

The Mountain Plains Regional Resource Center has agreed to compile and disseminate information to the states based upon specific topics selected by the State Directors of Special Education. The purpose of this Information Bulletin is to provide you with recent information on the topic of Curriculum-Based Assessment.

CURRICULUM-BASED ASSESSMENT: MORE THAN AN EDUCATIONAL FAD

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All of the recent national reports calling for educational reform have discussed a concern for improving the quality of instruction within classrooms. This concern is based upon the preponderance of research over the last several years which has demonstrated the direct relationship between certain instructional practices and student achievement.

More recently within the field of special education, significant emphasis has been placed on the importance of decision-making not only as it relates to instruction but also how it effects all aspects of identifying and placing handicapped students. In an effort to more precisely identify the educational decision-making practices which lead to effective instruction, Dr. James Ysseldyke and his colleagues conducted a research project at the University of Minnesota under the title of the Institute for Research in Learning Disabilities (IRLD). During the period of 1977-1983, they investigated the relationship between various methods of educational assessment and student achievement and special education decisions.

THE ISSUES AND CHALLENGES WITHIN SPECIAL EDUCATION

Ysseldyke and his colleagues wanted to know if educators who used alternatives to the traditional methods for making decisions about special education could in fact make better judgments about students and therefore improve their school performance. This group found, after hundreds of controlled research studies, that teacher-based and curriculum related methods of assessment could assist educators to make educational decisions that translated directly to improved student achievement.

Parallel to, but not independent of the research at the IRLD, investigators have been studying the effects of assessing student performance through the local curriculum as an alternative to traditional norm-referenced and standardized testing procedures. Studies by Tucker (1980), Gickling and Havertape (1981), Shapiro and Lenz (1985) and a host of others have also demonstrated the benefits of using direct and curriculum-based performance measures in making educational decisions. These alternative procedures have been called curriculum-based assessment (CBA) and curriculum-based measurement (CBM). This research has raised questions that strike at the very foundation of the field of Special Education. The controversial issues raised have presented challenges to the following issues:

- * The nature of handicapping conditions and the use of categorical disability labeling.

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- * The benefits and legal propriety of relying on norm-referenced and standardized tests to identify and place handicapped students.
- * The current methods for developing, implementing and evaluating the accomplishment of IEP goals and objectives.
- * The current practices for screening, referring and identifying handicapped children.
- * The presently accepted systems for delivering services to handicapped students both in terms of placement and instruction.
- * The role of support staff, e.g. school psychologists, in the assessment and instructional process with handicapped students.

THE EDUCATIONAL SYSTEM'S RESPONSE

As a result of the promising findings of Curriculum-Based Assessment research, several professional organizations and leaders in the field of Special Education have strongly advocated for wide-scale acceptance and implementation of the methods. The most notable example recently was provided by Mrs. Madeline Will (1986), Assistant Secretary of the Office of Special Education and Rehabilitative Services. In her white paper "Educating students with learning problems: A shared responsibility", Mrs. Will advocated for the implementation of CBA methodology as one effective means of increasing the achievement of children with learning problems.

In a response to Mrs. Will's regular/special education initiative, the Division for Learning Disabilities within the Council for Exceptional Children, earnestly supported the recommendation of CBA as a method for improving the education of students with learning disabilities. In addition, the National Coalition of Advocates for Students and the National Association of School Psychologists have also endorsed CBA as a means of providing non-biased assessment information.

WHAT IS CURRICULUM-BASED ASSESSMENT?

The "Past" History of CBA

First of all, CBA procedures are not new. Tucker (1985) stated that "there is nothing new about curriculum-based assessment. In many respects it is like coming home to traditional classroom instruction" (p. 199).

The major assumptions and premises that serve as the basis for the recent efforts in CBA research were originally developed outside of the field of education. The principles were derived from the field of the experimental analysis of behavior (EAB). Early researchers of the methods of EAB (Skinner, 1938; Ferster and Skinner, 1957) provided specific definitions and meaning to the words "experimental", "analysis" and "behavior". To fully understand the current applications of CBA it is important to know the definitions of these words.

Experimental - use methods that allow for the descriptions of functional (cause and effect) relationships between the behavior of an individual and the environmental consequences.

Analysis - use single case study (one subject) methods and not group comparisons to identify the functional (cause and effect) relationships for that particular individual.

Behavior - study only the observable and measurable behaviors of the individual and environment and do not rely on the inferred inner processes, e.g. cognition, purposes, attitudes as causes. In other words study and measure the behavior directly and frequently.

Through the application of these methods one of the most significant contributions to the field of education was made. Skinner (1950) and Ferster and Skinner (1957) demonstrated that learning could be represented in the behavior of an individual through measures of rate of

behavior exhibited. What this meant for education was that measures of the rates of behavior (learning) for an individual student could be directly related to the methods of instruction (environment) and could yield important information about increasing the learning for individual students. .

In the early 1960's, Ogden Lindsley at the University of Kansas, was one of the first researchers to apply the methods of the experimental analysis of behavior to solving educational problems of children. His precision teaching methods are now considered an important component of CBA procedures. [A frequently over-looked fact is that almost all of the measurement and instructional methods reported in the current CBA literature were identified and researched by experimenters at the University of Kansas during the early to mid 1960's (Caldwell and Cox, 1965; Johnson, 1966; Caldwell, 1967). The work that was subsequently conducted by Norris Haring and his colleagues at the Experimental Education Unit (EEU) at the University of Washington during the 1970's, replicated the previous findings and greatly added to our knowledge of the methods we now call CBA.

The "New" History of CBA

The recent history of CBA is about 10 years old. During the past decade researchers have examined methods for assessing student performance before, during and after instruction. Moreover, they have studied the relationship between curriculum-based assessment data and the design of instructional methods and the monitoring of student progress. Most of this research has been conducted within the field of special education and has been intended to determine the appropriateness of decisions made about special education from the point of referral to the delivery of instruction. These researchers began with assumptions about the most commonly used measures of student achievement (Deno, 1985). They assumed that standardized, norm-referenced and commercially available tests were:

- * biased regarding the curriculum content - tested skills that the students had not had the opportunity to learn within their local curriculum.
- * technically inadequate for making decisions about individual students- the tests do not provide individual data which are useful measures of performance and which are sensitive measures of change over time (learning).
- * are not useful for making instructional decisions- the tests do not provide specific measures of performance within skill areas and they do not provide measures of behavior which are direct and repeated.

Since most decisions made about special education are strongly based on normative and standardized test information, the above assumptions question the reliability and validity of special education program services in general. The challenge to researchers who accepted these assumptions was to find an alternative to the current practices. The alternative plan was to develop assessment procedures that reliably and validly reflected the skill or behavior of the student and which also provided measures that could be used by classroom teachers to assess student progress in order to make changes in instructional methods supported by a data base (Deno, 1985). To determine the methods that would meet these criteria the researchers drew on the earlier methods of the experimental analysis of behavior research. The methods they studied and which are now claimed under CBA are:

1. Assessment of a student begins with direct and repeated measures of the rate of behavior of a student within a skill area. For example, the initial reading assessment of an elementary student would include the gathering of several one minute samples of his/her oral reading from the local basal reader series over several days. During the oral reading the teacher (tester) would be measuring fluency of reading by recording the rate of correct and incorrect words read.

2. These data would be charted on a rate graph each day to determine a baseline of performance and to assess any patterns in responding. The six cycle semi-logarithmic graph paper can be used for this purpose.
3. Based upon this assessment of reading fluency a program of instruction would be designed which would include a long term goal (several weeks) and a short term goal (a few days) stated in terms of rate of fluency to be achieved and the methods the teacher will use to reach the goal.
4. At regular intervals (several days), the teacher would assess the student's progress towards achieving the goals. If progress did not match the expected short term goal, instructional methods would be changed in most cases. This is the process of analyzing student performance in terms of observable and measurable environmental events instead of looking inside the student for the causes of poor performance.

To date, the research using these methods has provided strong evidence to support its use in the areas of reading, spelling, and written expression (Ysseldyke, 1982). The research continues in many other areas including math and social behaviors. A summary of all of the research findings is far beyond the scope of this paper. However, the report that "number of words read aloud correctly and incorrectly from a basal text reliably and validly discriminates growth in reading proficiency throughout the elementary school years" (Deno, 1985) demonstrates the strength and value of CBA procedures.

Specifically in the field of special education, these findings suggest that CBA methods of measurement and instruction can:

- * be used to screen, assess, refer and identify those students in need of additional services,
- * be used to set appropriate IEP goals,
- * be used to guide teachers in day to day

assessment of student progress; and
 * be used to adjust instructional methods and programs before it is too late (Deno, 1985).

THE "SYSTEMS" QUESTIONS

The more recent research in CBA has raised a number of questions about the way the field of special education is organized to provide services to students with disabilities. To some degree these questions have been raised because of apparent conflicts between the way the educational system has traditionally organized services to meet the legal requirements of Public Law 94-142 and what the CBA research findings are now telling us about the nature of children with learning problems. Some of the systems-type questions CBA has raised are:

1. Are youngsters who are identified as mildly handicapped (about 75% of the special education population) really more than "casualties" of an unreliable and invalid system of assessment and instruction (Gickling, 1985)?
2. Are special education decisions regarding identification and placement based upon the best and most appropriate information available about individual students?
3. What are the true differences between learning disabled children and low achievers?
4. Are there any strong educational rationales for maintaining categorical programming for handicapped children?
5. Does the requirement that children must be identified into categorical areas actually encourage procedures that lead to a search for a category as opposed to identification of sound instructional methods?
6. Does categorical labelling perpetuate the notion that the "child has the

problem" and therefore distract attention from the problems caused by the assessment and instructional services?

7. What is the most appropriate role of special education support staff, e.g. school psychologist, within a system that does not favor standardized testing methods?
8. Are there strong educational and legal rationales to continue dual systems of special and regular education in light of the CBA evidence regarding the nature of some handicapping conditions and their etiologies?
9. Could building-level, pre-referral teams which include regular education staff and administrators, divert a large number of children away from the special education systems while providing improved educational services for these children?

The answers to these questions will only be provided through a complex process involving the educational, legal, political and social systems within our country. For the present time, data and information that will eventually help answer these questions continues to flood the literature. It may not be long until the balance among the systems will be tipped in one direction.

LEGAL SYSTEM SUPPORT FOR CBA: THE LUKE S. CASE

A rather significant step was accomplished by the signing of the Consent Decree in Louisiana regarding the Luke S. Class Action Suit. It appears that the legal system relied upon the expert opinion of educators on both sides of the issue to reach an agreement that radically changed Louisiana's educational assessment practices and delivery of services. ["As a result of the powerful sanctions built into the Luke S. consent decree, the State of Louisiana successfully implemented radically different assessment procedures which

mandated pre-referral intervention, curriculum-based assessment, state-wide in-service training for assessment personnel, and direct classroom intervention on the part of assessment personnel" (Taylor, Tucker, & Galagan, 1986, p. 376). The data and information about the educational achievement of students in Louisiana could provide answers to the system's questions posed above.

APPLICATIONS OF CBA

Total Special Education System

Another significant source of data can be found in the Total Special Education System (TSES) in Pine County Special Education Cooperative, Sandstone, Minnesota. Based upon the work of Deno and Mirkin (1977), Gary Germann, Director of the Cooperative, has organized an effort to provide special education services consistent with the methods of the experimental analysis of behavior and new research in CBA. The data from TSES have and will continue to provide the field with guidance regarding the need for categorical programming, the role of support staff, the need for the regular/special education separation and a host of other issues (Germann & Tindal, 1985).

For information on the TSES project, contact:

Gary Germann, Director
Pine County Special Education Cooperative
Route 1, Box 146
Sandstone, Minnesota 55072

Project RE-AIM

One of the more promising research projects has recently been funded through the joint efforts of the Office of Special Education Programs and Iowa Department of Education under the leadership of Jeff Grimes at the Iowa Bureau of Special Education. Project RE-AIM (Relevant Educational Assessment and Interventions Model) will investigate the impact of pre-referral interventions designed for students with learning and/or behavioral problems who are

referred, or about to be referred for special education by regular classroom teachers. The model consists of three techniques: behavioral consultation, curriculum-based assessment and referral question consultative decision-making. Frequently, the initial question is to consider if the referred student can be classified as handicapped. In contrast, the initial referral question in the Behavioral Interventions Model is to ask what can be done to modify the regular classroom to produce greater success in learning or in the development of more appropriate social behavior. The research will require school psychologists, social workers and special education consultants in the 15 intermediate educational units (AEAs) to apply new skills in pre-referral interventions. This project is one of the few research efforts to investigate the benefits of CBA as an important part of a consultation model. The data from this important study will be available in the next several months.

For more information, contact:
Jeff Grimes
Department of Education
Bureau of Special Education
Grimes State Office Building
Des Moines, Iowa 50319
(515) 281-3176

Early Intervention Project

The Early Intervention Project, under the guidance of Dr. James Tucker, is currently being conducted in eight school districts in the state of Connecticut. The project is investigating the effects of CBA, a modified family systems therapy approach, consultation by educational consultants and building level committees on the number of children served and the number of referrals to special education. The first full year of data will be available in the 1987 calendar year.

Dr. James Tucker of Educational Directions, Incorporated, will be providing in-service training in CBA at many sites throughout the country during the coming months.

For the location, dates and list of topics, contact:
Dr. James Tucker
Educational Directions Incorporated
P.O. Box 4471
Austin, Texas 78765
(512) 474-9728

ADDITIONAL CBA RESOURCES

The SpecialNet Program Evaluation bulletin board (Program.Eval, December 4, 1986) contains a three part report from the California SEA on a study of student study team processes in intermediate educational units (SELPAs) in California.

Performance Monitoring Systems of Cambridge, Minnesota is offering a computer assisted IEP training system to teach special educators to manage, analyze, graph and report student IEP data using the microcomputer. This program can be used to train educators to use CBA data to make important instructional decisions by tracking direct and repeated measures of student progress on IEP goals and objectives. The training system includes two components, a microcomputer program (the Progress Monitoring Program-Training version and its documentation) and a training manual which may be used in association with the microcomputer program. The total cost of this package is \$37.50.

To order contact:
Performance Monitoring systems
P.O. Box 148
Cambridge, Minnesota 55008
(612) 689-2688

