DOCUMENT RESUME

ED 355 715 EC 301 963

AUTHOR Glazer, Richard
TITLE Improving the Special Education Referral Process of At Risk Children by the Administration of Norm-Referenced Screening Instruments.
PUB DATE 15 Feb 93
NOTE 56p.; Ed.D. Practicum Report, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Achievement Tests; Aptitude Tests; Cognitive Ability; Early Intervention; Grade Repetition; *Handicap Identification; *High Risk Students; *Learning Problems; *Norm Referenced Tests; Primary Education; Program Improvement; *Referral; *Screening Tests; Special Education

ABSTRACT

This practicum was designed to improve the process used to identify kindergarten and first-grade children who are at risk for academic failure and may need to be referred for a comprehensive special education evaluation. Prior to the practicum, the screening process consisted of a curriculum-based readiness measure which failed to identify children's cognitive potential and delayed further evaluation of children experiencing severe learning problems; grade retention was then used as a primary mode of intervention. The practicum involved the administration of norm-referenced screening instruments (the American Guidance Service Early Screening Profiles and the Wide Range Achievement Test-Revised) to assess children's cognitive abilities and levels of academic achievement. The strategy was able to be implemented by teachers, counselors, and staff other than the school psychologist. The practicum's objectives were successfully met. As a result of norm-referenced screening, 35 kindergarten and first-grade students (out of 112 eligible for Chapter 1 services) were referred for more comprehensive evaluation. Retentions were eliminated for the academic year. The strategy also provided developmental data in terms of children's ability and achievement levels, which should be useful in curriculum planning. (Contains 30 references.) (JDD)

Improving the Special Education Referral Process of At Risk Children by the Administration of Norm-Referenced Screening Instruments

by

Richard Glazer

Cluster XXXVIII

A Practicum II Report Presented to the
Ed.D. Program in Child and Youth Studies
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

NOVA UNIVERSITY

1993

PRACTICUM APPROVAL SHEET

This practicum took place as described.

Verifier: Suzan Hess
Suzan Hess

Assistant Principal
Title

Miami, Florida
Address

January 21, 1993
Date

This practicum report was submitted by Richard Glazer under the direction of the advisor listed below. It was submitted to the Ed.D. Program in Child and Youth Studies and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova University.

APPROVED:

2/15/93
Date of Final Approval of Report

Mary W. Staggs, Ed.D.
Dr. Mary Staggs
Advisor

ACKNOWLEDGMENTS

This practicum project is dedicated to the memory of John Simoneau whose pursuit of excellence, generosity of spirit, and perseverance were a model for this writer and whose words of encouragement were an inspiration.

The implementation of this project could not have been undertaken without the capable support and assistance of Suzan Hess and Sharon Marsh whose efforts are gratefully acknowledged and deeply appreciated.

Special thanks to Dr. Mary Staggs, under whose professional guidance and advisement this project was undertaken.

The writer also wishes to acknowledge and thank his parents, Leon and Miriam Glazer, for their ongoing support and encouragement throughout this formidable and worthwhile endeavor.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	v
ABSTRACT	vi
Chapter	
I INTRODUCTION	1
Description of Work Setting and Community	1
Writer's Work Setting and Role	1
II STUDY OF THE PROBLEM	3
Problem Description	3
Problem Documentation	4
Causative Analysis	5
Relationship of the Problem to the Literature	7
III ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS	16
Goals and Expectations	16
Behavioral Objectives	17
Measurement of Objectives	17
IV SOLUTION STRATEGY	19
Discussion and Evaluation of Solution	19
Description of Selected Solution	24
Report of Action Taken	28
V RESULTS, DISCUSSION AND RECOMMENDATIONS	31
Results	31
Discussion	35
Recommendations	44
Dissemination	45
REFERENCES	47

LIST OF TABLES

Table		Page
1	ESP Cognitive and Language Standard Scores Compared to WRAT-R Academic Achievement Scores of At-Risk (Chapter 1) Kindergarten Students	36
2	ESP Cognitive and Language Standard Scores Compared to WRAT-R Academic Achievement Scores of At-Risk (Chapter 1) First Grade Students	37
3	A Comparison Between Kindergarten and First Grade Brigance Scores of At-Risk (Chapter 1) First Grade Students	40

ABSTRACT

Improving the Special Education Referral Process of At Risk Children by the Administration of Norm-Referenced Screening Instruments. Glazer, Richard A., 1993. Practicum II Report, Nova University, Ed.D. Program in Child and Youth Studies. Descriptors: At Risk Persons/Disabilities/ Early Childhood Education/Early Intervention/Educational Diagnosis/ Evaluation Methods/Prevention/Screening Tests/ High Risk Students/Predictive Measurement

This practicum was designed to improve the process used to identify kindergarten and first grade children who are at-risk for academic failure and may need to be referred for a comprehensive Exceptional Student Education (ESE) evaluation. Prior to implementation of this practicum the screening process of kindergarten and first grade students consisted of a curriculum-based readiness measure which failed to identify children's cognitive potential which is the best predictor of future academic success. As a result, a number of these youngsters who were experiencing severe learning problems were inappropriately retained and the possible need for a comprehensive evaluation was unnecessarily delayed.

The writer's solution strategy to improve the screening process involved the administration of norm-referenced screening instruments to assess children's cognitive abilities and levels of academic achievement. This solution strategy is effective and is able to be implemented by teachers, counselors, and staff other than the school psychologist.

Results of this practicum were positive and the objectives were successfully met. As a result of norm-referenced screening 35 kindergarten and first grade students (out of 112) were referred for a Child Study Team to consider a more comprehensive Exceptional Student Education evaluation. Retentions were eliminated for the current 1992-1993 academic year and practicum results also offered developmental data in terms of children's ability achievement levels which should be useful in curriculum planning.

****

Permission Statement

As a student in the Ed.D. Program in Child and Youth Studies, I give permission to Nova University to distribute copies of this practicum report on request from interested individuals. It is my understanding that Nova University will not charge for this dissemination except to cover the costs of microfiching, handling, and mailing of the materials.

Jan. 19, 1993
(date)

Richard
(signature)

CHAPTER I

INTRODUCTION

Description of Community

The writer works in a metropolitan public school system in the southeastern United States. The metropolitan area which geographically and politically encompasses an entire county has a large urban center and includes surrounding areas that are made up of urban, suburban, and rural communities.

The metropolitan population is tri-ethnic (46% Hispanic, 33% white, 19% black, 2% other groups) with upwards of two million people and comprises one of the larger school districts in the country. There are 271 schools in the district (within six Regions) serving a student population of approximately 300,000 students in grades prekindergarten through twelve.

Writer's Work Setting and Role

The writer's specific work setting is comprised of two elementary schools and a middle school in a lower socio-economic inner city neighborhood. One of the elementary schools is a language arts magnet program. Magnet programs offer specialized academic and arts curricula in order to attract students from other schools

as a means of furthering desegregation. The writer's primary work site is an elementary school designated as a center school because in addition to standard elementary grades there are several Exceptional Student Education (ESE) programs for children with special needs. The ESE programs in this particular center school are designed for children who have been diagnosed as learning disabled or who are developmentally disabled with diagnoses of autism or mental retardation.

The writer is a school psychologist who in his particular work setting provides consultative and evaluative services to children in prekindergarten through the ninth grades with ages ranging from three to approximately fifteen years. The writer's responsibilities include identifying children with special educational needs and helping to determine how those needs can best be met. These needs may include but are not limited to children who are suspected of having learning disabilities or emotional handicaps, or children who may be retarded, autistic or gifted.

CHAPTER II

STUDY OF THE PROBLEM

Problem Description

The previous screening process which discriminated children in kindergarten and first grade as being at-risk for academic failure was inadequate and insufficient. Most children at the kindergarten level who had been found to be at-risk for academic failure were found to be eligible for the federally funded Chapter 1 program.

The prior kindergarten screening process, while evaluating Chapter 1 eligibility, did not determine or discriminate which children might need further intervention such as a referral to Exceptional Student Education (ESE) services. This insufficient kindergarten screening failed to identify children's potential cognitive abilities nor did it identify developmental strengths and weaknesses and it was a poor predictor of future academic success.

The former screening measure which had been used exclusively, the Brigance K & 1 Screen, is a criterion-referenced, curriculum based instrument that was designed to confirm skill mastery and assist with curriculum planning. The test was not intended, however, for use as

a predictor of scholastic success. Decisions to retain children in kindergarten or first grade were strongly influenced by these inadequate readiness screening test results which had resulted in a number of children being unnecessarily retained in kindergarten or first grade.

Briefly stated, the problem was that the screening process which was used to differentiate kindergarten and first grade children who were at-risk for academic failure was inadequate and insufficient.

Problem Documentation

The problem manifested itself in this writer's primary work location through information provided by teachers and administrators. By report, in the previous academic year (1991-1992) there were 181 children in kindergarten and first grade. Out of this number 93 children (52%) had been designated to be at-risk for academic failure by virtue of their eligibility for the federally funded Chapter 1 program. Eligibility was determined by their performance on the Brigance K & 1 Screen for Kindergarten and First Grade, administered when a child first enters kindergarten.

During the academic years of 1989-1990 and 1990-1991, 23 children were retained in kindergarten or first grade. All of these children were in the Chapter 1

program. There were no retentions of children matriculating in regular (non Chapter 1) kindergarten and first grade classes. Furthermore, since 1988, 27 children had been referred for an initial Exceptional Student Education (ESE) evaluation as a result of chronic poor academic progress. All of these children were Chapter 1 students. Five children were referred in their kindergarten year, 8 children were referred while they were in first grade, 6 while in the second grade, 7 in the third grade, and 1 in the fourth grade. Of these 27 children referred for special education services 11 had been retained in kindergarten or first grade. No regular education (non-Chapter 1) students in kindergarten through fourth grade were retained or referred for an ESE evaluation. The data corroborates the fact that Chapter 1 children reflect a group of students who are academically deficient and at-risk for academic failure.

Causative Analysis

There were several causes attributed to the identified problem. One of the causes of the problem was that the screening test that determines Chapter 1 eligibility (Brigance K and 1 Screen) is a criterion referenced readiness assessment that does not offer evidence for the existence of a specific learning

problem nor can it discriminate the degree of a potential disability. This readiness instrument (Brigance K & 1 Screen), while effective in assessing skills that have already been acquired does not attempt to assess children's aptitude for acquiring new skills. It is able to measure the level of preparedness regarding a child's environmental opportunities however it is not diagnostic and offers no measure of cognitive aptitude. This assessment appropriately describes child school entry (readiness) characteristics but was never intended to predict outcomes. Similarly, while the Brigance readiness test facilitated curriculum planning it failed to identify those children who needed a referral for possible special education services.

Another related cause of the problem was that the academic potential of those who score poorly on the currently used readiness test is not accurately assessed. Students from educationally deprived backgrounds may not score well even if they have average or higher cognitive potential. Similarly some students may simply not have reached the level of maturity to be successful on the readiness assessment even though their developmental progress may be essentially within normal limits.

Relationship of the Problem to the Literature

A review of the literature reflects increased public scrutiny of the American educational system particularly since the early 1980's. The field of early childhood education in particular has been the focus of attention primarily because of knowledge gleaned through research in child development and learning theory (NAEYC Position, 1986).

Early childhood programs have shown an increased emphasis on formal instruction in academic skills beginning as early as kindergarten in preparation for the heavier academic priorities placed on students in the first through 3rd grades, although educators find the necessity of this early emphasis attached to academics as somewhat debatable (Meisels, 1987).

Every year there are approximately 3 million children entering kindergarten in this country differing significantly in their readiness to learn (Shepard & Smith, 1986). Provision of kindergarten programs per se is mandated in only slightly more than half the states and then less than five states have compulsory attendance (Rafoth, 1991).

Therefore it cannot be assumed that all children entering a first grade have attended kindergarten.

Shepard and Smith (1986) disclose that many children who just make the entrance age cutoff seem barely able to meet the readiness expectations of school, only emphasizing the problem educators have in trying to teach the great diversity these children have in cognitive development and social maturity. When first entering school the youngest children are nearly always less successful than their older classmates, however the disadvantage of being the chronologically youngest eventually disappears, most often by the third grade (Shepard & Smith, 1986). Langer, Kalk, and Searls (1984) corroborate, noting that the effects of youngness or oldness between children in the early grades tend to diminish as the children get older and grade level increases.

Because of the increased academization of kindergarten and the early primary grades it has become obviously necessary to identify those children most likely to experience learning difficulties and place these children in appropriate educational environments as early as possible. The impetus for early identification has been further influenced by the passage of the Education for All Handicapped Children Act of 1974 (PL 94-142) and its 1986 amendment, PL 99-457 (Stone & Gridley, 1991). These laws mandate that children with

handicaps who are from 3 to 5 years old be identified and provided a free and appropriate public education.

Too often the traditional practices for dealing with the problem of students who may be at risk for academic failure finds that too much time has passed before these students are identified by which time they have already fallen considerably behind their classmates. When they eventually are identified for remedial or special education programs it is often too late for the programs to be very effective (Slavin & Madden, 1989). An essential reason for identifying children who may be at risk for academic failure as early as possible is to try and prevent a future need for special education intervention; this can be accomplished by identifying and addressing educational problems in regular education classroom programs (such as Chapter 1) if at all possible (Dawson & Knoff, 1990).

Slavin and Madden (1989) identify at-risk children as those students who are in danger of failing to maintain academic progress with an adequate level of skills. Risk factors such as low achievement, grade retention, behavior problems, poor attendance, and low socioeconomic status are closely associated with future dropout rates; in fact, by the time students are in the

3rd grade these factors can accurately predict which students will drop out of school and which will complete their education (Howard & Anderson, 1978).

Any intervention for academically at-risk children must, out of necessity, include early preliminary and appropriate identification and assessment. Early intervention has a preventative focus, its goal being not only to serve children who already manifest deficits or a disability but also to serve those children just entering school who are at varying degrees of risk for developing a disability or deficits (Simeonsson & Edmondson, 1991).

The psychoeducational assessment and diagnosis of young children just entering school at kindergarten age is a challenge for school psychologists because of the limited number of adequate assessment tools which too often have poor predictive validity and do not necessarily have a clear link to appropriate intervention techniques (Erickson & Pianta, 1990). Bagnato, Neisworth, and Munson (1989) corroborate by indicating that caution must be exercised because even though traditional diagnostic assessment might lead to a special education placement, it does not necessarily provide the best qualitative information directly related to treatment or intervention because it is precisely in early childhood that traditional assessment tools and

early childhood curricula exhibit the largest gap.

In most states, according to Stone and Gridely (1991), the usual procedure for the early identification of handicapping conditions includes the screening of children prior to kindergarten entry. While screening procedures will vary, they generally can consist of an assessment of receptive and expressive language functioning, perceptual-motor skills, and cognitive development (Stone & Gridley, 1991). Implicit in the use of screening procedures for identifying children at risk for school failure is that the screening instrument should be capable of predicting school achievement to some degree (Vacc, Vacc, & Fogleman, 1987). The problem is that many of the screening instruments used for this young student population have not been validated for predicting any external criteria. Stone and Gridley (1991) reiterate that kindergarten screening tests must be validated for predictive accuracy for the identification of both majority and minority children who may be academically at-risk.

The process of identifying and placing youngsters who are deemed to be academically at-risk is a complicated process. Poor results on readiness tests have been found to be less reliable than for children

scoring higher, in fact many children who could read have scored poorly on readiness tests primarily because they bypassed or have not experienced the opportunities of conventional readiness activities ("Primary Education," 1989).

In this writer's school district the Brigance K & 1 Screen is a criterion-referenced readiness test that is curriculum-based and used for kindergarten screening to determine Chapter 1 eligibility. While helpful in obtaining a sampling of students' skills and in planning curriculum development, it was never intended to be a predictive test of mental ability; in fact students from economically or educationally deprived backgrounds may not score well even if they have above average aptitude (Brigance, 1987).

As a consequence of screening and readiness tests results, youngsters have often been denied a free and appropriate public education (Meisels, 1987). In the past before PL 94-142, students were often excluded from public education due to handicapping conditions. Today, however, children can be excluded from school as a result of not meeting a particular school's readiness standards and/or being declared developmentally immature. Rafoth (1991) describes this exclusion by indicating how children just old enough to enter school who have low

readiness test results compared with their peers can be 1) kept out of school, 2) placed in a developmental or transitional class, or 3) retained. Katz (1988) describes these options as being counter-productive to young children by diminishing the motivation of otherwise bright children who may have the basic academic abilities but lack the confidence to use them and often end up ultimately feeling that success in school lies beyond their reach.

Rafoth (1991) states that while the age of kindergarten entrance cutoff dates may vary considerably across the country, teachers have often felt that the youngest children should be held back or held out of the regular classroom. He cites the controversy in the use of delayed entry, extra-year or transitional placements, or retention for those kindergarten children considered ill prepared to make the transition to a regular first grade. Rafoth (1991) further cites that while children who are retained in kindergarten may do better than those enrolled in first grade at the prescribed age, these initial gains do not hold up over time. Similarly, Gredler (1990) agrees that kindergarten retention generally has had negative results in terms of fostering gains in academic progress or social maturity. These

findings are corroborated by Dawson and Knoff (1990) and Mcleskey and Grizzle (1992) who not only cite the negative effects of retention on achievement but further identify students as having a diminished self-concept, negative attitudes toward school, and increased school drop-out rates. Research indicates that the rare circumstances where retention might be helpful would be the situation where a child has missed a lot of school because of illness or a family move and then only if the child would be no more than one year older than classmates if he or she were retained ("Should my," 1991). Research generally indicates that retention as a remedial measure is ineffective and often only delays the identification of the student who may need special education services (Mcleskey & Grizzle, 1992).

Chapter 1, a major federal program, has received substantial funding over the past 25 years. The Chapter 1 program was designed to provide quality education to children who are economically disadvantaged and educationally deficient and was clearly meant to be a funding program and not an educational program (Anderson & Pellicer, 1990).

Chapter 1 accounts for about 20% of the US Department of Education's total annual budget of approximately 4 billion dollars and accommodates an

estimated one of every nine school-aged children in the United States (Anderson & Pellicer, 1990). The criteria and guidelines for Chapter 1 quite clearly specify which students are eligible for the program but avoid specifying how students are to be served.

One of the problems with Chapter 1 programs is that teachers often have low expectations of these students and a corresponding tendency to teach to the students' low levels of functioning rather than to the levels they will need to be successful in the future; in fact rather than exiting Chapter 1 programs once better skills are achieved, Chapter 1 students often have a tendency to remain fixed in the program (Anderson & Pellicer, 1990).

All children are certainly not at the same stages of readiness for school when they're five years old. This is particularly true for children who are from minority linguistic or cultural groups and who may be at a disadvantage because of the limitations of the assessment tests being used (Meisels, 1987).

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The goal of the writer for this practicum was to effectively intervene in the educational programming and placement of kindergarten and first grade students already identified as being academically at risk by virtue of their Chapter 1 eligibility. This goal would be accomplished by altering and augmenting the current kindergarten/first grade screening process; a goal considerably broader than just a unilateral administration of a psychometric test. This project would actually be a field test whereby the screening test results obtained from the implementation could be shared with teachers in order to help them develop appropriate intervening teaching strategies for individual children with learning problems. Additionally, implementation results could be used to refer those children who may have a need for a more comprehensive evaluation and possible Exceptional Student Education (ESE) programming.

Behavioral Objectives

The first objective was to provide an improved kindergarten/first grade screening process which would yield norm-referenced developmental screening data in the areas of cognition, language, and academic achievement. This information would augment and supplement the criterion-referenced readiness assessment and help provide a link between psychometric assessment and curriculum instruction. This data would enable a comparison to be made between a child's aptitude and achievement levels.

The second objective was that there would be a more expeditious process for identifying and referring those at-risk children who may have a possible need for special education services and for an Exceptional Student Education (ESE) comprehensive evaluation. Finally an anticipated third objective was that by improving the kindergarten screening process and expediently ide tifying children who may need special education services, the rate of unnecessary retentions would be diminished.

Measurement of Objectives

In order to evaluate the outcomes of the practicum objectives, measurements of each kindergarten and first

grade child screened during implementation were charted in the areas of verbal and nonverbal cognition (aptitude), and academic achievement. A tally was also made of how many children were referred to a Child Study Team to determine which at-risk children should be considered for a possible referral for a more comprehensive and extensive Exceptional Student Education (ESE) evaluation. It is essential to note that a primary intent was to identify those at-risk kindergarten and first grade youngsters who might need a more comprehensive evaluation and refer them to a CST. Whether a comprehensive evaluation ultimately leads to an ESE placement is obviously important but secondary to getting them in the ESE referral process as early as possible.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Solution

The problem was that the screening process used to identify kindergarten and first grade children who are at-risk for academic failure was inadequate and insufficient. The screening process could not differentiate which children should be referred to a Child Study Team (CST) to consider a comprehensive Exceptional Student Education (ESE) evaluation which could result in a possible special education placement.

Yussen and Santrock (1978) reflect that it is the discrepancy between scores on aptitude tests and actual performance that are the main criterion for categorizing children as underachievers. The implication, of course, is that the test results will yield the distinction between children who are underachieving with low performance/low ability from those children who are underachievers but with average (or higher) ability. The authors indicate that when underachievement continues over time there may be a need to refer the child for remedial help or some type of special education classes.

If those children who are indeed underachievers can

be identified and trained to adapt and cope effectively with their academic problems as early as possible in their school experience, then the appropriate groundwork will have been laid for increasing the probability for academic success in the later school years (Yussen & Santrock, 1978). In recent years educators have been seeking more integration and cooperation between regular education and special education in meeting the needs of at-risk students with the goal being to lessen the dependence, wherever possible, on pull-out programs (Self, Benning, Marston, & Magnusson, 1991). Additionally, the authors indicate that the most recent US Department of Education Chapter 1 reauthorization plan (1989) has provided some flexibility in federal regulations which has allowed educators to continue to meet the needs of low achieving, at-risk students.

Most schools have two separate types of remedial programs to deliver services to low achieving students; learning disabilities programs which are a part of special education and Chapter 1 which is part of regular education. Chapter 1 services are determined by local school policies, typically using group achievement and/or readiness tests which keep classification costs to a minimum, in contrast to the much higher cost in professional time that would be required for a

comprehensive special education evaluation (Wilson, 1991). Wilson also indicates that one of the primary distinctions between specific learning disabilities (SLD) and Chapter 1 is the difference in socio-economic status, with SLD associated with middle class and Chapter 1 with the lower economic class. Although Anderson and Pellicer (1990) argue that Chapter 1 programs are substantially less effective for students with severe learning problems than for marginal students who have only moderate learning problems.

Hammill (1990) reflects that typically children with learning disabilities are thought to need specialized teaching techniques to help them compensate for faulty information processing while students served in Chapter 1 are usually considered to be slow learners who need instruction designed to provide extensive repetition. Kirk (1978) has indicated, however, that there is no single set of techniques for teaching reading to the slow learner or retarded child as compared to the disabled learner and that treatment procedures overlap.

Lillian Katz (1988) suggests that the academization of kindergarten and first grade has led to the extensive use of psychometric testing in recent years and cautions that test results should not be misused to exclude

children from school or the regular classroom. Similar related concerns have been addressed by the National Association of Early Childhood Specialists who have indicated that retention is not a viable option for young at-risk children and tests used in kindergarten should not be used to segregate children into extra year performance programs prior to or following regular kindergarten (Gredler, 1990).

Conversely, school psychologists are in a position to proactively help identify and meet the needs of at-risk students through the use of prereferral screening. The function of screening allows for prevention and intervention services without the immediate necessity of costly special education assessment procedures (Dawson & Knoff, 1990). While many readiness/ screening instruments are intended specifically to assess reading readiness, more comprehensive screening instruments can include a broader array of social and developmental skills relevant to a child's adjustment in school (Shepard & Smith, 1986).

It is impractical to conduct extensive and comprehensive testing of all children in a school district which is why simple and inexpensive ways of screening children initially entering school requires effective identification procedures to maximize results

(Mcloughlin & Rausch, 1990). Simeonsson and Edmondson (1991) agree that a primary role of the school psychologist is the assessment activity pertaining to the identification of at-risk children for primary prevention services.

Much of the time teachers are able to use fairly reliable subjective judgment in order to identify those children with learning problems, however appropriate screening and assessment measures can help the teacher to more objectively determine the most effective learning strategies needed by individual pupils ("Primary Education," 1989). Screening, assessment and evaluation need to be inextricably linked aspects of the intervention process so that the evaluation is not seen as an end in itself, but as part of a sequence (Bagnato, Neisworth, & Munson, 1989). Similarly, developmental expectations based on standardized measurements and norms should compare any individual child or group of children not only to normative information that is age-matched, but also that which is appropriate for gender, culture, and socioeconomic differences (Standards, 1985).

Developmental screening tests are clearly different from readiness tests and were designed to accomplish different objectives (Meisels, 1987).

Developmental screening tests provide a brief assessment of a child's developmental abilities which are associated with future school success. Readiness tests on the other hand are concerned with curriculum related skills a child has already acquired that are prerequisites for specific instructional programs and should not be used to identify children who may need special education services or intervention because of their lack of ability to predict future academic success (Meisels, 1987). Meisels continues to corroborate by citing that one of the primary differences between developmental screening and readiness tests lies in the predictive relationships of developmental tests to outcome measures such as school performance. Whereas in general, readiness tests do not have a strong predictive relationship to such outcome measures because the potential of those who score poorly on readiness tests is not accurately assessed (Meisels, 1987). Lehr, Ysseldyke, and Thurlow (1987) suggest that ultimately it is the test user's responsibility to determine the value of a test based on documented research.

Description of Selected Solution

The writer's plan was to augment the current kindergarten and first grade screening process by

administering the American Guidance Service (AGS) Early Screening Profiles (ESP) and the reading and arithmetic portions of the Wide Range Achievement Test-Revised (WRAT-R) in order to better differentiate those at-risk children who may have a need for a referral to a Child Study Team (CST) to consider a more extensive and comprehensive exceptional student education evaluation. The AGS Early Screening Profiles (Kaufman, Kaufman, Harrison, Bruininks, Rydners, Ilmer, Sparrow, & Cicchetti, 1990) and the WRAT-R (Jastak & Wilkinson, 1984) were employed to improve the current process of identifying at-risk kindergarten and first grade children who may be in need of a more comprehensive evaluation because the tests were able to offer standardized norms and predictive information in a relatively short amount of time.

The writer chose to employ the AGS Early Screening Profiles (ESP) because it is an individually administered assessment that offers multiple domains and sources to measure cognitive and language development. National standardization suggests that this test is useful in predicting later development and school achievement (Kaufman et al., 1990). The cognitive/language profile section of the test can be separated into nonverbal and verbal subscales for screening children with limited

English proficiency and language difficulties. The scoring system is norm referenced and provides standard scores, percentile ranks, and age equivalents. In addition there are screening indexes which use standard deviation units to help determine which children might need more extensive and comprehensive testing.

The ESP is a nationally standardized test. The manual reports the results of predictive, concurrent, and constructive validity as well as providing information regarding internal consistency and delayed test-retest reliability; in addition scoring allows for the determination of local norms (Kaufman et al., 1990). The test was able to be administered by teachers and paraprofessionals in under 30 minutes which permitted the school psychologist and other professionals to concentrate on those children identified as needing a more comprehensive assessment as well as being able to provide increased time for consultation services.

The Wide Range Achievement Test-Revised (WRAT-R) was chosen because like the ESP, it is a norm-based screening assessment that was able to serve as an adjunct to the ESP cognitive scale. The WRAT-R has proven to be a valuable instrument in helping to diagnose learning disabilities, measuring development of basic academic

achievement, and determining instructional (curriculum) needs. Additionally, the WRAT-R (reading and arithmetic subtests) takes only a short time to administer (less than 10 minutes), is easy to score, and can be administered by teachers, counselors, etc., as well as psychologists.

The information gleaned from the ESP was compatible with, yet supplementary to, the criterion-referenced Brigance K & 1 Screen for Kindergarten and First Grade (Brigance). The strength of the Brigance is that it identifies specific skills that need to be mastered by the student and yields results that can be used as strategies for remediation which can be translated into individualized (curriculum) education plans. Conversely the strength of employing the ESP and the WRAT-R was the ability of those norm-referenced screening tests to offer an assessment of a child's potential ability (aptitude) and current levels of academic achievement compared to other children of the same chronological age. The norm-referenced materials therefore were able to offer the ability to predict future academic achievement. With this data decisions were reached as to which children should be referred for a CST to consider a possible ESE evaluation.

The ESP was administered to all those kindergarten and first grade children who have been identified as being at-risk for academic failure (Chapter 1 eligible) as a result of their scores on the Brigance K & 1 Screen. A multidisciplinary team consisting of the psychologist, teacher, and school administrator then made the decision whether to refer a child for a CST based not only on test scores, but also as a result of observational data and input from teachers and professional staff. The writer served as trainer in terms of teaching the ESP and WRAT-R administration to the necessary teaching staff and other essentially involved professionals including the school counselor.

Report of Action Taken

The first 4 weeks involved an extensive briefing of the teachers whose students were a part of the implementation plan. Administrative permission for this practicum had already been obtained as were materials and supplies that were needed for the implementation. During the first 4 weeks of putting the solution plan into action a list was organized of all students who were to be a part of the implementation plan. The beginning of month 2 through the end of month 8 involved the administration of the AGS Early Screening

Profiles (ESP) and the Wide Range Achievement Test-Revised (reading and arithmetic subtests) to all Chapter 1 eligible kindergarten and first grade students.

While the ESP has profiles in motor skills and self-help/social skills as well as the cognitive/language domain, a primary intent of this implementation was to obtain a valid estimate of the child's cognitive (intellectual) aptitude, one of the best predictors of future school performance. Furthermore, because cognitive measures are better predictors of first grade academic performance than either physical, motor, or social development (Kaufman, 1990) the cognitive/language domain was the primary ESP profile that was used.

To gauge the student's actual academic achievement as compared to aptitude, the reading and arithmetic portions of the WRAT-R were also administered to each of the implementation population. As an additional baseline for comparison purposes the Brigance scores were chronicled for all kindergarten and first grade Chapter 1 students.

At the conclusion of the implementation period the writer was able to analyze the results of the data that was collected. Following this the writer met in a multidisciplinary effort with each kindergarten and first grade teacher and went over the screening test results on

each of the students in that teacher's class who was in the implementation population. A decision was then reached as to whether a particular child should be referred to a CST to consider the need for more comprehensive testing and possible ESE programming.

CHAPTER V

RESULTS, DISCUSSION AND RECOMMENDATIONS

Results

The goal of this practicum was to more effectively intervene in the educational programming and placement of kindergarten and first grade students already identified as being academically at-risk by virtue of their Chapter 1 eligibility. The problem was that the readiness screening instrument used to identify these academically at-risk kindergarten and first grade students was inadequate and insufficient in terms of predicting future academic achievement, assessing a student's cognitive potential, or identifying those children who may need ESE intervention services to achieve their maximum potential.

The solution strategy employed to improve this situation involved the administration of norm-referenced screening instruments to supplement the curriculum-based readiness instrument (Brigance K and 1 Screen) which had been used to determine at-risk (Chapter 1) eligibility. Specifically, the problem was solved by utilizing the American Guidance Services Early Screening Profiles (ESP) to assess cognitive potential, and the Wide Range Achievement Test-Revised (WRAT-R) to assess academic

achievement in reading and arithmetic. Together, these norm-referenced screening instruments provided the information necessary to make an informed decision as to whether a particular child needed to be referred for a CST to consider a comprehensive ESE evaluation.

The CST referrals were truly a multidisciplinary process. While the screening test scores were clearly important in terms of influencing the decision whether or not to refer an individual child for a CST, scores alone were not used to make a unilateral decision. This writer felt that teacher input was important in making an informed decision because teachers work with children on a daily basis and have a global understanding of students' strengths, weaknesses and rates of progress over time.

Some of the children referred appeared to have a fairly direct and obvious need for a CST because of significant deficits in both academic achievement as well as cognitive (aptitude) scores which were corroborated by teacher input. Other children were referred because of a discrepancy between their apparent low average/average aptitude and their significantly deficient academic progress in reading, arithmetic, or both. Similarly, some of the referrals for CST's reflected children exhibiting discrepancies between their ability and

achievement, although not statistically significant. Teachers, however, felt these children were beginning to show precipitous declines in their rates of progress. Test results obtained from the practicum also enabled teachers to develop appropriate intervention strategies for some children based on specific areas that were identified as strengths or weaknesses.

The first objective of this practicum was to improve the kindergarten/first grade screening process by obtaining norm-referenced developmental screening data in the areas of cognition, language, and academic achievement. By successfully obtaining this data comparisons were made between a child's aptitude and achievement levels. This data was clearly unavailable prior to implementation.

The second objective was to develop a more expeditious process for identifying and referring those at-risk children who might have a need for special education services and for a possible Exceptional Student Education (ESE) comprehensive evaluation. While not all children initially referred for a CST will ultimately end up qualifying for ESE services, the effectiveness and benefit of this practicum is that it has established a baseline for normative measures of aptitude and

achievement not available previously which can be valuable in making future comparisons if the child has increasing academic difficulties in subsequent months or years ahead. The actual results of the implementation yielded 14 out of 39 Chapter 1 kindergarten students and 21 out of 42 Chapter 1 first grade students who were referred for a CST to consider a comprehensive ESE evaluation.

Because of the improved condition of being able to efficiently identify and refer at-risk kindergarten and first grade youngsters to CST's, the third objective was met by projecting that there will be no retentions for the current (1992-1993) academic year. Prior to this practicum project the decision to retain a child was most often made unilaterally by the teacher based on the child's perceived lack of progress. Teachers had little in the way of objective criteria on student performance or ability other than the Brigance readiness test scores. As a result of this practicum, however, normative screening measures were obtained on student aptitude and achievement levels. Significantly underachieving students were thus able to be identified and expeditiously referred to a CST for possible ESE consideration instead of using retention as a primary mode of intervention. Teachers also agreed that it

served no useful purpose to retain an underachieving child when the screening measures suggested that the child lacked the concomitant aptitude to academically succeed at the expected grade level. Furthermore, teachers generally seemed to indicate that the screening test results gave them a better understanding of their students' individual strengths and weaknesses which helped them, in varying degrees, to make curriculum modifications and adjustments for some of the students they had previously considered retaining.

Discussion

The philosophy of this practicum project was to provide the expedient identification of academically at-risk kindergarten and first grade students and refer them to a Child Study Team in lieu of retention which has been an ineffective mode of educational intervention too often used in the past (Gredler, 1990). Chapter 1 eligibility certainly has identified this group of children as being academically at-risk by virtue of their diminished readiness skills. But, as the results have suggested, Chapter 1 is an insufficient if not inappropriate intervention for a number of these children. As the test scores indicate from Tables 1 and 2 a number of the children being referred for CST's show a significant

Table 1

ESP Cognitive and Language Standard Scores Compared to WRAT-R Academic Achievement Scores of At-Risk (Chapter 1) Kindergarten Students

Student		ESP		WRAT-R	
		Cognitive	Language	Reading	Arithmetic
K1		77	77	73	69
K2		80	83	84	68
K3		84	88	92	83
K4	*	83	88	84	63
K5		77	77	82	78
K6		92	96	79	80
K7		94	91	81	83
K8		83	88	91	83
K9	*	84	70	86	65
K10	*	80	80	<63	60
K11		88	84	72	75
K12		99	99	98	83
K13		84	73	73	59
K14		98	95	86	88
K15	*	82	88	69	54
K16		91	93	94	95
K17		80	81	94	64
K18		71	77	73	48
K19		85	95	91	83
K20	*	75	88	77	59
K21		88	88	87	85
K22		91	91	88	68
K23	*	65	66	82	64
K24	*	60	66	65	54
K25		86	77	101	83
K26		71	78	75	60
K27	*	67	64	78	53
K28		80	81	81	75
K29		99	104	98	95
K30		75	77	97	69
K31	*	73	74	71	59
K32	*	86	83	81	73
K33		85	88	96	94
K34	*	83	91	94	78
K35	*	80	81	70	55
K36		71	73	69	69
K37	*	75	83	89	73
K38		85	80	91	88
K39	*	77	80	77	64

* referred to CST

Table 2

ESP Cognitive and Language Standard Scores Compared to WRAT-R Academic Achievement Scores of At-Risk (Chapter 1) First Grade Students

Student			ESP		WRAT-R	
			Cognitive	Language	Reading	Arithmetic
F1			89	81	92	92
F2			96	97	93	100
F3	*		102	98	80	100
F4			85	81	92	75
F5			102	93	89	75
F6	*		82	81	67	70
F7			84	83	80	95
F8	*		65	74	68	60
F9			104	100	89	89
F10			82	89	89	75
F11	*		88	86	79	75
F12	*		94	93	71	90
F13	*		91	89	79	96
F14			78	78	85	90
F15	*		85	90	78	85
F16			82	91	89	88
F17			84	82	78	75
F18			95	102	83	108
F19	*		88	79	82	98
F20			94	97	91	100
F21	*		86	82	61	75
F22	*		87	85	92	75
F23	*	R	68	68	65	<46
F24	*		89	68	78	75
F25	*		78	86	67	70
F26			78	85	89	75
F27			78	79	91	60
F28	*	R	64	72	60	<46
F29			88	90	85	80
F30			80	87	86	80
F31	*		70	78	81	70
F32	*	R	80	79	68	59
F33	*		60	65	76	75
F34	*	R	81	86	60	<46
F35			91	86	80	83
F36	*		75	68	56	51
F37			76	82	92	80
F38			88	93	92	85
F39	*		80	79	66	73
F40			93	90	83	73
F41	*		87	91	75	78
F42			89	91	82	83

* referred to CST
R previously retained

discrepancy between their low average/average aptitude (cognitive) compared to their deficient achievement scores. This profile is often consistent with youngsters who may have a specific learning disability. Similarly, a number of the kindergarten and first grade youngsters being referred for CST's were significantly deficient (2 standard deviations or greater) in both aptitude and achievement. This may reflect an Educable Mentally Handicapped (EMH) profile and suggests the probability that the child would experience significant academic failure with a regular grade level curriculum.

While an ESE referral to a Child Study Team may have been an eventual outcome for some of these children anyway, it is the timeliness of early screening that can enable early and appropriate intervention. It is particularly interesting to note that 4 of the first grade children currently being referred to a CST as a result of the practicum implementation were retained when they were in kindergarten during the 1991-1992 academic year. This data clearly illustrates what an injustice retention can be and has been for these 4 children. They had to repeat a whole year of instruction (kindergarten) with sustained academic failure and they are only now being referred for a CST. It is this very situation that the practicum was designed to prevent. It also suggests

that Chapter 1 intervention may not have been effective in meeting the appropriate educational needs of these children and corroborates the primary thrust of this practicum in that academically at-risk children with severe learning problems should be identified as early as possible and referred for a CST. Kaufman (1990) parallels this concept by indicating the efficacy of identifying learning problems early and intervening promptly rather than letting the learning problems develop until they reach a crisis stage.

One interesting outcome of this practicum was the ancillary finding that a number of first grade Chapter 1 students appeared to make real gains in readiness skills as measured by their improvement in Brigance scores between kindergarten and first grade (Table 3). When these first grade students were in kindergarten their average Brigance score was 58.42 percent compared to a mean of 87.32 for non-Chapter 1 students. By the time they were in first grade their Brigance score had improved to 82.94 percent, an increase of almost 25 percent, yet so many of these children continued to struggle academically as noted by their academic achievement scores, even though their aptitude reflected

Table 3

A Comparison Between Kindergarten and First Grade Brigance Scores of At-Risk (Chapter 1) First Grade Students

Student		Kindergarten Brigance (all scores expressed in percent)	First Grade Brigance
F1		49.5	93.5
F2		71	94
F3	*	74	83.5
F4		59.5	96.5
F5		71.5	94
F6	*	46.5	47.5
F7		60	72
F8	*	48.5	47.5
F9		N/A	78.5
F10		35	67
F11	*	50	88
F12	*	74	73
F13	*	61.5	92
F14		67	78
F15	*	51	86
F16		33.5	96
F17		63.5	96
F18		71	96
F19	*	70	98
F20		71	96
F21	*	55	65.5
F22	*	66	93
F23	*	49.5	90
F24	*	51.5	85.5
F25	*	49	61.5
F26		43.5	78
F27		62	91.5
F28	*	48.5	77.5
F29		72.5	77
F30		69.5	92
F31	*	33	54
F32	*	59	83
F33	*	64.5	73.5
F34	*	66.5	95.5
F35		50	93
F36	*	80.5	74.5
F37		48.5	85
F38		49	92.5
F39	*	57.5	62.5
F40		57	96
F41	*	72.5	92.5
F42		62.5	97
	Mean	58.42	82.94

* referred to CST

low average to average cognitive ability (Tables 2, 3).

So this practicum discovered something interesting and unexpected. The anticipated outcome of identifying at-risk children who may need exceptional education intervention by referring them for a CST has been very successful and was relatively direct, inexpensive, and efficient to implement and holds the further promise for even broader dissemination in this writer's school district. What was unexpected, however, was the aforementioned discovery that while many Chapter 1 first graders were seemingly able to bridge the apparent readiness 'gap' that was identified when they first entered kindergarten, their academic achievement generally remained poor. Discussions with the Chapter 1 kindergarten and first grade teachers suggested that Chapter 1 students often appear to have qualities that differentiate them from their non-Chapter 1 counterparts in ways other than readiness level, aptitude, and academic achievement. Teachers describe Chapter 1 students as frequently lacking the qualities of motivation, initiative, and pride in their work compared to non-Chapter 1 students. Furthermore teachers indicate that parents of Chapter 1 students more often appear to show little interest in their children's academic progress by not returning phone calls, not showing up for

parent conferences, school open houses, and so forth. It is therefore a contention of this writer that lack of parental involvement, that is the parental value system as it applies toward the school and the educational system may very well be contributing factors to the sustained academic deficiencies of their Chapter 1 children with otherwise low average/average ability. The failure of many Chapter 1 children to succeed academically in this writer's work site appears not to be the fault, in any major way of the Chapter 1 program itself. In fact Chapter 1 appears to be inherently successful in improving the readiness skills between the time a child enters kindergarten to the time the child enters first grade.

The failure of these children is probably due to a complex combination of factors. While poverty of these lower socioeconomic families might be a contributing factor this writer postulates that family values projecting benign or even negative attitudes toward school and education may be responsible for inhibiting the nonintellective factors of intelligence such as self-esteem, pride, and motivation without which academic success cannot take place. It is the contention of this writer therefore, that cognitive intelligence (aptitude)

is obviously a necessary but not sufficient component in determining academic success. In fact Yussen and Santrock (1978) cite poor parent-child relationships wherein parents are not encouraging toward their children's academic performance and where they fail to establish a model achievement orientation for their children as primary factors responsible for children who exhibit sustained academic underachievement. In all likelihood the parents of these underachieving at-risk children had negative experiences in school regarding academic achievement and are passing these negative educational values on to their children. Indeed, parents are the first teachers of their children and if parents don't take an active interest in their children's education, chances are their children will be inclined not to take an interest either.

Reversing this process of academic failure resulting from a negative mindset about school and education is a daunting task because it involves changing generally deep-seated attitudes and values which are inherently resistant to change. While many Chapter 1 children may continue to fail or underachieve academically no matter what kind of intervention takes place, if some children can be reached and 'turned around' academically (and they are) it is worth the effort. The task of proactive

educators is to find ways to turn around as many children as possible. This practicum has attempted to answer one small facet of this problem by identifying, as early as possible, these at-risk kindergarten and first grade children who might need special education services beyond their Chapter 1 placement. However, no matter what intervention methods are employed with these academically at-risk students, parental involvement will be a necessity.

Recommendations

Academically at-risk students are a concern for all teachers and they are a particular concern for kindergarten and first grade teachers because most of these youngsters are just beginning their school careers and the future academic success or failure of these children is often established or at least significantly influenced in these first critical years of school. It is recommended that schools with academically at-risk populations, such as schools with Chapter 1 programs, develop strategies to involve parents not only when their children first start kindergarten but even before. It is important for the schools to understand and be sensitive to the fact that many of these parents have negative feelings about when they were in school and were academic

underachievers themselves. Nonetheless parent literacy programs, parent advisory committees and parent-teacher conferences might be some activities to proactively induce and include parents of academically at-risk students to become more involved in their children's education.

Secondly, it is recommended that careful consideration be given to whatever norm-referenced screening instruments that may be employed in the identification of at-risk children who may be experiencing severe learning problems. The screening instruments should obviously possess psychometric reliability and validity. But it is important to note that these are screening instruments and should not be used to make diagnostic or placement decisions. Rather the screening test results along with teacher input should provide the basis for making a referral to a Child Study Team where an informed decision can be made whether to pursue a more extensive and comprehensive evaluation.

Dissemination

The successful outcomes of this practicum have already become an integrated part of the kindergarten and first grade screening assessment process within this writer's work location. It is anticipated that because

of the diminished number of retentions and the ability to efficiently identify and refer at-risk children with severe learning problems on a very timely basis to a Child Study Team, that the scope of this practicum can be broadened to eventually include all kindergarten and first grade students in the entire district. This is entirely possible because the screening implementation itself requires an almost negligible capital expense and can be efficiently administered by school personnel such as teachers or counselors in addition to the school psychologist.

REFERENCES

Anderson, L., & Pellicer, L. (1990). Synthesis of research on compensatory and remedial education. Educational Leadership, 48(1), 10-16.

Bagnato, S., Neisworth, J., & Munson, S. (1989). Linking developmental assessment and early intervention: Curriculum-based prescriptions (2nd ed.). Rockville, MD: Aspen Publishers.

Brigance, A. (1987). Brigance K & 1 Screen for Kindergarten and First Grade. N. Billerica, MA: Curriculum Associates, Inc.

Dawson, M., & Knoff, H. (1990). Toward improved early childhood education: Perspectives. Communique, 19(2), pp. 8-9.

Erickson, M, & Pianta, C. (1990). Family focused assessment and intervention for infants and children. Communique, 18(5), p. 28.

Gredler, G. (1990). Advocates for the young child: Current assessment. Communique, 18(6), p. 10.

Hammill, D. (1990). On defining learning disabilities: An emerging consensus. Journal of Learning Disabilities, 23, 74-84.

Howard, M., & Anderson, R. (1978). Early identification of potential school dropouts: A literature review. Child Welfare, 52, 221-231.

Jastak, S., & Wilkinson, G. (1984). Wide Range Achievement Test-Revised. Wilmington, DE: Jastak Associates.

Katz, L. (1988). What should young children be doing? American Educator, 12,(2), 28-34.

Kaufman, A., Kaufman, N., Harrison, P., Bruininks, R., Rynders, J., Ilmer, S., Sparrow, S., & Cicchetti, D. (1990). AGS Early Screening Profiles (ESP). Circle Pines, MN: American Guidance Service.

Kirk, S., Kliebhan, J., & Lerner, J. (1978). Teaching reading to slow and disabled learners. Boston: Houghton Mifflin Company.

Langer, P., Kalk, J., & Searls, D. (1984). Age of admission and trends and achievement: A comparison of blacks and caucasians. American Educational Research Journal, 21, 61-78.

Lehr, C., Ysseldyke, J., & Thurlow, M. (1987). Assessment practices in model early childhood special education programs. Psychology in the Schools, 24, 390-99.

Mcleskey, J., & Grizzle, K. (1992). Grade retention rates among students with learning disabilities. Exceptional Children, 58, 548-554.

Mcloughlin, C., & Rausch, E. (1990). Best practices in kindergarten screening. In J. Grimes & A. Thomas (Eds.). Best practices in school psychology-II (pp. 455-467). Kent, OH: The National Association of School Psychologists.

Meisels, S. (1987). Uses and abuses of developmental screening and school readiness testing. Young Children, 42(2), 4-9.

NAEYC position statements on developmentally appropriate practice in early childhood programs. (1986). Young Children, 41(6), 20-29.

Primary Education Program overview and screening requirements. (1989). Miami, FL: Dade County Public Schools.

Rafoth, M. (1991). Retention and the first years of school. Communique, 19(7), p. 11.

Self, H., Benning, A., Marston, D., & Magnusson, D. (1991). Cooperative teaching project: A model for students at risk. Exceptional Children, 58, 26-34.

Shepard, L., & Smith, M. (1986). Synthesis of research on school readiness and kindergarten retention. Educational Leadership, 44, 78-86.

Should my child repeat a grade? (1991). Silver Spring, MD: National Association of School Psychologists.

Simeonsson, R. & Edmondson, R. (1991). Early intervention and psychology: Assessment implications. Communique, 19(5), p. 16.

Slavin, R., & Madden, N. (1989). What works for students at risk: A research synthesis. Educational Leadership, 46(5), 4-13.

Stone, B., & Gridley, B. (1991). Test bias of a kindergarten screening battery: Predicting achievement for white and native American elementary students. School Psychology Review, 20, 132-139.

Standards for educational and psychological testing. (1985). Washington, D.C.: American Psychological Association, American Educational Research Association, and National Council on Measurement in Education.

Vacc, N., Vacc, N., & Fogleman, M. (1987). Preschool screening: Using the DIAL as a predictor of first grade performance. Journal of School Psychology, 25, 45-51.

Wilson, M. (1991). Support services professionals' evaluation of current services for students with learning disabilities and low achieving students without learning disabilities: More grist for the reform mill. School Psychology Review, 20, 67-80.

Yussen, S., Santrock, J. (1978). Child Development (pp. 440-485). Dubuque, IA: Wm. C. Brown Co.