efficient for early childhood educators, the next chapter identifies, describes and analyzes instruments which appear useful for program-oriented developmental assessment. The ultimate goal is to promote the use of assessment for the purposes of establishing more relevant and individualized objectives in early childhood education. To that end, the instruments which were selected for inclusion met the following criteria:

1. The assessment device focuses on typical preschool children between the ages of 3 and 5 years.

2. The instrument yields information on a child's specific competencies in selected developmental areas.

3. The assessment results are useful to teachers as they suggest points of program planning necessary for encouraging higher levels of mastery.

4. The assessment instrument has a high degree of utility for preschool teachers in that it has complete and self-contained administration, scoring, and interpretation procedures that do not require any special training or extensive preparation.

5. The assessment instrument is accessible for review as was determined by obtaining the instrument from one of the following sources: (a) university library; (b) early childhood colleague; (c) early childhood professional organization; (d) author or publisher complimentary copy; (e) author or publisher on approval; and (f) author or publisher on approval with prepayment, but with the option to return. No attempt was made to intentionally exclude any assessment device presently available.

Chapter 7

ASSESSMENT INSTRUMENT DESCRIPTIONS

Good assessment practices require that the assessment instruments themselves be evaluated (Goodwin & Driscoll, 1980). Likewise, instrument descriptions and reviews follow for the purpose of facilitating early childhood educators' selection of developmental assessment instruments for use in preschool settings. The reviews are not intended to be a substitute for the test manuals, but rather a collection of detailed summaries for the preschool teacher to use in making informed decisions concerning their possibilities of use with respect to their particular needs and suitability to their individual situations. It is important to realize that even though the descriptions and analyses provide specifics and some subjective assessment of an instrument, only a review of the instrument itself should be the basis for a final judgment of selection.

Fourteen assessment instruments are described in this chapter. Two tables are presented to provide the reader with a brief overview of each instrument. Table 1 lists the salient features of each instrument which include the cost, recommended ages, method, recording system, provision or availability of developmental activities, and the presence or absence of information related to the instrument's item selection, reliability and validity. Table 2 identifies the basic developmental areas which are covered in the instruments. The complete descriptions of each instrument follow the presentation of the tables.

Table 1

Salient Feature of Assessment Instruments

Assessment Instruments	Cost	Recommended Ages	Method[a]	Recording System[b]	Developmental Activities	Item Selection[c]	Reliability[c]	Validity[c]
Brekken Drouin Developmental Spotcheck	$ 7.50	24-72 m	IO/FO	R	X	D	D	-
Brigance Diagnostic Inventory of Early Development	$67.95	B-72 m	IO/FO/I	C		D	-	D
Circle Individual Preschool Assessment	$ 4.00	B-72 m	IO	C	X	D	-	-
Developmental Profile	$14.25	B-12 years	I	C		D	D	D
Developmental Resource	$50.50	B-grade 2	unspecified	unspecified		D	-	-
Humanics National Child Assessment	$17.70	36-72 m	O	C	X	-	-	-
Learning Accomplishment Profile	$ 4.50	36-72 m	IO/FO/I	C	X	D	-	-
Lexington Developmental Scales	$ 7.00	24-72 m	IO/FO/I	R		D	D	D
Memphis	$ 6.00	B-60 m	IO/FO/I	C/R	X	D	-	D
Portage Guide to Early Education	$ 4.75	B-72 m	FO/I	C	X	D	-	-
Preschool Attainment *Record*	$ 2.00	B-84 m	I/FO	R		-	-	-
Sewell Early Education Developmental Program	$ 3.50	B-48 m	FO	C		D	-	-
Skills Checklist	$ 5.00	36-60 m	unspecified	C		-	-	-
Uniform Performance Assessment System	$15.00	B-72 m	FO	C		D	-	-

Note. [a] IO = Informal Observation, FO = Formal Observation, I = Interview.
[b] R = Rating, C = Checklist
[c] D = Described, - = Omitted

Table 2

Developmental Areas of Assessment Instruments

Assessment Instruments	Gross Motor	Fine Motor	Cognitive	Language	Social-Emotional	Self-help	Other
Brekken Drouin Developmental Spotcheck	X	X		X	X		
Brigance Diagnostic Inventory of Early Development	X	X	X	X		X	X[a]
Circle Individual Preschool Assessment	X	X	X	X	X	X	
Developmental Profile	X		X	X	X	X	
Developmental Resource	X	X	X	X	X	X	X[b]
Humanics National Child Assessment	X		X	X	X	X	
Learning Accomplishment Profile	X	X	X	X	X	X	
Lexington Developmental Scales	X		X	X	X		
Memphis	X	X	X	X	X		
Portage Guide to Early Education	X		X	X	X	X	
Preschool Attainment Record	X		X		X		
Sewall Early Education Developmental Program	X	X	X	X	X	X	
Skills Checklist	X			X	X		X[c]
Uniform Performance Assessment System	X	X	X	X	X	X	

Note. [a]The Brigance Diagnostic Inventory of Early Development includes specific areas labeled Preambulatory, General Knowledge, Readiness, Basic Reading and Math.

[b]The Developmental Resource includes developmental sequences for the areas of Creative Activities and Response to Reinforcement.

[c]The Skills Checklist identifies a developmental area of math.

THE BREKKEN DROUIN DEVELOPMENTAL SPOTCHECK

Acronym:	B.D.D.S.
Authors:	Christopher Drouin, Linda Brekken, Bette Nelson, Elizabeth M. Neuman, Mary Ann Read and Kathleen Selden
Published by:	Cosa Colina Hospital and Pomona Unified School District, 1979
Address:	Children's Services Center 255 East Bonita Avenue Pomona, California 91767
Phone No.:	714-593-7521
Cost:	The Brekken Drouin Developmental Spotcheck costs $7.50, which includes the scale, item definitions, observation and scoring procedures, development and reliability studies and the bibliography. BDDS assessment and program planning forms come in a set of 25 for $8.00 The Competency Curriculum manual, which includes the BDDS assessment and program planning forms and also a coordinated curriculum for the spotcheck costs $20.00.
Contents reviewed:	The primary focus of the review is based on the BDDS assessment and program planning forms. The competency curriculum manual which is coordinated with the BDDS but not necessary for conducting the BDDS assessment was also available for this review.

DESCRIPTION

Purpose: "The BDDS is used for three major purposes: (a) screening to identify young children with developmental difficulties, (b) facilitation of the referral process by specification of strength and problem areas, and (c) planning educational goal's and monitoring subsequent progress based on the pattern of developmental abilities" (Drouin, Brekken, Nelson, Neuman, Read, & Selden, 1979, p. 2). In addition, the test developers note that the format of the BDDS was chosen to meet the following needs:

1. It must be observational for use in preschool classes without disruption of the ongoing program.
2. It must be based on the developmental progression of basic skill areas.
3. It must be simple and inexpensive to use without requiring extensive observer training (Drouin, et al., 1979, p. 3).

Recommended Ages: "Although the BDDS is intended primarily for use with preschool children three to five years old, items are extended from 24 to 72 months to provide a range of coverage for developmental variations" (Drouin, et al., 1979, p. 10).

Method: The BDDS is an observational rating device designed for use by consultants, administrators, or teachers within the natural classroom environment (Drouin, et al., 1979). Observations are recorded on a developmental profile.

Developmental Areas: "The developmental areas which are covered by the scale are those of gross motor; perceptual motor; fine motor; language, including receptive and expressive modes; and social, comprised of both self-help and interpersonal skills" (Drouin, et al., 1979, pp 7-8).

ADMINISTRATION

Setting: This observational developmental assessment instrument is suitable for use in the preschool classroom. The authors add that, "It is possible to observe more than one child at a time, within this framework, to make better use of observer time" (Drouin, et al., 1979, p. 25).

Estimated Time: The only statement made regarding the time it takes to administer the instrument is that "Observations should be done over a few days time in order to obtain a more complete picture of the child" (Drouin, et al., 1979, p. 9).

Administration Procedures: The test developers do not give administration procedures,

> Because of the observational format of the Brekken-Drouin Developmental Spotcheck (BDDS), instructions for observations are provided, rather than the procedures for administration. Preschool environments vary widely, so that the BDDS was developed with the idea that uniformity of observation, rather than situation, is of primary importance. (Drouin, et al., 1979, p. 24)

The instructions for observations have three components. First, "Item definitions should be studied thoroughly in order to: (a) eliminate as many judgments about scoring as possible, and (b) provide the most accurate information available about the child" (Drouin, et al., 1979, p. 24). Secondly, the observation of items contained in the BDDS can be accomplished either unobtrusively or actively, interacting with children. Three cautions concerning the things to avoid in the observation situation are listed: "(a) teaching scale items while they are being observed, (b) structuring activities to the point that they resemble test situations, and (c) assuming the ability to do an item without direct observation" (Drouin, et al., 1979, p. 24). Thirdly, in order to facilitate eliciting and observing the skills and behaviors in the BDDS, a list of suggested activities is provided. The authors have seen that certain situations tend to

elicit the scale items with higher frequency. "Because of the variety of curriculum, styles and program components found in preschool programs, observers are urged to find situations in the particular center or classroom that might lead the child to demonstrate his/her maximum abilities" Drouin, et al., 1979, pp. 24-25).

The observation procedures fail to explicitly direct the test use to observe all the BDDS items; however, a brief look at the scoring procedures reveals that all of the items are to be observed and scored on the developmental profile sheet. "All items are listed in developmental sequences on one piece of paper, front and back, making it simple to use, convenient, and inexpensive" (Drouin, et al., 1979, p. 8).

No test materials, other than those "normally" found in preschool environments are required. However, there is not a list of equipment and materials that are necessary for the items in the instrument. A list could easily be developed from reading through the item definitions provided.

Scoring Procedures: The items on the BDDS are scored with one of five symbols for successful performance, intermittent or marginal performance, unsatisfactory performance, no opportunity for performance or refusal to perform the task.

For the most part the authors are correct in stating that, "The target behaviors of the BDDS are well defined in order to simplify and clarify observation and scoring" (Drouin, et al., 1979, p. 8). However, there are items in each scale in which further specification of criteria for scoring would be helpful (i.e. the items that involve copying a form are not clear as to what performance is acceptable or not.)

The scoring of the scales is done by determining a basal age for the skill area. The number of successful consecutive performances and failures that are necessary for figuring the basal age are provided. Specific directions for handling items scored as passed, no opportunity or refusal are given too. "The basal age plus the scores for the additional items passed are cumulated, and the resultant total provides a rough age estimate for each skill area" (Drouin, et al., 1979, p. 26).

Test Score Interpretation: The basal scores for each skill can be transferred to a profile to graphically present a child's developmental abilities.

The BDDS results can be used in three ways: screening, referral and/or educational planning. However, there are no specifications for the basis upon which to make screening and referral decisions. In regards to educational planning, the BDDS allows a teacher to determine developmental areas of strength and weakness so that appropriate educational strategies can be planned and implemented in the ongoing preschool program.

> By observing the present performance level in various developmental skill areas, teachers may determine the next logical step in the developmental progression for formulating individual educational short-term goals and for monitoring developmental progress . . . It is cautioned that items of

the BDDS are only indications of much more complex, integrated functions and should not be taught as remediation objectives. (Drouin, et al., 1979, pp. 16-17).

TECHNICAL ASPECTS

Item Selection: The test developers list the standardized and criterion-referenced type measures that were consulted in selecting items for the BDDS. One criteria for including items in the BDDS was that they appeared on two or more of the developmental scales within the same age ranges. Furthermore, they state the following criteria for item selection:

1. The behaviors must occur with high frequency in the preschool program.
2. The behaviors must be readily and easily scored.
3. The behaviors must be plausible response measures, congruent with the preschool environment.
4. The behaviors chosen must be representative of the developmental growth patterns of preschool children.
5. The behaviors must not require elaborate test materials (Drouin, et al., 1979, pp. 9-10).

Although several criteria are stated for item selection, the test developers fail to explain how items were chosen so that there are only two items for each six-month interval and four items for the twelve month interval.

Item analysis to determine the accuracy of the sequence and age references is not reported.

The BDDS does not give a rationale for the items within the instrument; but it states "general considerations" within part B of section IV of the Competency Curriculum Manual which gives an indication of the importance of the particular behavior or skill.

The test developers encourage high reliability in three ways ". . . by the use of specific item definitions which reduce scoring judgements, by immediate recording of responses to reduce observer bias due to selective memory, and by observing over a period of a few days so that target behaviors may be observed in more than one situation" (Drouin, et al., 1979, pp. 10-11).

Reliability: Reliability information is reported regarding interobserver agreement and reliability of different observers at different times. "A preliminary interobserver reliability study was conducted using two measures of agreement: correlations between profile scores for trained observers and percentage of agreement on items scored by both trained observers and teachers" (Drouin, et al., 1979, p. 11). The preliminary results were encouraging, showing interrater reliability of .95 for the trained observers on the profile age scores. Percentage of agreement on items that both observers scored was 92% for the trained observers and 93% for the teachers who had participated in a training workshop (Drouin, et al., 1979). Two later reliability studies were conducted and add additional support to the preliminary findings. Again, interobserver reliability showed 93% agreement for items that both observers scored. Another reliability study done by different observers two weeks apart considered how

stability affected interobserver reliability on the BDDS. "The results of the study of reliability of different observers at different times yielded an 80% agreement for items that both observers scored . . . The BDDS is consistent between observers and over time" (Drouin, et al., 1979, p. 13).

Validity: Information on the age norms and validity is not reported for the BDDS, but is being conducted.

The authors provide some supportive comments and information for the face validity of the developmental areas, ". . . although the categories tend to overlap somewhat" (Drouin, et al., 1979, p. 7). They state that the developmental skill categorizations were made on the basis of clinical experience, factor analysis and convenience to facilitate observation (Drouin, et al., 1979). A brief description of the abilities or skills involved in each developmental area and examples are provided.

ADDITIONAL COMMENTS

There are three additional components of the BDDS that deserve recognition. First, the authors present research-based support for their choice of developing an observational instrument for use within the ongoing classroom activities. Secondly, they note three cautions with the use of the BDDS.

1. It is an unstandardized measure that is not a test of intellectual ability or a diagnostic tool for specific learning disorders.
2. Some developmental difficulties, such as behavioral disturbances or articulation difficulties are not identified by the BDDS.
3. A total pictures of a child can be obtained when the BDDS is combined with other types of observations. (Drouin, et al., 1979) Thirdly, the test developers point out plans for further investigation of the BDDS regarding gathering data for validity and normative sampling, and also extending the BDDS downward to include children within the age range of 6 to 24 months.

ADDITIONAL REFERENCES

Southworth, Lois E., Burr, Rosemary L., & Cox, Andrea Ewell, Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

BRIGANCE DIAGNOSTIC INVENTORY OF EARLY DEVELOPMENT

Acronym:	The Brigance, The Inventory
Author	Albert H. Brigance
Published by:	Curriculum Associates, Inc., 1978
Address:	5 Esquire Road North Billerica, Massachusetts 01862
Phone No.:	617-667-8000 Toll free 1-800-225-0248
Cost:	The cost of this instrument is $67.95, which includes a thick plastic loose-leaf yellow notebook manual and one developmental record book (DRB) used to record an individual child's assessment data. The price of additional individual DR books is $12.95 for a 10 pack and $105.00 for a package of 100.
Contents reviewed:	The Brigance notebook manual and the DRB were the materials for the basis of this review.

DESCRIPTION

Purpose: The purpose of The Inventory is clearly outlined into five areas and summarized at the very beginning of the manual. It states that The Inventory functions in the following basic ways:

1. As an assessment instrument . . .
2. As an instructional guide with objectives stated in functional and measurable terms.
3. As a record-keeping tracking system which is on-going, specific, graphic and easily interpreted.
4. As a tool for developing and communicating an individualized educational program which best meets the needs of a child.
5. As a resource for training parents and professionals in child growth and development. (Brigance, 1978, p. iii)

Recommended Ages: The Inventory explicitly states that it was designed for children from birth through the developmental age of 6 years.

Method: The Inventory instructions recommend that personnel trained in child growth and development, assessment and early childhood curriculum planning should supervise the use of the Inventory. Assessors are allowed to use their "professional judgement and ingenuity" to decide the method or methods of administration. The manual described a variety of possible assessment methods; parent interviews, and formal and informal observations. Also, suggestions are made regarding which methods to use for specific behaviors.

Developmental Areas: This instrument is divided into the following areas titled: A. Pre-ambulatory motor skills and behaviors B. Gross motor skills and behaviors C. Fine motor

skills and behaviors D. Self-help skills E. Pre-speech F. Speech and language skills G. General knowledge and comprehension H. Readiness I. Basic reading skills J. Manuscript writing K. Math

The social-emotional skills and behaviors are not dealt with separately in this instrument. Different portions of this area of development are divided and included in other sections. For instance, "satisfactory" and "needs to improve" ratings are included on such areas as cooperation, confidence and rapport on the first page of the child's DRB.

ADMINISTRATION

Setting: The use of "professional judgement" is recommended in making decisions concerning individual or group administration. Some suggestions for selecting which method to use are given on certain skills and behaviors. However, in the case of group administration, the size of the group is not specified by the manual.

Estimated Time: The Inventory is too comprehensive to be administered in its entirety at one time. Unfortunately, the time required for actual testing of various skills and behaviors is not specified. However, several relevant factors that affect the amount of time needed are outlined in the Inventory which could aid the administrator in determining the amount of time required.

Administration Procedures: The Inventory is developed to be very flexible with administration. No special training is necessary for administration. One of the "features" of The Inventory is that it is an "assessment instrument which does not require rigid administration procedures" (Brigance, 1978, p. iv). The manual recommends that administrators use their "professional judgement and ingenuity" to decide the method or methods of administration that would be most convenient, efficient and valid for the particular situation. However, the instrument also attempts to guide administration decisions by describing a variety of possible assessment methods and by making suggestions as to which methods to use for specific behaviors. Methods of assessment are discussed in the introduction for each skill area and specific methods are recommended for each skill. In addition, directions are provided for the procedure in assessing each skill. For instance, if an interview method is recommended, "criterion questions" or statements are typed in bold print to guide the administrator in assessing the particular skill. The Inventory does make it clear that it is acceptable to reword questions and statements so that the most valid responses are obtained. However, a warning is given against coaching responses from children.

The Brigance Inventory manual provides many black and white drawings of concepts or objects that are needed for some of the items. For the most part, the drawings are clearly recognizable and assessors are not left completely to their own resources. The

use of windows or cover sheets is recommended which would help limit distraction and add a game-like element to the question/answer type of assessment. The concept/object drawings in the manual are arranged in manner for easy use so that the printed material is in correct position for the administrator's reference and the corresponding visual material is facing the child. Some items require additional equipment (i.e. paper, scissors, books, clothing fasteners, balance beam, puzzle, etc.). The majority, if not all of the additional equipment is likely to be readily accessible in a preschool program. Furthermore, the additional equipment does not have specific criteria, qualifications or characteristics to meet which makes the items more adaptable to various situations.

The format of the record book is designed for easy reference and correspondence with the areas and items in the manual. The use of the Brigance test manual and record book may present a problem to the assessor when used together in a restricted or small area because of their large size.

Scoring Procedures: A child's response or performance are scored by simply circling an accomplished item, underlining an item not passed and marking DNA (did not administer) by items that were obviously below the child's functioning which were not assessed. A small space is provided for each item to record any special notes. The scoring procedures are clear and extremely simple in contrast with the criteria provided for making pass/no pass decisions. Some of the skills had a brief statement of accuracy (written out before the directions) that was required to pass an item. In many instances, accuracy or criterion for passing an item was mixed in with the directions of the skill being assessed. the accuracy statement was not usually very detailed or useful. A typical accuracy statement would be "Give credit for each positive answer to a criterion question," or "see notes with each question." The description of the skill or the behavior, which was mixed in with the administration direction of an item, appeared to be more helpful in determining a pass or a fail, than most accuracy statements provided. In addition, The Inventory's emphasis on using professional judgement may somewhat explain the lenience allowed with the interpretation of accuracy required to pass a skill.

The manual does provide some specific directions as to when to stop assessing a skill (i.e. after X number of consecutive failures).

Test Score Interpretation: Test scores can be illustrated on individual horizontal bar graphs underneath each skill sequence. Although this is provided to help create a visual picture of the child's development, the bar graph can reflect an inaccurate picture in cases where a child misses an item in a lower age range but passes items at a higher age range.

In interpreting the scores of this criterion-referenced instrument, The Inventory emphasizes that it is important to realize that each child's developmental rate and pattern is

unique. the manual cautions to "Interpret the developmental ages with some flexibility, and use them only as guidelines. Children may vary because of a. differences in sex maturation, b. cultural differences c. rates and patterns of development" (Brigance, 1978, p. xii). The developmental ages are included to help interpret the results and determine what instructional objectives are most appropriate.

TECHNICAL ASPECTS

Item Selection: The Inventory states that curriculum practices and current pupil texts were used to identify the skills. References in each skill area are provided. Appendix A explains that a number of different types of programs and services for children below the 7 year old developmental age, in 16 states, provided contexts for the field testing and critiquing. However, the list in the appendix reveals that a majority of the programs and services were public school related which implies a probable bias in item selection.

Reliability: No reliability information is provided.

Validity: The Inventory appears to have face validity, especially in the area of academic or school-oriented view of development. The manual provides references in skill areas that were used in developing the sequence and validating the developmental ages. However, it is important to recognize that normative age data was not found to be adequate by participants of field-testing/critiquing for establishing and validating the sequence and developmental ages for academic or school-oriented skills. "Thus curriculum practices and current pupil texts were used to establish and validated the sequences and developmental ages of those skills" (Brigance, 1978, p. 250).

ADDITIONAL COMMENTS

The Inventory is fairly well organized. The introduction provided an adequate explanation; plus, it attempted to present information in an interesting (easy reading) manner with a section on "Features" and "do's and don'ts" for effective use of the instrument. The Inventory manual and DRB are consistent in their presentation of skill areas. The broad range of skills and behaviors included in The Inventory contributes to its adaptability for use in a variety of early childhood programs. However, the lack of reliability and incomplete validity information on this instrument hinders the eager acceptance and approval of this instrument.

ADDITIONAL REFERENCES

Anttonen, Judith. An Annotated Bibliography of Practical Tests for Young Children (Third Rev. ed.). Harrisburg, Pennsylvania: Pennsylvania State Dept. of Education. July 1980. (ERIC Document Reproduction Service No. ED 198 162)

CIRCLE PRESCHOOL INDIVIDUAL ASSESSMENT

Acronym:	None
Authors:	Glenda Fankhauser, Alicia Fazio, Nancy Giesseman, Jack Hailer, Suzanne Hering and Anne Oliver
Published by:	Alpha Plus Corporation, 1977
Address:	Circle Preschool 9 Lake Avenue Piedmont, California 94611
Phone No.:	415-655-0633
Cost:	Individual Assessment and Program Plan Book costs $4.00. The Live Oak Curriculum which includes the Circle Preschool Individual Assessment and program plan book of developmental activities related to the instrument items costs $18.50.
Contents reviewed:	The individual assessment is the primary focus of this review; however, The Live Oak Curriculum, ed. by Celeste Myers, was also available for additional reference, if necessary or helpful.

DESCRIPTION

Purpose: Rather than make a statement labeled as a purpose, the authors write that "the assessment was not designed to assign the child a skill age and plug her into a rigid program of teaching each skill as listed. Rather, it suggests an overall guideline for sequencing the content of classroom activities based on a developmental model" (Fankhauser, Fazio, Giesseman, Hailey, Hering, & Oliver, 1977, p. ii).

Recommended Ages: A brief look at the skill/behavior lists of the developmental areas reveals that it includes items between birth and 72 months of age, even though the assessment *does not* recommend its use for a specific age range.

Method: The assumption could be made that the teacher is the most suitable person to complete the assessment since the results are to be used by her in setting objectives. The authors suggest "observing and/or questioning the child rather than testing by standardized procedure" (Fankhauser, et al., 1977, p. i).

Developmental Areas: The items are organized around six skill areas of child development. They are listed below with any sub-divisions they might contain.

1. Language
   (auditory reception, visual reception, associate (auditory and visual) reception, memory (auditory and visual), verbal expression, and manual expression)

2. Cognitive
   (physical knowledge, social knowledge, logical knowledge including (classification, seriation, number, space and time), and representation)
3. Gross Motor Skills
   (walking, running, balance, jumping, climbing, walking board, throwing and kicking, catching and body coordination)
4. Fine Motor Skills
   (manipulation - release and grasp, eye-hand coordination, pre-writing, visual perception)
5. Socio-Emotional
   (comfort in school, interactions with teachers, achievement motivation and pride of mastery, interactions with other children, inner controls, play patterns and interactions with materials)
6. Self-Help
   (feeding, toileting, dressing, personal hygiene and safety)

ADMINISTRATION

Setting: "Usually an item describes a specific skill which can be observed in a group activity, free play or on an individualized basis" (Fankhauser, et al., 1977, p. i).

Estimated Time: There are no indications given regarding the length of time that might be involved in completing the assessment of a child with this instrument. The only reference to time that is made is in regard to re-evaluation at three month intervals.

Administration Procedures: The introductory pages to the assessment give brief and general directions for administering the instrument.

All of the items in each scale are not administered. Instead, a developmental skill level is established by beginning administration at or below a child's chronological age and working backwards until three consecutive skills are passed. This approach does not necessarily insure initial successes for the child unless the child succeed three consecutive skills at their age level and then works forward until three consecutive items are missed.

The items of the instrument are listed by each scale, rather than by age level. The descriptions of the items are the only information that the administrator has to assess that behavior or skill. the test user is left to decide what to say and what situations to provide to assess the behavior or skill. "Some items may require resourcefulness to elicit the desired information from the child without providing too many clues for the response" (Fankhauser, et al., 1977, p. i). Some items denoted by an asterisk, use terms in the assessment which must be

inferred by the administrator from observable behavior. The test developers left it to the observer's judgement what behavior indicates such terms as "understands", "listens" or "enjoys" (Fankhauser, et al., 1977).

There is no equipment provided for use in administering items of this instrument. The test developers fail to provide a list or point out that the equipment or materials necessary are commonly found in early childhood environments.

Scoring Procedures: The behaviors or skills are scored as "present" or "not present" by marking the date tested in one of the first two columns beside the list of items. The next two columns, labeled "goal" and "acquired", are used for test score utilization. The fifth column "re-evaluation" records the date of skills gained that were not set as goals.

There are no criteria for determining the adequacy of a response as being either "present" or "not present", which means that administrator subjectivity is likely to interfere with the reliability of scores.

Test Score Interpretation: "The assessment suggests the next cluster of skills . . . to assure a challenging environment for the child who is progressing steadily" (Fankhauser, et al., 1977, p. ii). The third column along side the lists of behavior and skills is labeled "goals" to target the next skills "not present". As the skills that are set as goals are attained, the date is marked in the "acquired" column.

The assessment booklet provides a chart format to be made and used for each skill area that provides an overall picture of a child's growth within that skill area. Although directions are given to color code the assessment dates into the chart, further directions are completely lacking to inform the test user of the process involved in making the entries in the chart.

TECHNICAL ASPECTS

Item Selection: The item selection process, importance of the behavior or skill and item analysis information, if any, are not included. A brief rationale for the purpose of including age references with items is given, stating that "We include ages only as a guide for determining weaknesses and strengths and to provide a sequential framework for planning a developmental program" (Fankhauser, et al., 1977, p. i).

The bibliography list provides the use with some indication of sources consulted in developing the instrument.

Reliability: No reliability data are reported.

Validity: Information and data regarding the validity of the instrument are not given. Content validity by logical analysis is not presented; however, the test developers do note an overlap between developmental domains, particularly between the language and cognitive areas. "Many items in the language category cannot

in reality be separated from cognitive skills; the elicited language is contingent on information available from the cognitive domain" (Fankhauser, et al., 1977, p. i).

ADDITIONAL COMMENTS

The instrument has many weaknesses in its lack of presenting information that describes the measure and its technical aspects which are necessary for appropriate administration and beneficial utilization of the results.

From a positive perspective, the instrument seems to balance the items directed to the 36-72 month age range and those for the 0-36 month age range.

ADDITIONAL REFERENCES

Hallau, Margaret Gardner. Improving Instructional Decisions in the Preschool Classroom. Washington, D.C.: U.S. Department of Health, Education and Welfare, National Institute of Education, 1977. (ERIC Document Reproduction Service No. ED 151 074)

DEVELOPMENTAL PROFILE

Acronym:	The Profile
Author:	Gerald D. Alpern, Ph. D. Thomas J. Boll, Ph. D.
Published by:	Psychological Development Publications, 1972
Address:	P. O. Box 3198 Aspen, Colorado 81611
Phone:	303-925-9272
Cost:	$14.25 Spiral bound manual with 10 scoring/ report forms.
Contents reviewed:	The Developmental Profile manual and scoring/ report form were used in the review of this instrument.

DESCRIPTION

Purpose: The manual outlines four major goals, rather than a purpose, which guided the construction of the Developmental Profile. The goals are:

> To offer an instrument which provides a multi-dimensional description of children's development.
>
> To provide an inventory which has no significant bias as a function of sex, race, and social class of the children being evaluated.
>
> To develop a relatively quick, inexpensive, but accurate description of children's development.
>
> To permit the administration, scoring, and interpretations of the instrument by people without specific expertise in psychological testing. (Alpern & Boll, 1972, pp. 2-3).

Recommended Ages: The Developmental Profile was designed to assess a child's development from birth to pre-adolescence, which is listed as 12 years of age.

Method: Anyone who is "sufficiently well acquainted" with the child can provide the necessary information through a report technique or a structured-interview manner. (Alpern & Boll, 1972). Although the term "sufficiently well-acquainted" is not defined explicitly, the manual refers to the teacher or mother as providing the information about the child. The information obtained is recorded in a checklist approach.

Developmental Areas: The authors describe this instrument as multidimensional, in that it measures functioning in five areas of growth and development: physical, self-help, social, academic and communicative. The contents of these developmental areas are described in the introduction section of the manual.

ADMINISTRATION

Setting: The manual does not recommend any particular setting in which to conduct the interview or report.

Estimated Time: In one place the manual states that the interview requires approximately 20 to 40 minutes to administer and score. In the summary it is reported that 30 to 40 minutes is required for administration of the average child between 3 and 9 years of age; and that younger or older children usually take less time. However, the manual does not clarify whether the time estimates given involves the regular method or short cut method of administration.

Administration Procedures: As the manual states, the administration procedures are simple. Brief general procedures are presented and followed by detailed instructions "to help the use avoid misunderstanding and mistakes" (Alpern & Boll, 1972, p. 6). The detailed instructions are outlined in separate steps. The first step deals with filling out general information and transferring scores to the front page of the scoring and report form. Deciding who will answer the questions about the child's skills and how to handle the situation of their not knowing or guessing the child's ability are discussed in step two. Three options are presented to the examiner when confronted with a question which is unknown to the interviewee. The examiner may choose to either ask someone who knows, test the child to see if he can do it or have the mother or examiner guess the child's ability to perform the item based on other information gained about the child's abilities. The examiner is given the responsibility to determine which approach to take.

Step three addresses the issue of rephrasing or rewording the questions. This area points out two matters that are important in this process. In order for a more valid interview, the language can be changed; but likewise for a more valid result the content should remain the same.

The fourth step points out that scoring and report forms have a separate page for each section of the test and each section of the test is color coded to the corresponding record pages in the scoring and report form.

Step five described two approaches to the actual administration of the instrument. The "regular method" involves asking all of the items in each scale and recording all responses. The "short cut method" is not as simple, yet is designed to omit asking unnecessary questions, and likewise to be less time consuming. In this method, a double basal and double ceiling are determined by finding the point at which the child passes all items in two consecutive age levels and the point at which a child can not pass any item at two consecutive age levels, respectively.

In addition to the five steps on administering the test, a section titled, Special Considerations, presents three areas concerning administration that the authors feel are worthy of

special notice. One paragraph addresses the initial awkwardness that may typically be experienced in first administrations. Secondly, the authors re-emphasize their concern with keeping the content consistent in rephrasing questions. The method of administering the test to "atypical children", is confronted in the third item of special consideration.

Scoring Procedures: The scoring of the test is done on a pass/fail basis. The authors point out in the detailed administration and scoring instructions that "some guessing will be necessary," but ". . . the why and how then needs to be clarified" (Alpern & Boll, 1972, p. 13). Even though the guess is clarified, the manual emphasizes with underling that ". . . all items be rated either as pass or fail" (Alpern & Boll, 1972, p. 13).

To aide the examiner in making a pass/fail judgement, a few of the items in the various scales attempt to provide one or two characteristics that describe a passing or failing response.

For each item in each scale a failing response is recorded by circling the digit 0 in the fail column and a passing response is recorded by circling the digit in the pass column, either 2 or 4 depending on the age level of the item. (The numbers in the pass column represent months and are used in determining developmental ages for the scales.)

Scores may be derived in two ways since two methods of administration are possible. In the regular method, the child's developmental age for each section is simply the sum of the numbers circled in that section. For the short cut method of administration and scoring, the scorer locates the highest or "oldest" age section in each scale at which the child passed all the items and enters the basal credit of years and months from that box into the scale summary. The sum of all other passes in that scale is entered in the box labeled additional credit. These two figures added together produce the childs developmental age for that scale.

In addition to deriving developmental ages, an I.Q. equivalency score can be found only if a double ceiling was obtained. The authors state the I.Q. equivalency (I.Q.E.) score is intended to provide a "descriptive label for administrative purposes . . . but in no way can be considered a substitute for the comprehensive intellectual evaluation" (Alpern & Boll, 1972, p. 18). The steps outlined for obtaining the I.Q. equivalency score are clearly outlined and require basic math computation skills to analyze scores on the academic scale.

Test Score Interpretation: There are five age scores that can be interpreted in relation to the child's chronological age. A comparison of the child's chronological age with each developmental age shows whether "the child is 'advanced' or 'retarded' in each of the five developmental areas" (Alpern & Boll, 1972, p. 21). The terminology "retarded" is in appropriate even at the "simplest level" of interpretation because it implies a negative connotation that anything less than the chronological

age is retarded as opposed to delayed. The manual clarifies whether the child's difference from his chronological age level is important or serious and significant. This is based on three influential factors; the child's chronological age, the particular scale on which the lag is found and the relationship of the lag(s) among the five scales. Furthermore, five tables, one for each scale, are offered as guidelines to aid in determining whether a developmental lag may be significant. The tables provide a reference for the user to compare the child's chronological age to the particular developmental age and determine if it is within normal range, in the borderline range of potential significance or in the danger range considered indicative of a handicapped area of functioning and requiring some further evaluation and possible remediation (Alpern & Boll, 1972).

The manual recommends that an examination of passes and failures of specific items may provide a more detailed analysis as to exactly what a child is or is not doing that led to the child being considered advanced or retarded for his age (Alpern & Boll, 1972). Although this suggestion is valuable in most cases, it may not necessarily be as valuable in respect to this instrument because of the limited number of items.

TECHNICAL ASPECTS

Item Selection: The Developmental Profile consists of 217 items in the total five scales. Most of the age levels within each scale contain three items, with the exception of the two highest age levels (11 and 12 year old) which contain fewer.

The items which compose the test were originally derived from three sources: "developmental items from actual scales of children's intellectual, physical, social and language abilities . . . items compiled from nomative data appearing in the child development literature, and . . . from original items derived from the multi-dimensional concepts underlying the test" (Alpern & Boll, 1972, p. 30). Specific references for the scales and literature used in deriving the items are not provided. Early revisions in the test items were based on experiences of profile users rather than on data analysis (Alpern & Boll, 1972). However, following a standardization study on the early 318 item version, an item analysis was done. The item analysis selected those items which met the criterion of being passed by 70 to 80 percent of the children of a specific age level in the standardized sample. The authors rationalized that this percentage was appropriate because 50% would mean that half would be considered sub-normal and 90% was too high to allow for individual differences in rates of development (Alpern & Boll, 1972). Items which exemplified insufficient discrimination between ages were discarded. The items in each scale also went through further refinements to meet the goals of non-discrimination as a function of sex, race and social class.

Reliability: Inter-rater reliability, the degree to which different interviewers using the instrument can produce similar scale scores, is of most relevance to the Developmental Profile.

Two investigations report data on reliability. The first reliability study reports 71% of the 35 teachers had complete agreement. A second test of the instrument's reliability was done with two interviewers and 11 mothers of children ranging from 11 months to 9 years 11 months old, to insure the inclusion of all items in all of the scales. The interviewers administered the Profile to the mothers two or three days apart from each other. A comparison of the two interviewers total scores revealed that 22% of the 11 cases had complete agreement and 92% were within 3 points of complete agreement. The authors conclude that the studies demonstrated "extremely high" scorer reliability.

However, the significance of both of the studies is restricted for several reasons. First, one must be aware that these investigations were carried out on the pre-standardized version of the inventory rather than the final version. Secondly, the authors do not clarify how scale points were obtained to compare agreement since the scales only produce developmental ages. Further more, the first study was limited by the fact that it covered only half of the items in only one scale (academic scale).

Validity: Content validity is presented in terms of the item analysis, which has been discussed earlier in this review. However, no empirical procedures were carried out to show the representativeness of the domains sampled. Further more, the developmental domains lack continuity in following a particular skill through its various levels of development. In addition, it appears that the scope of the domains is limited and relevant components have been neglected (e.g. physical domain omits kicking, balance skills, pre-writing, pouring.) Consequently, the instrument does not appear to be highly valid in its content because of its limited range of items in the five domains.

A second aspect of validity involves the accuracy of the informant's reporting of the child's developmental skills. This is important because the methods of data collection, in this case the interview method, may impair the goal of determining a child's developmental skills by over or under-estimation of the child's abilities. The study involved 100 children for which data was collected in two methods, one by interviews and the other by direct administration of items to the child. The study revealed a 84% agreement between the two methods. The conclusion was made appropriately in that the authors state that reports of a child's developmental skills "can be extremely accurate," but "the study offers no data on whether mother's will report their children's skills accurately" (Alpern & Boll, 1972, p. 63).

Concurrent validity of two scales in the Developmental Profile is presented through separate correlational studies because no single instrument existed with which the entire inventory could be correlated (Alpern & Boll, 1972). The study for concurrent validity of the physical scale correlated

children's physical age with their total developmental age. the correlations were high and significant, .89 for the pre-school age subjects and decreased in significance for 5 to 8 and 8 to 11 year old subjects. Although the manual reports the study involved 53 children from 2 to 11 years of age, it neglects to inform of the representativeness of the sample, especially as it relates to the age groups identified. Furthermore, the study for concurrent validity of the physical scale is limited in its significance because it involved the pre-standardized form of the profile. The authors recognize the short-comings of this study by stating that "More appropriate studies using the final version of the Physical Scale need to be accomplished to assess the scale's concurrent validity" (Alpern & Boll, 1972, p. 64).

The relationship of the Academic Scale to the Stanford-Binet intelligence tests was studied more thoroughly. The manual reports correlations for concurrent validity of the pre-standardized forms with retarded children. In addition, two more studies involving the standardized version, one with retarded children and another with children of a normal range of intelligence are reported. A significant correlation of .85 was found between the I.Q. scores and the I.Q.E. scores of the retarded children; but the I.Q.E. scores were found to be an average of five points higher than the I.Q. scores. In the normal group, the authors report a correlation of .49 which they claim to be statistically significant (Alpern & Boll, 1972).

In summary, the authors have shown some degree of concurrent validity between the Academic Scale and the Stanford-Binet Intelligence test; yet, there are several points that need to be openly recognized so as to understand this instrument's concurrent validity in the proper perspective. The correlations demonstrate some degree of concurrent validity to the Stanford-Binet I.Q. test. Furthermore, both studies involving the standardized form are limited in the representativeness of their sample. "There is a need for an evaluation of the relationship between the I.Q. and the I.Q.E. with a sample in which intelligence is normally distributed in order to make more definitive statements as to the relationship of the two measures" (Alpern & Boll, 1972, p. 66).

The validity of this instrument for use with certain groups of children can be determined by examining the standardization procedures. The standardization, accomplished after some 3 years of pilot work and before the item analysis, provides normative data for age references and also for sex, race and socio-economic status. The 3,008 subjects involved in the standardization were selected on the basis of several criteria to insure the generalizability of the norms derived. An even distribution is shown for age and sex of the standardization sample. In terms of age and race, the manual reveals that the racial differences were spread over the various age levels but 84% were white, 14% Black and 2% were classified as other (Alpern & Boll, 1972). The authors point out that they believe the instrument provides valid norms for both white and black children but that a question of the adequacy of the instrument for use with Black children may exist. Appropriately, the authors have chosen to " . . . present

the details and allow readers to decide for themselves" (Alpern & Boll, 1972, p. 35). Similar to the race distribution, the social class distribution also raised the question of adequacy in terms of representativeness of the lower and upper class allowed for standardization. Nine percent of the standardization population was lower class, 80% middle class and 11% upper class. " . . . Correlations known to exist between social membership and growth and development" (Alpern & Boll, 1972, p. 38) are dealt with in the item analysis procedures, so the authors conclude that a single set of norms can be validly used for all social classes (Alpern & Boll, 1972).

In conclusion, "the standardization population is adequate to derive general normative data on children of both sexes from birth to preadolescence" (Alpern & Boll, 1972, p. 40) across social classes. The norms are definitely applicable to white children and also Black children according to the authors. Since "an overwhelming majority" (Alpern & Boll, 1972, p. 40) of the standardization sample were from large urban areas and limited to the states of Indiana and Washington, a strong geographical bias may hinder the applicability of the norms. Consequently, the authors warn of the danger in applying the derived norms for children other than those adequately sampled in the standardization population (Alpern & Boll, 1972).

ADDITIONAL COMMENTS

The Developmental Profile initially claims to be an instrument to aid with programming planning, and then in the summary or conclusion it is labeled a screening instrument. In the instrument's history, the authors report that the original version of the Developmental Profile proved successful in deriving developmental skill ages of children and also in providing teachers with " . . . curriculum guides. That is, if a child's profile indicated weakness in a particular area, such as communication or self-help skills, the teacher would emphasize those areas in her work with that child. . . The teachers felt that they knew their children better and had some guidelines for furthering the child's development" (Alpern & Boll, 1972, p. 29).

The author's summary of the instrument is the first place that the Development Profile is labeled as a screening device, which means that the authors view it as providing " . . . valid estimates of children's developmental level functioning rather than comprehensive diagnostic assessments of each developmental skill" (Alpern & Boll, 1972, p. 69).

ADDITIONAL REFERENCES

Buros, Oscar Krisen (Ed.). The Eighth Mental Measurements Yearbook (2 vols.). New Jersey: The Gryphon Press, 1978.

Cross, Lee, & Goin, Kenneth (Eds.). Identifying Handicapped children: A guide to Casefinding, Screenings, Diagnosis, Assessment and Evaluation. New York: Walker and Company, 1977.

Johnson, H. Wayne. Preschool Test Descriptions. Springfield, Illinois: Charles C. Thomas, 1979.

Southworth, Lois E., Burr, Rosemary L., & Cox, Andrea Ewell. Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

THE DEVELOPMENTAL RESOURCE: BEHAVIORAL SEQUENCES FOR ASSESSMENT AND PROGRAM PLANNING

Acronym:	None
Authors:	Marilyn A. Cohen and Pamela J. Gross
Published by:	Grune and Stratton, 1979
Address:	111 Fifth Avenue New York, New York 10003
Phone No.:	212/741-6865
Cost:	Volume I costs $27.00 and Volume II costs $23.
Contents reviewed:	The Developmental Resource is a two volume set and is the basis for this review. The books are not an instrument per se. There are no manual record forms or materials. However, the books contain developmental information applicable to early childhood assessment and programming endeavors.

DESCRIPTION

Purpose: The intent of the books is to provide a bridge between the results offered by researchers in child development and the needs expressed by practioners for developmental information (Cohen & Gross, 1979). The authors state, "We have attempted throughout these volumes to integrate the information found in the research with that contained in the most frequently used assessment tools. the resulting compilation of material should prove especially useful to the practitioner" (Cohen & Gross, 1979, p. 6).

Recommended Ages: The Developmental Resource focuses primarily on the ages of birth to 6 years, with a few extensions of area up to 7 years and/or grade 2 levels.

Method: The authors direct their reader to devising an informal assessment tool because it is flexible to meet the needs of a particular type of environment and group of children. Chapter two presents some guidelines that might be used in devising an informal assessment tool based on the developmental sequences contained in the two books.

Instead of specifying how the information is obtained and by whom and how it is recorded, the authors state that "In keeping with the resource philosophy, the reader is encouraged to select those strategies most reflective of his own requirements and interests" (Cohen & Gross, 1979, p. 7).

Developmental Areas: The following developmental areas are identified and addressed in their own chapter within one of the two volumes: sensorimotor/early cognitive development, gross and fine motor development, self-help/adaptive living skills

development, language development, preacademic/skill development, social development, creative activities: music, arts and crafts, and development of response to reinforcement.

ADMINISTRATION

Setting: In developing an assessment instrument from the Developmental Resource lists, the authors point out that particular items may require certain settings to elicit the behavior or obtain a true indication of development. "Performance within the social area, for example, may be best assessed within settings such as those found in play groups or in family situations . . . skills significant within other developmental areas, such as those in audition or vision, may require settings free from an overabundance of distracting stimuli" (Cohen & Gross, 1979, p. 12).

Estimated Time: Consideration of the time that is involved in administering an assessment is a practical concern which is addressed in relation to selecting items to include in an assessment tool. Two important factors, the amount of items and the type of item, will greatly influence the time involved and can help to realistically estimate the total time assessment efforts will entail.

Administration Procedures: The Developmental Resource provides an administrative checklist which covers five major questions requiring decisions that effect the assessment:

> who will be involved? . . .
> what will be needed for the assessment? . . .
> where will the assessment be held for each of the items? . .
> when will the assessment take place? . . .
> how will assessment be conducted most efficiently, yet effectively? (Cohen & Gross, 1979, pp. 22-23).

Several additional questions are presented within each of these major areas to help clarify and ensure that the necessary plans for some of the details involved in administering the assessment instrument have been made to reduce frustration and confusion.

The authors propose and explain in detail, one method termed the "pinpoint scan" to use in establishing rules for administration. They claim, "This set of rules has proved functional for us in a number of situations; however, until more systematic data are gathered, the rules remain only a set of arbitrary guidelines. We have offered them here to serve merely as guidelines and to point out that consideration of such a set of rules may prove invaluable in allowing more efficient administration of the tool created" (Cohen & Gross, 1979, p. 22).

In addition, several questions are proposed in relation to selecting "practical" items for assessment, which also affect administration procedures. For instance, questions such as whether the required materials are accessible or adaptable to practical situations and whether the required staff, in number and qualifications are available affect the development of an

assessment tool from the resource and also affect administration procedures. No suggestions or guidelines are provided concerning the development of a record book with instruments formulated from the Developmental Resource.

Scoring Procedures: The authors do not explicitly propose a yes/no checklist approach to scoring (versus a rating); however, this is the format used in their illustrations.

The criteria for scoring items are within the listings of the skills and behaviors in the Developmental Resource. the authors state that they have attempted to present as clear a description as their sources permit; however, it was not possible in all cases to avoid instances in which the sources themselves were somewhat ambiguous. "Scattered throughout the listings are a few very global behavioral statements that require clarification if precise observations are to be made and shared" (Cohen & Gross, 1979, p. 17).

The authors identify three basic types of additions to items that affect scoring: (a) additions that offer more precise behavioral descriptions, (b) additions concerning specification of criteria for performance, and (c) additions that further define conditions under which assessment of a particular behavior might furnish the most precise information (Cohen & Gross, 1979).

Since the Developmental Resource books are not actually an instrument, but rather the basis for developing an assessment tool, there are no scores or directions for deriving scores.

Test Score Interpretation: The Developmental Resource addresses the importance of relating assessment to programming, rather than focusing on scores per se. A tool devised specifically for one's needs and a child or group of children leads to ". . . a functional assessment device whose results can be directly applied to program efforts" (Cohen & Gross, 1979, p. 28). The items in the developmental sequence can become the basis for a sequential program that will build on present skills and behaviors to higher levels of mastery. "The more carefully sequenced items have been sorted, and the more precisely items have been stated during the initial process of devising an assessment tool, then, the more easily and directly each item may be applied to program planning" (Cohen & Gross, 1979, p. 28), of long-term goals and short term objectives.

TECHNICAL ASPECTS

Item Selection: The two volumes of the Developmental Resource books attempt to integrate information found in research with that contained in the most frequently used assessment tools.

> Where behaviors and age ranges are drawn from research, the source is indicated by the principal investigators' names as well as the date of their study. A list of references, pertinent to the area described, is found at the end of each chapter . . . where sources involve standardized scales or what have been considered "classics" in the literature of the

field, an abbreviation of the scale or author name appears. All such abbreviations are explained in the standard source key at the end of each volume. (Cohen & Gross, 1979, p. 6) Thirty-one assessment sources are identified in the standard source key of the two volumes combined.

There are two levels of assessment strategies presented: (a) an assessment tool can be developed utilizing the sequences of all the listings of interest and convert them to a convenient format or (b) an assessment tool can be formulated from the listings through a sorting of the items in terms of their functionality and practicality. In the process of sorting items, several options are pointed out: deleting the entire item or altering the item by condensing it, substituting words or phrases or adding words or phrases.

Reliability: The importance of establishing reliability is almost completely neglected with the exception of one sentence concerning precise behavioral descriptions. "To determine whether the behaviors included are stated clearly enough, it is often useful to ask whether two or more people using the behavioral description offered would be in agreement about their observations after having independently observed the very same situation" (Cohen & Gross, 1979, p. 16).

Validity: No mention is directly made concerning validity. However, several comments are made that relate to the content validity of the items in the Developmental Resource.

First, "Throughout the listings, it has been our policy, wherever possible, to use 'Large N' studies, screening batteries, and developmental checklists as sources from which to compile the behaviors cited. Within some areas, however, an exception has been made when relevant work has involved 'Small N' populations" (Cohen & Gross, 1979, p. 5).Beside each item is the age at which the behavior is expected to occur. For some items rather general agreement among the sources is noted concerning the age of occurrence, whereas others may have several months discrepancy between sources. The variety of data available for any given behavior is provided for the user's awareness of differing results and comparison purposes.

The content of the Developmental Resource book stresses tracking the total course of development as it evolves longitudinally within each of the major development areas. Each chapter on a developmental area is divided into three major sections:

1. The Introduction to the Area presents "an overview of development within the area summarizing important developmental trends, critical research issues, and questions basic to a more thorough understanding of the area" (Cohen & Gross, 1979, p. 3).
2. The Developmental Sequences are a compilation of behaviors and age ranges in which they appear, documented through a careful search of frequently cited sources, all of which appear, beside the listings, allowing easy access to the original references" (Cohen & Gross, 1979, p. 3).

3. The Application is a "collection of suggestions for application of the developmental information available in the listings" (Cohen & Gross, 1979, p. 3).

ADDITIONAL COMMENTS

The Developmental Resource books provide a wealth of developmental information in a well-organized and functional format. For those who need developmental information, these books serve as an immediate resource for facilitating assessment as well as programming efforts as they are carried out in the practical setting.

ADDITIONAL REFERENCES

None

HUMANICS NATIONAL CHILD ASSESSMENT FORM & HUMANICS NATIONAL PRESCHOOL ASSESSMENT HANDBOOK

Acronym:	H.N.C.A.F. and H.N.P.A.H.
Authors:	Derek Whordley, Ph.D. and Rebecca J. Doster
Published by:	Humanics Limited, 1983
Address:	P. O. Box 7447 Atlanta, Georgia 30309
Phone No.:	404-874-2176
Cost:	$17.70 for both the form and handbook.
Contents reviewed:	The Humanics National Preschool Assessment Handbook and the coordinated Humanics National Child Assessment Form for Ages Three to Six supply the basis for this review. The Handbook is the user's guide to the H.N.C.A.F.

DESCRIPTION

Purpose: The authors state that, "It is a guide for teachers and parents to understanding child development . . . the H.N.C.A.F. helps parents and teachers identify skills and behaviors that individual children have already developed, and plan learning experiences which encourage continued growth . . . The H.N.C.A.F. was developed to structure observation of specific skills and behaviors that represent various levels of growth" (Whordley & Doster, 1983, p. 17). "The intent of the assessment is not to categorize the child, but to characterize and document her achievements" (Whordley & Doster, 1983, p. 7). However, the authors also state that, "The H.N.C.A.F. is useful as a screening tool to detect early signals of developmental delays or special problems" (Whordley & Doster, 1983, p. 203).

Recommended Ages: Several times within the instrument, the reader is informed that the checklist focuses on skills and behaviors of children between the ages of 3 to 6 years.

Method: Information to be gathered to complete the checklist form requires both informal and structured observation of the child primarily by the teacher, but it is also desirable to have parent observations too if possible. However, in answering the question "Who should use the handbook and the Humanics National Child Assessment Form?" the authors imply that parents can use the instrument themselves at home. The authors clearly state in a different location in the handbook that, "Interested parents should learn to complete the assessments on their own" (Whordley & Doster, 1983, p. 18). It appears that teachers and/or parents can complete the assessment observations and checklist of the instrument.

Development Areas: The H.N.C.A.F. focuses assessment on five major areas of development: socio-emotional, language, cognitive, motor skills, and hygiene and self-help. Each scale has 18 items, making a total of 90 items.

ADMINISTRATION

Setting: In contradiction to a previous implication by the authors that parents can use the instrument themselves at home (Whordley & Doster, 1983), the authors explicitly state, "actual assessments should take place in the school setting, however, in order to maintain the consistency of the testing environment" (Whordley & Doster, 1983, p. 24). The setting within the classroom is adaptable to both informal and formal observations. Observations done informally would be accomplished during the child's routine daily activity and formal observations would require a special situation, i.e. "game time" be planned to elicit information for any item not seen during informal observations. There are no set guidelines for the structuring of formal observations.

Estimated Time: An approximate amount of time necessary to complete the H.N.C.A.F. is unspecified. The Handbook recommends designating a two-week period to complete observations of the children in daily activities and structure the specific tasks called for in the checklist.

The H.N.C.A.F. is designed to be administered at least two times in the program year; initially no later than two months after children enter the program, and a second time late in the program year. (The record form provides four columns for the instrument to be administered at least four times.)

Administration Procedures: The Handbook contains a sample note to be sent to parents informing them of the program's intention to assess their child. The note also invites parents to "join the teacher in conducting the assessment observations" (Whordley & Doster, 1983, p. 19).

The Handbook recommends that staff and parents receive training in observation skills before conducting developmental assessments. The training should focus on four areas: recognizing significant developmental behaviors, understanding the children's present developmental level, being aware of the developmental processes that are occurring and recognizing the behavioral significance of potential handicapping conditions. (Whordley & Doster, 1983). The authors state that portions of the Handbook would be useful in this training, but they do not specify whether it would be sufficient.

Parent training is said to be accomplished in a two-hour session providing enough orientation for parents to make meaningful observations. Staff training on the other hand, should integrate the observational skills training with an overview of the instrument.

The developers of this instrument "strongly recommend" reading the entire handbook before administering the H.N.C.A.F. Chapters three through seven of the Handbook present an item-by-item discussion of the developmental items in the H.N.C.A.F. which includes sections labeled: "developmental significance", explaining the importance of the item in developmental terms, and "task description" explaining what behaviors to look for in deciding whether the child is able to accomplish the task, what materials might be required and in what types of situations the skill is likely to appear.

The actual directions for conducting the observations are general and flexible. Observations may be made informally and/or formally. "There is no set rule delineating which behavior should be observed informally and which to structure more formally" (Whordley & Doster, 1983, p. 24). Nor is there any sequence suggested of what developmental area to begin observing first. The instrument implies, rather than explicitly states, that all of the items are to be included in the assessment of each child.

The H.N.C.A.F. does not require any specialized equipment or materials to administer that would not normally be found in the home or center. The Handbook provides a list of materials required for administering certain items of the instrument. Twenty-eight of the 90 items need materials to be administered.

Scoring Procedures: The recording of a child's scores is done in the Humanics National Child Assessment Form and not the Handbook. A child's performances are marked only when they exist. They are rated in two columns by their degree of frequency: "occurs consistently" or "occurs occasionally". The criteria for each rating is clearly specified in the Handbook. If the behavior is not present or does not occur, everything is left blank in the columns next to the item. The teacher or parent may make additional notes in the space at the bottom of the page for each developmental area.

Test Score Interpretation: Once an evaluation period is completed the next step is to complete the Child Development Summary Profile found on the back page of the H.N.C.A.F. and to use these results in selecting activities most helpful to the child. "An assessment tool is only as valuable as the way it is used. the results can be invaluable when considered as representations of the child's individual abilities to be used as the focus for individualized educational activities. If the results are merely set aside until the next assessment period, there is little to be gained from the assessment effort (Whordley & Doster, 1983, p. 203). The summary profile is easily completed by circling the number of the items that were scored as occurring occasionally in another color. The profile is used to begin formulating an answer to the question "What should I teach my child?" (Whordley & Doster, 1983, p. 203). From there decide which items are more difficult for the child and either return to the Handbook to choose activities, or use other ideas of activities that will help strengthen these areas. "Individualized

planning is based on the patterns of a child's behavior that 'occur occasionally' and 'occur consistently'" (Whordley & Doster, 1983, p. 19). Two pages in the back of the H.N.C.A.F. are set aside for developing planning after each assessment based on the information from individual items in the checklist. By writing out a child's strengths, areas needing support and follow-up activities planned, the teacher has something condensed and concrete to refer back to at a later point. Chapter eight of the handbook provides an even more detailed approach to incorporating the results of the H.N.C.A.F. into an educational program of the child. A sample format for organizing the results of the assessment into an Individualized Education Program and each component of an IEP is provided.

TECHNICAL ASPECTS

Item Selection: No information is provided concerning the process of item selection. A bibliography that might suggest sources consulted for the items is not provided either. The rationale or importance of each item is briefly addressed as "developmental significance" in unit II of the handbook that covers all the items in the Humanics National Child Assessment Form. The items within the instrument do not have more specific age references attached to them beyond being identified as "skills and behaviors a child is likely to develop during the ages 3 to 6 years" (Whordley & Doster, 1983, p. 17). Furthermore, no item analysis information is provided even though the Handbook states that the "Item on the five scales of the assessment are arranged in a generally progressive sequence. Task and skill mastery expected at an earlier age are presented at the beginning of each scale and are followed by increasingly difficult tasks at the end of the scale:" (Whordley & Doster, 1983, p. 18).

Reliability: No reliability data nor information are addressed in the Handbook.

Validity: The validity of the instrument is not discussed. Content validity should be considered by the test developers beyond their informal discussion in chapter one of the five major areas of development that are identified.

ADDITIONAL COMMENTS

There are three unique characteristics of the H.N.P.A.H. First, this instrument is unique in its provision of sample letters to parents concerning the intention to do assessment and planning assessments and parent conferences. The Handbook also provides a sample questionnaire to parents concerning their child's developmental history and present behaviors. However, no directions are given regarding the way this information is to be used in relation to the H.N.C.A.F. Secondly, in order to facilitate the use of the H.N.C.A.F. within early childhood programs, especially those involving a large number of children,

the Handbook provides a nine point guide to preparing and carrying out program-wide developmental assessment. And thirdly, "The Humanics National Preschool Assessment Handbook is particularly appropriate for candidates seeking the Child Development Associate credential because they both emphasize observation skills of developmental processes and designing specific activities that relate to developmental needs (Whordley & Doster, 1983).

ADDITIONAL REFERENCES

None

LEARNING ACCOMPLISHMENT PROFILE

Acronym:	LAP
Authors:	Anne R. Sanford and Janet G. Zelman
Published by:	Kaplan Press, 1981, rev. ed.
Address:	600 Jonestown Road P. O. Box 15027 Winston-Salem, North Carolina 27103
Phone No.:	1-800-334-2014
Cost:	$4.50 for the scoring book which includes manual type information
Contents reviewed:	The Learning Accomplishment Profile is contained in one booklet which was reviewed here.

DESCRIPTION

Purpose: "The revised Learning Accomplishment Profile (LAP) is designed to provide the teacher of the young child with a simple criterion-referenced tool for systematic assessment of the child's existing skills. . . Use of the LAP enables the teacher to: identify developmentally appropriate learning objectives for each child, measure individual progress in seven areas of development, and determine specific information which is relevant to individualized planning. . . The ultimate challenge and purpose of the assessment is the implementation of individual goals in an appropriate curriculum which fosters learning" (Sanford & Zelman, 1981, p. 3).

Recommended Ages: The primary focus of the LAP is the developmental range of 36 to 72 months. Although there are a few items below the 36-month level.

Method: The teacher is the administrator of this instrument, collecting data by observation and/or interview. A few parts of the measure allow information to be obtained through report by a parent when observation is not possible. The information is recorded in a checklist which also provides space for descriptive comments.

Developmental Areas: The LAP assesses approximately 389 skills within seven domains: gross motor; fine motor; pre-writing; cognitive; language; self-help; and, personal/social.

ADMINISTRATION

Setting The manual fails to explicitly outline any specific guidelines for the most appropriate setting to be used in administering the LAP. The procedures of the various items imply that a group setting is most appropriate for some items, but an individual basis is also acceptable for other items. Furthermore, the instrument appears to be usable within the classroom or in a pre-arranged private setting.

Estimated Time: No reference is made regarding the time necessary to complete the LAP.

Administration Procedures: This instrument contains the instructions, a child's record form, profile and the illustrated materials necessary for some of the items all in one booklet. This is convenient because everything is all together and different places on the edges of the pages are labeled with the name of the scale to which they correspond. Although this format could easily create problems from being so condensed, the authors of the LAP do not recognize the possible concerns. The primary contents of the booklet or manual are the seven scales. The beginning of each scale contains an index of the skills assessed in that section. Each scale has a column identifying the item or behavior which is sequenced by the normative developmental age assigned to the particular item(s). The largest column of each scale provides a list of any materials necessary for the particular item as well as the procedures for administering the item. Bold print is used in the procedures for instructions or words the examiner should use in administering the item. However, the authors of the LAP do not address the issue of an examiner's choice of wording in administering the items. Furthermore, when the procedures instruct the examiner to observe a child doing something they do not explain the specifics that one should be aware of in the activity. For instance, an item's procedures state "observe child when painting", yet, they do not give the examiner the directions as to whether she should focus on the child's grasp, movements, choice of color, representation, etc. The next section, titled criteria, is helpful in administration procedures, as well as scoring because it provides the examiner the basic notion of what is to be observed and scored in the item. Two other columns in the scales provide a space to record the date of assessment and the date an item, which was not present earlier, was achieved. "Explanations of any modification of procedures, question or appropriateness of an item for a specific child or use of adaptive equipment/materials should be explained in the 'comments' column" (Sanford & Zelman, 1981, p. 4).

The instrument provides assessment materials in the last pages of the booklet. No instructions are given regarding their preparation which would be necessary for their use. Since the illustrations are printed on both the fronts and backs of pages it would seem most helpful to copy them onto individual pages, especially in the one case where the pictures need to be cut apart. Although it is convenient that the LAP supplies these materials, the illustrations are lacking in interest because of the lack of varied shading used throughout. Unfortunately the directions do not confront this issue by supporting their approach or by suggesting to enhance the interest of the illustrations with some color. The LAP also requires materials that are commonly found in most child care centers. However, the LAP fails to include a comprehensive list of the materials that are needed.

The instructions for administering the LAP are simple, but incomplete. The directions explain that the examiner needs to establish a basal level of successful functioning by recording eight consecutive plus (passing) responses. A basal level is established for each scale, rather than for the whole instrument. The manual does not specify the order of assessment for a particular child. Nor does it instruct the examiner on how to decide where to begin the assessment for a child (i.e. at the very beginning of each scale or perhaps at items one year below his chronological age). After the basal level is determined, "it can be assumed that the child can pass all the items occurring before this point" (Sanford & Zelman, 1981, p. 4). Assessment continues until a "ceiling level" of performance is indicated by a score of three minuses (failures) on five consecutive items. These directions imply that administering the items in sequence is an important aspect of this instrument. However, the sequence of the items does not appear to consider the smoothness and continuity of the assessment procedure and consequently may complicate the whole process. For instance, in the pre-writing scale item #17 involves painting and four items later, #21, involves painting again. The examiner needs to be prepared for the time required in frequent shifts among items, or else organize him/herself so that similar items are assessed together.

In the process of administering the LAP, an examiner is allowed to use his/her judgement in analyzing each item "to ascertain its appropriateness for individual children"(Sanford & Zelman, 1981, p. 3).

Scoring Procedures: The items of the LAP are scored with a plus (+) to indicate the presence and successful performance of a behavior or skill and the lack of behavior or skill is indicated by a minus (-) sign.

Each item in the test has a special column titled "criteria" which explains what is an acceptable response to credit a child for a passing (+) score. The criteria for some items also specifies what is not acceptable to receive a plus score.

Test Score Interpretation: The LAP provides a visual representation of a child's behaviors and abilities through a bar graph at the end of the instrument. Developmental ages indicated on the bar graph should be viewed as approximate. The corresponding number of the items in each scale that a child achieved are colored in (green) upon the initial assessment, or pre-intervention. The items not achieved can be reviewed and used as a basis for selecting instructional objectives for a child. The authors point out that, "The critical nature of these items will vary with the individual needs of children. A behavior which is perceived as a 'vital' objective for one youngster may be irrelevant for another" (Sanford & Zelman, 1981, p. 3). As the child demonstrates accomplishment of a specific item, the corresponding space in the row labeled 'post' in the profile can be colored in (in red) to show progress.

Test scores can also be interpreted through the use of another form titled "Information from Assessment and Observation" at the end of the instrument. Two copies of the form are provided, one for initial assessment and another for assessment review. These forms list the seven developmental areas covered in the LAP and then provide two columns, one for strengths and one for weaknesses. Although the instrument does not mention their purpose or intended use, it appears that they are provided to aid the teacher in organizing and understanding a child's strengths and weaknesses in each area, at two different points in time.

Four pages are provided for the development of an Individual Education Program for a child; however no instructions are given for its use. This part of the instrument requires an informative explanation of its purpose and procedures in order for it to be truly beneficial for both the teacher and child.

TECHNICAL ASPECTS

Item Selection: Each item in the instrument contains at least one reference to another instrument or source. However, the process used to select the items is not revealed. Furthermore, the rationale or importance of a particular item is not mentioned.

There is no information in the manual on field testing, item analysis or refinement of items.

Reliability: No information is provided.

Validity: The validity of the LAP is not addressed by the authors on either an empirical or subjective basis.

The instrument appears to have reasonable face validity both within the instrument as a whole and within the seven separate developmental areas. The scope of the domains appear to include a wide range of behaviors and skills and each developmental area identifies the general components assessed through its items. The use of behavioral terms in the LAP items further contributes to the validity of the instrument's results.

The entire instrument includes approximately 389 items within the seven developmental areas. The items seem to be fairly evenly distributed across the domains, except for the cognitive area which includes about one quarter of the items in the instrument. The authors confront the controversial problem of assigning one behavior to one area of development. A brief, practical explanation informs the assessor that duplication of items across areas of development was eliminated for the purposes of programming (Sanford & Zelman, 1981).

The sequence of the items appears to be based on "reputable research-based sources" (Sanford & Zelman, 1981, p. 3) which provided normative developmental ages for a skill or behavior. No norms are established for the LAP itself and the authors caution that "while the LAP data reflect documented norms, it is essential that developmental ages be viewed as 'approximate' in nature" (Sanford & Zelman, 1981, p. 3).

ADDITIONAL COMMENTS

None

ADDITIONAL REFERENCES

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LEXINGTON DEVELOPMENTAL SCALE

Acronym:	LDS
Authors:	United Cerebral Palsy of the Bluegrass, Inc. John V. Irwin, Margaret Norris Ward, Carol C. Deen and Ann B. Greis
Published by:	United Cerebral Palsy of the Bluegrass Child Development Centers, 1973, 1977
Address:	P. O. Box 8003 465 Springfield Drive Lexington, Kentucky 40503
Phone No.:	606-252-2478
Cost:	$5.00 is the approximate cost of the Lexington Developmental Scale manual and 30¢ per chart.
Contents reviewed:	This review is based on the first revision, 1973, of the long form of the Lexington Developmental Scale manual and its appendices, and record chart for children 2-6 years old.

DESCRIPTION

Purpose: The Lexington Developmental Scales are a tool to assess children, which provide a better understanding of each child's development that may serve as a basis for curriculum planning for the total class and especially the individual child, for helping parents to better understand their child, as well as for evaluating the class programs (Irwin, Ward, Deen & Greis, 1973).

Recommended Ages: The early childhood version of the LDS is designed for children between 2 and 6 years years of age.

Method: The LDS was designed to be used by the preschool teacher, based on classroom activities and observations, and cumulative teacher judgments of the overall performance of a child. Also, some of the information is best obtained from the parents. A child's behaviors and skills are rated by degree of success within each developmental domain checksheet.

Developmental Areas: There are 46 items, at four progressive levels, listed in the LDS checksheets for early childhood which are organized into four developmental domains: motor (14), language (12), cognitive (10), and personal and social (10). The emotional developmental scale contains 18 items.

ADMINISTRATION

Setting: The manual suggests, if at all possible, that the child assessment be scheduled on an individual basis in a separate room to avoid any interaction between the individual child and the remaining group (Irwin, et al., 1973). the initial assessment

should facilitate the child's feeling of comfort. The only specific suggestion given for facilitating his/her comfort in relation to the setting is to keep the recording of information as inconspicuous as possible.

Following the initial individual child assessment, the administration of the remaining items are incorporated into the classroom activities over a specified time period. The manual gives a few suggestions for how items can be assessed through classroom activities; but, the teacher is given the freedom and responsibility to determine the details of the settings.

Estimated Time: The manual recommends that the assessment of a child's development be obtained over a survey period. The length of the survey period is influenced by the number of children to be rated by each teacher, the number of trained personnel and the time that can be allowed for individual assessment during the initial assessments with each child. the manual suggests a two or three week survey period for a situation where there are 10 children to each team consisting of a teacher and teaching assistant and where approximately one hour has been allowed for each initial individual child assessment (Irwin, et al., 1973).

In addition, a recommendation is made to complete the assessment at least twice, at the onset of the year and the end of the year.

Administration Procedures: The LDS is administered in several parts; questionnaire for parents, initial individual child assessment and assessment within the classroom.

The information obtained from parents concerns the performance levels of a child's skills and behaviors in the personal-social area as observed at home. An example of a questionnaire that could be used is contained in Appendix B.

In terms of administering the scale for the initial individual child assessments, the procedures are sketchy and unorganized. as previously stated, the setting to administer the items is not very specific. The general directions for teachers regarding initial child assessments suggest a sequence to follow in presenting the items, beginning with gross motor, then fine motor, language and ending with cognitive items. Reference is made to Appendix C which lists the specific items of the LDS that are important to assess on an individual basis to determine a child's performance level. The manual suggests that a teacher "create some feeling of fun and play in doing the tasks - as opposed to a test situation . . ." (Irwin, et al., 1973, p. 56), to help accomplish everything. The teacher must go beyond this brief guide in Appendix C and sort through the scales and items in Appendix A to organize the procedures for initial child assessments. "However, checking an item during the initial assessment of the child does not preclude or eliminate further checking during the survey period. On the contrary, results from the initial child assessment should be checked against subsequent performances singly and in groups. Some children, for various

reasons, do not perform at their usual level in situations comparable to those in an initial child assessment" (Irwin, et al., 1973, p. 4).

Individual assessment within the classroom appears to require "systematic planning on the part of the teacher . . ."(Irwin, et al., 1973, p. 3) so that any items that have not been checked in the initial interview or obtained from parents can be administered. In addition, some items may need to be checked a second time to verify the child's initial performance. A few brief ideas of how to incorporate items into the classroom activities are given in the directions for teachers. In addition, Appendix D contains two weeks of sample teaching plans for a two-week long survey period for 5 to 6 year old children. This sample gives the user an idea of how items can be incorporated into the daily schedule. The sample plans could have been more informative by identifying the area and item number that corresponded to the activities listed.

The procedures for administering the items of the scale are primarily found in three different places, which is confusing to follow and would appear to complicate the process of administering the items. First, the section "Directions for Teachers" contains part of the information concerning administration procedures. The manual states that "In general, the child may be given two trials on an item (unless otherwise stated). This may involve repeating the directions a second time or giving a demonstration a second time, etc." (Irwin, et al., 1973, p. 3). Administration procedures are also given for items that involve timing a child's performance. Secondly, Appendix A, which contains suggestions for administering the LDS is another place where further administration procedures can be found. The beginning of Appendix A states that "Many items are self explanatory" (Irwin, et al., 1973, p. 17). Therefore, all of the items in each scale do not have an explanation of how to approach administering the item. The suggestions for administration that are provided include two parts; the equipment required and a method statement. The method statement is based on selected procedures that teachers from the UCPB Child Development Centers found helpful for assessing the item (Irwin, et al., 1973). The LDS record charts are the third place where administration procedures are located. The record chart for each developmental area lists the items by numbers and four levels of performance that can be assessed for the particular skill or behavior. A sample graph of the use of the developmental scale chart is provided in Appendix E.

Administration of items begin at the level of a child's age. Levels of an item are administered above or below the child's age level so that the highest level of successful performance of an item, without assistance, is determined. "It is assumed that the child has already achieved success on all previous items to the left of the rating" (Irwin, et al., 1973, p. 4).

The setting of administration of the LDS items effects the choice of record forms used in the administration procedures. The developmental area scale charts are organized in a format that is designed to be used when assessing an individual's level of performance on items in the developmental domain. "A complete copy of the scale being used . . . should be available at all times during the initial assessment of the child and during class survey time" (Irwin, et al., 1973, p. 4). To promote ease and adaptability of administering LDS items of a developmental area in a group setting, the test developers recommend that "Each teacher should prepare checksheets similar to those in Appendix A using the items applicable to the age level of the class" (Irwin, et al., 1973, p. 4). The basic construction of a checksheet provides space for listing approximately 200 children's names along one side and the developmental items at their level along another side. Their performances are recorded at the point of intersection with the specific item. "The primary purpose of the checksheets is to serve as an efficient device to record the information about each child until time to transpose it to the scale" (Irwin, et al., 1973, p. 4).

The equipment that is needed for the items in each area is listed in Appendix A under the different developmental areas. The necessary forms (stimulus and/or response sheets) for various items in the instrument are also included within their respective developmental area in Appendix A. Other than the forms, no equipment or materials are provided with the instrument. Fairly detailed description of the dimensions or qualities of the equipment are provided; however, the equipment specifications are intended to facilitate the administration of the LDS rather than create hindrances. The necessary equipment seem to be basic items of most preschool settings which should not affect the adaptability of the LDS to a variety of programs.

The visual tracking exercise portion of the instrument may be completed after the survey period and after final ratings on the scale. However, it would seem logical to administer it first if there is an initial concern about a child's visual performance. The directions for administering and scoring a child's visual performance are located in Appendix F. The directions in this section are concise and thorough.

Scoring Procedures: There are two procedures for scoring items on the LDS. First, when scoring items in group settings, the developmental domain checksheets are most useful. Appendix A presents sample checksheets for each of the scales that can be used or adapted by teachers, depending upon the teaching situation, group being assessed and other factors. The level of performance of children's skill on the checksheets can be indicated by noting a variety of characteristics, i.e. time, distances, trials, etc. the instrument's scoring procedures for the checksheets allow for flexibility but provide minimal guidelines for establishing a system to specify a child's performance level on a skill.

Data can either be transferred off of the checksheets or recorded directly on individual scale sheets during administration. All of the scores of the LDS items are compiled on a child's individual scales for each developmental area. The developmental scales use a rating method based on the degree of successful performance to score children's responses. The placement of an "X" in one of three points (left, right or center) on the item's box indicates lack of success, partial success and complete success, respectively. In addition, an "X" with a circle around it is used to indicate that a child's attainment was assessed to a particular point but not completed because of lack of opportunity. This rating symbol at the extreme left or right of a skill would indicate that a child's performance is lower than the youngest age level represented or higher than the oldest age level on a scale, respectively. In addition, a child can score an "A" at the left of a skill in the case of absence or inability to obtain a rating. "NA", not applicable, can also be recorded as a score for those items that a child cannot perform due to physical handicapping condition.

The criteria for distinguishing between success, partial success and failure is dealt with in different places of the instrument. The data scoring directions clarify the definition of a partial success score as including observations where at least one half of the task was completed successfully or partial success for the item is otherwise indicated, e.g. by a number or time (Irwin, et al., 1973). Appendix A contains some statements about rating a child's performance of a specific item. For some skills, especially in the personal and social scale, both the data scoring directions and the scale itself fail to clarify the specific criteria for receiving unsuccessful, partial success, and successful scores. When a discrepancy occurs in the personal-social scale between parents reports and teacher observations, the manual instructs to ". . . consider more valid what the child can actually do at school . . . (and) . . . rate him at the point where he does perform at school" (Irwin, et al., 1973, p. 2).

The emotional scale of the LDS receives individual attention because it is an exception to the scoring procedures discussed above. Items in the emotional scale are rated by five degrees of frequency instead of by degrees of success. the authors recognize that ". . . it often takes more than the allotted period for the survey of an overt indication of some emotional traits to emerge. Therefore, it is suggested that the child be marked under the USUALLY rating unless some evidence presents itself to mark him otherwise" (Irwin, et al., 1973, p. 4).

The final scoring is completed by connecting the score of each item in sequence to create a graph. "Colors for successive dates should be chosen to show clear contrast from one rating period to another" (Irwin, et al., 1973, p. 5).

Test Score Interpretation: Interpretation and use of the graph is discussed with respect to teachers, parents and administrators.

Teachers can base their decisions for planning activities for a child or the group on the strengths and weaknesses revealed by the graph. "This does not indicate that teachers should teach only to the weaknesses of the child or the class; rather a constant effort should be made to further the development of the whole child" (Irwin, et al., 1973, p. 5). In addition, the graphic results can indicate to the teacher a child's need ". . . for more highly refined formal testing procedures and/or for referral to specialists in different areas" (Irwin, et al., 1973, p. 5).

Additional information and research are presented on the Lexington's predictive ability of the developmentally handicapped child's future growth under conditions of special intervention and no special intervention. However, "it is premature to state that the LDS makes accurate predictions . . ." (Irwin, et al., 1973, p. 10).

Although the LDS ". . . results may be used by administrators for many purposes . . ." (Irwin, et al., 1973, p. 1), their validity may be questionable because such purposes seem to be an afterthought without supporting evidence. However, the authors state that "A quick overall picture of any child's performance and of his progress . . . may be used to interpret the program to parents . . . board members . . . other agencies . . . subsequent schools where the child may go, and also in making various reports, as well as in making plans for the future. Interpretation of group ratings may show the progress of each class or the school as a whole and can be used to demonstrate the value of effective intervention, early childhood education, and expenditures connected with such programs" (Irwin, et al., 1973, pp. 5-6).

Several basic recommendations are made regarding the presentation of the LDS results to parents. If possible, both parents should be included, and the conference should begin and close with positive remarks. "Before any parent is shown the graph of his own child's performance, a careful explanation should be made interpreting the way the graph of a so-called 'normal' child would look. . . It should be explained, however, that it is not likely that the deviations for the normal child would be as great as those for a child with some form of developmental lag" (Irwin, et al., 1973, p. 5).

In addition, the LDS graphs serve as a basis for parent conferences, especially at the end-of-the-year to indicate the progress that has been made.

TECHNICAL ASPECT

Item Selection: All but 6 of the 256 items in the early childhood scale are supported by evidence found in one or more of the 41 items listed in the bibliography (Irwin, et al., 1973). "The sources of all the items are available at nominal charge upon request from the agency" (Irwin, et al., 1973, p. 1). The

remaining six items were either formulated on the basis of direct experience with the behavior in question or simply located as midpoints along the 4 year continuum of the item (Irwin, et al., 1973).

The difficulty of sequencing the items in the LDS is explained. First, whenever a disparity occurred between different sources, "a check was made of available sources on the item and a decision was made reflecting the greatest possible degree of agreement among the sources" (Irwin, et al., 1973, p. 2). Secondly, age norms are used to illustrate the progression in the developmental process and "In this scale, the heading means that a child should reach that level by the time he turns that age . . ." (Irwin, et al., 1973, p. 2) rather than the year following the specified age.

Item analysis information is not provided to verify the accuracy of the item sequence in terms of their difficulty or to verify the accuracy of the age placements.

Reliability: One reliability study, conducted with a prior edition of the LDS, is thoroughly reported, including the types of reliability, methods, subjects, judges judging period, and specific data. the study presents the reliability results in relation to each item as well as each developmental area. the motor, language and cognitive areas all showed good reliability, between .9 and 1.00, for the total of each area. Minimal revisions were made with respect to individual items. However, the reliability data of the personal and social area showed some variability which resulted in providing specific scoring instructions and a checksheet for the teacher in the revised version of the LDS reported herein.

Validity: The authors point out that, "A formal demonstration of the validity of the LDS has not been undertaken. In a very real sense, therefore, the validity of the instrument has not been established. Nevertheless, certain factors suggest the validity of the scale is well within the requirements of good educational practice" (Irwin, et al., 1973, p. 9). Face validity is supported by the fact that 98 percent of the early childhood items were selected from well known standardized developmental scales. In addition, general concerns of experienced teachers reports that ". . . the scale values are remarkably congruent with both their professional impressions of the children and with other physical and psychological data available to them" (Irwin, et al., 1973, p. 9). Concurrent validity is addressed in one study in relation to the Stanford-Binet (1972 revision). The correlation between the Binet IQ and each developmental area is reported with the cognitive area having a correlation of .84 and other areas less; language, motor, personal and social, and emotional respectively.

ADDITIONAL COMMENTS

The authors point out a unique feature of the LDS is organization of items by area and ages, as well as denoting four more or less continuous levels of development of a skill or behavior. For instance, the ability to jump in the gross motor scale is described in terms of the progressive changes that occur at approximately four age levels. "In developing these sequences, an effort has been made to be as consistent as possible in maintaining continuity of behavior from one age level to another" (Irwin, et al., 1973, p. 1).

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MEMPHIS EDUCATIONAL MODEL PROVIDING HANDICAPPED INFANT SERVICES

Acroyum:	Project MEMPHIS
Authors:	Alton D. Quick, Ed.D., Thomas L. Little, Ed.D., and A. Ann Campbell, M.S.
Published by:	Fearon Pitman Publishers, Inc., 1974
Address:	6 Davis Drive Belmont, California 94002
Phone No.:	415-592-7810
Cost:	The Guide to Programming booklet costs $1.00. A package of 10 instruments for individual program planning and evaluation costs $7.00 and includes one each of the Comprehensive Developmental Scale, the Developmental Skill Attainment Record and the Continuous Record for Educational-Developmental Gain. The Project Memphis text: Enhancing Developmental Progress in Preschool Exceptional Children costs $6.00 and Project Memphis Lesson Plans are $29.50.
Contents reviewed:	This review is of a portion of the Project .. Memphis system that was developed to be used either by itself or in conjunction with the total project. This review was accomplished through the use of Chapter Five, "Program Planning and Evaluation", of the Project Memphis text, The Guide to Programming and the three instruments (Comprehensive Developmental Scale, Developmental Skill Assignment Record and Continuous Record for Educational-Developmental Gain) for individual program planning and evaluation.

DESCRIPTION

Purpose: The rationale for the model states that, "In many educational programs for preschool age children, minimal effort is directed toward denoting specifically what the child should learn" (Quick, Little, & Campbell, 1974, p. 34). In addition, the point is made that "incidental learning" and unidentified (undetermined) learning outcomes are inadequate and less than desirable for promoting the teaching-learning process. Therefore, the purpose of the early childhood portion of the instrument is to be a resource for: "(1) developmental assessment, (2) selection and assignment of skills to be learned (objectives), (3) daily records of children's programs, and (4) periodic determination of children's progress" (Quick, et al., 1974, p. 32). The specific purpose of the Memphis Comprehensive Developmental Scale is to assess a child's developmental status in five areas to provide "rough estimates of the child's developmental levels for purposes of gaining information about deficiencies and needed educational treatment emphasis" (Quick, et al., 1974, p. 36).

Recommended Ages: "This scale is applicable to youngsters who are developmentally between birth and five years of age" (Quick, et al., 1974, p. 4).

Method: Information regarding a child's skills and behaviors may be gained by personal observation of the child or by information given to the teacher by others who are "knowledgeable about the child" (Quick, et al., 1974, p. 36). The information obtained is recorded on a pass/fail checklist.

Developmental Areas: The scale is directed toward five developmental skill areas, identified as: personal-social; gross motor; fine motor; language; and perceptuo-cognitive.

ADMINISTRATION

Setting: No guidelines are provided for the setting necessary for assessment. In the case of observation, it appears that the skills and behaviors assessed would be more easily elicited in an informal setting than a formal setting. Therefore, assessment in the context of a classroom would be likely to be more reliable and preferred to assessment in a contrived situation or private room.

The authors point out that the system may be most suitable and used with relative ease in a one-to-one teacher-child situation or in settings where the teacher-student ratio is approximately one to seven or eight (Quick, et al., 1974).

Estimated Time: The time for accomplishing either the total Project MEMPHIS assessment or its parts is unspecified.

Administration Procedures: The steps of administration are outlined in two different places. One place is in Chapter Five of the Project Memphis text and the other is in the Guide to Programming. The administration involves the use of the Comprehensive Developmental Scale to determine a child's present level of functioning in the five areas. Three month chronological age ranges are given for items in each area. "P" and "F" are used for scoring pass and fail of the skill items. The scales are arranged with the youngest ages and skills at the bottom of the page and the progress to the older ages and skills towards the top of the page. Administration begins at the bottom of the page with the youngest ages and skills. Assessment on each scale is stopped when six or more consecutive items are scored as fail. This is termed a ceiling level.

Scoring Procedures: The items on each scale are scored pass or fail by circling "P" or "F" corresponding to each item.

The criteria for scoring each behavior or skill listed is vague. "A skill is passed if it is regularly present in the child's behavior or has been mastered by the child" (Quick, et al., 1974, p. 36). Some of the items use subjective words such as "extensively" and none of the items are further defined as to what specifically constitutes a score of a pass or a fail.

Once the five scales are administered for a child, a raw score and developmental age for each scale can be determined. The raw score is derived by totaling the number of passes in a scale. The developmental age for a scale is found by locating the age level of the last item which was passed, before six or more consecutive items were failed. This method of determining a child's developmental ages allows for a child to fail some items at a lower developmental level and yet score a higher developmental age. Consequently developmental ages of the scales may be somewhat inflated in that they over-estimate a child's developmental level.

Test Score Interpretation: The front page of the Comprehensive Development Scale has a Profile of Developmental Status on which a line for a child's chronological age can be drawn, as well as plotting and connecting developmental ages for each scale. The Profile of Developmental Status readily shows a comparison between a child's chronological age and developmental ages of each scale.

Following the first step of evaluating a child using the Comprehensive Developmental Scale, individual program planning can be done using the Developmental Skill Assignment Record. The five developmental areas assessed appear as headings for listing specific skill titles and descriptions that the teacher assigns a child to master. "The quantity and choice of the skills and time period are determined by the teacher with the aid of the developmental scales and whatever other resources she deems appropriate" (Quick, et al., 1974, p. 45). Once decisions have been made on which skills to assign, the skill description of what comprises the skill, and the criteria level for passing the skill can be formulated. In addition, the Developmental Skill Assignment Record is "flexible" and additional skills may be assigned any time during the program if a child's progress "warrants" it (Quick, et al., 1974).

The next step, implementing and evaluating the Developmental Skill Assignment Record, employs the Continuous Record for Educational-Development Gain. This record is designed for the on-going recording of information concerning the mastery of assigned skills from the beginning to ending treatment dates. In this portion of the instrument, each developmental area has its own page with four columns. Each column is designed to identify the skills assigned in that developmental area and then space is provided to record the date and quality of performance each time the skill is worked on. For instance, when a specific skill is worked on, a child not only scores a pass or fail but also a number from one to four to indicate the quality of the pass or fail. A "1" indicates no competence at all and a "2" indicates the child is making progress but is not adequately performing the skill or behavior. A pass can be quality coded with a "3" to indicate adequate performance or a "4" to indicate extreme competence in performing the skill or behavior.

The Guide to Programming recommends that a criterion level of at least five passes be set for each skill before the skill is considered mastered; however, "It is up to the teacher to determine how many times a child must receive a passing score before the skill is considered mastered" (Quick, et al., 1974, p. 10).

The Completion Record, on the lower part of the front page of the Continuous Record for Educational-Developmental Gain, summarizes results at the end of the assigned programming period. This record provides feedback about the teaching-learning process.

Furthermore, the cycle can begin all over again with administering the Comprehensive Developmental Scale, assigning new skills and evaluating the progress made.

TECHNICAL ASPECTS

Item Selection: Appendix C of the text, Enhancing Developmental Progress in Preschool Children provides a partial list of references, 17, regarding the assessment of children at the preschool level. However, these references are not noted within the text and therefore cannot be assumed to be the basis of the development of scale items for Project Memphis.

Reliability: The reliability of this instrument is not discussed.

Validity: Minimal information is provided related to validity. The techniques developed in this project were designed for training preschool-age exceptional foster children and their foster parents; however, the Preface reports that they "have proven equally applicable to children living with their natural parents" (Quick, et al., 1974, p. 111).

The five developmental areas of this instrument appear to have face validity. Chapter 7 of the text, "Lesson Plans for the Educational Treatment Process" is the only place that any sort of a definition of the developmental headings is given, and even there, the definitions are brief and indirectly related to the skills found in the scale.

Although no norms or support for the sequence of items is given there are 8 to 12 items in each scale for each one year age range. This quantity is not exactly "comprehensive" as the title implies, but does provide 52 total items across the five scales at any one-year interval.

ADDITIONAL COMMENTS

This instrument has a rather unique circular process for evaluating and planning for children's development that provides teachers with a systematic, organized, purposeful method of evaluating and planning an early childhood education program.

In addition to the evaluation part of this project, lesson plans for each different skill within each of the developmental areas are written out in a lesson plan notebook available from the publisher for $29.50. Chapter 7 of the text contains a few lesson plans for some of the skills in each of the developmental areas. In addition, Appendix A of the text provides a list of examples of educational equipment that can be used in teaching and evaluating the skills in the different developmental areas.

The three instruments for Individual Program Planning and Evaluation have a practical format for ease in use. However, they are printed on legal size paper which allows for larger print and more space but creates an awkward size for handling and organizing. The text, however, has each of these three instruments reproduced in full in Chapter 5 with smaller print but a more convenient size. Furthermore, since 1979 all portions of the Project Memphis covered by the 1974 copyright are in public domain.

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PORTAGE GUIDE TO EARLY EDUCATION

Acronym:	Portage or P.G.E.E.
Authors:	S. Bluma, M. Shearer, A. Frohman and J. Hilliard
Published by:	Cooperative Education Service Agency #12, revised edition 1976
Address:	Box 564 Portage, Wisconsin 53901
Phone No.:	608-742-8811
Cost:	A set of individual checklists, containing sequences for each developmental area, costs 75¢. A set of 15 checklists is $8.50. the manual, which provides all instructions for use of the P.G.E.E. is $4.00. In addition, a Portage Kit may be obtained for $42.00. It includes the manual, individual checklists and an activity file box.
Contents reviewed:	The focus of this review relies on information provided in the P.G.E.E. manual and the checklist pages. The activity card file was also available for this review. It is not a necessary component of using the Portage checklists; however, the manual is only enclosed in the card file box.

DESCRIPTION

Purpose: The Portage Guide to Early Education, (revised edition) was developed to serve as a guide to assess a child's behavior and plan realistic curriculum goals that lead to additional skills, rather than produce any type of developmental age (Bluma, Shearer, Frohman & Hilliard, 1976).

Recommended Ages: The materials were designed to be used with children whose mental ages are between birth and six years (Bluma, et al, 1976).

Method: "The checklist serves as an informal method of assessment" (Bluma, et al, 1976, p. 20). The instructor obtains the information on a child for the checklists through: (1) referring to a standardized test and transferring a child's responses to the checklist; (2) having the child perform the listed skills; or, (3) interviewing a parent or another person familiar with the child.

Developmental Areas: Five developmental areas are identified for children in the 3-5 year age range: socialization, self-help, language, cognition and motor. There are 535 total items in the P.G.E.E. distributed between each area: socialization, language, self-help, cognition, and motor.

Forty-seven percent of the total number of items are found between the identified age levels of 3 years through the 5 year age level.

The instrument also includes a section titled "infant stimulation" for skills at the birth to 1 year age level that is not reviewed.

ADMINISTRATION

Setting: The directions in the manual for the P.G.E.E. checklists fail to address any criteria for the environmental conditions. The Portage checklists seem flexible for us in either a one-to-one situation or small (4-5 child) group, in the classroom environment or in a separate area.

Estimated Time: The manual does not suggest the length of time necessary to complete one administration of the checklist; nor does it specify whether the checklists should be completed in just one session or if it can be done in a series of sessions.

Administration Procedures: As a general guideline, the starting point of assessment is either one year below a child's mental age which was previously determined by a standardized formal assessment, or one year below a child's chronological age (Bluma, et al, 1976). The manual directs that the first 10 to 15 items of a scale be successfully performed by the child or backing up is necessary to the point where there is certainty of achievement of all previous items. The assessor needs to be certain that a skill a child cannot perform previous to consistent successes should not be left unadministered. The manual gives a couple examples of administering items, but beyond that, no other directions are provided. The teacher must rely on the behavioral description in the checklist and her own words and approach in administration. Items in each scale are administered until ten or fifteen are consecutively missed. However, the large number of failures necessary to discontinue testing indicates the items have a weak sequencing component between them.

The items of the P.G.E.E. are listed by developmental areas and age levels on the checklist pages, separate from the manual. Responses are recorded on each child's individual checklist by making a check in the "entry behavior" column the first time the P.G.E.E. is given. Dates may be recorded in the date achieved column on subsequent administrations. A small column labeled "comments" is provided for remarks regarding a child's performance, or lack of opportunity.

Most all of the items of the Portage involve some object, equipment or picture for the child to identify or act upon. However, none of the necessary materials are provided or listed. Since criteria for materials is not specified and most of the materials needed are unspecialized, it is quite likely that an administrator could gather most materials with minimal effort or expense.

Scoring Procedures: The items in the scale are scored with a check for a successful performance. In order to receive credit a child should be able to "perform the behaviors easily, without aid, on request . . ." (Bluma, et al, 1976, p. 22) or the child should have previously demonstrated the skill or behavior (Bluma, et al, 1976), unless otherwise stated in the behavior title. A comment may be made, if desired, when an item is failed. Successes on subsequent administrations are scored by recording the date.

There are absolutely no specifications given for determining if a child's response is adequate enough to be scored as a success or not. Unfortunately, this allows for subjectivity and inconsistency to interfere with the scoring.

The P.G.E.E. "is not intended to yield any type of developmental age" (Bluma, et al, 1976, p. 18) or other summary score.

Test Score Interpretation: "The important information derived from its use is a delineation of those skills acquired and those yet to be taught: (Bluma, et al, 1976, p. 18). The manual instructs the teacher to begin teaching one of the first skills a child was unable to perform in a given developmental area. Items in each developmental scale are numbered and color coded by developmental areas so they can be easily matched to the appropriate color and numbered card of the activity file to find suggested methods of teaching the skill.

TECHNICAL ASPECTS

Item Selection: The exact method of selecting the items in this instrument is not identified beyond the vague statement that "people on our own staff and throughout the country (who) have made valuable suggestions for additions and corrections to the guide" (Bluma, et al, 1976, p. 3). A review of the bibliography list reveals several assessment instruments that were consulted in the development and/or revision of the P.G.E.E.

Age references are given in yearly increments for items "Based on normal growth and development patterns" (Bluma, et al, 1976, p. 17). More precise ages of skill acquisition would not necessarily increase the usefulness of the guide. However, more sequenced items incorporated into the one year intervals for each behavior would enhance continuity and emphasize the developmental progression of the acquisition of skills. The manual recognizes that skills are sequenced by degree of difficulty in general, but "children may skip some behaviors completely, may learn behaviors out of sequence or may need additional subgoals in order to achieve a behavior on the checklist" (Bluma, et al, 1976, p. 17). The P.G.E.E. manual fails to provide any data or rationale concerning item analysis.

Reliability: No reliability information is given. Furthermore, even though the items listed in the checklist are said to be stated behaviorally, "they are not stated as complete

behavioral objectives" (Bluma, et al, 1976, p. 28). Additional specificity in the items to include information concerning necessary objects/materials, conditions of performance and degree of success would greatly contribute to the reliability of this instrument.

Validity: No validity information is given. The manual does indirectly address the issue of content validity. Descriptions of the five developmental areas (and infant stimulation) are given to serve as a definition of the areas and an explanation of the basis for including the skills listed in the P.G.E.E. However, part of the weakness of the content validity of the developmental areas is recognized in the statement that "in many cases the skills could be listed in more than one category" (Bluma, et al, 1976, p. 18).

ADDITIONAL COMMENTS

The test manual provides some additional useful information for early childhood teachers on planning for attaining curriculum goals. It gives details concerning identifying and developing behavioral objectives "who / will do what / under what conditions / to what degree of success" (Bluma, et al, 1976, p. 29). A task analysis approach of using smaller sequential learning to accomplish long-term objectives is described and illustrated. Different types of aid, from the teacher, procedures which can be used with the types of aid and correction procedures, all intended to be used in planning the specifics of an instructional program, are discussed. The manual also includes a brief section on some additional considerations, e.g. reinforcement and prerequisites for learning to be made when implementing the planned curriculum goal.

A bibliography of approximately 25 sources and a list of 10 books for additional reading and study are provided at the end of the manual.

ADDITIONAL REFERENCES

Coordinating Office for Regional Resource Centers, University of Kentucky. Preschool Test Matrix: Individual Test Descriptions. Washington, D. C. Bureau of Education for the Handicapped, 1976. (ERIC Document Reproduction Service No. ED 129 041)

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Southworth, Lois E., Burr, Rosemary L., & Cox, Andrea Elwell Screening and Evaluating the Young Child. Springfield, Illinois: Charles C. Thomas, 1980.

PRESCHOOL ATTAINMENT RECORD

Acronym:	PAR
Author:	Edgar A. Doll
Published by:	American Guidance Service, Inc. (1966)
Address:	Publisher's Building Circle Pines, Minnesota 55014
Phone No.:	621-786-4343
Cost:	$1.60 manual, $2.90 for package of 25 record forms
Contents reviewed:	The Preschool Attainment Record manual containing a copy of the record form was used in this review.

DESCRIPTION

Purpose: According to the author, "The aim of the record is to provide an assessment for children of preschool years with or without various types of handicaps, including socio-cultural . . . The purpose of the examination is to provide an assessment of children who are not readily accessible to direct examination, because of sensory impairments, speech or language difficulties, emotional disturbances, neuromuscular embarrassments, resistance to examinations, cultural problems and the like" (Doll, 1966, p. 8). The assessment is intended to provide information on what a child can do, and more importantly on what s/he actually does ir his or her usual state, so a base-line for educational planning, treatment or management can be established (Doll, 1966).

Recommended Ages: This instrument is designed for children in the preschool years. The specific ages assessed, birth to seven years, are apparent in the record form.

Method: This instrument obtains information on a child's abilities from "an informant who is familiar with the child's usual behavior" (Doll, 1966, p. 8). The manual does not identify who would be qualified but, "The suitability of the informant is determined by advance interview and observations, as well as by the consistency of his reporting" (Doll, 1966, p. 15).

The assessment of a child can be conducted by means of both interview and observations procedures. On-the-spot testing and the actual presence of a child is not required, "although some observation of performance is, of course, desirable" (Doll, 1966, p. 8).

The data are recorded in a rating system of "passed", marginal or "half success", "no success" and "no opportunity".

Developmental Areas: The PAR assessed the child's behavior along three domains: physical, social and intellectual. Within these three developmental areas there is a total of eight subdomains: ambulation, manipulation, rapport, communication, responsibility, information, ideation and creativity.

ADMINISTRATION

Setting: The manual does not give any specific guidelines regarding the setting for assessment; however, the directions say that the instrument is designed to be administered on an individual basis and that an informal setting is suitable. For instance, the interview should be conversational with "a minimum of pressure and a maximum of encouragement" (Doll, 1966, p. 15) and also, in the case of observation, "the examiner's problem is not to 'test' the child" (Doll, 1966, p. 16).

Estimated Time: An estimated time for administration is not reported in the manual.

Administration Procedures: The instructions for administration are reasonably clear.

The first step in using this instrument involves finding a "suitable informant" (Doll, 1966, p. 15). The manual states that suitability is determined by advance interview, observations and consistency of responses; however, the details of these three processes are not described.

The process of administration first involves obtaining background information, in as much detail as possible, required on the front page of the record form. The type of information requested includes the general structure and composition of the family, some space for environmental notes about the socio-economic and cultural-linguistic situations of the home and any relevant notes about the child's condition, indicating the degree, whether it be vision, hearing, speech, orthopedic, health, behavior, emotional or other. The examiner then proceeds to interview, observe and/or test each item of each category to establish a child's level of performance. The manual states that "various degrees of precision may be employed, depending upon the nature and purpose of the examination and particularly whether follow-up examinations for comparison are to be made later" (Doll, 1966, p. 15). General guidelines for developing interview questions are provided, but specific questions or samples for each test item are not provided. The author emphasizes that this instrument seeks to obtain descriptions of a ". . . child's ordinary behavior attainments as usual, or accustomed, or 'habitual'" (Doll, 1966, p. 16). In administering this instrument, any differences encountered between what a child ordinarily "can" as opposed to what a child "does" should be noted in the record.

No equipment is provided with this instrument for the examiner to use in the situation requiring observation or testing. However, the instrument's items appear to incorporate general materials which would commonly be found in child care situations, e.g., an object to throw and catch, object to draw/write with and suitable surface, objects to compare and match, objects to construct and explore.

Scoring Procedures: The items on the test are scored +, if the performance fully satisfies the item definition, ± if the child's abilities seem to be intermittent or marginal, and - if the performance is not well established or unsatisfactory in matching the criteria specified.

The item captions in the PAR are general, brief and simple. Scoring could be accomplished on the item captions. However, doubts could easily occur regarding the specific criteria for scoring items. Therefore, the author provides some guidelines elaborating on item definitions ". . . to clarify the limits within which the item is presumed to apply . . ." (Doll, 1966, p. 20). The specific item definitions located in back of the manual, are more helpful but still broad; they do not distinguish between successful, marginal and unsatisfactory abilities. The author expressed the belief that, "If the definition is pressed too far, then item scoring disappears by simple disintegration of formulation. Note that in our best psychometric scales this problem is by no means fully resolved in marginal performances" (Doll, 1966, p. 20).

The author allows for flexibility in recording the scores. "In the simplest form of examination, the Summary Profile Sheet can simply be checked without recording the details which justify the scoring of the items . . . the examiner need not be too scrupulous for rough purposes in checking the items as plus, minus of plus-minus" (Doll, 1966, p. 15). On the other hand, for more precise examining, the detailed item information is collected on the individual scales of the record form. This part of the record form identifies each scale with the item number and item, life age near and one space to record score basis (i.e. interview, observed performance or tested performance) and another space to record the degree of item performance. A child's performance scores can then be transferred to the Summary and Profile page where additional scores are calculated.

Several scores can easily be obtained from the reported or observed performance of a child on the PAR items. Successes (+) receive one point and ± scores are given half credit. The Summary and Profile page provides a well organized arrangement in which to record individual totals of items passed by age periods and items passed by categories. A raw score is obtained by totaling a child's + and ± scores in the entire instrument. The raw score is used in calculating a child's attainment age (AA). The attainment age value in years is determined by dividing the raw score by 16, since there are 16 items per year. A child's attainment age in months is determined by multiplying the raw score by 75 since there are 8 items per 6 months interval. Another score, the attainment quotient (AQ) is found by dividing the attainment age (AA) by the child's life age (LA) and then multiplying by 100.

The upper right hand corner of the Summary and Profile provide blanks for years and months of a child's LA, life age, MA, which is assumed to be mental age and AA, attainment age.

Test Score Interpretation: The manual provides minimal, unspecific guidelines for interpreting and using test scores. Performance on the test in age terms is displayed graphically on the Summary and Profile page which makes it easy to understand and communicate. For instance, the total of items passed by age periods show the consistency of age progression for items combined by age level. This record of performance provides a base-line for educational planning, treatment or management (Doll, 1966).

The author suggests basic review of the item scores with reference to related variables as recorded on the front page of the record form or obtained from other sources, e.g. intelligence tests. Interpretation of performance on the PAR is referred to primarily in terms of making a comparison between mental ages and attainment age and quotient. However, the lack of justification for these scores makes their present usage inadvisable.

The author clearly states two important and valid points. First, interpretations are limited because the PAR has not yet been normatively standardized with reference to associated variables. "It does not permit comparison of child with child, or of a given child with himself in successive measures, or for composing homogeneous groups, or assessing their comparability" (Doll, 1966, p. 7). Second, "interpretations will depend upon the intent or purpose of the examination and the action programs to be carried out" (Doll, 1966, pp. 21-22).

TECHNICAL ASPECTS

Item Selection: There are no data presented in the manual on the item selection process. "The placement of items is determined in large measure by information already available regarding developmental maturation in the preschool years" (Doll, 1966, p. 22). However, these sources are not noted or listed.

Reliability: No reliability data are reported in the manual.

Validity: Although there are no specific validity studies cited in the manual, the content validity of the PAR is indirectly addressed in the manual. The arrangement of items clearly possesses some face validity in relationship to normative studies of children's development and existing theory regarding the development of skills and abilities in young children. However, the content lacks thoroughness in its coverage of items per age level and/or domain. each sub-domain includes only twelve items over an age span from birth to seven years. In addition, each six month age level contains only one item from each of the eight sub-domains. The items appear, in general, to be appropriately assigned by domain, with a few exceptions. One example of inappropriate placement is a numerical item, testing the skill of addition, included under communication. Furthermore, there also appears to be considerable behavioral overlap in the items by sub-domain arrangement. Although this confounds the issue of content validity of this instrument, the author attempts to justify it by stating that it is inevitable because ". . . all behavior is essentially global" (Doll, 1966, p. 20). The author also

acknowledges in the manual that some items seem to be repetitive, across sub-domains or age levels. For instance, "complies" is at the 2.0-2.5 age level in the sub-domain Rapport while "minds" is at the 1.5-2.0 age level in the sub-domain Responsibility. The author is completely accurate in stating that this aspect requires ". . . further research on the feasibility or desirability of item differentiation and meanings" (Doll, 1966, p. 21).

The PAR does not contain any norms based on performances of a representative sample of children. The author describes some of the conditions and difficulties encountered in standardizing instruments and their subsequent use. The manual states: "We prefer to use this record for the time being as a developmental inventory which is speculatively developmental but not statistically verified. Actually any misplacement of items on a progressional basis causes no real difficulty except in the order of nuisance, in that such an instrument is less 'neat' than desirable. As an unstandardized inventory, comparative studies can be made even without normative standardization" (Doll, 1966, p. 23). This statement is not plausible, however, because a severe problem arises when confusion occurs due to misplaced items and teachers inappropriate use of the instrument's results.

ADDITIONAL COMMENTS

The PAR is an experimental research edition. It is not a highly prescriptive device including numerous detailed behaviors. Likewise, it is not a particularly appropriate measure for identifying precise instructional objectives within an early childhood program. However, the PAR could be quite useful for both screening and determining children's developmental levels, pending further development and standardization, if it was reliable and valid.

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SEWALL EARLY EDUCATION DEVELOPMENTAL PROGRAM

Acronym:	SEED Developmental Profiles
Authors:	Joan Herst, Shelia Wolfe, Gloria Jorgensen and Sandra Pallan
Published by:	Sewall Rehabilitation Center, 1976, rev. ed.
Address:	1360 Vine Street Denver, Colorado 80206
Phone No.	303-399-1800
Cost:	The instructions and record form are $3.50
Contents reviewed:	This instrument is contained in one book titled Developmental Profiles - Sewall Early Education-Developmental Program, which was the basis for the following review.

DESCRIPTION

Purpose: The manual states that the S.E.E.D. Profiles were developed in response to "a need for an accurate, more detailed assessment instrument to be used in informal evaluation . . ." (Herst, Wolfe, Jorgensen, & Pallan, 1976, p. 1). "These profiles were designed to be used to establish a developmental profile of each child's performance, thus providing a framework for developing individual goals and objectives. They are not meant to be a test or curriculum, but a functional assessment" (Herst, et al., 1976, p. 2).

Recommended Ages: The S.E.E.D Master Developmental Profile reveals that this instrument is intended for children developmentally between birth and 4 years.

The Introduction to the use of the S.E.E.D Developmental Profiles implies that this instrument was developed specifically for use with young handicapped children, although the instrument appears to be equally suitable for non-handicapped children.

Method: The teacher obtains the information of a child's skills and behaviors from direct observation during an evaluation session. The information is recorded into the profiles using a checklist method and open-ended comments to qualify the child's performance.

Developmental Areas: The S.E.E.D Developmental Profiles include seven individual profiles in the following areas of development: social/emotional; gross motor; fine motor; adaptive/reasoning; speech and language; feeding; and, dressing and simple hygiene.

ADMINISTRATION

Setting: The instructions clarify that "The assessment should be made in a room which provides at least the following: a) adequate floor space so that gross motor abilities may be assessed b) a small table to provide space for fine motor and adaptive tasks c) a small stable chair" (Herst, et al., 1976, p. 1).

The instrument may be used in either a classroom or private room setting as well as in individual and group administration, even though the authors fail to provide any further guidelines concerning a suitable setting for administering the profiles.

Estimated Time: There are two reasons why no specific time is approximated for completion of this instrument. One reason involves the fact that time may vary considerably because a child is credited for performance demonstrated at any time during the evaluation. Therefore, each item does not have to be administered individually. In addition, the time may vary as a result of the number of items assessed to establish basal and ceiling ages.

Administration Procedures: More than one testing period is acceptable in administering the S.E.E.D. profiles. "It is not always possible to complete all appropriate items in one session" (Herst, et al., 1976, p. 1). Each testing session should ". . . allow the child to become comfortable with the setting before specific demands are made" (Herst, et al., 1976, p. 1). The manual suggests one way to provide the child with support and comfort is to have his/her parents present. The tester is left to his/her own resources for generating additional ways to prompt a child's comfort in the assessment setting. The assessment room should contain adequate floor space for assessing gross motor abilities, a small table for fine motor and adaptive tasks and a small, stable chair.

Although the manual does not mention anything about administering the instrument several times throughout a program or time period, the Motor Profile provides spaces for dates of an initial evaluation, first re-evaluation and second re-evaluation. Also there is a color code provided in the corner for these three evaluations which could probably be used on the individual scales, as well as the Master Profile. The administration procedures state flexibility in the order in which the scales are presented. Flexibility is implied in the sequence of assessment of the items in each scale since no specific approaches are suggested. The general administration instructions neglect to explain at what point in the scales assessment should begin or how such a decision is to be made, however, the section on charting the scores states that "All items in a specific profile should be administered before charting" (Herst, et al., 1976, p. 2). The most efficient approach to the sequence of assessment appears follow the sub-domains, e.g. jumps, stairs, release patterns, auditory response and memory, ball. "All the areas are interrelated and many items can be checked at one time. For example, a ball can be used for naming; then, rolled to the child to gain social interaction; then, thrown by the child to check his/her ability to understand directions, to throw, release, and balance" (Herst, et al., 1976, p. 1). Familiarity with the complete instrument and its items will promote an efficient and comfortable administration.

Additional instructions on the administration procedures of scales and their items is limited. Each scale of the instrument is prefaced with a few general and specific guidelines for administration. These guidelines include a brief general informative description of development, as it relates to the particular scale, as well as some specific suggestions to consider in administering the scale, i.e. specific behaviors to focus on which are not directly assessed (learning style, "quality of movement," etc.)

The items of each scale are presented in a chart which easily identifies their sub-domain at the left and developmental level at the top of the page. To the right of each item is a narrow column for scoring; however, it is not labeled as such. The only section for comments is on the developmental profile for the particular scale; however, there are some blank spaces on item charts that could be used for comments. The items are brief. Some items give a brief, undetailed description of the procedure that the examiner should follow, but a majority of the items omit this aspect and simply state the behavior or skill to be demonstrated. For four sections of the instrument, the gross and fine motor, adaptive/reasoning and speech and language scales, an equipment list is provided at the beginning. It is organized by ages for convenience. However, this results in some repetitive listing of equipment needed if one is administering the scale by age levels and also it is not as helpful in the case of administration by sub-domains.

Scoring Procedures: The scoring is basically a pass (+) fail (-) method with several additional scoring notations. To clarify a passing score, a "PR" indicates that a child is able to complete an item successfully as a result of parent report and a letter "B" also indicates that a child passes an item because it is a behavior or skill which a child has outgrown. An "R" indicates a child's refusal during assessment, as opposed to a "NT" which means the item was not tested during the evaluation. One final notation, "NA", or not applicable, is primarily applicable to the assessment of a handicap child. The scoring procedures instruct that "NA" be used when a child's handicap makes the item inapplicable. An example is provided which clearly illustrates the difference that is evident between a minus and a not applicable score.

The criteria for scoring the items are generally lacking. A few of the items include a time criterion or number of trials permitted for successful completion of an item. However, a majority of the items omit supplying specific criteria and/or use subjective terms such as "easily", "with minimal difficulty" or "likes" without giving further behavioral definitions to clarify specifically what response constitutes a passing or failing score.

Test Score Interpretation: Test scores are transferred and used from Individual Profile Face Sheets and a Master Profile Sheet.

There are several simple steps listed in the manual that are used to transfer raw scores into these profiles. A child's Master Profile is compiled once a child's Individual Profile Face Sheets of each scale are completed. Completing Individual Profile Face sheets involves determining a child's basal level of performance for each sub-domain within the scale. "Basal level is defined as the age at which the child begins to miss items prior to this point" (Herst, et al., 1976, p. 2). A "hole" is distinguished from a basal level because a hole is identified as one missed item in a sub-domain among several successfully completed items. All basal levels of the sub-domains in a scale are marked with an "x" and connected with a solid line. A ceiling level is also derived from each sub-domain of a scale by locating the highest level at which the last item of the sub-domain was successfully completed. A dot on the sub-domains of each scale represents the ceiling level and basal; and, ceiling levels with a sub-domain are connected with a dotted line. No basal or ceiling levels are derived or charted when a child successfully completes all the items in a specific sub-domain. "Completed" is noted across the category on the chart.

In contrast to the Individual Profile face sheets which summarize a child's performance on the sub-domain within a scale, the Master Profile summarizes a child's performance on each scale of the instrument as a whole. The process involves simple addition and division to determine average age levels (derived from basal and ceiling age levels) for each sub-domain, which are then averaged to obtain a developmental age level for each particular scale. However, those developmental ages should be considered 'gross' because the sub-domains within the various scales are not equal in quantity or distribution of items. Likewise the averaging technique does not appropriately match the format of the test. Two scales in the instrument, the speech and language scale and the feeding scale, remain divided into their sub-domains which reveals an attempt to distinguish differences rather than mesh them together. (The Master Profile only includes two of the three sub-domains of the Speech and Language scale, omitting the auditory response and memory sub-domain. No instructions or explanations are provided.)

A 'general' graphic picture of a child's development can be obtained by marking an "X" at the computed age level of a scale or sub-domain and then connecting each "X" with a solid line.

"Once the findings are obtained and charted, a narrative report should be compiled to summarize the total abilities of the child. This report should then be sent to all agencies or persons involved with the child" (Herst, et al., 1976, p. 3). "In order to achieve maximum benefit from the profiles, it is strongly recommended that appropriate specialists be consulted to interpret the results and to assist in the design of individual program plans" (Herst, et al., 1976, p. 1). Since the recommendation is made, the authors assume that an appropriate specialist will be consulted, and consequently they do not explicitly state the meaning of the various profiles and how they are to be summarized. As a result, the instrument appears exceptionally vulnerable to misinterpretation and misuse by assessors.

TECHNICAL ASPECTS

ITEM SELECTION: The manual states that, "items from a variety of standardized tests have been used (see sources) to make up the S.E.E.D. evaluation tools as it was felt that consolidation of items and format produce a more realistic and complete picture of the child's abilities" (Herst, et al., 1976, p. 1). Otherwise, no information is reported regarding the process of selecting items for the instrument, nor of the rationale or importance for their inclusion. Although developmental age guidelines are supplied for items throughout the instrument, the authors do not specifically state how they were derived. The "Sources" section of the instrument lists 11 sources consulted in the construction of the instrument.

Reliability: The manual neglects to present any information concerning the reliability of the S.E.E.D Developmental Profiles.

Validity: The authors of the instrument do not address any aspect of the issue of the validity of the S.E.E.D Developmental Profiles. Overall, the items of the instrument appear to be placed appropriately in the various sub-domains. There may be some confusion on the placement of items in one scale as opposed to another. For instance, pre-writing or "activity with crayon" sub-domain is located in the Adaptive/Reasoning scale rather than Fine Motor Scale.

The sequencing of items appears to be consistent with developmental research. The age references also seem to be appropriate for the items; however, the documentation of the age references was not identified.

ADDITIONAL COMMENTS

In the present form, the instrument appears to be of greater utility for children in the infant and toddler age ranges where consultation of appropriate specialists for interpretation is available. Even then, the instrument severely limits its utility and widespread application because of deficits in its technical support. Consultation may not be as strongly recommended for non-handicapped children if more information were provided by the test developers concerning test score interpretations.

ADDITIONAL REFERENCES

Cross, Lee, & Goin, Kenneth (Eds.). Identifying Handicapped Children: A Guide to Casefinding, Screenings, Diagnosis, Assessment and Evaluation. New York: Walker and Company, 1977.

SKILL CHECKLISTS

Acronym:	None
Author:	The authors of the instrument are not identified in the Skill Checklists. However, a personal letter from the director of the school district stated that a group of preschool teachers in the Ferguson-Florissant School District of St. Louis County, Missouri, collaborated in developing the instrument. In addition, the checklist for 4 year olds was originally developed with the assistance of Dr. Walter Hodges, presently at Georgia State University, Atlanta, Georgia.
Published by:	Early Education Program Ferguson-Florissant School District, undated
Address:	665 January Avenue Ferguson, Missouri 63135
Phone No.:	314-595-2200
Cost:	The Skill Checklists birth through five's is priced at $2.50 and $2.00 for the Criteria for Skill Attainment booklet.
Contents reviewed:	This review is based on the Skill Checklists and Criteria for Skill Attainment booklets for three's and four's

DESCRIPTION

Purpose: The introductory page of the Skill Checklist booklet implies the purpose of the instrument: ". . . to determine where the child is, what specific skills or concepts need strengthening, and how the child is progressing toward the attainment of targeted skills or concepts. The information from each checklist brings into clearer focus the educational needs of each child and therefore serves as a valuable guide for planning the educational program for each child" (Ferguson-Florissant School District, undated, p. i).

Recommended Ages: The instrument specifies that it is for 3 and 4 year old children.

Method: This is a checklist instrument which does not state exactly what method of assessment should be used to administer the various items. The checklists appear to rely on observation of behaviors and skills rather than on an interview.

Developmental Areas: Language, math and motor are the primary divisions of development at the 3 year old level. The language area includes items which encompasses cognitive skills as well. A total of 90 items composes the 3 year old assessment checklist.

The 4 year old checklists are divided into language, math, motor and personal-social. As in the 3 year old checklist, items of a cognitive nature are included in the language checklist. The 4 year old checklist includes 154 items in all.

ADMINISTRATION

Setting: The instrument fails to state the type of setting in which to observe the child's responses. A classroom observation approach to this assessment instrument seems most suitable; however, a one-to-one setting may also be a feasible method.

Estimated Time: The only statement made regarding time is that the checklists are designed to be used continually throughout the year. No instructions are given regarding the duration of any observations or intervals between assessments.

Administration Procedures: There are no instructions provided for administering the skill attainment checklists. However, reading through the Criteria for Skill Attainment booklet may give the administrator some indications on how to approach administering some of the items.

The checklist book, which is required for each child, has a column labeled "achieved" for recording passing an item. An administrator may use whatever system she desires to mark in the achieved column, i.e. checkmark or date.

This instrument requires many different materials with the various items it includes. None of the materials or a list of materials are provided. However, the equipment needed is unspecialized but likely to be found in most preschool settings.

Scoring Procedures: This instrument is organized as a checklist to be scored by marking in the achieved column for each corresponding item.

The Criteria for Skill Attainment booklet provides some clarity for scoring the various items so teachers may uniformly evaluate their students. Some specifications are provided about the quantity of response required, i.e. number of trials, and the quality of a response.

This instrument does not provide any summary scores.

Test Score Interpretation: The recorded responses, are to "serve as a valuable guide for planning the education program for each child" (Ferguson-Florissant School District, undated, no page).

TECHNICAL ASPECTS

Item Selection: Neither the checklist booklet or the criteria book state where or how the items were derived. Furthermore, the instrument neglects to provide information on the age placements of the items.

The checklist states that "the skills listed within each major subject area are sequenced according to difficulty" (Ferguson-Florissant School District, undated, title page), however, the process is not described and no item analysis information is provided.

Reliability: No reliability information is mentioned.

Validity: No validity information is mentioned. The face validity of the language developmental areas is questionable because of the close connection between language and cognitive development.

ADDITIONAL COMMENTS

This assessment checklist is lacking in its provision of basic information concerning its development, administration and technical aspects of the measure.

REFERENCES

None

UNIFORM PERFORMANCE ASSESSMENT SYSTEM, BIRTH - 6 YEAR LEVEL

Acronym:	UPAS
Author:	Margaret Bendersky (Ed.)
Published by:	University of Washington, College of Education, 1978
Address:	Child Development and Metal Retardation Center Seattle Washington 98195
Phone No.:	206-543-4011
Cost:	$15.00 includes tester's manual, 10 sets of record sheets and spiral bound book of criterion tests. There are also varying additional costs if computer analysis of results is desired.
Contents reviewed:	The UPAS Tester's Manual, book of criterion tests and a set of record sheets were the materials used in this review.

DESCRIPTION

Purpose: The UPAS tester's manual hints to the purpose of the instrument, without explicitly identifying it. The UPAS is a curriculum referenced criterion instrument intended to measure and monitor developmental behaviors of handicapped children functioning within the range of birth to six years of development. The test was specifically designed to assess a child's performance progress in relation to its particular program's curriculum objectives.

Recommended Ages: This instrument specified that it includes skills children normally acquire between birth and 6 years of age. It does not state that it is necessary for a child to be between this age range. In addition, it was developed for use with a wide range of handicapped children.

Method: The teacher tests the child by administering the items, observing the child's behavior, and recording the performance in a checklist form.

Developmental Areas Assessed: The scale covers approximately 284 items distributed among five areas: pre-academic/fine motor; communication; social/self help; gross motor; and, behavior management. In all the areas, except for behavior management, the goal is for a child to develop every skill listed. The behavior management lists undesirable verbal and physical behaviors. In addition, the UPAS items have also been classified according to the "behavior category" (Bendersky, 1978, p. 9) into which the specific skills being tested fall. There are four broad behavior categories: sensory intactness or awareness; motor skills; cognitive skills; and, interactive skills.

ADMINISTRATION

Setting: The manual recommends administering items to the whole class or to small groups of two to three children whenever possible, perhaps during a regularly scheduled activity, to decrease the amount of time it takes to administer the UPAS.

Estimated Time: The manual points out that it is impractical and unnecessary to test a child complete in one continuous session. "It would be a good idea to complete the assessment of the entire class over the course of one or two weeks" (Bendersky, 1978, p. 7).

Administration Procedures: The examiner is given a brief, poorly organized, but adequate 4-step procedure in the manual to follow in preparing to administer the instrument. The first step logically suggests reading the criterion tests and becoming familiar with the procedures. Secondly, the examiner should select items to be tested. As stated previously, it is not advisable to attempt to test everything at once. The manual describes a few specific situations for testing several UPAS items at once. These suggestions should help generate the examiner's ideas of combinations of items to select and test together.

Next, the examiner should plan the actual testing. The book of criterion tests and record forms contain the information necessary for administering items and recording performances. There is a criterion test for every item on the record sheets, with the exception of behavioral management. Each criterion test provides useful, well-organized information for assessing each skill. For instance, the age level of the skill is given in months for less than one year and in one-year intervals up to age six. Furthermore, each criterion test identifies its developmental area and behavior category as well as outlining an expanded skill description, a list of the equipment and materials necessary to administer the test, test or observation procedures and criteria for scoring a child's performance. However, the manual instructs not only to gather the materials but also to design a plan sheet of directions and scoring criteria as well as an efficient data recording system to indicate successful performances. This step implies that the book of criterion tests and record forms are not suitable for use in the actual testing situation, and understandably so, since they could easily create confusion and inefficiency due to the pages involved and the flexibility allowed in administering different combinations of items to more than one child at a time.

The fourth or last step involves administering the assessment. Several practical administration assists are provided in the criterion tests themselves and explained in the manual. An asterisk following the age level on a criterion test item indicates that the item is multi-level. This means that more than one skill of the same type is assessed using a common procedure. For instance, voluntary grasp and jumping down are assessed at three levels. The words "RED FLAG" written at the top of the

criterion tests is a signal to the tester that the assessment of that particular skill is important because a failure may indicate a handicapping condition. Some communication and social/self help items may have the word "INDICATOR" written at the top of the criterion test to point out to the tester that this item assesses a sample of a larger class of behavior. The purpose is to determine mastery of a specific class of behaviors (i.e., two-action commands) rather than determining mastery of a specific behavior. Furthermore, each child should have some initial success while being tested but with some particular items, it would be more efficient to begin testing at the most proficient level and then drop back to easier levels if success is not achieved. In addition, five useful guidelines are given for the examiner to use in administering the UPAS in a group setting. In order for this instrument to be useful with assessing handicapped children, the manual discusses the adaptation of administering items in the four behavior categories of sensory awareness, motor skills, cognitive skills and interactive skills, depending on a child's particular handicaps.

The record form for each child consists of five separate color-coded sheets for each area assessed in the instrument. They each have a small key or code box in the upper right hand corner. Each sheet is organized by skill sequence headlines within the particular developmental area. The items in each area are numbered so that easy reference can be made to the criterion test. A small code letter is printed beside the item number and descriptor to indicate the behavior category in which the item falls, i.e., M for motor, S for sensory, C for cognitive and I for interactive. Sometimes the code letter is circled to show that that particular skill is considered to be "basic skill for all" (Bendersky, 1978, p. 11) children. (There are also some other small numbers beside some of the items, but they are only signals for key punchers to use for entering data for computer analysis.) An important feature of the record sheet is that it provides four columns for administering each scale four times. In addition, there is also a column labeled IEP which has a circle by each item of each scale so that a record can easily be kept of the items selected for a child's individual education program. The book of criterion tests lists the specific equipment and materials necessary to administer each individual task. The book also contains "worksheets" that are required for particular tasks. The worksheet pages are designed to be cut apart and made into cards or copies for individual use with a child. In addition, Appendix B in the tester's manual provides a comprehensive list of materials that need to be collected for each developmental area.

Scoring Procedures: The majority of the instrument is scored on pass (+) /fail (-) basis, with the exception of a few items which are scored by recording a number. Those items are printed in capital letters on the record sheet. The number may represent the number of correct responses made by a child or the number of second that a child took in performing a certain task. By filling in a number rather than a simple 'yes/no' ability to

measure progress is greatly improved. In addition, this provides . . . information on which to base more accurate statements of criteria for these skills, once enough data have accumulated" (Bendersky, 1978, p. 11). The behavior management checklist, on the other hand, is scored differently from the other scales of the instrument. This scale employs a rating procedure for the presence of inappropriate verbal and physical behaviors. A "0", "1", or "2" is used to indicate the degree of the problem behavior. In addition to scoring by pluses, minuses, numbers and rating, a column on the record sheets is provided for recording relevant notes of a child for that item. There are six relevant notes that can be recorded by a letter code to describe different circumstances which can effect the analysis of the results. The codes are provided at the top of each record sheet and described in detail in the tester's manual.

The criteria for scoring a skill or behavior is specified in the book of criterion tests. Items that are scored by a plus or a minus sign have sections describing "criteria for yes", "criteria for no", and "criteria for scoring". However, these sections are extremely brief in their explanations. In most cases, the "criteria for yes" is most descriptive and informative because the section titled "criteria for no" tends to merely restate the "criteria for yes" in the negative. Furthermore, the "criteria for scoring" simply states throughout to either record yes on the record sheet if a child's performance meets the criteria for yes and to record no on the record sheet if a child's performance meets the criteria for no. When items are to be scored by a number, the criteria for yes and no is omitted and the section titled "criteria for scoring" remains, explaining to record the amount of time or the number correct or zero for the lack of any correct responses.

The criteria for scoring a 0, 1, or 2 on the behavior management section of the test is given. A "0" indicates that no problem is present because the child does not exhibit the particular in appropriate behavior. A "1" means that the behavior occurs occasionally and is only a minor problem because it is not interfering enough to establish a program to eliminate it and a "2" indicates a major problem because a child exhibits the behavior frequently enough that it interferes with the other objectives so that the teacher needs to eliminate it from a child's repertoire. The difficulty in scoring this scale of the instrument is primarily a result of unspecified definitions of items, i.e., tantrums.

Test Score Interpretation: The manual clearly states that the results of a child's progress are used to make effective educational decisions (Bendersky, 1978). The educational decisions to be made from UPAS results involve placement decisions and programming decisions. Placement decisions refer to the examination of a child's observed strengths and deficits and then determining the most appropriate placement among various programs or within a classroom group. Programming decisions, on the other hand, involve pinpointing instructional objectives for a child.

Placement and programming decisions can also be reviewed and evaluated after the UPAS has been administered to a child several times. The results can reveal information about the rate of a child's progress, which in turn, may reflect the appropriateness of the particular placement and programming.

There is a graph on the back of each record form showing the "expected acquisition curve" for a non-handicapped child between birth and 6 years of age. A teacher may plot a child's percentage of items passed on each scale over several testing dates to compare the relative rates of progress.

In addition, a more complex interpretation of a child's test scores can be obtained through a computer analysis of the record forms. Appendix A of the tester's manual gives a detailed description and examples of the UPAS error summary, individual progress summary and group summaries that the computer performs. The computer analysis of UPAS data is a unique and valuable characteristic of the instrument because it provides a rapid analysis and summary. However, the details of the computer analysis are not reviewed and evaluated here because the usefulness of the instrument does not necessarily depend on a computer analysis. In addition, it is noteworthy to mention that computer analysis costs vary depending on first and subsequent analysis and the number of individual cases analyzed at one time.

TECHNICAL ASPECTS

Item Selection: The UPAS calls itself a curriculum-referenced instrument which means that its items were derived from the curriculum objectives of the program for which it was developed.

The initial choice of items to be included in the scales was determined by three criteria: (1) the items needed to be appropriate for the children for which it was directed, (2) the items had to be listed in the order in which they would usually be mastered, and (3) each item needed to be "linear", in that approximately the same amount of time was required for any given child to master it (Bendersky, 1978). Three major revisions of the UPAS were accomplished, based on computer analysis and tester feedback. These revisions involved identifying ". . . omissions in skill sequences, objectives which should be eliminated because they were not necessary parts of the curriculum, problems with testing and data recording procedures, and criteria for passing" (Bendersky, 1978, p. 2). However, the brief, general overview in the manual neglects to clearly explain the progress, rationale and any sources consulted in the selection, arrangement and age references of the test items.

The validity of the age levels provided in the book of criterion tests is not addressed. Furthermore, validity is lacking for the sequencing of the skills within each area. Although the manual states that, "The skills within each sequence are ordered from easier to harder, and the sequences are generally arranged from lower level to higher level within each area" (Bendersky, 1978, p. 3), this claim is not supported by any research-based evidence.

Reliability: Reliability is not discussed in the available test materials.

Validity: The tester's manual briefly discusses the issue of content validity for curriculum-referenced assessment instruments in general, rather than the specific validity of the UPAS. "If the assessment instrument chosen or developed does, indeed, reflect the program's general curriculum, then it has a definite 'face' or 'content' validity - the program's impact is evaluated in terms of what it is actually supposed to accomplish" (Bendersky, 1978, p. 1). Since the UPAS was developed with specific reference to a curriculum and is a summary of the content of that curriculum, it is implied, rather than reported in detail, that the instrument has a high degree of content validity for users of that particular curriculum. Its content validity with other curricula is not addressed; however, the items included in the instrument are commonly found in early development scales of children between birth and 6 years of age, and for this reason, it appears to possess face validity in relation to its usefulness in other early childhood programs.

ADDITIONAL COMMENTS

The Uniform Performance Assessment System appears to be a promising curriculum criteria-referenced measure of the development of children from birth to 6 years of age. It is equally applicable to both handicapped and non-handicapped children. The large number of items, approximately 284, is especially suitable for designing detailed instructional programs; however, the scale seems quite lengthy to be a routine quarterly assessment, as implied by the four testing date columns on the record sheets. Although the computerized procedure could eliminate part of the time problem, the cost and delay of sending and obtaining the results may actually serve to complicate the problem rather than alleviate it.

ADDITIONAL REFERENCES

Doucette, John, & Freedman, Ruth. Progress Tests for the Developmentally Disabled: An Evaluation. Cambridge, Massachusetts: Abt. Books, 1980.

Chapter 8

SUMMARY

Criterion-referenced assessment instruments have several characteristics that promote their utility for program-oriented assessments of children's abilities. First, criterion-referenced instruments usually cover several developmental areas, even though there is not consensual agreement in the identification of the areas. All of the 14 instruments that were reviewed covered at least 3 of the 6 basic developmental areas. Five of the 14 instruments reviewed included all six of the basic developmental areas and another five instruments assessed 5 of the 6 areas.

Secondly, criterion-referenced measures usually contain a large number of items. For example, only 4 of the 14 instruments described contained less than 100 items in the 3 to 5 year age range.

A third characteristic of criterion-referenced measures that facilitates program-oriented assessments is their developmental sequencing of skills and behaviors. All of the 14 instruments described attempted to sequence their items, most frequently by age levels. In addition, 3 of the 14 instruments made a clear effort to sequence skills and behaviors across age levels (e.g. jumping skills were assessed at various levels). "The chief contribution of criterion-referenced measures is their increased descriptiveness. In fact, the need for testing devices with more powerful descriptive schemes has spurred the growth of the criterion-referenced measurement movement" (Popham, 1978, p. 218).

Fourth, criterion-referenced assessment instruments tend to purposefully allow for flexibility in their administration. The majority of the 14 instruments reviewed permit the assessor to choose from a variety of alternatives affecting the administration procedures (i.e. the setting, the method or methods of assessment) since the major goal is to determine whether the child can accomplish a particular task.

The fifth important strength of criterion-referenced assessment is the practicality of its use in early childhood education. The developmental information obtained through criterion-referenced assessment identifies children's levels of development before instruction, checks progress during instruction so help can be given if necessary, and determines if the criterion has been achieved at the end of instruction or a time interval. Two-thirds of the 14 instruments reviewed recommended periodic re-assessment.

Sixth, criterion-referenced assessment promotes curriculum development by identifying the next level of a child's development. Six of the 14 instruments reviewed had sequenced developmental activities available or included that corresponded to the contents of the assessment instrument.

Before becoming over-encouraged by the prospective usefulness and benefits of criterion-referenced instruments, equal attention should be given to a number of weaknesses resulting primarily from a shortage of guidelines for constructing and using criterion-referenced tests (Hambleton & Eignor, 1978). First of all, ". . . there is a fair amount of confusion about just what a

criterion-referenced instrument really is" (Popham, 1978, p. 92). Only 1 of the 14 instruments reviewed was specifically identified as criterion-referenced. Another was identified as a curriculum criterion-referenced instrument. However, the purposes of all 14 instruments reviewed were congruent with the purpose of criterion-referenced measurement. One reason for the many definitions and varieties of criterion-referenced tests is the changing nature of the concept, as well as how it has been shaped by various applications (Nikto, 1980).

Secondly, criterion-referenced measurement does not have standards of expectation established regarding its construction and quality, thereby making it susceptible to increased numbers of poor instruments. In the last few years, most of the major test publishers have published a wide assortment of criterion-referenced tests. In addition, many school districts, state agencies, small testing firms, consulting firms, and teachers have produced their own criterion-referenced measures (Hambleton & Eignor, 1978). Although there are a number of instruments labeled as criterion-referenced ". . . few of these are truly top-drawer testing devices" (Popham, 1978, p.283). Weak criterion-referenced instruments are produced by entrepreneurs who pursue profits more than quality or by well-intentioned but unsophisticated test developers (Hambleton & Eignor, 1978). Although all but one of the instruments reviewed listed its authors or editor, less than one half of the instruments provided any information about the qualifications of individuals who developed the instruments.

A third weakness of criterion-referenced instruments is their ambiguously stated or unspecified scoring criteria. Thus far, the establishment of proficiency, competency or mastery levels is primarily an arbitrary decision or value judgement on the part of the instrument developer or the assessor (Hallau, 1977). Scoring criteria were typically offered in the instruments reviewed, but few instruments attempted to offer any rationale for setting the scoring criteria.

The fourth, fifth and sixth weaknesses of criterion-referenced instruments are all related to their technical aspects. The establishment of item selection, reliability and validity are crucial for an assessment instrument. These should be fully and clearly reported in the assessment manual. However, only 2 of the 14 instruments reviewed addressed each of the instrument's technical aspects. Manuals of criterion-referenced measures for young children often fail to provide adequate technical data concerning each of the aspects. For example, only three instruments reported on two technical aspects and six instruments only addressed one aspect. "If only partial data are provided in the manual, the potential user is uncertain as to the full psychometric quality of the instrument; if no data appear, one must wonder whether such data even exist" (Goodwin & Goodwin, 1982, p. 530). Three instruments completely omitted presenting information on its item selection, reliability and validity.

Given the state of criterion-referenced assessment with its strengths and weaknesses, Almy says,

> Perhaps no aspect of the early childhood educator's work provides greater challenge than that of assessing development and learning. If she takes development as the aim of education and care, she will need to find new modes of assessment, new ways of looking at children. She will always run the risk of subjectively and poorly documented proof of progress. She will need to defend her position. . . (1975, p. 243).

It is encouraging to see and be a part of the increasing number of preschool teachers who are realizing and attempting to deal with this challenge. As early childhood educators unite together toward this effort, another step toward improving early childhood education will be made.

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ASSESSMENT INSTRUMENTS FOCUSING ON PRESCHOOL CHILDREN'S ABILITIES

by

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AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Family and Child Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1984

This report discusses the use of assessment instruments at the preschool level and systematically reviews 14 criterion-referenced instruments. The first chapter establishes the basis for program-oriented assessments of preschool children's abilities. Chapter two presents the role of assessment instruments in relation to curriculum planning, documenting children's developmental changes, and facilitating communication and knowledge of child development to parents. Some general assessment guidelines are provided in chapter three, and chapter four explains the systematic outline used in describing and analyzing instruments. Chapter five presents the basis for the selection of assessment instruments reviewed. The systematic outline is used in the sixth chapter, which contains the body of the paper, to present detailed descriptions of 14 assessment instruments. Chapter seven summarizes the overall strengths and weaknesses of the assessment instruments.