

DOCUMENT RESUME

ED 284 389

EC 200 206

**AUTHOR** Thurlow, Martha L.; And Others  
**TITLE** Policy Analysis of Diagnostic Assessment in Early Childhood Special Education Programs. Research Report #12. Early Childhood Assessment Project.  
**INSTITUTION** Minnesota Univ., Minneapolis.  
**SPONS AGENCY** Special Education Programs (ED/OSERS), Washington, DC.  
**PUB DATE** Sep 86  
**GRANT** G008400652  
**NOTE** 28p.; For other reports in this series, see EC 200 204-209.  
**PUB TYPE** Reports - Research/Technical (143)  
**EDRS PRICE** MF01/PC02 Plus Postage.  
**DESCRIPTORS** Case Studies; Comparative Analysis; Decision Making; \*Disabilities; Early Childhood Education; Educational Diagnosis; Evaluation Criteria; Evaluation Methods; \*Handicap Identification; Regional Characteristics; \*School Policy; \*Screening Tests; \*Special Education; Student Evaluation

**ABSTRACT**

Detailed qualitative case studies of four early childhood special education programs, representing a variety of approaches to decision making as well as different community settings (urban, suburban, and rural), present information regarding their diagnostic assessment procedures. In general, programs reported that the main objective of diagnostic assessment is to ascertain the child's eligibility for special education services. Programs tended to focus on identifying children who were mildly handicapped, as more severely handicapped children had already been identified and were being served by other programs. Referrals for diagnostic assessment came from a variety of sources, including the Preschool Screening program, physicians, parents, and community agencies. All programs had structured screening programs that refer children to the diagnostic assessment process. A state-mandated formation of interagency collaboration committees was being implemented in all programs to promote interagency collaboration, exchange of information and service delivery, and to reduce duplication of services. All programs also included some sort of parent involvement. Assessments varied among the programs, ranging from a minimum of one hour to a more extensive 6-week diagnostic placement. The number of personnel involved in the diagnostic assessment process ranged from 3 to 8 among programs. Variation in the use of diagnostic assessment techniques was evident. (CB)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

ED284389

**RESEARCH REPORT #12**

**POLICY ANALYSIS OF DIAGNOSTIC ASSESSMENT IN  
EARLY CHILDHOOD SPECIAL EDUCATION PROGRAMS**

Martha L. Thurlow, James E. Ysseldyke, Camilla A. Lehr,  
Paula A. Nania, Patrick J. O'Sullivan, and Jill A. Weiss

**EARLY CHILDHOOD ASSESSMENT PROJECT**

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

September, 1986

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY  
James E. Ysseldyke

---

200206

## Abstract

Diagnostic assessment issues for early childhood special education programs to consider are addressed in this report. These issues were identified through detailed qualitative case studies of four early childhood special education programs selected to represent a variety of approaches to early childhood special education decision making, as well as different community settings (urban, suburban, and rural). The analysis was used to develop a set of programmatic guidelines for diagnostic assessment.

The development of this report was supported by Grant No. G008400652 from Special Education Programs, U.S. Department of Education. Points of view or opinions stated in this report do not necessarily represent official position of Special Education Programs. Special appreciation is expressed to the school personnel, parents, and children who participated in the case studies used in this policy analysis.

Policy Analysis of Diagnostic Assessment  
in Early Childhood Special Education Programs

Martha L. Thurlow, James E. Ysseldyke, Camilla A. Lehr,  
Paula A. Nania, Patrick J. O'Sullivan, and Jill A. Weiss

School systems are playing an increasingly important role in the delivery of special services for young children who are identified as handicapped. As public awareness of the availability of programming increases, and legislative mandates are implemented, professionals are charged with accurately identifying those children who are in need of special services and with planning appropriate educational programs for them. Hamilton and Swan (1981) have described the diagnostic process as consisting of three phases: (a) verifying that the screening process has correctly identified the child as needing early intervention, (b) determining the child's general level of performance in a variety of broad-based skill areas, and (c) determining what the child can and cannot do within very specific skill areas so that instructional objectives can be established and instructional plans made.

Comprehensive diagnostic assessment is a pivotal intermediate phase in the educational process for young children with special needs. It bridges the gap between the screening phase, when children who are suspected to be in need of services are identified after a relatively brief evaluation, and the intervention period, when children receive the services they need to prepare them to function in mainstream education settings. The diagnostic assessment process supposedly protects children from potential hazards of the screening process. It safeguards against the overidentification of children as

handicapped by demanding a more careful and thorough examination than a brief screening will allow. Some states have even gone so far as to mandate this process through the implementation of guidelines that state that "no child shall be placed in any special education program solely on the basis of screening activities" (Gracey, Azzara, & Reinherz, 1984). And, diagnostic assessment procedures are thought to help eliminate poorly planned intervention efforts based on screening data that are inadequate in quality and quantity. It is believed that the information gathered during in-depth diagnostic assessment is necessary to develop a cohesive, individualized, appropriate educational plan that reflects a child's strengths, remedial needs, and general developmental abilities (Gunnoe, 1979).

Progress in the area of developing sound diagnostic practice is reflected in recent research and evaluation efforts. The extent to which these improved practices have generalized to the preschool setting, however, is unknown. Further, we know little about existing social, political, educational, and economic influences on diagnostic assessment procedures, or of the implications of specific procedures for policy. To begin to examine these and other issues, the diagnostic practices used in four early childhood special education programs were examined as part of a qualitative research study on assessment and decision making for children identified as handicapped prior to school entrance.

### Definition

For this study, diagnostic assessment was defined as the in-depth assessment of a child being considered for placement in an early childhood special education program. Diagnosis typically follows referral of a child for further evaluation after screening failure. The objective of diagnostic assessment generally is "to determine the presence or absence of a problem, ascertain the child's strengths and weaknesses and to decide what services or interventions are required in order to meet the individual needs of the child" (Paget & Nagle, 1986, p. 156). However, as Paget and Nagle acknowledge, diagnostic assessment usually is undertaken to determine classification and to establish eligibility for special program placement.

### Research Questions

During the descriptive phase of this study, several questions were asked in relation to four early childhood special education programs:

- (1) Who receives diagnostic services? How many children are assessed?
  - From where are the children referred?
  - What proportion of children who participate in the diagnostic process receive special education services?
- (2) Who else is involved in the diagnostic process?
  - Who conducts the assessment?
  - What are the roles of various professionals?
  - To what extent are parents involved in the diagnostic assessment process and placement decision?

- (3) What tools/procedures are used for diagnostic assessment?
  - What developmental areas are assessed?
  - Are modifications in the assessment process made for some children?
- (4) When does the diagnostic procedure take place?
  - How much time does the assessment involve?
  - Where is the diagnostic assessment conducted?
- (5) When is the decision for placement in a special education program made?
  - Who is responsible for making the decision?
  - What criteria are used for making such decisions?

For the present policy analysis, the focus of attention was on the general issues related to referral sources, location of assessment, parent involvement, assessment length, personnel, and assessment instruments.

### Method

#### Subjects

Four school districts were considered to be the subjects in this investigation. Within these districts, the focus was on the early childhood special education program and the preschool screening program. Many individuals within and outside these programs provided information for the study. The general characteristics of the four programs (given fictitious names) are presented here.

The Maplewood program is located in a suburban school district that serves primarily a middle- to upper-middle class population

(Bureau of the Census, 1982), with almost 50% of the families earning an income above \$30,000. The school district serves approximately 7,000 students in pre-kindergarten through grade 12 classes each year; only 2% of whom are minorities. Each year, the early childhood special education program serves approximately 30 children.

The Oakwood program is located in a large urban school district serving more than 35,000 pupils in grades pre-kindergarten to 12. Compared to other districts in the state, this district falls at the 42nd percentile for median family income, and the 12th percentile in median age of residents (Bureau of the Census, 1982). About 38% of the residents belong to minority groups, and 45% of special education preschoolers are minorities (School District Information, 1985).<sup>1</sup> Within the early childhood special education program, School 1 serves an average of about 200 handicapped four-year-old children in 13 classrooms during the school year. These children attend half-day sessions five days per week for up to nine months. About 90% of all handicapped preschoolers attend School 1, and the remaining severely handicapped preschoolers attend School 2 (physical handicaps), School 3 (hearing-impaired), and School 4 (autism).

The Elmwood program is located in a rural school district that has a total population of approximately 6,000. About 94% of the families in the district are above the poverty level (Bureau of the Census, 1982). The school district enrolls approximately 1,500 pupils in pre-kindergarten through grade 12 programs each year, about 2% of which are minorities. In the 1985-86 academic year, 14 children were enrolled in this program.



Two components form the Birchwood program, which is located in a suburban school district that encompasses six communities. The total district population is approximately 33,763, with 99% of its families above the poverty level (Metropolitan Council, 1985). The school district enrolls approximately 8,400 pupils in pre-kindergarten through grade 12 programs each year. In the 1985-86 academic year, 42 children were enrolled in this program.

### Procedure

The four sites were selected to reflect a range in demographic characteristics (including community characteristics, and size of program) and in approaches to diagnostic assessment. Also, because data collection procedures required extensive contact with the sites, proximity to the research center was considered in this selection process. All sites contacted agreed to participate in the research.

One research team member was assigned to each participating district and acted as primary contact person and data collector. Typically, more than one person collected data in each site. In three of the districts, data collection took place during an eight-month period. Due to time and travel restrictions, all data from the rural site were collected during a three-month period in the spring.

Data collection procedures included: (a) observations of meetings, classroom activities, and screening and assessment procedures, (b) extensive interviews with various staff and administrative personnel, (c) file searches, and (d) parent surveys. Although specific data collection procedures varied as a function of

differences in the programs, the same research questions were asked in all sites. Detailed information describing preschool screening, diagnostic assessment procedures, the instructional programs, program exit procedures, and follow-up data on student participants was gathered for each site. (See Ysseldyke, Thurlow, Lehr, Nania, O'Sullivan, Weiss, & Bursaw, 1986, for the full descriptive reports.)

### Results

A summary of current procedures in diagnostic assessment across the four programs is contained in Table 1. The information in this table and in a more detailed report (see Ysseldyke, Thurlow, Lehr, Nania, O'Sullivan, Weiss, & Bursaw, 1986) indicates many similarities and differences in diagnostic assessment practices across the four programs. Several points are noteworthy.

In general, programs reported that the main objective of the diagnostic assessment process is to ascertain the child's eligibility for special education services. Programs tended to focus on identifying children who were mildly handicapped, because children with more severe handicaps had already been identified and were being served in other programs. In addition, the extent of service required in the area(s) of need also is identified during this process.

### Referral Sources

Referrals for diagnostic assessment came from a variety of sources. Most referrals were from the Preschool Screening (PSS) program. Other sources of referral included physicians, parents, and

Table 1

8

## Assessment Process Across Programs

	Birchwood Program	Maplewood Program	Elmwood Program	Oakwood Program
Referral Sources (majority of referrals come from first source listed)	Preschool Screening Other Community Agencies Parents Physicians/ Hospitals	Preschool Screening Parents Physicians/ Hospitals Other Community Agencies	Other Community Agencies Preschool Screening	Preschool Screening Other Community Agencies
Assessment Process After Referral	Diagnostic Assessment Assessment Team Staffing (staff only) Staffing	Social Worker Home Visit Intake Conference (to determine whether further assessment is warranted) Diagnostic Assessment Precompilation Conference (staff only) Compilation Conference	Diagnostic Assessment Assessment Team Staffing (staff only) Assessment Verification Staffing	Diagnostic Assessment Assessment Team Meeting (staff only) IEP Conference
Typical Length of Assessment Process	Seven ½ day Diagnostic Classroom	1 Hour Assessment or 2 Week Diagnostic Classroom	Varies According to Areas of Need	Four ½ Day Diagnostic Classroom
Alternative Length of Assessment Process	Six-Eight Week Diagnostic Placement	Six Week <sup>a</sup> Diagnostic Placement		Six Week <sup>a</sup> Diagnostic Placement
Setting of Assessment Process	Birchwood Program Classroom	Maplewood Program Classroom Home Visit (prior to full assessment)	Elmwood Program Classroom	Oakwood Program Classroom Other Community Agencies
Time of Year Assessment Generally Occur	Spring Session (e.g., May 27-June 4)	Fall or Spring (Also conducted year round on an individually scheduled basis)	Spring	Summer Sessions (3) September (3) October to March (Two A.M. and P.M. classroom assessments) March/April (traveling assessment teams)
Parent Involvement	Letters Telephone Parent Meeting Adaptive Behavior Interview Developmental History Interview	Telephone Home Visit Case History Interview Compilation Conference Following Assessment	Telephone Parent Interview Assessment Verification Meetings Following Assessment	Letters Telephone Health and Family History Interview IEP Meeting Following Assessment

<sup>a</sup>Week = Four Half Days

community agencies, such as Developmental Achievement Centers (DACs). Administrative personnel from the Elmwood Program, located in a rural area, indicated that most of their referrals originated from private preschool programs or DACs that children already were attending. In most cases, referrals from these other settings precluded diagnostic assessment because of existing information that already had been compiled about the child's placement and progress in those settings. In contrast, the Oakwood program used formal assessment teams who traveled to private programs in the district and there conducted diagnostic assessment in order to ascertain eligibility for special education services.

All of the programs had structured screening programs that refer children to the diagnostic assessment process (see Ysseldyke, Thurlow, O'Sullivan, Weiss, Nania, & Lehr, 1986). Only one district (Elmwood) indicated an extremely low referral rate from preschool screening (approximately 3%, compared to two others at 11% and one at 5%). Most of the children who require special services at age 4 or 5 have already been in a program, such as a Developmental Achievement Center, and therefore bypass preschool screening. This particular district is in a rural area, in contrast to the other three urban/suburban programs. It may be that preschool screening plays a more significant role in determining referrals in more densely populated areas. It may also be possible that the criteria for referral were more stringent in the rural district. Thus, only the more severely handicapped children are referred. It is also possible that communication among programs

and people is more easily facilitated and maintained in rural areas (due to smaller numbers of community agencies), which increases the number of referrals made to the ECSE Program from other area agencies.

The state mandated formation of interagency collaboration committees was being implemented in all programs to promote interagency collaboration, the exchange of information and service delivery, and to reduce duplication of services. Interagency collaboration will be especially important as mandatory services for 3-year-olds are implemented. Many programs will be contracting for educational intervention within private settings, but conducting assessments using district personnel.

#### Location of Assessment

Although all programs conducted diagnostic assessments in their respective settings, some programs also gather data in community agencies and homes. One program conducted diagnostic assessments in several community agency settings, with two assessment teams traveling to other agencies and settings for a period of approximately two months. This procedure eases the number of summer assessments and allows observation of children's behavior in familiar surroundings. Some diagnostic assessments are conducted during home visits. These assessments are usually not comprehensive, but they do include parent interviews, observation, and occasional standardized testing. The frequency of home visits appears to be influenced by the number of children served in the program, with home visits occurring more often in programs serving fewer children.

### Parent Involvement

All of the programs included some sort of parent involvement. Most often, though, parent involvement consisted of attending a summative conference where recommendations were made and Individualized Education Plans (IEPs) developed. Reportedly, parents can have a significant influence on decisions about programming at these meetings, especially in cases where final recommendations are unclear. All programs interview parents in the diagnostic assessment process. Parent interviews range from informal discussions to structured health and developmental histories, to standardized interviews using the Vineland Adaptive Behavior Scales. In most programs, information provided by parents seems to be an important contribution to the decision-making process.

### Assessment Length

The nature of the diagnostic assessment varies extensively from program to program. Assessments can range from a minimum of one hour to a more extensive six-week diagnostic placement. The length of time involved varies according to programmatic structure and the extent of developmental concerns. For example, if a child failed only the speech/language section of the Denver Developmental Screening Test, that child might be diagnostically assessed only in that area. This cuts down on unnecessary expenditures of time, money, and personnel. However, it may also provide a less valid profile of the child. It appears that the smaller programs may be most flexible in terms of designated length and times for assessment. Larger programs have

designated periods of time when assessments occur; these last several days (four to seven half days). Yet, within one program, children who had completed necessary diagnostic testing early were dismissed from attending the entire 7-day period. In cases where decisions about eligibility are difficult to make based on available information, programs provide alternative diagnostic placements that are more lengthy (6-8 weeks). This does not appear to occur on a frequent basis, but its availability helps to ensure the appropriate provision of services if warranted.

### Personnel

Table 2 is a summary of personnel involved in the assessment process in the four programs. The number of personnel involved in the diagnostic assessment process ranged from 3 to 8, according to program structure and the number of areas in need of evaluation. The role of the psychologist varied extensively and included no involvement, administering readiness tests, conducting cognitive assessments, interviewing parents, and observing. The psychologist's role often overlapped or supplemented roles played by the social worker, teacher or EBD consultant. Only one program formally designated a case manager to function as a leader at IEP meetings, to be responsible for complete files, and to write IEPs. In general, specialists appear to assess areas in which their expertise is greatest. However, some programs rely extensively on special education teachers who may not be qualified to assess particular areas.

Personnel Involved in Assessment Process

	Special Education Teacher	Teacher's Aide	Speech Clinician	Occupational Therapist	Physical Therapist	Social Worker	Special Education Coordinator	Psychologist	Case Manager <sup>a</sup>	Nurse	ERD Consultant
Birchwood Program	X	x <sup>b</sup>	X	X			X	X		x <sup>c</sup>	
Maplewood Program	X	x <sup>b</sup>	X	X		X	X	x <sup>c</sup>		x <sup>c</sup>	
Elmwood Program	X		X	x <sup>c</sup>	x <sup>c</sup>		x <sup>d</sup>			x <sup>c</sup>	x <sup>c</sup>
Oakwood Program	X	X	X	X		X		X	X	X	

<sup>a</sup>Case Manager is designated by members in assessment team

<sup>b</sup>Observation and classroom management only

<sup>c</sup>Limited involvement

<sup>d</sup>Attendance at meetings



### Assessment Instruments

Variation in the use of diagnostic assessment techniques was evident (see Table 3). A common shift in the four programs was away from the use of the Brigance Inventory of Early Development toward use of the Battelle Developmental Inventory for assessment of readiness skills. In addition, shifts away from cognitive assessments using intelligence tests were noted. This conformity across programs suggests that more useful information can be gathered from observation, interview, readiness assessment or adaptive behavior scales. The large urban program cited the use of two district developed instruments. Information obtained from these instruments was tied directly to guidelines that indicated the amount or type of intervention service required (e.g. Monitoring vs. Level III). As with nationally standardized tests, however, the technical adequacy of locally developed tests must be evaluated.

Although criteria for eligibility have been recommended by the State, entrance criteria for each program varied and were somewhat unique. Some programs use scores expressed as "percent delay," while others use age equivalents or standard deviations to determine handicapping conditions. In some programs, wording is ambiguous and undefined (e.g., "area of need"). Some programs place more weight on articulation difficulties or motor delays than others. One consistent factor in making placement decisions that emerged was the significant influence of subjective information gathered from specialists, parents, previous agencies, etc. In many cases professional judgment,

Assessment Instruments Most Commonly Used By Programs

	Birchwood Program	Maplewood Program	Elmwood Program	Oakwood Program
Readiness	Battelle Brigance	Battelle	Battelle Brigance	Brigance Battelle Informal Rating Scales
Socio-Emotional	Parent Interview Behavioral Observation Informal Rating Scales	Parent Interview Burks Behavior Rating Behavioral Observation	Parent Interview Play Interaction Behavioral Observations Checklists	Program Developed Instrument Battelle Parent Interview Informal Rating Schedules Behavior Observation
Cognitive	Kaufman Assessment <sup>a</sup> Battery	Various Intelligence Tests <sup>a</sup>	-----	Stanford-Binet <sup>a</sup> Kaufman ABC Pictorial Test of Intelligence
Speech/Language	Battelle TACL Language Sample PPVT-R SPELT PAT	Goldman-Fristoe Language Sample Phonetic Transcriptions SICD Expressive One Word Vocabulary Test	PPVT Preschool Language Scale Vocabulary Comprehension Scale Language Samples Goldman-Fristoe Test of Phonological Processes TACL-R	District Developed Instrument Zimmerman PLS Photo Articulation Test SICD TALL
Motor Development	Battelle Miller Motor Scale Brigance	Miller Motor Scale Peabody Developmental	Battelle Informal Checklist Bruininks-Oseretsky Peabody Developmental Motor Scale	(Conducted only when child is referred by team member) Miller Assessment for Preschoolers Beery-Butenica VMI Gesell

<sup>a</sup>Cognitive assessments conducted on approximately 5% of those children assessed

which considered several aspects of the case (e.g. family environment, medical history, recent crises, behavior, etc.), was used to complete the assessment process and help make decisions regarding special education programming.

### Discussion

Diagnostic assessment is considered by many to be the critical point in the assessment and decision-making process. Sound diagnostic practices will fulfill two necessary functions: (a) the accurate identification of those children who can benefit from existing early childhood special education programs and who without such programming would later have problems in school, and (b) the provision of information necessary to plan specific educational programs suited to each child's unique needs and utilizing each child's strengths and resources.

In all programs studied, the primary goal of diagnostic assessment activities appeared to be to help reach the best decision about whether an individual student should receive special education services. The importance of reaching this decision in many cases took precedence over possible discussion of specific instructional needs.

Although all programs included parent interviews, it is questionable whether this process involved observations of home environment, parent-child interactions, or accurately reported development and health history data.

The four programs studied went beyond "testing" and included behavioral observations of the child in the diagnostic assessment

process. However, the quality and extensiveness of these observations and ratings, along with their value for planning educational programs, was unknown. It is unknown whether any of the assessment procedures included documentation of child strengths and weaknesses.

All of the programs reported that they employed several different measures in each developmental area. There appeared to be a preponderance of norm-referenced measures employed, although criterion-referenced measures also were included. While norm-referenced data are appropriate for determining a child's standing relative to other children and therefore may be employed to identify delayed children, these data offer little information of the quality needed to plan educational programs (Salvia & Ysseldyke, 1985).

Some of the measures used could be considered technically inadequate (see Lehr, Ysseldyke, & Thurlow, 1986). Perhaps it is in order to compensate for the perceived lack of both test-based and ecologically valid assessment data that several of the programs often waited until after a child had been in the early childhood special education intervention classroom for a period of time before including detailed planning on a child's individualized educational program (IEP) (see Ysseldyke, Thurlow, Nania, O'Sullivan, Weiss, & Lehr, 1986). This procedure may be appropriate and cost-effective when identification of a deficit has been confirmed and admittance into a program has been decided upon.

The extent to which the procedures employed by the four programs justified their costs in terms of personnel time for direct

assessments and for attending meetings is difficult, if not impossible, to ascertain. Few programs obtain follow-up information on their students. Thus, even if appropriate outcomes from a special education program for young handicapped children could be identified, we would not have data on the students who progressed through the program to be able to relate outcomes to cost.

### Considerations and Guidelines

Although identification and/or classification activities may be useful and necessary in themselves, they are truly justified and worthwhile only if they lead to appropriate remedial programming for the children involved (Keogh & Daley, 1983; Reger, 1965). Unlike situations involving medical problems where diagnosis indicates the kind of treatment required, when potential educational problems are the focus, remedial implications may be uncertain or even controversial (Keogh & Daley, 1983). The recognition of such a problem does not provide a plan for treatment that will guarantee a "cure" for any individual child (Keogh & Becker, 1973). So, when the nature of the problems is educational or developmental, and mild rather than severe, additional steps must be taken to plan programs for children who have been identified as at-risk or handicapped.

The literature does offer suggestions as to what the steps are that we should take in order to plan and provide appropriate individualized programming for children with special needs. Many of these practices have also been advocated because they increase the accuracy with which we can identify those children who may experience school failure.

As stated earlier, a medical model is not appropriate for dealing with children who have mild developmental or educational problems. Also unfounded in such cases is one of this model's assumptions, that we are necessarily dealing with within-child conditions. We must also take into account extra-child factors, such as the home environment, that may either exacerbate or ameliorate conditions (Hamilton & Swan, 1981; Keogh & Daley, 1983; Sameroff, 1981). We must also consider those extra-child factors such as task demands, instructional variables, and situational variables (Fuchs & Fuchs, 1986; Keogh & Becker, 1973). If we want to identify possible school failures we must consider the situations in which we are predicting that the child will fail, and look at the child-by-task-by-setting interaction (Keogh, 1972).

Also important in planning interventions are child strengths and resources that can be mobilized to compensate for deficits and help the child to achieve success (Keogh & Becker, 1973; Lindsey & Wendell, 1982). The interaction of abilities across developmental domains should also be taken into account for the same reasons (Brooks-Gunn & Lewis, 1981). Keogh (1972) believes that assessment of a child's functional characteristics such as persistence, strategies of organization, and how tasks are approached, provides valuable information in planning interventions.

A third issue is the nature of the measures used to assess. The literature advises the use of multiple measures rather than single global measures (Beckman-Brindley & Bell, 1981; Brooks-Gunn & Lewis,

1981; Keogh & Becker, 1973), and using measures in addition to developmental milestones (Brooks-Gunn & Lewis, 1981). Because young children's development is characterized by rapid change, instability in development, and lack of continuity in behavioral change (Dunst & Rheingrover, 1981), several authors (Beckman-Brindley & Bell, 1981; Keogh & Daley, 1983; Lidz, 1977; Mercer, Algozzine, & Trifiletti, 1979) have recommended measuring child behavior over time in order to reduce false positives in identification and to accurately identify those problems that persist and need remedial efforts.

The technical adequacy of the instruments used in diagnostic assessment is another issue that early childhood programs need to address. Programs may be using instruments with inappropriate norms and inadequate reliability and validity, thereby compromising diagnostic accuracy and the quality of educational planning.

We must abandon a deficit orientation in diagnostic assessment, wherein the focus is detection of single deficits at isolated points in time (Beckman-Brindley & Bell, 1981; Keogh, 1972; Lindsay & Wendell, 1982) if we are to accurately identify children with special needs and plan appropriate interventions for them.

There have been efforts on the parts of the programs studied to adopt some of these recommendations. Three of the four programs place referred children in diagnostic classrooms for at least several days, allowing assessment team members to observe and work with the children over time and in situations that are similar to those educational environments in which children will be required to function.

One final issue that needs to be addressed is that of eligibility criteria. All programs had written eligibility criteria, but they were found to be somewhat vague in some cases. Although the state of the art does not allow us to designate any criterion points that separate the "sick" from the "well," program personnel must work toward refining eligibility criteria to increase the overall efficiency and accuracy of the identification process.

The success of early childhood special education programs depends on sound diagnostic assessment practices. Programs need to stay astride of advances reported in the literature and continually work toward refining their practices. With clear definitions of conditions requiring special services, and with techniques that lead to accurate identification and thorough individualized remedial program planning, the enterprise of early childhood special education will become more of a science and less a venture founded only on good intentions.



## References

- Beckman-Brindley, S., & Bell, R. Q. (1981). Issues in early identification. In S. M. Kauffman & D. P. Hallahan (Eds.), Handbook of special education (pp. 378-389). Englewood Cliffs, NJ: Prentice Hall.
- Brooks-Gunn, J., & Lewis, M. (1981). Assessing young handicapped children: Issues and solutions. Journal for the Division of Early Childhood, 2, 84-95.
- Bureau of the Census. (1982). Census of population and housing, 1980: Summary tape files 1F and 3F, school districts in Minnesota [machine-readable data file]. Washington, DC: Bureau of the Census.
- Dunst, C. J., & Rheingrover, R. M. (1981). Discontinuity and instability in early development: Implications for assessment. Topics in Early Childhood Special Education, 1(2), 49-60.
- Fuchs, L. S., & Fuchs, D. (Eds.) (1986). Linking assessment to instructional intervention (Special issue). School Psychology Review, 15.
- Gracey, C. A., Azzara, C. V., & Reinherz, H. (1984). Screening revisited: A survey of U.S. Requirements. The Journal of Special Education, 18, 101-107.
- Gunnoe, L. W. (1979). Informal assessment and individualized educational planning. In S. J. Meisels (Ed.), Special education and development: Perspectives on young children with special needs (pp. 139- ). Baltimore: University Park Press.
- Hamilton, J. L., & Swan, W. W. (1981). Measurement references in the assessment of preschool handicapped children. Topics in Early Childhood Special Education. Rockville: Aspen Systems.
- Keogh, B. K. (1972). Psychological evaluation of exceptional children: Old hangups and new directions. Journal of School Psychology, 10, 141-145.
- Keogh, B. K., & Becker, L. D. (1973). Early detection of learning problems: Questions, cautions, guidelines. Exceptional Children, 40, 5-11.
- Keogh, B. K., & Daley, S. E. (1983). Early identification: One component of comprehensive services for at-risk children. Topics in Early Childhood Special Education, 3(3), 7-16.

- Lehr, C. A., Ysseldyke, J. E., & Thurlow, M. L. (1986). Assessment practices in model early childhood education programs (Research Report No. 7). Minneapolis: University of Minnesota, Early Childhood Assessment Project.
- Lidz, C. S. (1977). Issues in the psychological assessment of preschool children. Journal of School Psychology, 15, 129-135.
- Lindsay, G. A., & Wendell, K. (1982). The early identification of educationally "at risk" children revisited. Journal of Learning Disabilities, 15, 212-217.
- Mercer, C. D., Algozzine, B., & Trifiletti, J. (1979). Early identification -- An analysis of the research. Learning Disabilities Quarterly, 2(2), 12-24.
- Metropolitan Council. (1985). Personal communication.
- Paget, K. D., & Nagle, R. J. (1986). A conceptual model of preschool assessment. School Psychology Review, 15(2).
- Reger, R. (1965). School psychology. Springfield, Ill: Charles C. Thomas.
- Salvia, J. E., & Ysseldyke, J. E. (1985). Assessment in special and remedial education (3rd ed.). Boston: Houghton-Mifflin.
- Sameroff, A. J. (1982). The environmental context of developmental disabilities. In D. D. Bricker (Ed.), Intervention with at-risk and handicapped infants (pp. 141-152). Baltimore: University Park Press.
- Ysseldyke, J. E., Thurlow, M. L., Lehr, C. A., Nania, P. A., O'Sullivan, P. J., Weiss, J. A., & Bursaw, R. A. (1986). An ecological investigation of assessment and decision making for handicapped children prior to school entrance (Research Report No. 10). Minneapolis: University of Minnesota, Early Childhood Assessment Project.
- Ysseldyke, J. E., Thurlow, M. L., Nania, P. A., O'Sullivan, P. J., Weiss, J. A., & Lehr, C. A. (1986). Policy analysis of instructional intervention and decision making in early childhood special education programs (Research Report No. 13). Minneapolis: University of Minnesota, Early Childhood Assessment Project.
- Ysseldyke, J. E., Thurlow, M. L., O'Sullivan, P. J., Weiss, J. A., Nania, P. A., & Lehr, C. A. (1986). Policy analysis of screening and referral for early childhood special education programs (Research Report No. 11). Minneapolis: University of Minnesota, Early Childhood Assessment Project.

## Footnote

<sup>1</sup>School District Information sources included a special education preschool program handbook (1984), a school district annual report (1985) and student statistical report (1985), and a brochure (1985) about learning opportunities for preschoolers in the school district.

## ECAP PUBLICATIONS

Early Childhood Assessment Project  
University of Minnesota

- No. 1 Preschool screening in Minnesota: 1982-83 by M. L. Thurlow, J. E. Ysseldyke, & P. O'Sullivan (August, 1985).
- No. 2 Current screening and diagnostic practices for identifying young handicapped children by J. E. Ysseldyke, M. L. Thurlow, P. O'Sullivan, & R. A. Bursaw (September, 1985).
- No. 3 Instructional decision-making practices of teachers of preschool handicapped children by J. E. Ysseldyke, P. A. Nania, & M. L. Thurlow (September, 1985).
- No. 4 Exit criteria in early childhood programs for handicapped children by M. L. Thurlow, C. A. Lehr, & J. E. Ysseldyke (September, 1985).
- No. 5 Predicting outcomes in a statewide preschool screening program using demographic factors by J. E. Ysseldyke & P. O'Sullivan (October, 1985).
- No. 6 An ecological study of school districts with high and low preschool screening referral rates by J. E. Ysseldyke, M. L. Thurlow, J. A. Weiss, C. A. Lehr, & R. A. Bursaw (October, 1985).
- No. 7 Assessment practices in model early childhood education programs. C. A. Lehr, J. E. Ysseldyke, & M. L. Thurlow (April, 1986).
- No. 8 Decision-making practices of a national sample of preschool teachers. M. L. Thurlow, P. A. Nania, & J. E. Ysseldyke (April, 1986).
- No. 9 Preschool screening referral rates in Minnesota school districts across two years. R. A. Bursaw & J. E. Ysseldyke (April, 1986).
- No. 10 An ecological investigation of assessment and decision making for handicapped children prior to school entrance. J. E. Ysseldyke, M. L. Thurlow, C. A. Lehr, P. A. Nania, P. J. O'Sullivan, J. A. Weiss, & R. A. Bursaw (September, 1986).
- No. 11 Policy analysis of screening and referral for early childhood special education programs. J. E. Ysseldyke, M. L. Thurlow, P. J. O'Sullivan, J. A. Weiss, P. A. Nania, & C. A. Lehr (September, 1986).
- No. 12 Policy analysis of diagnostic assessment in early childhood special education programs. M. L. Thurlow, J. E. Ysseldyke, C. A. Lehr, P. A. Nania, P. J. O'Sullivan, & J. A. Weiss (September, 1986).
- No. 13 Policy analysis of instructional intervention and decision making in early childhood special education programs. J. E. Ysseldyke, M. L. Thurlow, P. A. Nania, P. J. O'Sullivan, J. A. Weiss, & C. A. Lehr (September, 1986).
- No. 14 Policy analysis of exit decisions and follow-up procedures in early childhood special education programs. M. L. Thurlow, J. E. Ysseldyke, J. A. Weiss, C. A. Lehr, P. J. O'Sullivan, & P. A. Nania (September, 1986).