NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, tests publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30.

Canada

THE UNIVERSITY OF ALBERTA

A COMPARISON OF CURRICULA FOR CHILDREN WITH SEVERE DISABILITIES

BY

JEANNE CARTER

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

IN

SPECIAL EDUCATION

MULTIPLE DEPENDENT HANDICAPPED

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1988

ISBN 0-315-45462-8

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: JEANNE CARTER

TITLE OF THESIS: A COMPARISON OF CURRICULA FOR CHILDREN WITH SEVERE DISABILITIES

DEGREE: MASTER OF EDUCATION

YEAR THIS DEGREE GRANTED: 1988

Jeanne Carter

(Student's signature)

3911 35 Avenue

(Student's permanent address)

Edmonton, Alberta

Date: October 13, 1988

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "A Comparison of Curricula for Children with Severe Disabilities" submitted by Jeanne Carter in partial fulfilment of the requirements for the degree of Master of Education in Special Education (Multiple Dependent Handicapped).

Supervisor

Date: October 13, 1988

ABSTRACT

There have been considerable changes in the literature regarding the education for children with severe challenging needs in the last decade. Many of these changes focus on the concepts of normalization, integration, and the instruction of functional programming. These recommended changes have been referred to by several authors as the indicators of "best educational practices." Widespread use of these practices is not currently evident in many Alberta classrooms. The literature was initially reviewed to determine the effects that different approaches to assessment might have on curriculum selection, and program development and implementation.

The curricula selected as guidelines for instruction will have a profound affect on the extent to which the changes in the literature will be reflected in the classroom. Curricula are the means by which the values and expectations for programming are put into practice in the classroom. The author examined 16 curricula currently known to be in use in Alberta in the education of children with severe challenging needs. A review of the literature was conducted and 41 program indicators of "best educational practices" pertaining to curriculum content and implementation were developed. The purpose of this study was to determine the extent to which the 16 curricula reviewed reflected the values and expectations suggested in the literature. A matrix was developed with the 16 curricula forming one axis and the 41 indicators forming the second axis. The presence or absence of the indicators in the curricula was determined. Inter-observer reliability measures were conducted by determining the agreement

corrected by chance. Results of the reliability measure indicated a high rate of agreement between the reviewers.

Forty of the indicators proved to be reliable indicators which have the capability of successfully differentiating among curricula. The curricula were then compared in the form of a bar graph to determine which curricula contained the most indicators of "best education practices." Six curricula were found to have over 35 indicators present. Alberta Curriculum Guides, both the Trainable Level and the Dependent Handicapped Level did not contain a sufficient number of the indicators. A review and revision of the Alberta Curricula is recommended.

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER 1

Several notable changes have occurred in the literature over the past decade in regard to what constitutes the "best practices" in the education of children with severe challenging needs. Although these changes have been powerfully and eloquently stated, this author and many researchers have noted that the practices have not been evidenced in the classrooms in a consistent and wide spread manner (Bates, Morrow, Pancsofar, & Sedlak, 1984; Green, Canipe, Way, & Reid, 1986; Meyer, Eichinger, & Park Lee, 1987; Wilcox & Bellamy, 1987b). The curricula selected for instruction will play a pivotal role in the extent to which philosophical changes will be evidenced in the classroom. Although Webster's Dictionary describes a curriculum as a "set of courses", many curricula contain much more. In addition to the listing of skills to be taught, often there are a philosophy statement, assessment strategies, task analyse, teaching procedures, methods of monitoring progress, methods for adapting programs and a variety of other components. Some curricula are even accompanied by suggested teacher training packages. Why then this absence of change in practice within many classrooms? Do the curricula currently being utilized sufficiently represent the values and expectations suggested in the literature? If the values and expectations are represented, are adequate strategies for implementation provided? Is the curriculum which is selected the "best" choice?

The approach to assessment employed by teachers, consultants, specialists, and other related services can have a powerful impact on the selection of assessment tools, the selection of program goals, and

on the curriculum from which programs are selected. The extent to which the approach they utilize reflects the changes cited in the literature, will influence the amount of change evidenced in the classroom. One likely reason for the lack of evidence of change is the dominant impact of the medical model and its strong grounding in a developmental approach to assessment and remediation. Many of the children with moderately and severe challenging needs in the past received any available interventions within the institutions in which they were housed or in therapy and activity settings. Curricula were developed to serve these children, many of them based on developmental logic. As the children began to move out of the institutional settings and into segregated classrooms, and even into the typical classroom, the traditional approaches to assessment and curriculum development followed the children. These programs have a tendency to focus on pre-academic skills taught in segregated environments. An emphasis is placed on the teaching of component skills rather than whole activities (Fewell, & Cone, 1983). As the children continue to move into more integrated environments, not only within the school setting, but in the home, school, and community environments as well, teachers, parents, advocates, and people in the community have become more aware of the fact that a developmental approach to the education of children with moderate or severe challenging needs, beyond the preschool years, may not adequately equip the child with the skills necessary to interact effectively in these integrated environments.

Those advocating "best practices" in todays classroom would argue that the primary goal of public education should be to prepare students for their adult role within society. In order to achieve

this goal Fox and his associates (Fox, Thousand, Williams, Fox, Towne, Reid, Conn-Powers, & Calcagni, 1986) would advocate that curricular expectations for children with severe challenging needs, from their earliest experiences in the educational system should be functional, cumulative and longitudinal in nature. Lou Brown and his colleagues were some of the earliest proponents of this change in philosophy. In their position paper, they proposed that the "criterion of ultimate functioning" be utilized as a measure of the functionality of a skill for an individual (Brown, Nietupski, & Hamre-Nietupski, 1976). The concept of a functional skill was designed to include the variety of skills which are frequently demanded from fully functioning adults in natural, domestic, vocational, and community environments. They are skills which influence a student's ability to function as independently and as productively as possible (Brown, Branston-McClean, Baumgart, Vincent, Falvey, Schroeder, 1979). In contrast to developmentally based curricula, functional curricula focus on the need to develop instructional experiences that are as chronologically age-appropriate as possible and teach skills within the context of whole activities. Functional curricula focus on assessment of current and future integrated environments to determine the student's individual educational needs.

In the past the focal point of many professionals, educators, and those in the community, had been to view children with severe challenging needs in terms of what the individuals were not able to do, rather that what they were capable of doing (Searl, Ferguson, & Bilken, 1985). This focus makes it difficult for people to see

students and adults with challenging needs as contributing members of society. Bates, Morrow, Pancsofar, & Sedlak, (1984) studied the effect of functional versus nonfunctional task performance on the attitudes and expectations of college students viewing a video tape of a young woman with Down Syndrome. Significantly higher expectations for the woman's future were predicted for the woman when she was depicted as being involved in functional, integrated, and age appropriate activities. The functional approach builds upon skills that a child could do, or can do with partial assistance or adaptations. It focuses on the teaching of skills which will be valued by others. It assists in increasing our expectations for the future.

Over the past decade, as well, there has been a growing consciousness that educators must be accountable for the integrity of their educational interventions and for the significance or value parents, peers and the community place on the skills the child has acquired (Voeltz & Evans, 1988). As a result, educators must begin to play a much more active role in the decision making process. There is now a need for school districts to develop team mission statements which clearly define the skills, knowledge, and attitudes they wish to teach as a result of their educational interventions. These values must apply not only to the child with challenging needs, but also to their nonhandicapped peers and to the community at large. Educators must be continually adjusting and re-adjusting their intervention strategies to ensure congruency between their mission statements and the results of their interventions.

Rationale for the Study

The Alberta Guidelines and Instrument for Evaluation of Special Education Programs and Services were reviewed. These guidelines are designed to provide a framework with which to review the quality of educational programs offered to students within Alberta. This framework provides evaluation in five areas: student, teacher, programs, school, and the school system. During the review it was noted that these guidelines do not appear to review the curriculum content or the method of implementation of the programs. These are two very critical areas which must be considered when determining the quality of an educational program.

A further review of the literature revealed that there did not appear to be available any structured guidelines or formal or informal methodology with which to review curricula. The curriculum plays such a pivotal part in the determination of the educational validity of an educational program. It not only sets the course of study, but also often provides guidelines for assessment, goal selection, and implementation and evaluation procedures. The literature review also revealed that there apparently has not been established quality indicators of a "good" curriculum. Thus few guidelines exist to assist in the selection of a curriculum or the review of a curriculum presently in use.

In the course of the review three articles were examined that had attempted to establish indicators of "best practices" in the field of education of children with moderate or severe challenging needs. Fox and his colleagues (Fox et al., 1986) established nine "best educational practices" and their quality indicators with the primary

purpose in mind of improving the state-wide delivery of special education in the state of Vermont, and related services to learners with severe handicaps and their parents. Meyer and her colleagues (Meyer, Eichinger, Seunghee, 1987) developed 123 items representing quality indicators in educational services for students with severe disabilities. They were derived from a search of the literature and by polling experts. The indicators were rated by six groups. Mean ratings for each of the indicators were calculated in order to determine the support afforded each of the indicators. Thirdly, Wilcox and her colleagues (Wilcox, Jackson, Overdorff, & Flannery, 1987) included a review of the indicators of effective schools and then presented the implications of the review for programs serving students with severe handicaps. The review was designed to assist program administrators and their staff to review their programs and then establish the quality indicators present in their program. Strategies are then presented to facilitate the development of the quality indicators which may be missing from the program.

The indicators derived from the above studies did not specifically address curricula. The studies also did not reveal any systematic application of the indicators or a comparison of applications in order to determine the reliability of the indicators as a method of reviewing an educational program for children with severe challenging needs. The purpose of this study was to determine the extent to which the most recent curricula, known to the author, reflect the changes in philosophy evidenced in the literature. The present study represents a systematic application of derived quality indicators to validate curricula currently in use in Northern

Alberta. The reliability of the indicators will be established by comparing the results of a primary observer (the author) and a secondary observer.

The instrument is not designed as an evaluative procedure. It is designed as a model to be personalized by individual school systems. The intended purpose is for systems to determine their educational value system, operationalize the values in the form of indicators and then use the indicators to determine the "best match" between their values and beliefs of quality educational programming and the curriculum or curricula which best exemplify these qualities. If such a match cannot be established then the indicators could be useful as a guideline to modify a curriculum in order for it to better reflect the values of the school system. If a school district decides to base instruction on individual curriculum sequences the instrument could also prove useful as a check to ensure all necessary elements have been included.

Summary

Educators are thus faced with many difficult decisions concerning the merits of one program over another. Many of the judgements are based on our own personal value system. The purpose of this study was to develop a format with which to operationalize the values and expectations of functional programming. Curricula were examined using the instrument to determine how many of these values were reflected in each of the curricula. The purpose of the development of the instrument was to determine if one could employ such a device to reliably evaluate a curriculum selected to be utilized in the

education of a child with moderate to severe challenging needs.

For the purpose of this study, children with moderate and severe challenging needs refer to children who would have traditionally been labelled as moderately or severely mentally handicapped, multi-handicapped, or autistic. The reference to the challenging needs refers to the necessity of modifying their educational programs such that their needs will be minimized by the development of individualized programming strategies which emphasize capitalization of their strengths and the development of their full potential independence in adult life.

Chapter 2 in this study is a review of the approaches to assessment and how they may influence curriculum selection. Chapter 3 is a review of the literature which summarizes what current literature would deem necessary for an educational program to be considered educationally valid. A description of each of the curricula is provided in Chapter 4. Chapter 5 provides the methods and procedures used in the application of the instrument and a definition for each of the indicators. Chapter 6 provides a description of the results of the application of the instrument. The final chapter provides a discussion of the results and implications for future research.

CHAPTER 2

ASSESSMENT APPROACHES

A variety of assessment approaches have been utilized with children with severe challenging needs. Assessments are conducted to gain information about a specific child in order to make a number of different decisions. Assessment information can be useful for screening children to determine the extent of their special needs; for determining the most appropriate educational placement; for determining educational programming needs; and for the purpose of evaluating the children's progress, or the effectiveness of the program intervention.

The approach the assessment administrator takes to assess, and the instrument employed, will be determined by the purpose of the assessment and by the theoretical philosophy of the administrator. The different instruments will offer different types of information. Upon completion of the assessment the administrator's educational philosophy will also influence the interpretation of the results and the determination and the selection of educational goals. The priorities determined will have a large impact on the functionality of long and short term goals selected. Theoretical philosophy will also influence many other factors such as the procedures suggested to teach the goals, whether to teach the goals in isolation or as functional units of behavior, and where the instruction should occur.

As educators begin to feel less compelled to label and segregate children, a shift in the focus of assessment away from funding and

placement issues is occurring causing movement towards a closer examination of the instructional environment and the development of an educational program suited to the child's individual needs (Ysseldyke, & Christenson, 1987). The major goal of assessment must be focused on appropriate educational program development.

For the purpose of this study the various assessment approaches will be examined to determine how the approaches to assessment influence the selection of educational goals and curriculum development. The advantages and disadvantages of the approaches will also be reviewed.

The Developmental Approach

The norm-referenced, developmental approach identifies tasks normally performed by children in a hierarchy of developing skills. Developmental logic assumes that the best order for teaching skills is the chronological sequence in which nonhandicapped children are assumed to acquire the skills. Two major types of testing which are sequenced in a developmental order and have been utilized with children with moderate and severe challenges are (1) the Standardized Achievement Testing and (2) some Curriculum-Based Assessments. These two types of tests are commonly utilized in the regular classroom. As school aged children with moderate and severe challenging needs are beginning to return to the regular classrooms, as a result of the integration movements, there is an increased possibility that these types of testing will be increasingly applied. Let us first examine the advantages and disadvantages of these testing methods for normal children and children with mildly

challenging needs and then examine the results of developmental testing with children with moderate and severe challenging needs.

Standardized Assessments

Standardized assessments such as Standardized Intelligence Tests have often been utilized to diagnose a handicapping condition or to compare performance with other students.

Advantages. The diagnosis is used to help explain why the student does not achieve. The diagnosis of a handicapping condition is often completed for the purpose of determining placement of a child or for determining the child's eligibility for funding.

Disadvantages. Sampling practices promoted by standardized tests have been shown to be of limited use in helping teachers meet the daily instructional needs of most low-achieving students (Jenkins & Pany, 1978). One of the reasons for this inefficiency is that many of the items of our more prominent tests do not correspond well with the curriculum programs used in schools. An IQ test is not very useful in determining where a student is relative to expected curriculum-based criteria. The results of an IQ test cannot be used to develop a program within a given curriculum (Tucker, 1985).

The materials used within an IQ testing situation are not materials commonly found in the normal classroom nor are they likely to be found in the child's natural environment. They are used to project what the child's performance would be in future normal environments with normal instructional materials.

There has been strong criticism leveled against the use of standardized testing for the use of diagnosis and funding (Skakun, 1987). Much of the available resources for funding has been taken up in the administration of Standardized Tests leaving few dollars for actual provision of information relevant to educational intervention for the child.

Curriculum-Based Assessment

In curriculum-based assessment the essential measure of success in education is the student's progress in the curriculum of the local school (Tucker, 1985). Curriculum according to Tucker is defined as the "course of study" adopted by a given school system. Curriculum-based assessments then measure the level of achievement of a given student in terms of the expected outcomes of the school. Assessments which are curriculum-based will usually follow the order in which the curriculum is designed. If the curriculum is developmentally based, then the assessment will also, in all likelihood, follow a developmentally based orientation.

The student's performance within the course content is assessed for the purpose of determining the student's instructional needs. The data received is then used to make screening, referrals for further testing or placement, IEP planning, pupil progress, and program outcome decisions (Deno, 1985).

Advantages: Children with mildly challenging needs. Data collection, interpretation, and application are interwoven functions whose primary goal is to facilitate the instructional decision-making

process. It is used to control the task difficulty by adapting or modifying the various assigned tasks to match the student's abilities. Teachers prefer to rely on ongoing assessment of student performance on curriculum tasks to make judgements about student achievements rather than competence in the local school curriculum. They are individually referenced so that judgements can be made about whether a student's current rate of progress is an improvement over that student's past rate of progress. They are also peer-referenced so that "normality" of a student's performance can be reliably and regularly determined through locally developed peer sampling.

Disadvantages: Children with mildly challenging needs. Although curriculum-based assessments do measure entry level skills, and response to instructional demands of graduated task difficulty, they do not measure task relevance match between the child and the task. They assume that all tasks are necessary and lower level success is a prerequisite for entry at a higher level. The curriculum is typically written to meet the needs of the average student. Adjustments are not generally made by teachers for students who deviate significantly from their grade level.

Advantages: Children with moderate and severe challenging needs. The skills are typically organized into domains that correspond to major areas of child development such as gross motor, fine motor, perceptual, cognitive and self-help. They target those behaviors typically classed as developmental milestones (Donnellan & Neel, 1986; Wilcox & Bellamy, 1982). The testing provides a global picture of the

child's abilities and provides a common ground for reporting performance levels (Orelove & Sobsey, 1987; Snell, 1987). Complex skills are broken down to facilitate the measurement of a child's ability level within a specific skill hierarchy.

Disadvantages: Children with moderate and severe challenging needs. Students with disabilities who might learn at a different rate are usually seen as lagging behind in the growth process. Failed items are then re-written as goals. The assessment seldom yields objectives really needed by individuals with handicaps (Snell, 1987). Children with moderate and severe challenging needs forced to remain within a normal curriculum will get further and further behind and will become more entrenched within the failure cycle. Many of the skills targeted may never be learned. As the gap widens, the child's instruction often becomes more and more isolated from the other children. This often leads to removal from the natural classroom environment.

This approach assumes there is unlimited time for teaching. This test to teach method is likely to have little impact upon the ultimate attainment of independence and self-sufficiency (Holvoet, Guess, Mulligan & Brown, 1980). Total reliance on developmental assessments is unlikely to result in the development of curricula relevant to the needs of students, especially as the students reach upper elementary and secondary levels.

A further difficulty in the selection of age inappropriate curricula is that it often results in the corresponding use of age-inappropriate materials considered necessary to teach the "readiness"

skills. These materials are items often not useful in everyday lives. The teaching of age inappropriate skills with age inappropriate materials will only serve to devalue and dehumanize children with moderate and severe challenging needs.

A developmental approach assumes that "normal development is synonymous with necessary development" (Wilcox & Bellamy, 1982). It also causes the educator to focus on the particular form of the behavior rather than its function (White, 1985). It rarely considers adaptions of sequences to facilitate the partial participation of children with moderate and severe challenging needs.

The Basic Skills Approach

The "basic skills approach" (Wilcox & Bellamy, 1982) to assessment and program planning is very similar to that seen in regular classrooms as developmental programming. It is an approach seen commonly in classrooms containing children with moderate and somewhat higher challenging needs. The curriculum is arranged in a developmental sequence. It focuses on the main academic skills required in the normal classroom.

Advantages. The basic skills approach focuses on similar programs to those used in and the typical classrooms. The curriculum is arranged in a developmental sequence. These may provide common reference points when special education and regular education educators are exchanging information.

Disadvantages. The basic skills approach often results in little adaptation from programming seen in the typical classroom, although there may be a much higher concentration of practice worksheets. The curricula is organized around the "three r's", but these are often taught in isolation.

The model ignores the fact that everyday life may demand that several competent academic skills be required at one time to complete an actual problem. The student is often unprepared to be able to pull this information together, or even to recognize the necessity to do so, as he has been taught to only work in isolation. In addition, the real world requires many skills besides academics. The child may be lacking many of the extension skills such as the basic communication, basic orientation and mobility skills, and basic social skills required to complete the task.

This method becomes more and more inappropriate as the child gets older. The spread between the skills the severely challenged child is acquiring and those his age-peer is acquiring will increase greatly as the number of years in school increases. As the child reaches adolescence he may still be learning to grasp a pencil in order to color within the lines, while his age peer may be learning to manipulate materials in an industrial arts program. The instructional time required for a child with severe challenging needs to acquire basic academic skills may be quite extensive. In actuality, the student may never become proficient in some skills. The amount of time required to train the basic skills will take away substantially from the time available to teach more functional and readily applicable skills. The failure to progress quickly and the lack of

functional use of the skills may, also inhibit the student's motivation to learn.

There is also little attempt to modify the acceptable form of the behavior. Therefore items such as calculators would not be considered to perform the same function as adding by memory. Although teachers who specialize in teaching students with special needs are becoming more aware of these issues, as more and more handicapped students begin to move into integrated settings the danger becomes greater that a heavy reliance on this type of curriculum could again become commonplace unless teachers of regular classrooms are made aware of the pitfalls.

Applied Behavioral Psychology Approaches to Assessment

Applied behavioral psychology has worked closely with special education personnel especially in the infancy stages of program development for the severely challenged. This approach did not directly address the issues of instructional content. It did, however provide new powerful instructional techniques with which to teach selected curricula. In the applied behavioral approach, target behaviors were identified. Unfortunately many of the first students were living in institutions at the time and as such had developed some very bizarre and strange mannerisms. These behaviors were often seen as aggressive and maladaptive. The programming then became focused on the "elimination" of behaviors that were judged by the teachers to be maladaptive, inappropriate or interfering responses (Wilcox, & Bellamy, 1982). The programs then became focused on what later was referred to as "dead man" goals which were goals that even a dead man.

could do. An example of such a goal might be, "the child will remain seated and will not make any noise." Little concern was expressed for what the child was learning as he sat still. Artificial reinforcers were often employed to motivate the child rather than examining the activity he was doing while remaining seated to determine if the activity was naturally reinforcing. It was presumed that one must first eliminate the interfering behaviors before targeting new adaptive responses and beginning skill building.

The student was held in a "get ready" holding pattern. This delay of instruction wasted valuable learning time, often caused the child to be seen in a very negative, devalued connotation and may have eliminated the child's only way of controlling their environment (La Vigna, & Donnellan, 1986).

This "reductionist" orientation caused educators to focus on single, isolated behaviors (Guess & Helmstetter, 1986). The designs often called for the behavior to be eliminated in one environment before the student moved into the next.

This model did however teach special education persons the need to carefully define the behavior one had targeted and develop precise data sheets and updating decision models. Technology for task analysis of behaviors also grew out of this model and assisted us to develop skills to enable the breaking down of a behavior into smaller, more easily achieved steps. These steps were then chained together until the child could complete the whole task. Although behavior analysis has been identified as a curriculum model, it is in fact only an instructional technology. It can be very useful in telling us how to teach. It does not provide us with information about what

to teach.

Community-Referenced Assessments

The community-referenced approach to assessment and educational programming is an educational strategy which looks at determining the functioning level of a student in various environments, across a variety of activities. It is based on the principles that skills taught should reflect what is needed to make a satisfactory adjustment to the adult world. Interactions with the environment should be age appropriate. Training should occur in the natural environment at naturally occurring times of the day. All training needs should be integrated as they would naturally occur.

It is important when determining curricular content to include those tasks which the student may not totally master. The principle of partial participation (Baumgart, Brown, Pumpian, Nisbet, Ford, Sweet, Messian, & Schroeder, 1982a) was developed to incorporate the belief that it might be more educationally and economically justifiable to teach a child with moderate and severe challenging needs to perform portions of a skill sequence even if those portions cannot be performed independently, than to restrict that student from participating in the entire sequence and consequently making him or her more dependent upon others than was otherwise previously necessary. It also increases the personal dignity of the child and recognizes their right to learn and enjoy feelings of positive self-esteem.

Environmental inventories are commonly used to collect and organize data (Brown et al., 1976; Neel, Billingsley, McCarty,

Symonds, Lambert, Lewis-Smith, & Hanashiro, 1983). The inventories become a longitudinal evaluation tool. Current and subsequent environment oriented curriculum development strategies are designed to delineate the skills required to function in a variety of least restrictive current and subsequent school and nonschool environments (Brown et al., 1979). The present level of functioning of the child, environmental cues and consequences and possible environmental adaptations that are available may also be documented. The following steps are outlined by Brown and his colleagues:

1. Identify the least restrictive current and subsequent environments in which a child with moderate or severe challenging needs currently functions and those in which he or she might function in the future. These environments should encompass all chronological age-appropriate recreational/leisure, educational, vocational, domestic, and general community environments.
2. Identify the subenvironments within those environments.
3. Identify the most relevant and functional activities which normally occur within those subenvironments.
4. Identify the skill requirements of the activities performed in those environments. Determine the skills needed to participate at least in part of an activity and describe possible adaptations that allow or enhance participation.
5. Design and implement instructional programs to teach the child the skills. This should include descriptions of the performance criteria, the instructional materials and the measurement strategies to be utilized (Brown et al., 1979).

Advantages. Brown and his colleagues list five main reasons for curriculum assessment and programming strategies based on current and subsequent environment orientation. First and foremost, a community referenced approach will lead to a de-emphasis on the developmental discrepancies between children with severe challenging needs and the nonhandicapped child. It will, conversely, lead us to focus upon the chronological age-appropriate functioning skills required by the least restrictive environments in which the child currently functions or in which they might function. Secondly, this approach will direct educational efforts towards the need to precisely describe the functional skill clusters required in a variety of natural environments. This will provide validity to the notion that children with severe challenging needs can perform, or at least partially perform in the performance of as many of those functional skill clusters as possible. Thirdly, functional curricular content will be generated which would be supported by significant people in the child's environment. The use of a variety of instructional service delivery models will support the use of a variety of settings, materials and facilitators. Such a focus is necessary to ensure that critical domestic, vocational, recreational/leisure, and general community functioning skills are taught. The assumption is that if these essential skills are not taught by educators, the probabilities are great that they will not be acquired, and that the children then will be deprived of opportunities to participate in activities that require those skills. Lastly, a curriculum that allows teachers to teach individualized skill sequences will foster the development of community support systems needed to facilitate community

referenced educational services.

In addition, the inventory strategies result in a curriculum that is neither rigid in content or scope. It is individualized to the child's needs and can be as extensive as is desired by the assessor and those designing the program. The assessment leads directly to determining instructional content. It focuses instruction on a top-down approach, looking at critical skills required by the adult. It focuses instruction in the natural context and with natural skill clusters.

Disadvantages. The ecological assessment model can be very time consuming, especially for those not familiar with the skills of task analysis. The approach will yield many activities and skills. There is no one right way to determine which skill to teach first. It becomes very dependent upon the values of those making the decisions. If parents, peers and those in the community and subsequent environments are not likely to support the child's participation in skills selected, then the learning is unlikely to be maintained. It therefore becomes critical to involve these persons in the decision making.

The Individualized Curriculum Model

The Individualized Curricula Model (ICS) was developed by Holvoet and Guess (1980) in the early 1980's. It utilized developmental logic but began to recognize that the normally recognized domains of cognitive development, social development and motor development were not acquired in isolation. There was an interdependence between

them. Interacting effectively in the environment often required the use of a number of skills concurrently, or in rapid succession. Following the logic, that if there was an interdependence between these skills, Holvoet and Guess developed a model that provided for concurrent training of skills across content areas in a horizontal, rather than a vertical instructional model (Holvoet & Guess, 1980). Remedial logic was employed to assess the skills required by the child with severe challenging needs to improve their ability to interact with their environment. This procedure was systematized through the use of ecological inventories (Guess & Helmstetter, 1986). Greater emphasis was placed on providing instruction in nonschool settings. Guess and Helmstetter advocated that the skill taught should be age appropriate and functional regardless of the student's presumed developmental ability. Skills are derived from environmental inventories, parent and service providers, and the use of traditional assessment instruments. The skills selected are based on the concurrent task model in which two or more tasks are taught at the same time. The behavior "clusters" are sequenced in the order in which the behaviors commonly occur in the natural environments. By clustering the behaviors, it was assumed that once the cluster is acquired by the student, the student will be able to interact more effectively with the social and physical properties of the environment and generalization would be maximized.

Advantages. This method essentially dictated a move away from isolated "massed" trial formats to skill clusters taught in a "distributed" trial training. It focused on age-appropriate and

functional skills taught in the natural environment. An activities/skills matrix is completed for each student which lists material and events with which to teach each skill during the daily activities (Orelove & Sobsey, 1987). Students learn faster than by the traditional isolated massed trials. The instruction is more meaningful and both the staff and students are more motivated than with massed trial instruction. Often natural cues and consequences can be employed. There is less likelihood of satiation of reinforcers. Generalization of skills across multiple environments and multiple activities is built into instruction from the beginning.

Disadvantages. The ecological assessment of skills required across a number of different environments can be somewhat time consuming. Subsequently, determining the skills which are priorities for instruction can also be a time consuming and difficult decision. The staff must then be aware of all the targeted skills of all the children they will work with in a day, their current level of functioning and the type of instruction to provide. This requires very skillful and knowledgeable staff. The data collection can be difficult as it is often required across multiple environments and multiple activities. Guess and Helmstetter (1986) caution that staff adherence to getting through the prescribed sequence has often engendered the same rigidity as previous in massed trials where inflexible adherence to written programs caused insensitivity to self initiated behavior of the learner. There is little adherence to student choice and flexibility in student response.

Summary

The theoretical approach that one brings to the assessment of individuals with severe challenging needs will influence the selection of the assessment instruments. The skills tested are very dependent upon the instruments selected. Both will greatly influence the selection of educational goals and the curricula approaches considered. It is necessary to closely examine the instrument which is selected in order to determine if it will produce the desired effects.

Although popularity of the developmental model and the basic skills approach to assessment and skill selection still remains strong with many professionals, the influence of Brown and his colleagues and many other prominent researchers has been considerable. The functional approach to assessment and curriculum development has resulted in a much closer relationship between assessment and program development. There is now a much greater likelihood that assessment will be viewed as an ongoing and continuous evaluation of a student's performance. Testing, in many situations, has now shifted from the use of testing materials to the use of natural, task specific materials. The location of the testing has moved from isolated examination rooms to testing in the actual environments. A much broader range of instructional objectives is now sampled. As the child with severe challenging needs begins to reach school age the movement away from the developmental orientation of "test train", "get ready" model is growing stronger. The focus is moving towards the determination of a student's current functioning level, in adult domains, in multiple environments, under natural conditions and with

natural cues and consequences. This movement has also resulted in earlier and more extended participation in the assessment procedures and goal selection by both teachers and parents.

The next chapter will examine more closely current literature in the field of education of children with severe challenging needs. In the past decade there has been considerable changes in what has been and currently is now considered to be the "best practices" in educational programming. This has resulted in the re-examination of philosophical values and expectations by teachers, consultants, administrator and parents. The curriculum is the medium through which values and expectations are put into practice. It is therefore critical to examine the current literature to determine what researchers in the field are proposing as the best indicators of an educationally valid program.

CHAPTER 3

QUALITY INDICATORS

Educational Validity

Educators in the United States have faced increasing legal pressure to be accountable for the functionality of the educational program they design and implement since the passing of Public Law 94-142 (Reid, Parson, McCarn, Green, Phillips, & Schiepis, 1985). Although the pressure of courts and legislation has been less apparent in Canada, there has been considerable influence on Canadian education which has resulted in a perceived need to be accountable for the educational programs offered children with severe challenging needs. It has been postulated that the functionality of a program must be judged by the educational validity of the program (Voeltz & Evans, 1983). The authors further clarify educational validity as a concept which includes both empirical and social validation of the results of the intervention efforts.

Empirical Validation

Empirical validation examines the meaningfulness of the behavior change and the benefit the eventual outcome of the training will afford the child. Snell & Browder (1986) refer to empirical validation as the "procedure of verifying if the procedures and specific outcomes will enhance the individual's independence in multiple environments and result in meaningful behavior changes". People involved in the education and treatment of children with severe

challenging needs are consistently being required to justify the outcomes and the procedures utilized in educational settings. The outcomes and procedures must reflect the basic values of normalization and integration (Horner, Meyer & Fredericks, 1986). As such from the mid-1970's there has been increased pressure for educators to provide programs which are age appropriate, community referenced, and provide for maximum opportunities for interaction with nonhandicapped persons in a variety of environments.

Social Validation

Rusch (Rusch, Schutz, & Agran, 1982) described social validation as the procedure used to determine the social acceptability of training programs. Three component parts must be examined: the purpose of the training programs, the procedures utilized, and the acceptability of the results of the training. The social acceptability measures the importance or significance of the targeted skill to others, to the society in which the person lives, the consumers of the skills acquired by the students (Voeltz & Evans, 1983). One method suggested for determining social validation is to identify individuals who will be the consumers of the skills acquired by severely handicapped children enrolled in the program and have them provide judgements about the program outcomes (Strain & Odom, 1986). The authors suggest four groups of people who are the main consumers of the skills acquired by the children. First of all, the parents or primary caregivers are among the most important sources. They are in one of the best positions to make judgements regarding improvements made by their children, not only in the school setting, but also in

the home and community setting as well. Secondly, Strain and Odom suggest that the Public Education System is in a position to judge the validity of the skills acquired by children in the early education programs. As a consumer the Public Schools will judge how well the children have acquired skills to enable them to function successfully in the least restrictive classroom placements. Each "next" or subsequent educational environment will continue to evaluate the validity of the skills taught in the previous environment. Thirdly, there is an increasing awareness that the child's peer group is also a key consumer of the skills a severely challenged child acquires. Successful social integration into peer groups will increasingly provide evidence for the social validity of educational programs. As we become more aware that the ultimate goal of education is to provide the child with the skills to function as independently as possible in an integrated community, there is also an increasing awareness that there is a fourth consumer of the educational system, that being the community at large. Rusch refers to this method as descriptive validation in which the potential consumers would be requested to describe verbally or by survey, acceptable goals, procedures and results.

Documentation of the effectiveness of a program must include not only the data which indicates the skill has been acquired, but also evidence that the skills acquired are functional skills These skills must be displayed in the natural settings, under natural conditions. They must be skills which would be considered comparable to those acquired by the child's nonhandicapped age peers. Social validation must also be applied to the acceptability or the intrusiveness of the

teaching procedures, the training setting and the methods of taking data. A discrepancy analysis, which involves comparing the child with challenging needs and his/her age-peers without challenging needs, is one method which can be utilized to socially validate a child's program. Such an analysis would compare the skills taught, the procedures utilized, and the settings the skills are taught in, with the nonhandicapped peer to ensure that similar opportunities and instruction were available and that the procedures used were socially acceptable.

Let us now explore more fully what I considered to be the qualities necessary for an educational program for a child with severe challenging needs to be considered educationally valid. To facilitate this examination, a research of the literature was conducted to determine the qualities deemed to be most critical by professionals in the field of education of children with severe challenging needs.

Normalization

In the early 1970's, Wolf Wolfensberger interpreted the Swedish principles developed by Benjt Nerje to an American model. Normalization is based on the concepts of making opportunities available to those persons with challenging needs, the same opportunities that are presently available to persons who do not have challenging needs. These opportunities include the rights to qualities of life such as: housing in normalized communities, access to the neighborhood and community recreation and work opportunities, the right to influence decisions regarding their lifestyles and the

right to opportunities for socialization with nonhandicapped peers (Falvey, 1986).

Brown and his colleagues (Brown et al., 1979) advocated that the concept of integration must include education in natural instructional settings frequented by nonhandicapped peers, and the receiving of programs in locations where the population of handicapped persons is in natural proportions to the nonhandicapped peers. They also extended the concept of normalization to include not only the right of all individuals to "live, work and play in integrated environments" but also to receive an equable education program. A "discrepancy analysis" was advocated as one method of determining the differences in available opportunities. The procedure involved first observing or conducting an ecological inventory of the opportunities the environment afforded a nonhandicapped individual, and then completing the same procedure for a handicapped individual. Following the inventories a discrepancy analysis was conducted to determine the difference in opportunities. These areas were then targeted as objectives (Brown et al., 1983).

The concept of normalization also recognizes the worth and dignity of a person with severe challenging needs and their right to be respected. Wilcox & Bellamy (1987a) define respect as "having a valued place among a network of people, and valued roles in the community life". Professional staff can influence the respect afforded an individual by modelling respect in their interactions with children with challenging needs, by selecting teaching procedures which communicate respect, and by selecting skills to teach which will assist in enhancing the individual's competence.

The Criterion of Ultimate Function

"The criterion of ultimate functioning refers to the ever changing, expanding, localized, and personalized cluster of factors that each person must possess in order to function as productively and independently as possible in socially, vocationally, and domestically integrated adult community environments" (Brown et al., 1976). It is based on the concept that because persons with severe challenging needs may not be able to acquire the same number of skills as a nonhandicapped person, and because there is a limited time in which to acquire the skills required to function as an adult in an integrated environment, educators must be extremely careful in the selection of skills they teach. To generate a curriculum-based upon ultimate functioning, an educator must first identify the critical effects that are necessary for successful, independent performance in important environments (White, 1980). Brown and his colleagues referred to this as a "top-down" approach rather than a "bottom-up" orientation. They advocated that the focus of education should be on instruction of skills critical for adult survival in natural environments. The developmental approach focuses on the skills in a sequential, developmental fashion from those acquired as an infant (bottom) through to adulthood. In order to make more productive use of educational time, skills necessary for adult functioning should be emphasized.

Prior to the initiation of any intervention it was cautioned that educators must consider at least the following questions: Why this activity? Is it necessary to prepare students to ultimately function

in complex heterogeneous community settings? Could students function as adults if they did not acquire the skill? Is there another activity that could allow them to acquire the same skill more quickly and more efficiently? Are the skills, materials, tasks, and criteria similar to those encountered in adult life? (Brown et al., 1976).

White (1980) cautioned that educators must also take care to ensure the skills selected must produce a desired critical effect in the natural environment. When selecting skills needed in the predictable future, there must be a current critical effect present in the environment in which it is instructed or teaching the form of the behavior will have outweighed the teaching of the function and the skill will not be meaningful for the learner. For example, when introducing dishwashing to a young child, one must take care to allow a certain amount of play activity within the instruction or the child will become frustrated by the strict adherence to the adult form of dishwashing. The function of the task at a young age will probably be the learning of a basic routine and the exposure to water activities. The activity would also be much shorter in length for a younger child.

Billingsley (1984) found that 2/3 of the 499 individual educational plan objectives he studied targeted functional objectives but very few had targeted generalized performance as a desired outcome. He cautioned that without considering an emphasis based on training the skill across a variety of situations, a potentially functional skill that is not performed outside the training setting will quickly become extinguished. A student who utilizes a skill across a number of situations will be provided access to natural reinforcers which can act to promote skill maintenance in natural

environments. Many authors suggest that initial training, as well, must also occur in the natural environment (Falvey, 1986; Neel et al, 1983; Wilcox, & Bellamy, 1982).

Criterion of Least Dangerous Assumption

Ann Donnellan (Donnellan, 1984) first developed this concept as a caution that there is still an urgent need for more information to determine what the needs of students with challenging needs are. Judgements concerning educational interventions, placements, materials, and curriculum are often required. Although we have some standards by which to make these judgements many of the decisions are value based and qualitative. There still exists very little longitudinal data, supporting one intervention or strategy over another. In lieu of longitudinal data, Donnellan proposed the criterion of least dangerous assumption.

> "The criterion of least dangerous assumption hold in the absence of conclusive data, educational decisions ought to be based on assumptions which, if incorrect, will have the least dangerous effect on the likelihood that students will be able to function independently as adults". (Donnellan, 1984, p 142)

Until there is sufficient longitudinal data on which to base educational decision-making parents and educators must have some standards to utilize when making decisions regarding a child's educational program, the procedures for instruction, and the educational placement of the child. Donnellan suggested that if we base these critical decisions on those factors which will ultimately lead to the greatest independent functioning of the student in their adult lives then our decisions will be likely to result in the least

amount of incorrect decisions and will likely result at least in best preparing the child for his or her adult role in society.

Donnellan suggested that a combination of the least dangerous assumption and the criterion of ultimate functioning would provide the needed standards. If chronologically age appropriate functional skills are developed, educators are making assumptions that, even if incorrect, the skills will not add substantially to the problem of stigmatization and devaluation (Donnellan, & Neel, 1986). Within this context, relevant developmental information such as language skills, coin recognition or reading skills can be interfaced and instructed. Even if the student does not make the developmental progressions, the skills he or she acquires will be chronologically age appropriate as functional tasks, which will be valued in his adult life.

Donnellan also extended this concept to include educational placement and the context in which instruction was received. She cautioned that the more specialized the initial learning environment the more dangerous the assumption that the behaviors will be generalized to the complex, integrated environment in which students will ultimately need to function. The ultimate goal of education must be to prepare the student to live and function in the least restrictive environments possible. To ultimately prepare the child to later function in these environments educational decisions, which result in the child obtaining the skills necessary to function in the least restrictive environments and which provide the child with the greatest number of opportunities to practice these skills in the environments in which they must be performed, will be decisions which will ultimately lead to the greatest success of the student.

Under this assumption programs which stress positive, nonaversive intervention would also seem to be justified. Behavior programs should focus on nonaversive procedures which emphasize positive ways of interacting with and influencing their environment. Instruction which places an emphasis on errorless learning strategies by predicting and preventing student errors, providing corrective feedback and positive practice, reinforcements, and prompting and fading, is also recognized as necessary ingredients for meeting this criteria.

Education in Integrated Environments

Our primary goal in the education of children with challenging needs is to equip them with skills that will allow them to participate in multiple integrated adult environments. Brown (Brown, 1986) recently concluded that many educators and parents have begun to realize that when students complete segregated school programs, their most probable life options are also segregated. He calls for a need to move on to an emphasis on personhood rather than our previous need to label and diagnose. He emphasizes the need to form new goals, expectations, values, pressures and opportunities through meaningful social interactions 24 hours a day, 7 days a week. Our goals as educators and as advocates must then be to increase the number of integrated community and school environments in which the child with severe challenging needs can participate.

There is no prerequisite to minimally participate in any environment (Fox et al, 1986). But there are many approaches which can be made to increase that participation beyond physical presence.

The environment can be adapted to the current capabilities of the learner. This can be accomplished through inservicing and modelling of methods of interacting with persons who have disabilities. Increasingly, educators of all children are becoming more aware of the need for all classrooms to begin to accommodate to the individual needs of the learners (Ysseldyke, & Christenson, 1987) and of the need to present materials in a variety of methods to accommodate differing learning styles. In addition, more and more environments are becoming physically accessible within the schools and the community.

The researchers of Project Reach described integration as "the placement of students with severe handicaps into special education classrooms, in chronologically age appropriate, regular school sites with planned systematic, and sustained interaction opportunities with their nonhandicapped age peers" (Doering, & Culp Hunt 1983, p. 30). Falvey contrasted this definition with the concept of mainstreaming which she described as a situation in which a student moves into the general education classroom.

Some school districts such as the Yellowhead School District in Alberta, the Waterloo District in Ontario, the Woodstock Catholic School District in New Brunswick, and the State of Vermont, have now moved away from the dual system of education. A child is automatically enrolled in a Kindergarten placement. The responsibility is then placed on the school district to provide an appropriate educational program for the child within the regular classroom setting. If the child must be removed from the regular classroom, a transition plan must be in place to accommodate his re-entry into the regular classroom as quickly as possible (Fox et al.,

1986).

It has been found that segregated classrooms within public schools often fail to promote friendships and relationships between children with challenging needs and the typical child. Integration must move beyond the physical presence. At a minimum it must include spontaneous interactions between students. It must include regularly scheduled interactions in heterogeneously grouped instruction and shared participation in lunchrooms, hallways, playgrounds, and transportation systems (Meyer, Eichinger, & Park-Lee, 1987). The focus of educational programs must also be on teaching the learner with challenging needs, skills which will increase his or her abilities to interact with their environment and with persons in their environment. These are functional skills which will provide immediate impact for the learner (Fox et al., 1986).

Norman Kunc (1985) addressed the need to facilitate integration very eloquently. He reminded us that life does not consist only of skills such as walking better, talking better, or being able to swim. Life involves facing challenges which face us in the world beyond the educational facility. It involves the right to choose how we live. He cautions however that if we are exposed only to a segregated environment we are prevented from facing challenges or from even knowing the choices available.

Planning for Transitions

The first major transition for the very young child with severe challenging needs is often the transition they must make from home to an early intervention program. Parent participation in the

transition, together with support from the recommending agency can help to facilitate the transition. The child progresses through the preschool and enters another transition phase into a Kindergarten classroom. The more the previous program has prepared the child with survival skills for the "next" environment, the smoother the transition is likely to be. Transition involves preparing the student for subsequent environments, expectations, norms and rules (Falvey, 1986).

To ensure successful transition from one learning environment to the next, a careful planning system must be employed. The appropriate persons from each environment, both the present environment and the new environment, together with the other persons involved in IEP planning must meet at least once a year prior to the transition to assist in planning goals which will prepare the child to adjust, adapt, function appropriately, generalize skills or transfer training to the new environment (Fox et al, 1986; Thousand, Fox, Reid, Godek, Williams, & Fox, 1986). In addition, prior planning for transitions will allow time for planning in the subsequent environment and any perceived necessary modifications to be carried out.

Planning for transition is extremely critical as the student reaches high school age. At this time his/her post-school environment must be examined closely to determine the skills he will require in adult life. Aveno (1987) provides an excellent example of surveying the "next" environment in his study, in which he surveys the activities engaged in and skills most needed by adults in community residences.

Parent Involvement

Parents have the longest term of involvement with a child with challenging needs. They spend the most time with the child and are our greatest wealth of knowledge. They must be part of the evaluation team. They can evaluate their child's present abilities in the home and in the community. Their opportunity to observe the child over extended periods of time may provide much more accurate feedback of their strengths and weaknesses than those observed by professionals. They are often very aware of their child's preferences and the subtle signs he or she may give to indicate them. They have a very large stake in determining the student's next and future environments and thus can be of great assistance in longitudinal planning.

Parents are also able to provide information about the generalization of skills learned across environments. Their involvement in the selection of the IEP objectives will be the best way to ensure they will be practiced and maintained with the context of normal family routines.

There are currently available many good parent/caregiver inventories which will help teachers to systematically gain information. The Inventory Process for Social Interaction (Doering, & Culp Hunt, 1983) and the Parent Inventory portion of the IMPACT Curriculum (Neel et al., 1983) are two suggested resources. These inventories involve obtaining information from the child's family regarding the activities they participate in within the home and community in the normal course of their lives. The inventories look at the environments they frequent. The inventories also solicit information from the families regarding their preferences and the

preferences of their child.

There should be a systematic plan of outreach to parents. The degree of involvement by parents will vary from family to family depending upon many personal factors. It is important for the school to maintain ongoing positive contact with the home. In exchange for the input the parents provide, schools should be prepared to provide parents with inservice information, if requested, and information regarding assistance available from other community agencies. Parent involvement in school activities is likely to be greater if their child is attending their neighborhood school with his or her siblings. The relevancy of issues discussed during parent meetings at their local neighborhood school is likely to be much greater than those that would be discussed in a district site school parent meeting. For example, a local school may be discussing local after school groups which meet at the school. This issue may be very relevant if the child may be able to attend after school activities. The likelihood of such attendance if a child is bused to a large district site is greatly decreased due to time and transportation issues.

Parents should be regularly surveyed to determine their satisfaction with the programs. Their suggestions for program improvements should be regularly solicited. The power of parents to influence school district decisions, school board policy and legislation should never be underestimated. Parents are often very vocal about what they feel are their child's most urgent needs. Their impact can be very powerful (Fox et al., 1986).

Integration of Multi-Disciplinary Services

Children with challenging needs may require the services of the regular education teacher, the special education teacher, the occupational therapist, the physiotherapist, the communication disorders specialist, the audiologist and other related medical personnel. The individual needs of the child will dictate the necessity of some or all of these persons involvement in the assessment and program development for the child.

In an isolated model the therapist will often conduct her assessment in isolation and prescribe a program traditionally conducted in an environment separated from the student's classroom. Falvey (1986) points out that in this situation, parents and teachers are often not aware of the progress of the child in the therapy session and the therapist may be unaware of the goals established by the teacher and the parents. There is little communication between persons involved with the child. The child's program is segmented which can result in infrequent consideration of the whole child's needs.

It has become increasingly recognized that it is important to incorporate the programs developed by these related disciplines into the daily routine of the child. It is more beneficial to utilize staff time of these experts to train others who work directly with the child on an ongoing basis than it is to provide direct therapy. These persons may include the teacher, classroom aides, peers, parents and other family members, volunteers, employers or fellow workers, and any one else who may have ongoing contact with the child. These activities should be integrated into regular scheduled events in the

home, school and community. Some disciplines such as occupational therapists and physiotherapists have encountered some difficulties with role release but many of these problems have been successfully overcome (Orelove & Sobsey, 1987; Rainforth & York, 1987).

The likelihood of the learning being maintained and generalized is much greater if it is taught across multiple environments and multiple people at natural times. Philippa Campbell (Campbell, 1988) suggested that what we want is for parents and teachers to do the positioning of the child, for optimal learning, better than the physiotherapist can. The likelihood of preventing deformities and further disabilities and learned helplessness is much greater if all parties are involved.

In the integrated model the experts can become consultants to teachers about alternative performance strategies and prosthetic devices, and provide suggestions for appropriate forms of partial participation. The expert observes the child in the classroom, school yard, home and community as they participate in natural activities (Wilcox, Jackson, Overdorff, Flannery, 1987). Rainforth and York (1987), in their journal article, presented guidelines and examples of how transdisciplinary teams can deliver services to students in community environments. Direct intervention must occur within the classroom, community or home setting throughout a student's daily routine by those regularly involved with the student. Sailor (Sailor, Halvorsen, Anderson, Goetz, Gee, Doering, & Hunt, 1986) advocated the input of the various specialists as required to assist in developing adaptations during community based instruction. As more children are "coming home" to their regular classrooms and neighborhood schools,

the necessity to develop structured models which facilitate maximum communication and integration of services becomes more apparent. The regular education teacher as well as the special educator must be part of the transdisciplinary team. Such a model is presented in the Homecoming Model (Thousand et al., 1986).

Utilization of Routine-Based Programming

A routine is a task analysis of the series of events that are necessary to produce a desired effect for the student in the natural environment. Each routine begins with a natural cue and ends with the realization of the critical effect (Holvoet, Mulligan, Schussler, Lacy, & Guess, 1982). Routines are actions that occur repeatedly, often on a daily basis or even several times in one day. They are predictable and often follow a fairly fixed set of actions (Brown, F., Evans, Weed, & Owen, 1987). Other routines can vary around a fixed set of actions, in that some parts will be the same but other portions may present options. An example of such a routine would be driving to the office in the morning, there may be several routes that you can take, but the routine of getting in your car and operating it is quite fixed. Routines occur over many events in one's day and across many environments.

Routines facilitate efficient use of attentional and physical resources (Carreiro & Townsend, 1987). Once the child is familiar with a routine, he/she will often become more comfortable in a situation and often more calm. This allows the child to focus on new portions of the routine as the familiar portions are practiced and repeated.

Fredda Brown and her associates have delineated some very practical methodology for implementing routine based programming within daily routines (Brown, F., 1987). Within this paper she advocates looking beyond the task analysis of the observable steps in routine based programming. There are many less observable behaviors that are critical for the routine to be completed in the natural environment. Core extension skills must be included. These are skills such as initiating, preparing for, monitoring the quality of, monitoring the tempo of, problem solving, and terminating the routine. There are also related skills within routines which will enrich its performance. These include the skills of communication, social behavior, and preference.

Systematic Instructional Procedures

During the instruction on specific objectives systematic procedures must be in place which allow for the application of specific prompting procedures to maximize the student's independence while minimizing their errors. Although many programs have developed specific prompting hierarchies (Freagon et al, 1883b; Fredericks, et al., 1980) others are beginning to recognize that the type of instructional prompts required vary from individual to individual (Donnellan & Neel, 1986; Wilcox & Bellamy, 1987a). The guiding rule should be selected by the least intrusive prompt, individually determined, that will result in maximizing student learning. Although the levels of prompting may be individually determined it is critical to have a consistent form of recording the prompt levels to facilitate accurate communication between all parties involved with the students.

Systematic techniques must also be employed to fade the assistance provided over time to increase the student's independence. Instruction should occur frequently enough to facilitate learning. A variety of instructional arrangements should be included with opportunities to participate in individualized instruction, small group and large group activities. The amount of participation will also vary as some skills are observational in nature while others require extensive engagement.

Extensive inservicing of all those persons involved in the instructional process should be provided to ensure the student is receiving consistent, high quality educational instruction. Instructional programs should be clearly written and should contain all the elements necessary to ensure consistent instruction across trainers.

Systematic Monitoring of Student Progress

It cannot be assumed that a child will learn skills by being merely exposed to the skills over time and in different setting. Many children with severe challenging needs will often make slow and at times inconsistent progress. Provisions must be in place to evaluate and revise programs on an ongoing manner. Systematic monitoring of progress is necessary to determine if the intervention strategy is effective, if the skill has been acquired, or if adaptations to the program may be necessary to facilitate acquisition. Systematic monitoring can also prevent a child from remaining on a program once he has acquired a skill or is ready to begin learning to demonstrate the skill at a more difficult level.

There must be in place program standards and ways to measure all program goals (Wilcox, & Bellamy, 1987a). There are now available excellent resources which describe techniques for carefully tracking and charting progress of skill objectives (Fredericks et al., 1980; Irmer, Odenkirk, & Glasenapp, 1981; Wilcox, & Bellamy, 1982). Professionals must be thoroughly familiar with these techniques as it often becomes the responsibility of the teacher to manage the training of others involved in the direct instruction on the techniques for successful systematic data based instruction. Safeguards must be in place to ensure that the learner's programs are reliably and effectively administered (Fox et al., 1986). The data should be taken on a regular basis. Changes in programming should be based on the data gathered. Data methods should be as unobtrusive as possible and acceptable to the environment in which the skills are monitored. Special care must be taken in community environments.

Implementation of Adaptive Strategies

The need to consider adaptation to programs must be individualized. The process for systematically accessing the need to build in adaptations where necessary was first discussed in an article by Brown and his associates in a paper presented in 1979 (Brown et al, 1979). It briefly stated that if a child may not be able to be completely independent in the task, then providing adult or peer assistance, simplifying the activity to enhance independent performance or adapting the environment should be considered. It goes on to offer that it fits the goal of normalization if one considers that most adults are both independent and interdependent. Most adults

depend upon friends, family and environmental aids to some extent in their daily routines. It is better that a child be allowed to partially participate than to be excluded entirely from an activity or an environment due to inability to perform the task independently.

The need for adaptations is determined by a "top-down" approach to the individual's needs and abilities. Environments in which a student should learn to function are first identified (York & Rainforth, 1987). The subsequent steps in determining adaptations include first identifying the critical activities, then identifying difficult steps, brainstorming alternative strategies, and selecting the appropriate strategy (Wilcox & Bellamy, 1987b). Baumgart (Baumgart, Vincent, Falvey, & Schroeder, 1982b) described an eight phase strategy which utilized adaptations to generate functional school and nonschool curricula for severe handicapped students.

It is important to continually monitor the need for and the effectiveness of the adaptations. It must be ensured that it makes maximum use of the persons competencies; that it is acceptable to the individual and significant to others, and that it is acceptable to the community. If the adaptation is successful it is important to consider if it may be applicable across a number of activities.

As educators it is also our responsibility to advocate for accessible community and school environments. Classrooms such as Home Economics rooms, Shop, Art rooms, Computer and Typing rooms and Gymnasiums must be accessible. As much as possible equipment in these classrooms should also be adapted to accommodate individual needs. There are currently available a wide array of adaptive devises to facilitate the operation of battery-operated toys and electrical

appliances.

Community-Based Programming

For a skill to be considered functional it must be taught in the environment in which it would naturally be used. More and more it is being recognized that instruction of educationally relevant skills can and should occur outside the confines of the classroom walls, not only for children with severe challenging needs but for all children (Baumgart, & Van Walleghem, 1986; Wilcox, & Bellamy, 1982). There is a variety of ways in which instruction can be organized. It can occur only in the school; in the school and then the community; concurrently in both; or only in the community.

Community-based instruction should occur in a regularly scheduled basis rather than in a field trip format. Sailor, (Sailor, Halvorsen, Anderson, Goetz, Gee, Doering, & Hunt, 1986) one of the strongest advocates of community based programs recommends that there be a five phase linear model of time spent in the community which extends from the age of 3 to 6 in which it is recommended that a child spend 10% of his time in the community; 25% of his time in school; and 65% of his time in the classroom. Other professionals would argue that it is more critical to maximize the time the child actively engages in interactions with his age peers. In a survey conducted by Meyer (Meyer, Eichinger, & Park-Lee, 1987) strong support was given to the item which advocated community programming. In the item it was recommended that instruction outside the school should be at least twice monthly for children ages 3 to 8; twice weekly for those aged 9 to 12; and 3 to 4 times a week for children aged 13 and up. Wilcox

and Bellamy (1982) recommended a minimum of 35% for high school aged students The decision must be individualized to the child and significant other's preferences.

In their chapter on community-based instruction, Sailor and his associates present excellent strategies to overcome some of the obstacles to community based programming such as transportation, scheduling staff, liability, administrative concerns, placement options and various other concerns and considerations necessary to account for when planning a child's program. Baumgart and her colleagues also offer some excellent strategies (Baumgart, & Van Walleghem, 1986).

For some skills required in the community it is difficult to simulate them in the classroom setting. In these cases, the child must be taught the skill in the community. It is critical that community based training occur in the child's own community. If the child is attending a school outside his own community then the skill must be demonstrated in his own community for the learning to be considered mastered (Freagon et al., 1983). Instruction in the community must be unobtrusive, natural, in appropriate size groupings, and utilize appropriate behavioral management strategies (Wilcox et al., 1987). All aspects of the training which call attention to the student, trainer, and data taking should be minimized. Family members should be directly involved in training whenever possible as they are the persons who will ensure the learning is maintained outside of school hours (Fox et al., 1986). Community participation provides the student with more than just the opportunities to acquire task specific skills. It also allows the student the opportunities to interact with

a variety of people and set the potential for extending the child's network and the opportunities for forming personal relationships and friendships (Doering, & Culp Hunt, 1983).

Student Preferences

Wilcox describes choice as the experience of autonomy both in small everyday matters and in large, life defining matters. Personal choices expresses the individual identity (Wilcox & Bellamy, 1987a). It is critical to consider student's preferences when selecting skills to instruct. Many required skills can be acquired across a variety of activities. Student preferences can be determined by observing the student, asking significant others in his environment, offering choices directly to the student or by reviewing past records (Browder, & King, 1987). It is important not to make too hasty of a decision when attempting to determine choices. Often the initial reaction to exposure of something new may be disliked due to the unfamiliarity of the activity or it may be positive because of the novelty factor. Choices should be offered on several occasions before determining preference.

Focused effort is necessary to increase the number of choices or options available to students with severe challenging needs. Houghton (Houghton, Bronicki, & Guess, 1987) in his study on choice making found that even though some staff in classrooms examined were aware of the importance of choice making as an initial communication strategy, very few of the naturally occurring opportunities were used to acknowledge choices subtly expressed by students, nor did staff present choices when the opportunities functionally arose. McLean and

his associates (McLean, Snyder-McLean, Rowland, 1986) also emphasized the critical importance of the recognition of subtle choice communication as critical in the development of generic interactional skills. Wilcox and Bellamy further substantiated this need. They proposed that without a focused effort to increase the options that choices present, and without a concentrated effort to provide students with severe challenging needs the power to be decision makers, the students will become passive and have no way or need to express themselves. Students will also not have effective ways of communicating when they find a situation undesirable (Wilcox & Bellamy, 1987a). The authors have developed a picture based method of facilitating choice making in their activity based catalog (Wilcox & Bellamy, 1987b).

The option to express one's choice should not be limited to the choice between activities. Choice should be an integral part of a student's day and can be incorporated into many natural routines. Choice will allow the student to effect his environment in a positive way. It will allow him/her to be perceived as a valued person in his environment. Many adaptations can be created to facilitate choice with children who are nonverbal.

Peer Validation

As more and more children with severe challenging needs are becoming integrated into the regular classrooms and into their neighborhood schools, peer interactions have progressed beyond the concepts of peer buddies and peer tutors. Peers are becoming lasting friends. The McGill Action Planning System (MAPS) (Forest & Snow,

1986) was built on the belief that good schools educate all students. It views the student body as a kaleidoscope in which everyone fits into the pattern. Joint meetings are arranged with parents and family members and the instructional staff to plan the child's year. School peers are invited to attend the meetings from the initial planning stages. The meetings are designed to facilitate extending the parts of the "kaleidoscope" the child touches and influences. This is accomplished by first exploring the parents' dreams for their child, and then briefly exploring their nightmares for their child. It is important for parents to have this opportunity to express clearly what they hope for their child in the future and to feel free to discuss the things they most fear about the future. Ideas are then generated about who the child is, what his strengths are, and what his needs are. The peers are very active participants and are often able to see the child as a whole person much better than professionals. They view the child's needs as the same as their needs and provide many creative suggestions for activities and programming needs. They are also very creative in their solutions to required adaptations. The peers have a "lets get on with it" attitude and readily offer support for the child across activities and environments. This system increases the peers involvement and commitment to the individual and often results in more lasting friendships being formed.

Summary

The current literature reveals that there is a growing awareness on the part of educators to be accountable for the educational

programs we are providing children with severe challenging needs. The needs of the children are great but there are many positive approaches to educating these children, which involve respecting the worth, value, and dignity of each individual child. The focus has evolved into the development of individualized education plans designed to assist the child in developing to their greatest possible level of independence. The next chapter will explore curricula which have been developed in the last decade. The research which has been cited in this chapter and in Chapter Two has come to the forefront in the last decade as well. The curricula will be reviewed with an eye to discovering how the trends in literature are reflected in the curricula.

CHAPTER 4

CURRICULUM DESCRIPTIONS

Curricula could be narrowly described as a compilation of skills to be taught. Most curricula extend beyond a statement of goals and expected outcomes of education. Curricula should reflect the educational values of the educators, their school districts, the parents, and the student's community expectations. Curricula afford educators the opportunity to translate values and expectations into practical educational programs (Wilcox & Bellamy, 1987a).

In addition to delineating the skills, curricula will often suggest the order in which the skills are to be taught, suggest teaching strategies to facilitate implementation and establish a criteria for judging the student's performance of the skill.

The previous chapter reviewed the values deemed essential by prominent researchers and project administrators. The indicators implied that as educators we should value programs whose curriculum content provides opportunities for learners with severe challenging needs to develop skills which will afford them maximum independence in adulthood across a maximum number of critical environments. It also indicated that the curricula should be longitudinal in nature, teaching skills necessary to equip the student for transitions, include all adult domains, provide methods for monitoring progress and determining skill selection. Above all the curricula should reflect the values of normalization and individualization. As such the curriculum should teach the skills required to participate in their

local homes, schools, communities and work places.

In this chapter, sixteen curricula are reviewed. All but one of the curricula is known to be currently used in at least one school in Northern Alberta. The curricula were selected based on a development date within the last decade. A variety of curricula were selected in an attempt to provide a diverse sample for the later application of the instrument developed for the purpose of this study. For this reason some of the curricula selected were designed as locally based curriculum. Others have been designed with more universal implementation in mind. Some of the curricula encompass all of the critical domains, while others have been designed to encompass only one major domain. All but one of the curricula has been designed specifically for students with moderate to severe challenging needs. Some are designed to serve a specific age group while others encompass the entire school age population. For the ease of presentation, the curricula have been arranged in the order in which they were developed. In the case of duplication of years, they have been ordered alphabetically by author's name. The review is designed as an attempt to familiarize the reader with the suggested purpose of the curriculum and to describe the main features of each of the curriculum, their methods of organization and their methods of selecting and monitoring progress.

Programmed Environments Curriculum

The Programmed Environments Curriculum (Tawney, Knapp, O'Reilly, & Pratt et al., 1979) was initiated during the early 1970's when the movement for the right to an education for children with severe and

profound challenging needs was just gaining a firm ground. The curriculum was developed in conjunction with a teacher training program to develop models of instruction for children with severe challenging needs. In addition to the curriculum, instructional modules, a video training tape and module post-tests, and forms of data are available. The curriculum was designed for and field tested with children "generally considered to manifest moderate, severe, or profound developmental retardation". It was based on a developmental conceptualization in which skills were targeted that are typically learned by normal children from birth through 3 years of age.

The early portion of the project involved the validation of the right of these children to an education. The validation involved training teachers, providing direct instruction to children and developing a data-based system to document the extent of which the children benefitted from the instruction. Data was collected on 300 children. This curriculum was one of the first curricula to recognize the need for teachers to have clear objectives, documentation of alternative strategies employed, and records of child performance in order to ensure "accountability" to the parents of children with severe challenging needs.

The curriculum developers were cognizant of the reality that no curriculum could adequately meet the diverse needs of all the children with severe challenging needs. Thus the programs were designed as models to assist teachers to generate curricula individualized to the child's needs. The programming model is conceptualized on an errorless learning model in which the conditions of instruction were carefully arranged to accommodate the learner. Intensive direct

instruction in individual or small group sessions, 10 to 15 minutes in duration was recommended.

The curriculum includes an assessment tool in the form of a screening classroom observation form, organized by and sequenced in the approximate order of acquisition. The program areas included: language, cognitive, motor and self-help skills.

Each program contains a program overview which described the rationale for the functioning of the skill, a description of entry behaviors, suggested adaptations for sensory or motor impairments, the behavioral objective, and suggestions for generalization. Instructional procedures for teaching each skill included specified strategies and performance criteria and suggestions for modification if a child failed to meet the criteria. Forms for recording response were standardized with the inclusion of suggested data sheets. Options on materials, cues, concepts, and responses were also listed.

This curriculum did recognize that skills did not develop in isolation and grouped behaviors across content areas into two categories: that of response building, which included learning and producing the motor components necessary for motor and self-help area; and stimulus shaping, which included the teaching of skills necessary for differential responding to specific stimuli across the language, social and cognitive areas.

Supplementary information is included with the curriculum to assist the teacher in understanding the basic tenets of the curriculum and to facilitate Individual Educational Program development. The curriculum stressed the participation of the teacher in determining program needs in addition to district diagnosticians and the

importance of prescriptive types of criterion referenced assessments which assisted in determining what skills to teach next. The role of the parents, in addition to the professionals, in the determination of long and short term objectives is also discussed. The necessary components of an IEP are carefully outlined.

A Longitudinal Listing of Chronological Age-Appropriate and Functional Activities for School-Aged Moderately and Severely Handicapped Students

The authors (Ford et al., 1980) described and developed longitudinal curriculum strategies which they based upon their commitment to the following principles: 1) that each handicapped individual should be provided opportunities to participate in some capacity in chronologically age-appropriate functional activities; 2) that the participation should occur in a wide variety of natural environments; and 3) each curriculum should be organized into domains which represent the child's life-space. The curriculum was designed as a guide to assist teachers and parents in identifying and prioritizing appropriate instructional activities and to assist in developing individual educational plans.

The curriculum is organized according to the student's school placement. The categories are Elementary School; (ages 5 to 12); Middle School (ages 12 to 15); and High School (ages 16 to 21). The child may be involved in the same activity at the different levels but the skills which are emphasized will change to ensure the child is acquiring age-appropriate skills.

The emphasis of the program is on teaching skills in the natural

environment in which they occur. The domains accessed are: the domestic, the community recreational/leisure, and vocational. Each of the domains is further subdivided into subenvironments. The domestic domains includes: personal health care, housekeeping, clothing care, and meal preparation. In the community domain restaurants, transportation, coin-operated machines, other community facilities, public bathrooms, and general problem solving skills are considered. The recreational/leisure domain is arranged in a checklist format under the heading of home/indoors, home/outdoors, school, community, and vocational. The vocational domain looks at skills through a Work Adjustment Inventory involving specific work skills and the actual job description. Functional activities are prioritized and then skills are targeted and adaptations and related skills are verified.

This curriculum development approach suggests the utilization of natural environments, the parents, printed materials, current teacher practices, and student behaviors as sources of information when determining skills to be targeted. The approach focuses on a longitudinal educational program which assesses the needs of both the current and future environments. It focuses on the individualization of program sequences to the child. The authors stipulate that the student dictates what should be taught. The emphasis is also on the use of a structured approach to determine any necessary adaptations to instruction for the child to allow at least partial participation in desired activities. These adaptations could be in the form of instructional procedures, sequences, and materials to allow maximum participation.

Preceding each section, a brief philosophy is presented which

outlines the major considerations necessary regarding the curricular content at each age level. The curriculum does not propose specific teaching methods, materials or content priorities. The authors feel they must be individually determined.

The Teaching Research Curriculum for Moderately and Severely Handicapped: Gross and Fine Motor.

The Teaching Research Curriculum for Moderately and Severely Handicapped: Self Help and Cognitive

The Teaching Research Curriculum (Fredericks et al., 1980) was compiled from individualized prescriptions for students which were then field tested on other students and found to be effective. The teaching methodology for use of the programs has been standardized as the Data Based Classroom. Teachers have been trained in its use. The purpose of the curriculum is to provide the breakdown for skills appropriate to be taught to handicapped children. The skills selected are skills a nonhandicapped child would acquire in the first six or seven years. The skills are sequenced in a developmental order.

The curriculum is organized into curricular areas which include: gross motor movements, fine motor movements, receptive language, expressive language, self-feeding, dressing, personal hygiene, table skills, personal information, reading, writing and number skills. Each of the skills in the curricular areas is task analyzed and broken down into subcomponents of phases and steps. A terminal objective is specified for each behavior. Prerequisite skills are also designated. Suggestions are provided with each task analysis for materials to be used and possible necessary modifications for sensory

impaired students. Teaching notes are included to provide information about the order in which the skills are to be taught and any additional information deemed necessary to ensure effective instruction.

The curriculum provides a methodology for assessing placement in the curriculum in each of the areas. The decisions are usually based on the next occurring skills in the hierarchy after the child's last success at performing the terminal objectives for each area. Procedures for conducting a baseline and for determining where to begin teaching a selected skill are also carefully explained. A system is also available to post-test the skills and to test for maintenance of learning after instruction has been terminated.

The curriculum authors strongly suggest the use of a multi-disciplinary team approach to the education of children with moderate and severe handicaps and include a partial list of "red flags" to alert teachers when they may need to seek the expertise of others.

The curriculum is designed for a data-based decision model which involves trial by trial data taking, daily updating of level of instruction, rules for making program changes and standardized data sheets and marking system. The levels of prompting provided are often included within the phases and steps. Cues, correcting procedures, reinforcement procedures and presentation of the materials is standardized across instructors to ensure consistency of the data taken. A system of branching strategies does provide for some individualization of task analysis. Most of the programs are designed to be taught in isolation.

Alberta Education: Trainable Mentally Handicapped Curriculum Guide

The Trainable Mentally Handicapped Guide (Cameron et al., 1982) recommends the use of a multi-disciplinary team to ensure the child functioning within the trainable level of cognitive functioning receives an appropriate education. Assessment is viewed as an ongoing process that involves continued evaluation and revision of training as required. An individual intellectual assessment, an academic functioning assessment, social functioning/behavior and information from professionals and paraprofessionals are viewed as necessary components of program planning. The curriculum also recognizes the parent as a source of knowledge regarding their child.

The curriculum guide is designed as an integrative model which integrates computation, communication and living vocational skills. A methodology which utilizes partial application of the skills taught at functional times to increase the meaningfulness of the skills is advocated. The entire community is considered when planning programming. In contrast to adherence to the developmental hierarchy of skill achievement and the concept of readiness is also advocated. Individualization of instruction, utilization of generalization principles, day to day programming, establishing of awareness of routines, peer tutoring and integration are considered necessary as well.

The curriculum is divided into ten sections which include: understanding of self and others; travel; health; safety, world of work, home management, money management, motor and physical activities, fine arts and personal expression, and citizenship and individual responsibilities. Six functioning levels are designated

within each section. The levels are hierarchical in nature. Objectives are delineated in each level. The objectives are not behaviorally defined but tend to be generic in nature. Teaching strategies are suggested for each objective and materials or resources are included for some objectives. An overview of the sections and levels is included in an appendix.

An additional two sections, Computation and Communication, are included separately. These sections are again arranged in six levels. The Computation section includes four units of instruction: shapes and positionals, number, operations and measurement. The Communication section includes: receptive communication, viewing, expressive communication, functional reading, handwriting and spelling. The intention is for the skills to be integrated with the Living/Vocational Skills section. An overview of all the objectives, a student/profile checklist, and resource suggestions are also included.

Alberta Education: Dependent Handicapped Curriculum Guide, Revised Edition

The philosophy of the Dependent Handicapped Program, (Cameron, et al., 1982) outlines that the specific aim of education for the dependent handicapped student is to make the student less dependent by increasing his awareness and control of his environment. The targeted population includes "those persons with severe to profound mental handicaps and those with severe physical disabilities or intense medical needs". A transdisciplinary approach is recommended in the assessment, education and treatment decision making process.

The guiding principles of education advocated in a curriculum include: a recognition of the dignity of the student; a continued reliance on the developmental pattern as a reference base; the implementation of age-appropriate curriculum within a setting which is as natural as possible; and the use of a systematic teaching approach.

The curriculum guide is organized into the areas of awareness and socialization, communication, concept formation, motor skills, self-care skills, purposeful activities, community skills and recreation. Skills are selected in each of the major areas. The objectives are delineated within each area and suggested strategies and materials are provided. The objectives are described in generic terms and are not task analyzed. The areas of instruction are discrete with little overlapping. The objectives are taught in isolation.

A checklist is provided to chart the student's progress over time with a five point designation ranging from "not accomplished" to "transfers skill to natural environment". Suggested assessment tools to utilize in conjunction with the checklist are provided in the appendix. In addition, a glossary of psychological, educational, physical and medical terms have been included.

The Teaching Research Curriculum for Handicapped Adolescents and Adults: Assessment Procedures

The curriculum presents strategies for identifying skills that each individual adolescent or adult would need to function as independently as possible in his current or future environment, including his post-school environments (Peterson et al., 1983). The curriculum is adaptable to persons demonstrating moderate to severe

challenging needs. The Assessment Procedures were developed as an assessment of skills. They are useful in assisting to determine needs. Supplementary manuals have been developed which task analyze the skills and provide teaching strategies.

The school, home, community and vocational environments are examined. The domains include: social, independent living, leisure time, and vocational and associated work skills. The social domain is further broken down into curricular areas of communication, socialization, and sexual awareness. Independent living includes personal hygiene, dressing and clothing care, housekeeping, shopping, money management, cooking and community mobility.

The skills are assigned priorities by first looking at the environments and determining the skills required in each environment and then predicting the student's most likely future environments. The student's skills are then assessed in those environments and the strengths and needs are determined from a discrepancy analysis.

A major emphasis in the curriculum planning is on a parent/teacher partnership. The curriculum advocates the teaching of generic social skills across all domains. The designation of work associated skills is unique to this curriculum. It assists in providing a common reference ground for schools and potential employers. Assessment of skills in isolation can often lead to instruction of skills in isolation. The curriculum has attempted to prevent this somewhat by incorporating the use of whole task instruction in their training format. The use of nondirective cues and whole task instructional cues marks a move away from the more structured step-by-step instructional cueing system employed in their

elementary curricula.

Individual Community Life Skills Profile System for Severely Handicapped Students

The Dekalb County Special Education Association expressed a commitment to providing community-based instructional programs for all students with severe challenging needs. The authors (Freagon et al., 1983) then viewed the need to develop the longitudinal assessment tool which would utilize the domestic, community, vocational and recreational/leisure environments. The resulting profile is based on the perceived demands placed upon severely challenged students for independence and/or partial participation in their individual current and future environments. The assessment is not sequentially or developmentally based.

The assessment delineates activities and skills that are deemed essential to independent adult functioning and current participation in natural integrated environments. As such, the profile is designed to be utilized to access the level at which an individual student is currently functioning, assist personnel in determining additional skills required, maximize adult participation, productivity, and independence in multiple environments, delineate instructional environments and monitor and evaluate the student's progress while acquiring the necessary skills. The environments assessed were determined by examining not only the Dekalb, but also the local neighborhoods of students who were bussed into Dekalb's School from neighboring communities. The skills are then locally based. Although this curriculum is not designed as a universal curriculum the generic

skills are readily expandable and thus would provide other school districts the basis from which to locally reference their own curriculum.

The domains include the domestic, recreational/leisure, community, vocational, and interactions with nonhandicapped persons. The activities have been delineated in a "generic" rather than a "specific" manner to provide for critical skills acquisition and systematic generalization training. This also assists to facilitate application as a profile across similar school populations. The training focuses on functional, age-appropriate, longitudinal skills which will maximize community participation. Recreation/leisure activities are coded by school-age level to ensure age-appropriateness.

A unique feature of the curriculum is that it has been designed with the multi-disciplinary team approach. As such, it provides a common base between educational personnel, including teachers, speech clinicians, OT's and PT's to discuss and monitor the child's progress. The communication skills and the physical skills required to complete a task are included directly into the generic task analysis. This also assists instructional staff to be aware of the need to integrate these skills into daily routines. Parent participation is enhanced by their early involvement in the planning process and by the locally based qualities of the curriculum.

A second feature of the curriculum is that it is designed to monitor student progress over a number of years and provide space for both fall and spring assessment information. It also provides space for the recording of any adaptations in sequence, materials, and/or

method. A common marking system has been developed to ensure a consistent form of marking levels of independence. This facilitates communication across instructional environments. The curriculum has incorporated a system to systematically monitor the types and amounts of interaction the student has with his peers as well. Procedures for use of the curriculum are clearly outlined and examples of the profile application are provided. A video explaining the rationale for the development of a community-based program of instruction is also available.

Inventory Process for Social Interaction (IPSI)

This is the first of five volumes on Project Reach (Regular Education For all Children With Handicaps). The inventory for social interaction (Doering, & Culp Hunt, 1983) "describes an approach for assessing and programming for the social skill needs of students with severe disabilities". The authors advocate that the acquisition of these social skills will increase the degree in quality of the child with severe challenging needs participation in their school and community environments.

Social skills are categorized into three domains: social exchange, social rules and body posture. Social exchange is subdivided into the components of initiation, reaction, maintenance and termination. The social rules are learned by students as a practice of social exchange components. Body posture relates to mannerisms and body postures which may interfere with social exchanges. Community and classroom environments are assessed through a process of ecological inventories. Neighborhoods, schools and

community sites near the school are assessed. Samples are provided. The social skills of the student in the classroom and nonclassroom environments is then observed. Assessment information from auxiliary staff is ascertained. In addition, information is obtained from a parent/teacher interview. Prior to the interview, parents are requested to fill out forms indicating their normal weekday schedule, weekend schedule, and any additional scheduled activities. This not only looks at the activities but at such things as the child's performance level, whom he participates with, and the environment. This in effect provides an inventory and a discrepancy analysis between the child and others in the family. Parent participation in the planning process is very active.

Strategies are provided to develop and implement individual educational plans that incorporate a training of basic skills within and across critical activities. Basic skills are identified within the four areas of: social, communication, behavior and physical. A strong emphasis is placed on the fact that basic skills cannot be acquired in isolation. To be meaningful and motivating they must be acquired in the context of functional activities. Critical activities are identified for the child. Present and future critical activities are considered. The skill needs and the critical/functional activities are then fit into a matrix. Both the basic skill and activities are written into the IEP objectives.

Several examples of the actual implementation of the IEP objectives into actual instructional programs are provided across a variety of activities in the school, home, community and work environments. Models for the integration of severely disabled

students into regular public and community settings are described. Inservice ideas and peer programs are discussed. Concrete suggestions for the difficult area are also included.

Curriculum ideas for leisure, community, domestic and vocational functional activities are provided. The authors developed this chapter as a resource for teachers to expand their awareness of where, how, and what social skills should be taught.

Task analysis are provided of possible curriculum activities across a variety of leisure skills, community resources, domestic activities and vocational activities. Suggestions are provided with each task analysis of social skills which can be incorporated into the activity. Sample observation and evaluation forms are included in the appendix.

Leisure Education for the Handicapped: Curriculum Goals, Activities, and Resources

The authors (Bender, Brannan, & Verhoven, 1984) of leisure education for the handicapped assert that although the importance of leisure education for the handicapped persons is now recognized, extensive efforts need to be made to incorporate leisure education experiences in school curricula for handicapped students at both elementary and secondary levels. They also suggest that leisure does not need to be a separate curricular subject area. Many of the leisure related concepts, including attitudes and social skill development and activities are currently being taught, but in a manner that is not clearly related to helping handicapped students develop

positive leisure life styles. The authors suggest the employment of leisure concepts and activities in various subjects and courses allows for the meaningful application of "academics" to real-life problems facing the handicapped.

The authors developed a taxonomy of leisure skills following eight major curricular areas: Play and Games, Sports and Physical Development, Camping and Outdoor Activities, Nature Studies/Appreciation and Development, Hobby Activities, Craft Activities, Art Activities, Educational, Entertainment and Cultural Activities. The [illegible] subdivided into content areas and third subcategory identifies specific leisure activities or experiences. A complete listing is presented.

The authors contend that in order for individualized programs to be effective, they must take into account the learning characteristics of the handicapped student and include goals and objectives that reflect preparation for life adjustment in areas such as self-maintenance, home, career and leisure. A listing of learner needs and related curriculum modifications is presented. A matrix approach to leisure time activity into the total school curriculum is detailed for both elementary and secondary schools. Samples are provided.

Leisure Learning Units are explored as a delivery system. These units are designed to assist educators and related professionals to integrate leisure education concepts and activities into their total school curriculum. The units employ nine major principles of development: criterion referencing, task analysis, transportability, flexibility, individualization, cost effectiveness, unit basing, skills training to self-actualization continuum, and developmental

sequencing. Each Leisure Learning Unit contains information pertaining to: the major content area, the subcontent area, activity, overview, goal statements, assessment methods and suggestions, lead-up strategies, follow-up strategies, short term objectives, task analysis, adaptation/modifications, resources, and integrative learning chart. Exemplary Leisure Learning Units are presented.

Skill-Streaming the Elementary Child: A Guide for Teaching Pro-Social Skills

Skill-streaming in the Elementary Child (McGuinnis & Goldstein, 1984) was designed to assist teachers in the instruction of complex social and personal skills. Its intended purpose is to shift the focus of attention away from behavior problems and classroom disruptions to the constructive achievement of prosocial skills necessary to facilitate placement in integrated environments. This book provides teachers of mainstreamed and special education classes with strategies and concrete techniques for group instruction in pro-social skills.

The structured learning process is based on a psycho-educational and behavioral approach for providing instruction. Through this approach the authors have developed strategies which include: modelling, role playing, performance feed back and transfer of training. Each skill to be taught is broken down into behavioral steps and then the four strategies are applied. This focuses instruction in natural environments where the skill is actually needed.

The goal of assessment, as described by the authors, is to arrive

at a teaching prescription tailored to the individual skill assets and deficits of each child. Methods of assessment include; interviews, self-reports, naturalistic observation, analogue observation, behavior rating scales, and sociometrics. A student skill checklist, a teacher skill checklist and a chart to assist in grouping the students is included in text. The ratings are a five point scale ranging from "almost never" to "almost always". In addition, progress summary sheets and a student mastery record can be maintained for each child.

The skills are organized into five groups which include: classroom survival skills, friendship-making skills, skills dealing with feelings, skill alternative to aggression, and skills dealing with stress. Skills do not need to be taught in the order in which they are presented but they should be assigned a priority rating according to those relevant to the immediate needs of the student. Each skill is task analyzed into specific behavioral steps. The purpose of many of the skills, especially those dealing with alternatives to aggression, is to teach an impulse control strategy. This will assist the student by giving him added time to recall the routine and the remaining steps. In addition to the task analysis, suggested situations for practice and a comments section are provided. The comments section provides information on teaching strategies and portions of skills which may need to be emphasized. The methodology used in the program lends itself well to adaptations necessary for children with moderate to severe challenging needs. The language can be shortened and simplified, picture cue cards, videos and social skill games can be utilized. The procedures incorporate similar behavioral technology often utilized in other curriculum.

A soft covered booklet is available which contains the blank program forms corresponding to those utilized in the text descriptions. Skill Streaming the Adolescent (Goldstein, Sparfkin, Gershaw & Klein, 1980) is also available for the adolescent learning. The structure is a similar one. A sixth group of skills, planning skills, has been added in this addition.

Teaching Autistic Children: A Functional Curriculum Approach

Innovative Model Program for Autistic Children and Their Teachers (IMPACT)

The author's purpose (Neel et al., 1983) for the curriculum is "to enable autistic children to participate in the environment to the maximum degree possible through improved communication and independence". The curriculum is designed for students with autism or autistic-like behaviors and for students with severe developmental disabilities. It is useable for students ages 5 to 21.

The assessment is designed to measure the manner and type of functions the student has in the domain areas of: communication, transition, retreation/leisure, and self-help. The assessment lists the forms the student uses across environment. The ecological inventory measures the degree of restriction for each child which includes the number and types of environments that are currently assessed and the amount of supervision and/or assistance required in each of the settings. Detailed sample inventories of both the school and home environmental inventories are provided.

The authors list the following guidelines when selecting skills or behaviors to be taught: currently functional, can be used in

multiple environments, is longitudinal, is age appropriate, is universally understood, and reliably produces the desired effect. The focus is on current and future environments when determining needs.

The instructional strategies focus on the teaching of skills in routine-based programs. These programs are determined based on individual needs. The program stresses development of behaviors that achieve a desired effect for each individual child. There is not a rigid adherence to a particular form, the determining factor is how well it functions for a child. The instruction utilizes a nonhierarchical range of assistance which must be individually determined for each child. Instructional procedures, data collection and pupil evaluation is described in detail. A set of decision rules for making program changes are provided as a guideline. Suggestions are also provided to assist with scheduling the classroom day.

Parent involvement in the inventory process, goal selection, planning for future environments, and actual goal implementation across environments is highlighted. A parent guide to understanding the curriculum and an explanation of the need to shift to functional programming is provided in the appendix.

Research on the effectiveness of the program strategies for goal selection and instruction has been conducted in both integrated and segregated environments and the results have been very promising (Donnellan & Neel, 1986). The study was conducted over a three-year period and demonstrated substantial student gains.

Niagara South Board of Education: Peer Tutoring Program, Physical Educational Opportunity Program for Exceptional Learners: Peer Tutoring Handbook and Task Analysis Sheets (1985)

Phoenix Union High School District: PEOPEL Physical Education Opportunity Program for Exceptional Learners, Teacher Guide (1981)

The PEOPEL Program (Irmer et al., 1981) was developed in response to the growing movement of educating children with exceptional needs away from segregated settings. It was founded as a methodology to promote the principles of integration, normalization and age-appropriate learning opportunities. The authors proposed that through the process of shared learning experiences, the exceptional learners and senior secondary students, a promotion and development of the positive aspects of integration would occur. Individualized learning programs were developed by peer tutors who worked with exceptional learners under the guidance and direction of the physical education staff. The authors report a dual benefit from the program: significant improvement in terms of physical and social development of the exceptional learners, and increased opportunities for peer tutors to foster leadership, decision making and organizational skills. The Niagara South Board of Education (McPherson & Carmichael, 1985) recommended the peer tutoring concept be expanded into other areas of the exceptional learner's curriculum. Reported areas of expansion include: woodworking, measurement, communication, speech and language development, prevocational training, daily living skills, and typing.

The Peopel Teacher's Guide contains 36 units of instruction which are applicable to junior and senior high school students in physical education. The exceptional learners include: educable, emotionally

handicapped, hearing and/or vision impaired, multi-handicapped, physically handicapped and specific learning disabilities. An abstract precedes each unit and gives the reader basic information concerning the content within the specific unit. Sample units include: dance, gymnastics, recreational activities, self-improvements maintenance, and team sports.

Each unit of instruction is divided into four main sections: comments and activity experiences, performance objectives, task analysis and student classifications. The performance objectives are stated in precise behavioral terms. There are three types in each unit: cognitive (knowledge), motor (skills), and affective (attitudes). The task analysis are developmental and sequential.

The appendices include blank data sheets, some additional resource materials for units, a series of warm-up activities, and Peopel student evaluation forms to monitor progress and to demonstrate the validity and reliability of the project.

The program is unique in its development of a structured, accredited peer tutoring course for nonhandicapped peers. The objectives for the nonhandicapped peers and their goals are also clearly stated and monitored. An introductory course is provided for each tutor prior to working with the exceptional learner and to provide them with the skills, knowledge and attitudes contained within the program. A peer tutoring manual is available. Additional task analysis have also been developed by McPherson and Carmichael (1985).

Project EnTrans: A Model for Transition of Preschool Children with Handicaps into Public School

Project EnTrans (Blair-Thomas, Guida, & Wilson, 1986) was developed as a method of examining the social behaviors, work skills, and self-management skills which would influence a child's success in their educational placement. It was originally designed to facilitate the transition of children from preschool to elementary school, but it is applicable for children entering and participating in the early elementary years.

The model is designed to assist the sending preschool teacher to determine priorities for intervention during the last preschool year. It will also assist the receiving elementary school teachers to quickly pinpoint areas of concern for maintaining a child's present placement or for improving the present placement.

Project EnTrans examined the generic skills required in a resource room, self-contained classroom, Kindergarten and the first grade. The domains considered include: classroom rules, work skills, self-management, communication and social behaviors. The domains are further broken down into the skills deemed essential in each area.

The Project supports the concept of programming for the "next" environment. The checklist is also accompanied by teaching strategies for intervention. The administration time for the assessment is suggested as 10 minutes per child. A marking key is provided. The assessment form also provides a comment section where individualized needs or circumstances could be noted.

The High Point TMI Curriculum The Washtenaw Intermediate School District, Ann Arbor, Michigan

The High Point Curriculum (Bonczyk et al., 1986) was designed in response to recommendations from Steering Committee which was designed to review the Trainable Program Study. The recommendation was to design a core curriculum, combining the young adult and the intermediate/primary curricula, and to expand the concentration on social, vocational and community living skills. The target population is trainable mentally impaired and severely mentally impaired students.

The curriculum is organized in color-coded sections under the domains of: social skills, motor and recreation, communication, functional academics, self-care, daily living, preoccupational, and occupational skills. Each measured domain area has subheadings that serve as instructional objectives. These are further divided into the areas of Performance Objectives.

The curriculum has incorporated a methodology for tracking longitudinally student's progress on the Performance Objectives up to 8 years on each sheet. Each entry includes a pre-test score, the date selected, the prompt levels, and the criterion achieved. In addition, the primary mode by which the child is to receive and express the information is noted. A guide is provided to teachers when the particular areas should be emphasized, by denoting P (Primary) I (Intermediate) and YA (Young Adult) by each Performance Objective.

The curriculum utilizes a unique prompting level. It is not stated but it is presumed to be hierarchical in nature. The prompt levels include: physically assisting the student (P); modelling the

task, physically or verbally (M); verbal or signed directions, questions and cues (V); cues, pictures/checklist used by the student (C); adaptations used by the student independently (A); and independence in the performing task, no prompts (I).

In addition to the curriculum, an Assessment Procedure and Recording Forms booklet was developed to assist teachers to track students progress toward achieving identified performance objectives. Subskills within each objective are identified. Criteria for target objectives is also specified to assist in standardizing assessment and recording procedures. Procedures for selecting skills and for determining priorities for instruction to assist in the development of individual educational plans are not specified other than to recommend areas to emphasize during Primary, Intermediate and Young Adult.

Generic Skills Curriculum for Severely/Profoundly Handicapped Students

The curriculum was designed to focus on the building of the generic skills of interaction. The authors (McLean, Snyder-McLean, Rowland, 1986) deemed these skills to be critical to the student's further adaptive development and learning. The curricula targeted population is adolescence, age 13 to 18 years, who are functioning within the severe to profound levels of disability and have no functional verbal skills. The authors promote the continued teaching of generic process skills through intensive programs of interaction between the student and his environment. McLean and his associates advocate that generic skills can be interfaced with any acceptable skill curricular model. The curriculum provides an assessment

inventory, strategies for IEP development, intervention strategies and methods of evaluating progress.

The assessment strategies utilized include: field observations, informant report, teachers or caregivers, and then the use of formal strategies for evoking optimal performance in structured situations. Skills are grouped in five domain areas including skills for relating to objects, skills for representing things you know about the world, receptive communication skills, expressive communication skills, and dyadic interaction skills.

The program is designed as an interactive model which includes both the generic skills and the setting of specific skills. The classroom environment is "engineered" to provide optimal opportunities for the skills. Skills at each generic skill domain are organized into four levels of functioning. The authors found that these levels are characterized by basic qualitative shifts in the types of generic responding required. The scale is also subdivided into "people skills" and "thing skills".

All skills are targeted in the context of specific activities and the natural context in which they are needed and used. It focuses on teaching the process response classes to facilitate additional learning. The instructors manipulate the environment to maximize the student learning potential by facilitating their interaction with their senses, materials, staff, peers, generic and specific skills. It is modelled on the belief that strategies should be ecologically valid and require the student to be an active learner. It focuses on the natural cues and consequences. It also structures the instructional procedures such that the student is given opportunity to

direct the situation and thus incorporate initiation of choice-making. The curriculum recognizes the need to build on consistent daily routines.

The Activities Catalog: An Alternative Curriculum for Use In Adults Severe Disabilities

The activities catalog (Wilcox & Bellamy, 1987) was designed for "any adolescent or adult whose progress in existing programs is so slow or irregular and competent daily performance seems unlikely to resolve in the time available". The catalog approach is also useful for persons who have previously been deprived of access to community living. It is designed for students who are high school age or older. It can be utilized by families, schools, residential or continuing education facilities.

The goal of the catalog is to develop local competence of an individual. The emphasis is on community integration, independence, and productivity. The catalog provides a structure for organizing content, negotiating individual program plans, and providing and evaluating service. The catalog looks at teaching functional skills combined with other skills in the performance of natural activities. The activities included in the catalog must be locally adapted to reflect the opportunities available in the student's accessible community.

Three domains are identified by the authors. The leisure domain consists of opportunities presented by the environment and delineates activities to occupy discretionary time. Personal management includes all the demands of the environment. It includes care of one's person

and belonging's, managing one's time, money, and possessions. The work domain includes activities necessary to generate resources for the other two domains.

The authors have organized activities in each domain into groupings of activities which have similar benefits or functions. This form of organization is designed to assist those selecting the skills and to ensure a balance set of objectives for an individual. The activities have been extended to include all the components necessary for the preparation, execution, and resolution or termination of an activity. Each activity includes: a brief rationale and introduction to the activity; a generic activity analysis; general information about cost, time, and equipment requirements of the activity; and suggestions for possible adaptations or prosthetic devices. This focus on alternative performance strategies has been included to provide maximum participation in all environments. The actual skills are not delineated until after the activity is selected. This is designed to ensure the skills will be locally referenced to the actual environment in which the instruction will occur.

The authors developed the catalog by reviewing existing curricula, reviewing a variety of informal documents such as the yellow pages, parks and recreation listings, local newspapers and community calendars, and by peer nomination of skills. In developing the catalog Wilcox and Bellamy have attempted to circumvent the need for an ecological inventory for each individual which must be compiled and ranked before determining priority activities. A strong emphasis has been placed on the skills the parents and peer groups value. The

catalog is also useful for parents who are not sure what kinds of activities are functional for their sons and daughters and just newly becoming orientated to the community based instruction. It presents an array of options to interest the user and to facilitate the selection of desirable activities. The local referencing of the activities ensures that the activity is valued in the community and that the opportunities for the skill to be generalized and maintained are enhanced. Instructional procedures and training procedures must also be locally referenced.

The guide which accompanies the catalog provides strategies to develop local referencing. It also describes how to write activity goals as measurable behaviors, illustrates format for collecting data, and strategies for comparing an individual's performance at different times, summarizing the performance of a group, and comparing progress across programs or communities. Activity assessment forms are provided. It promotes a continuity between assessment and planning. The guide focuses on life-style planning.

CHAPTER 5

METHODS AND PROCEDURES

Procedures

A review of the literature was conducted to determine what the leading program developers and experts in the field of education for children with severe challenging needs are presently proposing as indicators of good educational practices. Research which was cited in the literature that was available to empirically validate the indicators proposed by the program developers and experts was also closely reviewed. The indicators previously mentioned in the studies were reviewed. A total of forty-one indicators were developed and operationally defined as a result of the research.

The review of the literature also involved the examination of several different approaches to assessment of children with severe challenging needs. The theoretical approaches to assessment, skill selection and goal planning affect the value system present in a school system. This, in turn, influences the indicators that the school system values most when selecting a curriculum. This phenomenon was substantiated in the study of the quality indicators conducted by Meyer and her associates. The mean values for the six different groups in the value they attached to areas such as integration was considerably divergent. The group concerned with behavioral management rated integration a much lower priority than did the parent group.

Sixteen curricula were selected to be reviewed. The review

encompassed examining the intended purpose of each curriculum, the age group and disability groups the curriculum was intended to serve, the organizational structure of the curriculum, the components of the curriculum, any approaches to assessment discussed within the curriculum, implementation strategies, evaluation strategies and the general philosophy of the curriculum.

The listing of the 41 operationalized indicators and the sixteen curricula were then placed on a matrix with the two principle axis being the curricula and the indicators. Figure 1 illustrates the evaluation matrix. The curricula were then reviewed by a primary observer (the author) and an independent observer. Each curriculum was assigned a number value from 1-16 based on the order in which the curricula were developed. The curricula are listed in the order they were developed in Figure 1. For example the Tawney Curriculum was assigned number 1 as it was the first developed. The Activities Catalog was assigned number sixteen as it was the most recently developed curricula. A randomization table was then employed to determine the sequential placement of the curricula on each of the two matrixes provided to the two observers. This was done to assist in preventing a fatigue factor from influencing the examination of the curriculum. This was deemed necessary due to the considerable time commitment necessary to thoroughly examine sixteen curricula. The data was then compiled into one set of data which is reflected in Figures 2-15.

Each curriculum was systematically examined to determine the presence or absence of the 41 indicators. The data obtained from the examination of the curricula were then examined to assess the

MATRIX OF INDICATORS AND CURRICULA

	Indicator	Indicator	Indicator
Programmed Environments Curriculum			
Longitudinal Functional Activities			
Teaching Research Curriculum			
Alberta Education: Trainable Level			
Alberta Education: Dependent Handicap			
Teaching Research Adolescent Assessment			
Community Life Skill Profile (Dekalb)			
Inventory Process For Social Interaction			
Leisure Education			
Skill-streaming: Prosocial Skills			
Teaching Autistic Children (IMPACT)			
Peopel Program			
Project EnTrans			
High Point TMI Curriculum			
Generic Skills Curriculum			
Activities Catalog			
Total Curricula Indicator Present			

* X=Present 0=Not Present ()=Secondary observer

Figure 1

reliability of indicators. Reliability was determined by calculating the estimate of agreement between observers corrected by chance. The total number of indicators present in each curriculum was also examined to determine if there was a curriculum which would best exemplify the values (indicators of best educational practices) determined by the review of the literature. The curriculum having the greatest number of indicators present would be considered to be the best exemplifier of the values.

Operationalized Definitions of the Indicators

Normalization

1. Recognizes the worth and dignity of all students.
2. Program evaluation concerned primarily with quality of life changes.
3. Activities considered normal by society (valid, and worthwhile, age-appropriate).

Criterion of Ultimate Function

4. Skills selected address student needs in current and future environments.

Target Population

5. Designed for students functioning within moderate to severe ranges of challenging needs.

Assessment

6. Informal or formal procedures are described.
7. Geared to the individual-information collected, current skills organized to facilitate choices among possible program goals, not sequentially orientated.

8. Assessment reflects the environmental opportunities and the performance in natural settings.

9. Samples real life domains.

Functional Units

10. Full activity units are taught rather than isolated component skills.

11. Use of real materials rather than simulated.

12. Teach immediately useful skills, (as opposed to prerequisite skills).

Natural Environments

13. Instruction in actual settings where skills will be used.

Routines

14. Use of naturally occurring activities and daily routines.

Community Referenced

15. Training in community and all school environments advocated.

Generalization

16. Specifically addresses generalization and maintenance of skills.

17. Zero inference (Brown et al., 1979). No inference should be made in relationship to a student's abilities to transfer skills from one setting to another.

Partial Participation

18. Access to all environments considered. Student is provided opportunities to participate and acquire partial skills and to participate to the maximum.

Adaptation

19. Alternative performance strategies suggested to allow partial participation.

Objectives

20. Targets specific activities which are clearly defined (Falvey, 1986).
21. All goals belong to the learner, rather than team members (York & Rainforth, 1986).
22. Reflect learning conditions, observable behavior, and criterion for success.

Data

23. Provisions have to be made for objectives to be evaluated and revised in an ongoing systematic manner (Falvey, 1986)
24. Illustrates formats for collecting data on student performance.

Task Analysis

25. Generic analysis of each activity (common general steps, specific variations added when setting selected).
26. A task analytic approach utilized.
27. All related skills of the behavioral objective are identified including communication and social skills.

Multi-disciplinary Team Approach

28. Multi-disciplinary Team approach recommended from assessment, through to program implementation and evaluation.
29. Team services delivered in the context of instruction in natural environments.

Materials

30. Functional materials which would be encountered outside the classroom and in natural environments.
31. Age appropriate materials which would be used by same age peers.

Cues

32. Ultimate goal must be to respond to natural cues in the natural environment.

33. Consistent form for recording levels of prompting provided.

Integration

34. Procedures established to maximize participation in integrated environments.

Parents

35. Need for parent involvement recognized.

36. Systematic plan in place to establish and maintain parent involvement.

Transitions

37. Plans to develop skills necessary for successful transition. Planning and implementation in place in advance of transition. A recognition of the need for prior planning and instruction.

38. Formal examination of needs of next environment (ecological assessment or other examination of the next environment).

39. Evidence of longitudinal planning.

Age-appropriate skills

40. Skills to be taught selected with consideration to being a skill normally taught to an age peer.

Choice

41. Preferences of the student acknowledged or actively solicited.

Independent Variable

Sixteen curricula in all were selected. Fifteen of the curricula were selected because they were known by the present researcher to be

currently in use, in whole or in part by schools serving children with challenging needs in the Northern half of Alberta. Both the primary and secondary observer are Educational Consultants with Edmonton Public School Board in their Outreach Services. In the course of our occupations we have had opportunities to familiarize ourselves with the curricula in use in the northern half of the province. This is by no means an exhaustive list of those used but encompasses the curricula most prevalent in the classrooms visited by the two reviewers. In addition, one curriculum was reviewed, The High Point Curriculum, as a representative of a curriculum developed by a school district to serve the needs of their local population of students. This was intended to provide a contrast to some of the curricula that were intended for a more universal usage. Many school districts are beginning to examine the possibility of locally based curricula.

The main features of the curricula were described in detail in chapter four so that description will not be repeated at this time. The curricula selected do however represent some unique and some common features. Some of the curricula cover most of the major domains while others cover only one domain. All but one of the curricula selected were designed for use with children with moderate and severe challenges. Skillstreaming Prosocial Skills was selected for this purpose to determine if a curriculum could contain sufficient merit to be useful, especially with a child integrated into a typical classroom. Some of the curricula were designed for specific age groups, while others were designed to serve children of all school ages. Some of the curricula have a developmentally based philosophy while others have a more ecologically based philosophy.

The following is a listing of the curricula examined. Several of the titles are quite extensive. For the purpose of convenience the titles have been abbreviated when they have been placed on figures to represent the results of the study. Any abbreviated titles used have been included at the end of each title, in parenthesis, to avoid confusion.

1. Programmed Environments Curriculum (Tawney, Knapp, O'Reilly, Pratt, 1979). (Programmed Environments Curriculum).
2. A Longitudinal Listing of Chronological Age-Appropriate and Functional Activities for School Aged Moderately and Severely Handicapped Students (Ford, Johnson, Pumpian, Stengert, Wheeler, 1980). (Longitudinal Functional Activities).
3. The Teaching Research Curriculum for the Moderate and Severely Handicapped: Gross and Fine Motor (Fredericks, Hanks, et al., 1980).

   The Teaching Research Curriculum for the Moderate and Severely Handicapped: Self Help (Fredericks, Makohon, et al., 1980). (Teaching Research Curriculum).
4. Alberta Education: Trainable Mentally Handicapped Curriculum Guide (Cameron et al., 1982a) (Alberta Education: Trainable Level).
5. Alberta Education: Dependent Handicapped Curriculum Guide, Revised Edition (Cameron et al., 1982b). (Alberta Education: Dependent Handicap).
6. Teaching Research Curriculum for Handicapped Adolescents and Adults: Assessment Procedures (Peterson, Trecker, Egan,

Fredericks, Bunse, 1983). (Teaching Research Adolescent Assessment).

7. Individual Community Life Skill Profile System for Severely Handicapped Students (Freagon, Wheeler, McDannel-Gayle, Costello, 1983). (Community Life Skill Profile (Dekalb)).

8. Inventory Process for Social Interaction (Doering, Katherine Frey & Hunt, Pamela Culp, 1983). (Inventory Process for Social Interaction).

9. Leisure Education for the Handicapped: Curriculum Goals, Activities, and Resources (Bender, Brannan, Verhoven, 1984). (Leisure Education).

10. Skill-streaming the Elementary School Child: A Guide for Teaching Prosocial Skills (Mc Guinnis, & Goldstein, 1984). (Skill-streaming: Prosocial Skills).

11. Teaching Autistic Children: A Functional Curriculum Approach. Innovative Model Program for Autistic Children and their Teachers (IMPACT) (Neel, Billingsley, McCarty, Symonds, Lambert, Lewis, Hanashiro, 1983). (Teaching Autistic Children (IMPACT)).

12. Niagara South Board of Education: Peer Tutoring Program, Physical Educational Opportunity Program for Exceptional Learners: Peer Tutoring Handbook and Task Analysis Sheets (McPherson, & Carmichael, 1985).

Phoenix Union High School District: Peopel Physical Education Opportunity Program For Exceptional Learners, Teacher Guide (Irmer, Odenkirk, Glasenapp, 1981). (Peopel Program).

13. Project EnTrans: A Model for transition of Preschool Children with Handicaps into Public School (Blair-Thomas, Wilson, Guida,

Manning, 1986). (Project EnTrans).

14. The High Point TMI Curriculum: The Washtenaw Intermediate School District, Ann Arbor, Michigan (Bonczyk, et al., 1986). (High Point TMI Curriculum).

15. Generic Skills Curriculum for Severely/Profoundly Handicapped Students (McLean, Snyder-McLean, Rowland, 1986). (Generic Skills Curriculum).

16. The Activities Catalog: An Alternative Curriculum for Youth and Adults with Severe Disabilities (Wilcox, & Bellamy, 1987). (Activities Catalog)

Data Collection and Analysis

Each of the sixteen curricula were reviewed, one curriculum at a time. Each of the indicators was considered a single, independent data point. The reviewer examined the curricula to determine the presence or absence of each of the indicators in each curriculum. For each data point the reviewer scored an "x" for each of the indicators present in the curriculum, or an "0" if the indicator was not present, or not mentioned specifically. N/A (not applicable) was used to indicate an undecided score or an inability to score. The primary (the author) and the secondary reviewers examined the curricula independently. The ratings in parentheses represents the secondary reviewers scoring on each of the indicators.

The ratings were then matched and a Kappa value was determined for each of the indicators to determine the reliability of the indicators, corrected by chance. The following formula was used to determine Kappa values:

$$\text{Kappa} = \frac{Po-Pc}{1-Pc} \quad \text{Where } Po = \frac{\text{Agreements}}{\text{Agreements} + \text{Disagreements}}$$

and Pc= (observer A occur/intervals) X (observer B occur/intervals).

A mean Kappa value for all the indicators was also calculated.

The total number of indicators present in each of the sixteen curricula was calculated by counting the number of indicators present, using the primary reviewers results. The results were then charted in a bar graph form. The results of the review of the curricula, the comparison of the results across reviewers, and the comparison of the results across curricula is presented in the subsequent chapter.

CHAPTER SIX

RESULTS

The ratings for each of the indicators in each of the curricula is presented in Figures 2 through 15. With one exception, all indicators were given ratings of 0 or X indicating either the presence or absence of the indicator. The indicator "recognizes the worth and dignity of all students" received an undecided scoring with some of the curricula and thus was considered "not applicable". The kappa values of all of the indicators is presented in Figure 16. The reviewers achieved complete agreement on twenty five of the indicators across all sixteen curricula. These indicators would then be considered to have perfect reliability across the curricula examined. The Kappa values all other indicators, with the exception of one are all above .75 and therefore are considered reliable. The reliability of all indicators, not corrected by chance, is .80 or higher. The indicator "targets specific objectives, activities clearly defined" received a kappa value of .65. This low kappa value was the result of raters agreeing on the presence of the indicator in 14 out of 16 curricula, not present in one, and disagreeing on the presence of the indicator in one curriculum. The reliability level, not corrected by chance, for this indicator is .93. It can be argued then that this indicator also rates an acceptable level of agreement for the purpose of this study since the reliability is 93% without considering probability of random agreement. The mean kappa value for all indicators was .93. The results indicate that it is possible for

two people to examine curricula, using the indicators presented in this study, and reliably agree on the presence or absence of the indicators in the curricula.

The total number of indicators present in each of the curriculum was also calculated. The results are presented in Chart 16. The total number possible is 40 due to the elimination of one indicator. The first indicator, "recognizes the worth and dignity of all students" was eliminated due to the difficulty experienced by the raters in determining the presence or absence of this indicators in the curriculums. The results have also been presented in Table 17 in a bar graph form to provide a more visual opportunity to compare curriculum. An analysis of the results reveals considerable discrepancies between curriculum in regards to the number of indicators present. The results range from a low value of 7 indicators present in the Alberta Education Curriculum for Dependent Handicapped to a high value of 40 indicators present in the Inventory Process of Social Interaction. The variation in the total indicate that one can successfully discriminate between curriculum. A high rating would indicate presence of a high number of indicators in the curriculum. The indicators are the values or what is considered to be the "best practices" in the education of children with moderate and severe challenging needs. Therefore a curriculum with a high rating utilizes many of the best practices of "best education" and would be a preferable curriculum if one is concerned about the educational validity of the program to be implemented.

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Recognizes the worth and dignity of all students	Program evaluation and concerned with quality of life	Activities considered normal by society
	N/A	0(0)	0(0)
Longitudinal Functional Activities	N/A	X(X)	X(X)
Teaching Research Curriculum	N/A	0(0)	0(0)
Alberta Education: Trainable Level	N/A	0(0)	0(0)
Alberta Education: Dependent Handicap	N/A	0(0)	0(0)
Teaching Research Adolescent Assessment	N/A	X(X)	X(X)
Community Life Skill Profile (Dekalb)	N/A	X(X)	X(X)
Inventory Process For Social Interaction	N/A	X(X)	X(X)
Leisure Education	N/A	X(X)	X(X)
Skill-streaming: Prosocial Skills	N/A	X(X)	X(X)
Teaching Autistic Children (IMPACT)	N/A	X(X)	X(X)
Peopel Program	N/A	X(X)	X(X)
Project EnTrans	N/A	X(X)	X(X)
High Point TMI Curriculum	N/A	X(X)	X(X)
Generic Skills Curriculum	N/A	X(X)	X(X)
Activities Catalog	N/A	X(X)	X(X)
Total Curricula Indicator Present	N/A	12(12)	12(12)

* X=Present. 0=not present ()=secondary observer

Figure 2

MATRIX OF INDICATORS AND CURRICULA

	Addresses student's needs in current & future environments	Designed for moderately and severely challenged students	Informal or formal assessment procedures are described
Programmed Environments Curriculum	0(0)	X(X)	X(X)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	0(0)	X(X)	X(X)
Alberta Education: Trainable Level	X(X)	X(X)	0(0)
Alberta Education: Dependent Handicap	0(0)	X(X)	X(X)
Teaching Research Adolescent Assessment	X(X)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	0(0)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(0)	X(X)	X(X)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	X(X)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	13(12)	15(15)	15(15)

* X=Present 0=Not present ()=secondary observer

Figure 3

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Assessment geared individual:Choice facilitated (not sequential)	Assessment reflects performance in natural settings	Curriculum content reflects real life domains
	X(X)	0(0)	0(0)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	0(0)	0(0)	0(0)
Alberta Education: Trainable Level	0(0)	0(0)	X(X)
Alberta Education: Dependent Handicap	0(0)	0(0)	0(0)
Teaching Research Adolescent Assessment	X(X)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	0(X)	X(X)	X(0)
Project EnTrans	X(X)	0(0)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	0(0)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	12(13)	11(11)	12(11)

* X=present 0=not present ()=secondary observer

Figure 4

MATRIX OF INDICATORS AND CURRICULA

	Full activity units taught rather than isolated skills	Real materials rather than simulated materials	Teach immediately useful skills (as opposed to pre-requisite skills
Programmed Environments Curriculum	0(0)	X(X)	0(0)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	0(0)	X(X)	0(0)
Alberta Education: Trainable Level	0(0)	X(X)	0(0)
Alberta Education: Dependent Handicap	0(0)	X(X)	0(0)
Teaching Research Adolescent Assessment	X(X)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children. (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(X)	X(X)	X(X)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	X(X)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	12(12)	16(16)	12(12)

* X=Present 0=Not present ()=Secondary observer

Figure 5

MATRIX OF INDICATORS AND CURRICULA

	Instruction in actual setting skill will be used	Use of naturally occuring activities and daily routines	Training in community and all school environments
Programmed Environments Curriculum	0(0)	0(0)	0(0)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	0(0)	0(0)	0(0)
Alberta Education: Trainable Level	0(0)	0(0)	0(0)
Alberta Education: Dependent Handicap	0(0)	0(0)	0(0)
Teaching Research Adolescent Assessment	X(X)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(X)	0(0)	X(0)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	0(0)	X(X)
Generic Skills Curriculum	X(X)	X(X)	0(0)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	12(12)	10(10)	11(10)

* X=Present 0=Not Present ()=Secondary observer

Figure 6

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Specifically addresses generalization/maintenance of skills	Zero inference of student's abilities to transfer skills to new settings	Access to environmental opportunties to acquire partial skills advocated
	X(X)	0(0)	0(0)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	X(X)	0(0)	0(0)
Alberta Education: Trainable Level	0(0)	0(0)	0(0)
Alberta Education: Dependent Handicap	0(0)	0(0)	0(0)
Teaching Research Adolescent Assessment	X(X)	X(X)	0(0)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(0)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(0)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	0(0)	0(0)	X(X)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(0)
Generic Skills Curriculum	X(X)	X(X)	X(X)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	13(13)	11(11)	11(9)

* X=Present 0=Not Present ()=Secondary observer

Figure 7

MATRIX OF INDICATORS AND CURRICULA

	Alternative perform-ance strategies suggested/partial participation	Objectives target specific activities which are clearly defined	All goals belong to the learner
Programmed Environments Curriculum	0(0)	X(X)	X(X)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	0(0)	X(X)	X(X)
Alberta Education: Trainable Level	0(X)	0(X)	X(X)
Alberta Education: Dependent Handicap	0(0)	0(0)	X(X)
Teaching Research Adolescent Assessment	0(0)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	0(0)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(0)	X(X)	X(X)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	0(0)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	X(X)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	9(9)	14(15)	16(16)

* X=Present 0=Not present ()=Secondary observer

Figure 8

MATRIX OF INDICATORS AND CURRICULA

	Objectives reflect conditions, observable behavior and criterion	Objectives to be evaluated, ongoing and systematically	Illustrates formats for collecting data
Programmed Environments Curriculum	X(X)	X(X)	X(X)
Longitudinal Functional Activities	0(X)	X(X)	0(0)
Teaching Research Curriculum	X(X)	X(X)	X(X)
Alberta Education: Trainable Level	0(X)	0(X)	X(X)
Alberta Education: Dependent Handicap	0(0)	0(0)	X(X)
Teaching Research Adolescent Assessment	X(X)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	0(0)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(X)	X(X)	X(X)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	X(X)
Activities Catalog	X(X)	X(X)	0(0)
Total Curricula Indicator Present	13(14)	14(15)	13(13)

* X=Present 0=Not Present ()=Secondary observer

Figure 9

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Generic task analysis of each activity identified X(X)	All components of behavioral objectives are identified 0(0)	Related skills of task analysis also identified (comm./social) X(X)
Longitudinal Functional Activities	X(X)	0(0)	X(X)
Teaching Research Curriculum	X(X)	X(X)	0(0)
Alberta Education: Trainable Level	0(0)	0(0)	0(0)
Alberta Education: Dependent Handicap	0(0)	0(0)	0(0)
Teaching Research Adolescent Assessment	X(X)	0(0)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	0(0)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	0(X)	X(X)
Peopel Program	X(X)	X(X)	X(X)
Project EnTrans	0(0)	0(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	0(0)
Activities Catalog	X(X)	0(0)	X(X)
Total Curricula Indicator Present	13(13)	9(9)	12(12)

* X=Present 0=Not Present ()=Secondary observer

Figure 10

MATRIX OF INDICATORS AND CURRICULA

	Multidisciplinary team recommended through assessment implementation	Team services delivered in context	Materials are functional, found in non-classroom settings also
Programmed Environments Curriculum	X(X)	0(0)	0(0)
Longitudinal Functional Activities	0(0)	0(0)	X(X)
Teaching Research Curriculum	X(X)	0(0)	0(0)
Alberta Education: Trainable Level	X(X)	0(0)	0(0)
Alberta Education: Dependent Handicap	X(X)	0(0)	0(0)
Teaching Research Adolescent Assessment	0(0)	0(0)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	0(0)	X(X)
Skill-streaming: Prosocial Skills	0(0)	0(0)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	0(0)	X(0)	X(X)
Project EnTrans	X(X)	0(0)	X(X)
High Point TMI Curriculum	X(0)	0(0)	X(0)
Generic Skills Curriculum	0(0)	0(0)	X(X)
Activities Catalog	X(0)	0(0)	X(X)
Total Curricula Indicator Present	11(9)	4(3)	12(11)

* X=Present 0=Not Present ()=Secondary observer

Figure 11

MATRIX OF INDICATORS AND CURRICULUMS

Programmed Environments Curriculum	Age appropriate materials, those used by same age peers	Goal: for student to respond appropriately to cues in natural environment	Consistent form of recording prompt levels
	0(0)	0(0)	X(X)
Longitudinal Functional Activities	X(X)	X(X)	0(0)
Teaching Research Curriculum	0(0)	0(0)	X(X)
Alberta Education: Trainable Level	0(0)	0(0)	0(0)
Alberta Education: Dependent Handicap	0(0)	0(0)	0(0)
Teaching Research Adolescent Assessment	X(X)	0(0)	0(0)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(X)	X(X)	X(X)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	X(X)	X(X)	X(X)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula Indicator Present	12(12)	11(11)	12(12)

X=Present 0=Not Present ()=Secondary observer

Figure 12

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Integration procedures established for maximum participation	Need for parent involvement recognized	Systematic plan in place to facilitate parent involvement
	0(0)	X(X)	0(0)
Longitudinal Functional Activities	X(X)	X(X)	X(0)
Teaching Research Curriculum	0(0)	X(X)	X(X)
Alberta Education: Trainable Level	0(0)	X(X)	0(0)
Alberta Education: Dependent Handicap	0(0)	X(X)	0(0)
Teaching Research Adolescent Assessment	X(X)	X(X	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	0(0)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	0(0)
Skill-streaming: Prosocial Skills	X(X)	X(X)	0(0)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	X(0)	0(0)	0(0)
Project EnTrans	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	0(0)	X(X)	0(0)
Activities Catalog	X(X)	X(X)	X(0)
Total Curricula Indicator Present	11(10)	15(15)	8(6)

* X=Present 0=Not Present ()=Secondary observer

Figure 13

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Transition plans in place to develop skills in advance of need	Formal examination of needs of next environment	Evidence of longitudinal planning
	0(0)	0(0)	0(0)
Longitudinal Functional Activities	X(X)	X(X)	X(X)
Teaching Research Curriculum	0(0)	0(0)	0(0)
Alberta Education: Trainable Level	0(0)	0(0)	0(0)
Alberta Education: Dependent Handicap	0(0)	0(0)	0(0)
Teaching Research Adolescent Assessment	X(X)	X(X)	X(X)
Community Life Skill Profile (Dekalb)	X(X)	X(X)	X(X)
Inventory Process For Social Interaction	X(X)	X(X)	X(X)
Leisure Education	X(X)	X(X)	X(X)
Skill-streaming: Prosocial Skills	X(X)	X(X)	X(X)
Teaching Autistic Children (IMPACT)	X(X)	X(X)	X(X)
Peopel Program	0(0)	0(0)	0(0)
Project EnTrans -	X(X)	X(X)	X(X)
High Point TMI Curriculum	X(X)	X(X)	X(X)
Generic Skills Curriculum	0(0)	0(0)	X(X)
Activities Catalog	X(X)	X(X)	X(X)
Total Curricula, Indicator Present	10(10)	10(10)	11(11)

* X=Present 0=Not present ()=Secondary

Figure 14

MATRIX OF INDICATORS AND CURRICULA

Programmed Environments Curriculum	Age-appropriate skills selected based on skills used by age peers 0(0)	Choice preferences of students acknowledged or solicited. 0(0)	
Longitudinal Functional Activities	X(X)	0(0)	
Teaching Research Curriculum	0(0)	0(0)	
Alberta Education: Trainable Level	0(0)	0(0)	
Alberta Education: Dependent Handicap	0(0)	0(0)	
Teaching Research Adolescent Assessment	X(X)	0(0)	
Community Life Skill Profile (Dekalb)	X(X)	X(X)	
Inventory Process For Social Interaction	X(X)	X(X)	
Leisure Education	X(X)	0(0)	
Skillstreaming: Prosocial Skills	X(X)	X(X)	
Teaching Autistic Children (IMPACT)	X(X)	X(X)	
Peopel Program	X(X)	0(0)	
Project EnTrans	X(X)	X(X)	
High Point TMI Curriculum	X(X)	0(0)	
Generic Skills Curriculum	X(X)	X(X)	
Activities Catalog	X(X)	X(X)	
Total Curricula Indicator Present	12(12)	7(7)	

* X=Present 0=Not Present ()=Secondary observer

Figure 15

KAPPA VALUES OF INDICATORS

Recognizes worth and dignity of all students	N/A	Targets specific objectives activities defined	.65
Evaluation concerned with quality of life changes	1.00	All goals belong to the learner	1.00
Activities considered normal by society	1.00	Reflect learning condition, observable behav., criterion	.76
Addresses student needs in current and future envif.	.82	Provisions for obj. to be evaluated, ongoing	1.00
Designed for moderately or severely challenged	1.00	Illustrates formats for collecting data	.82
Informal or formal procedure for assessment described	1.00	Generic task analysis of of each activity	1.00
Information collected and organized to facilitate choice	.82	All components of behavioral objective are identified	.81
Assessment reflects performance in natural setting	1.00	Related skills of task analysis are also identified	1.00
Content reflects real life domains	.85	Multi-disciplinary team approach advocated	.79
Full activity units taught rather than isolated skills	1.00	Team services delivered in context	.92
Use of real material rather than simulated	1.00	Functional materials used-encountered in nonschool envir.	.85
Immediately useful skills (not prerequisite skills)	1.00	Materials age-appropriate (used by age peers also)	1.00
Instruction in actual setting skill will be used	1.00	Ultimate goal, student responds to natural cue	1.00
Use of naturally occuring activities and routines	1.00	Consistent form of recording prompt levels	1.00
Training occurs in community and all school environments	.87	Integration procedures are established	.87
Specifically addresses generalization and maintenance	.82	Need for parent involvement recognized	1.00
Zero inference of abilities to transfer skills	1.00	Systematic plan for parent participation in place	.84
Access to all opportunities to partially participate	.79	Transition plans in place to develop skills in advance	1.00
Alternate performance strategies suggested	.81	Formal examination of needs of next environment	1.00
Evidence of longitudinal planning	1.00	Age-appropriate skills selected	1.00
Choice preference acknowledged or solicited	1.00		

*Mean Kappa Value .93

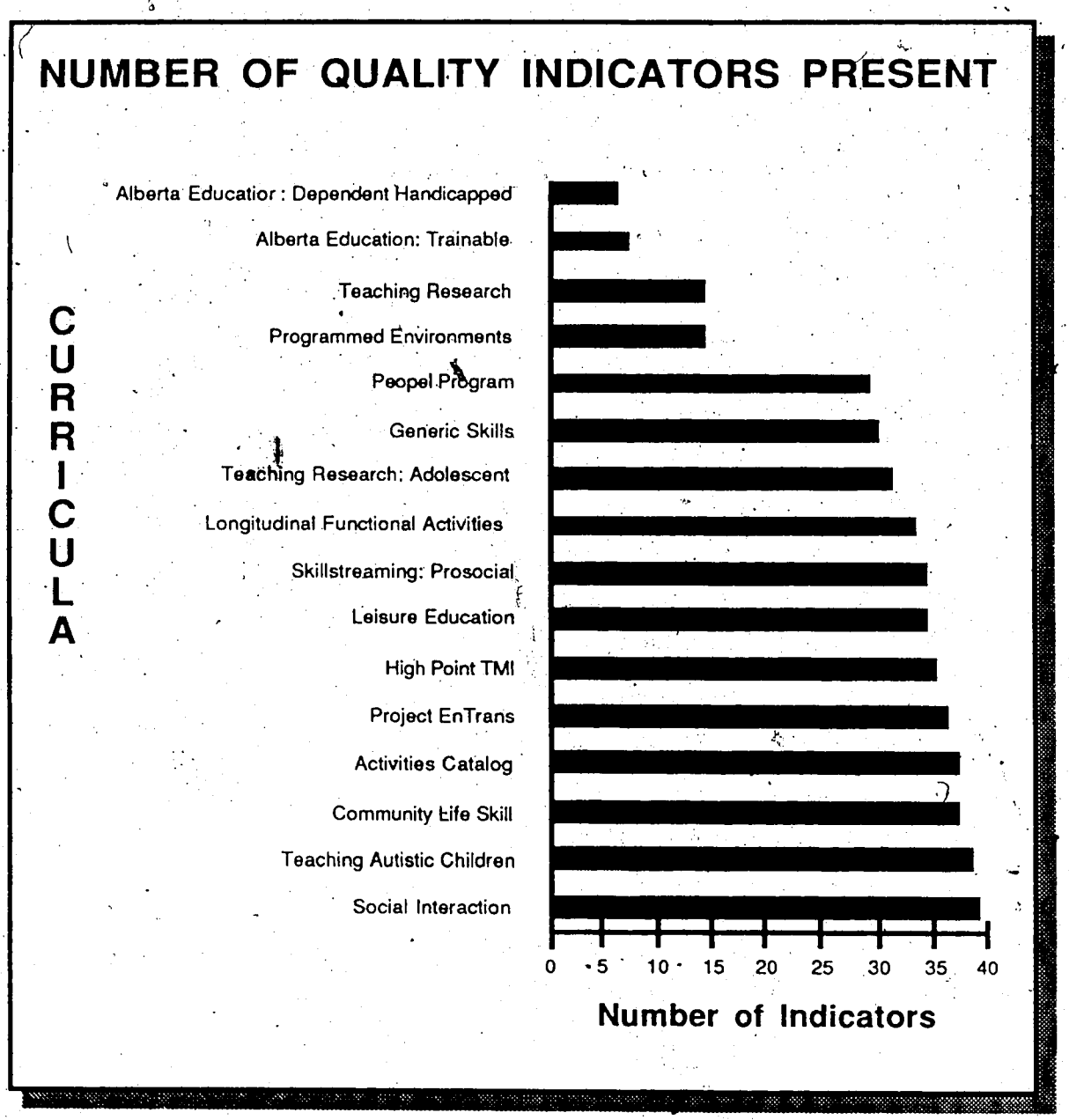
Figure 16

NUMBER OF INDICATORS PRESENT IN CURRICULUMS REVIEWED

(Total indicators n=40)

Curricula	Total
Programmed Environments Curriculum	15
Longitudinal Functional Activities	34
Teaching Research Curriculum	15
Alberta Education: Trainable Level	08
Alberta Education: Dependent Handicapped	07
Teaching Research Adolescent Assessment	32
Community Life Skill Profile (Dekalb)	38
Inventory Process for Social Interaction	40
Leisure Education	35
Skill-Streaming: Prosocial Skills	35
Teaching Autistic Children (IMPACT)	39
Peopel Program	30
Project EnTrans	37
High Point TMI Curriculum	36
Generic Skills	31
Activities Catalog	38

Figure 17


NUMBER OF QUALITY INDICATORS PRESENT
CURRICULA
Alberta Educatior : Dependent Handicapped
Alberta Education: Trainable
Teaching Research
Programmed Environments
Peopel Program
Generic Skills
Teaching Research: Adolescent
Longitudinal Functional Activities
Skillstreaming: Prosocial
Leisure Education
High Point TMI
Project EnTrans
Activities Catalog
Community Life Skill
Teaching Autistic Children
Social Interaction
0
5
10
15
20
25
30
35
40
Number of Indicators

CHAPTER 7

DISCUSSION

Reliability of the Instrument

This study reveals considerable agreement about the presence or absence of the operationalized indicators in the curricula across two independent observers. When observers agree at an equal to random probability, one would expect a kappa value of 0. If agreement passes the expected chance and approaches a maximum of 1.00, kappa values provide us with a measurement of agreement over and above chance. A Kappa value between 0.00 and -1.00 would indicate agreement less frequently than would be expected by chance. In this study there were twenty five indicators in which there was complete agreement as to the presence or absence of the indicators in the curricula.

Difficulty was encountered with the first indicator, that of "recognizes the worth and dignity of all students" This indicator was a very value-orientated statement. It is very dependent on your value system as well as those implementing the curriculum. If judging only the curriculum, it is unlikely a curriculum developer would write a curriculum for individual's with severe challenging needs if they did not value them and their human worth. The standards which imply we value a person have increased as we become more enlightened by the success many of the students are experiencing in more integrated environments. Some of the programs developed nine or ten years ago have very little choice built into the programs, may not be based on the principles of individualization, and advocate behavior management

programs which lack consideration for communicative intent. Are these indications that the child may not be valued? The decision was difficult and not a decision you could make without additional criteria and information.

Although complete agreement was achieved in the indicator "all goals belong to the learner", this indicator would not be considered a discriminating indicator. The indicator was present in all the curricula. This does not diminish the importance of the indicator, but it is unlikely to be a deciding factor in the selection of a curriculum as it will likely be present in most recent curricula.

On the other hand, it is encouraging to note that indicators, such as "including related skills in the task analysis" or "the use of naturally occurring routines" or "acknowledging or soliciting choice" appear to have a high predictive value. These indicators were usually present in the more highly rated curriculum.

Limitations of the Instrument

There were a few indicators in which there was some indication of a quality being present, but a judgment call was necessary in deciding just how much was enough to justify a positive answer. An example of such an indicator was "training occurs in the community and all school environments". Some curricula indicated that this was desirable but did not provide strategies for the actual instruction to occur. Some curricula suggested this was desirable for older students but did not mention younger students. There were also some instances in which the indicator was present in some areas of the curriculum but not adhered to in another. It would be difficult to set a qualitative value to

indicators such as the above mentioned indicator as the qualitative value would vary with many factors, such as age, location of the child, or type of program. This limitation in the instrument could possibly be overcome by adding a third rating, yes/no and partially present.

In general, these findings do provide strong support that curricula can successfully be reviewed and compared. The instrument provided a suitable medium for evaluating the "goodness of fit" between the indicators and the curricula. This match was able to be successfully measured reliably across two independent observers. The results indicate considerable divergency in the number of indicators present in each of the curricula. The use of several of the curricula would be strongly supported, given the indicators of "best educational practices" used in this study. Eight of the curricula demonstrated thirty five or more of the indicators present in their materials and suggested procedures.

Implications for Teachers and Consultants

Some of the curricula are not very explicit in their details of implementation. The Longitudinal Functional Activities is a good example of such a curricula. The ideas presented within the curriculum were the cornerstone for much of the current developments. It was however, missing clear cut methods for implementation. This can make it a difficult curricula for a new teacher, with little experience, to implement without additional supports.

Others appear to have gone to the other extreme and have described

the task analysis and cueing and reinforcement strategies in such detail that they lose their ability to adapt to individual needs of the student. This can lead to teaching in isolated settings in order to ensure all the conditions of the program are being met. A further concern is that the curriculum and related training procedures have been developed in such detail that the developers may be reluctant to make changes quickly or readily and may have a tendency to cling to old ideas. The Activities Catalog, or the Inventory Process for Social Skill Interaction, on the other hand, contain many instructional strategies and provide excellent suggestions for improving the functionality of educational programs offered. The specific details of the task analyses, the environment in which the skill will be taught, the materials used to teach the skill and other vital programming decisions are not decided until the activity is selected. The educational strategies focus on individual choice, and adaptation of the skill, and the environment, to the individual. This approach would lend itself well to any new future developments in curricula being incorporated into their curriculum.

It is critically important that assessment strategies should relate directly to content and focus on later program intervention. The application of this instrument with a particular curriculum would assist a teacher in determining the number of the indicators present in the curriculum he or she may be considering for use. The absence of particular indicators may lead the teacher to decide that another curriculum may be more appropriate for their needs. It may also lead the teacher to decide to use the curriculum, and supplement the curriculum with additional curriculum materials that will succeed in

fulfilling their needs. Many of the curricula reviewed would interface very well together to provide an excellent base from which to build a program. For example, The Activities Catalog, the Leisure Education Curriculum, and the Inventory Process for Social Interaction Curriculum would all blend very well together. The Generic Skills Curriculum was actually designed to be interfaced with another curriculum. The Peopel Program would also provide an excellent supplement with its structured peer tutoring format. The number of indicators each of these curricula have in common would lead one to believe the authors have a similar philosophy base. The review of the curricula would assist a teacher to make these important decisions in a more systematic manner.

If a school district was unable to determine a curriculum that had sufficient indicators to match their needs, the district may choose to develop their own curriculum. The indicators would provide an excellent outline from which to develop a suitable curriculum. Some of the curricula lend themselves very well to a localizing of the curricula. These curricula were also the curricula which contained the greatest number of indicators. They included curricula such as: Inventory Process for Social , Interaction, the Activities Catalog, the IMPACT Curriculum, and the Community Life Skills Profile.

With the growing trend to become more cognizant about the effective use of educational funding, and the diminishing pursuit of labelling and categorizing children, the role of the specialist or consultant is undergoing change. More energy is beginning to be devoted to determining what the child's individual needs are within his natural environment. Strategies are also being pursued to adapt

the environment to support the child and provide him with the maximum number of skills attainable to achieve as independent a life style as possible. Consultants are now being considered more in the role of a resource person. They may also be responsible for providing inservice for staff. Basically the role of the consultant is now to empower educational staff with the skills, knowledge and attitudes necessary for "good" educational practices. The time involved to locate the curricula, thoroughly review the curricula, access and review the literature, define the indicators, and complete the procedures was a considerable investment. In most cases, this would be more time than the normal teacher could afford. The time and the resources may, however, be more readily available to a consultant. This study does yield valuable information which could be disseminated across several teachers and school districts by a consultant. What better information could a consultant provide than knowledge of the indicators of "best educational practices" and the curricula which will best assist in the implementation of the "best educational practices." There is a critical need for instruments with which to examine training materials used in the instruction of children with severe challenging needs. This is one viable method of comparing curricula.

Implications for Future Research

Future research should be considered to establish which curricula are currently most in use within Alberta. The Alberta Curriculum Guides are suggested to be in use, at least as guidelines, in classrooms for children with moderately and severely challenging

needs. The Trainable Level and the Dependent Handicapped curricula were not found to sufficiently represent the changes in "best educational practices" when they were compared to other curricula presently available. The review and the comparison of the curricula suggests a need for a review and an updating of the Alberta Curriculum Guides. This may be necessary to assist in ensuring that the education of children with moderately and severely challenging needs in Alberta continues to be educationally valid. If a review and revision were to be completed, inservicing of the various levels of educational staff would also be warranted to ensure adequate implementation. A curriculum guide in Alberta which clearly reflects the "best educational practices" may result in the changes in the literature being evidenced in classrooms in Alberta in a more consistent and widespread manner.

REFERENCES

Aveno, A. (1987). A survey of activities engaged in and skills most needed by adults in community residences. Journal of the Association for Persons with Severe Handicaps, 12, 125-130.

Bates, P., Morrow, S.A., Pancsofar, E., & Sedlak, R. (1984). The effects of functional vs. nonfunctional activities on attitudes/expectations of nonhandicapped college students: What we see is what we get. Journal of the Association for the Severely Handicapped, 9, 73-78.

Bates, P., Renzaglia, A., Wehman, P. (1981). Characteristics of an appropriate education for severely and profoundly handicapped students. Education and Training of the Mentally Retarded, 16, 142-149.

Baumgart, D., & Van Walleghem, J. ((1986). Staffing strategies for implementing community based instruction. Journal of the Association of Persons with Severe Handicaps, 11, 92-102.

Baumgart, D., Brown, L., Pumpian, I., Nisbet, J., Ford, A., Sweet, M., Messian, R., Schroeder, J. (1982a). Principals of partial participation and individualized adaptation in educational programs for severely handicapped students. Journal of the Association for the Severely Handicapped, 7 (2) 12-27.

Baumgart, D., Vincent, L., Falvey, M., & Schroeder, J. (1982b). Utilizing characteristics of a variety of current and subsequent least restrictive environments as factors in development of curricular content for severely handicapped students. In L. Brown, M. Falvey, D., Baumgart, I. Pumpian, J. Schroeder & L. Gruenewald (Eds.), Strategies for teaching chronological age

appropriate functional skills to adolescent and young adult severely handicapped students, (Vol. IX, Part 1). Madison: University of Wisconsin and Madison Metropolitan School District.

Bender, M., Brannan, S., Verhoven, P. (1984). Leisure education for the handicapped. Curriculum goals, activities and resources. San Diego: College-Hill Press.

Billingsley, F. (1984). Where are the generalized outcomes? (An examination of instructional objectives). Journal of the Association of Persons with Severe Handicaps, 9, 186-192.

Blair-Thomas, L., Guida, J., Wilson, T. (1986). Enhancing school placement. Monmouth: Teaching Research Division, Project EnTrans.

Bonczyk, E., Bryers, D., Coffman, S., Dolsen, K., Elyakin, N., Frushour, N., Galloway, M., Kwik, W., Lawson, P., Mirochna, K., Reickenberg, S., Sheinberg, Z., Stelzer, G., Trarron, D., Winn, A., Wirstrom, K., Woodhams, J., Yaeger, K. (1986). High Point: TMI Curriculum. Ann Arbor, Michigan: Washtenaw Intermediate School District.

Browder, D., & King, D. (1987). Comprehensive assessment for longitudinal curriculum development. In: D. Browder, Assessments of individuals with severe handicaps (pp. 25-54). Baltimore: Paul H. Brookes.

Brown, F., Evans, I., Weed, K., & Owen, V. (1987). Delineating functional competencies: A component model. Journal for the Association for Persons with Severe Handicaps, 12 117-124.

Brown, F. (1987). Meaningful assessment of people with severe handicaps. In Matha E. Snell. Systematic instruction for persons with severe handicaps (pp. 37-67). Columbus: Chales E. Merrill.

Brown, L. (1986). Foreword: Then and Now. In: R. Horner, L. Meyer & H.D. Fredericks (Eds.). Education of learners with severe handicaps. (pp. xi-xiii). Baltimore: Paul H. Brookes.

Brown, L., Branston-McClean, M., Baumgart, D., Vincent, L., Falvey, M., & Schroeder, J. (1979). Using the characteristics of current and subsequent least restrictive environments in the development of curricular content for severely handicapped students. AAESPH Review, 4(4) 407-424.

Brown, L., Nietupski, J., & Hamre-Nietupski, S. (1976). The criterion of ultimate functioning and public school services for severely handicapped students. In L. Brown, N. Certo, & T. Crowner (Eds.). Papers and programs related to public school services for secondary-age severely handicapped students, (Vol. VI, pp. 1-12). Madison: University of Wisconsin and Madison Metropolitan School District.

Brown L., Nisbet, J., Ford, A., Sweet, M., Shiraga, B., York, R., & Loomis, R. (1983). The critical need for nonschool instruction in educational programs for severely handicapped students. Journal of the Association for Persons with Severe Handicaps, 8, 71-77.

Brown, L., Pumpian, I., Baumgart, D., Vandeventer, P., Ford, A., Nisbet, J., Schroeder, J., Gruenewald, L. (1981). Longitudinal transition plans in programs for severely handicapped students. Exceptional Children, 47, 624-630.

Campbell, P. (1988). Integrated programming for the severely handicapped student: A transdisciplinary approach. (presentation at Focus 88, Victoria, B. C. Canada.).

Cameron, R., Cameron, S., Cratwright, F., Cook, B., Henschel, B., Kroetsch, M., Leavitt, G., Moore, J., Newton, D., Parry, R., Reid, I., Walpot, B., Ward, J. (1983). Dependent handicapped curriculum guide. Edmonton: Alberta Education.

Cameron, R., Cameron, S., Cratwright, F., Cook, F., Henschel, B., Kroetsch,M., Leavitt, G., Moore, J., Newton, D., Parry, R., Reid, I., Walpot, B., Ward, J. (1982). Trainable mentally handicapped curriculum guide. Edmonton: Alberta Education.

Carlson, C., Scott, M., Eklund, L. (1980). Ecological theory and method for behavioral assessment. School Psychology Review, 9, 75-81.

Carreiro, P., & Townsend, S. (1987). Routines: Understanding their power. In D. Frans, Teaching curriculum goals in routine environments (pp. 1-5) Edmonton, Alberta: CONE Learning Systems.

Deno, S. (1985). Curriculum-based measurement: The emerging alternative. Exceptional Children, 52(3), 219-232.

Doering, Katherine Frey & Hunt, Pamela Culp (1983). Inventory Process for Social Interaction' IPSI. Education Resources (U.S. Department of Education.

Donnellan, A.M. (1984). The criterion of least dangerous assumption. Behavior Disorders, 9, 141-150.

Donnellan, A.M., & Neel, R.S. (1986). New directions in educating students with autism. In R. Horner, L. Meyer, & H.D. Fredericks (Eds.). An educative approach to behavior problems: A practical decision model for interventions with severely handicapped learners, (99-126). Baltimore: Paul H. Brookes.

Falvey, M. A. (1986). Community based curriculum. Baltimore: Paul H. Brookes.

Fewell, R., & Cone, J. (1983). Identification and placement of severely handicapped children. In M. Snell (Ed). Systematic instruction of the moderately and severely handicapped, 46-73. Columbus Oh.: Charles E. Merrill.

Ford, A., Johnson, F., Pumpian, I., Stengert, J., Wheeler, J. (1980). A longitudinal listing of chronological age-appropriate and functional activities for school aged moderately and severely handicapped students. Madison: Madison Metropolitan School District.

Forest, M., & Snow, J. (1986). MAPS/The McGill Action Planing System. (Unpublished paper presented at Curriculum Development Course, 1986, University of McGill).

Forest, M. (1984). Education/integration: A collection of readings on the integration of children with mental handicaps into regular school systems. Downsview, Ontario, Canada: National Institute on Mental Retardation.

Fox, W., Thousand, J., Williams, W., Fox, R., Towne, P., Reid, R., Conn-Powers, C., Calcagni, L., (1986). Best educational practices '86: Educating learners with severe handicaps. Center of Developmental Disabilities, University of Vermont.

Fredericks, H.D., Hanks, S., Makohon, L., Fruin, C., Moore, W., Blair, L., Piazza-Templeman, T., Dalke, B., Hawkins, P., Coen, M., Renfroe-Burton, S., Bunse, C., Farnes, T., Moses, C., Toews, J., McGukin, A., Moore, B., Riggs, E., Balwin, Vic, Anderson R., Ashbacher, V., Carter, V., Gage, M., Rogers, G., Samples, B.

(1980). The teaching research curriculum for moderately and severely handicapped: Gross and fine motor. Springfield: Charles C. Thomas.

Fredericks, H.D., Hanks, S., Makohon, L., 'Fruin, C., Moore, W., Blair, L., Piazza-Templeman, T., Dalke, B., Hawkins, P., Coen, M., Renfroe-Burton, S., Bunse, C., Farnes, T., Moses, C., Toews, J., McGukin, A., Moore, B., Riggs, C., Balwin, Vic, Anderson R., Ashbacher, V., Carter, V., Gage, M., Rogers, G., Samples, B. (1980). Teaching research curriculum for moderately and severely handicapped: Self-help and cognitive. Springfield: Charles C. Thomas.

Freagon, S., Wheeler, J., Hill, L., Brankin, G., Costello, D., & Peters, W. M. (1983a). A domestic training environment for students who are severely handicapped. Journal of the Association for Persons with Severe Handicaps, 4, 49-61.

Freagon, S., Wheeler, J., McDannel-Gayle, G., Costello, D. (1983b). Individual student community like skill profile system for severely handicapped students. Northern Illinois University: Dekalb County Special Education Association.

Gaylord-Ross, R., & Holvoet, J. (1985). Strategies for educating students with severe handicaps. Boston: Little, Brown.

Gaylord-Ross, R., Haring, T., Breen, C., Pitts-Connway, V. (1984). The training and generalization of school interactional skills with autistic youth. Journal of Applied Behavior Analysis, 17, 229-248.

Goldstein, A., Sprafkin, R., Gershaw, N., Klein, P. (1980). Skill-streaming the adolescent. Champaign, Illinois: Research Press

Company.

Green, C., Canipe, W.S., Way, P.J., & Reid, D.H. (1986). Improving functional utility and effectiveness of classroom services for students with profound multiple handicaps. Journal of the Association of Persons with Severe Handicaps, 11, 162-170.

Green, C., Reid, D., McCarn, J., Scheipis, M., Phillips, J., Parson, M. (1986). Naturalistic observations of classroom serving severely handicapped persons: Establishing evaluative norms. Applied Research in Mental Retardation, 7, 37-50.

Guess, D., Helmstetter, E. (1986). Skill cluster instruction and the individualized curriculum sequencing model. In R. Horner, L. Meyer, & H. D. Fredericks (Eds.), Education of learners with severe handicaps, (221-250). Baltimore: Paul H. Brookes.

Guess, D., & Noonan, M (1982). Curricula and instructional procedures for severely handicapped students. Focus on Exceptional Children, 4, 1-12.

Hawkins, R., & Hawkins, K. (1981). Parental observations on the education of severely retarded children: Can it be done in the classroom? Analysis and Intervention in Developmental Disabilities, 1, 13-22.

Holvoet, J., Mulligan, M., Schussler, N., Lacy, J., & Guess, D. (1982) The KICS model: Sequencing learning experiences for severely handicapped children and youth. Lawrence: University of Kansas, Department of Special Education.

Holvoet, J., Guess, D., Mulligan, M., & Brown, F. (1980). The individualized curriculum sequencing model (II): A teaching strategy for severely handicapped students. Journal of the

Association for the Severely Handicapped, 5(4), 337-351.

Horner, R., Meyer, L., & Fredericks, H.D. (1986). Eds: Education of learners with severe handicaps. Baltimore: Paul H. Brookes.

Houghton, J., Bronicki, B., Guess, D. (1987). Opportunities to express preferences and make choices among students with severe disabilities in classroom settings. Journal of The Association for Persons with Severe Handicaps. 1 18-27.

Hunt, P., Goetz, L., Anderson, J. (1986). The quality of IEP objectives associated with placement on Integrated versus segregated school sites. Journal of the Association for Persons with Severe Handicaps, 11(2), 125-130.

Ianacone, R., & Stodden, R. (1985). Transition issues and directions for individuals who are mentally retarded. In R. Ianacone & B. Stodden (Eds.), Transition issues and directions (pp. 1-8). Division on Mental Retardation - The Council for Exceptional Children.

Irmer, L., Odenkirk, B., Glasenapp, G. (1981). Physical education opportunity program for exceptional learners (PEOPEL). Phoenix: Phoenix Union High School District.

Irons, D., Iron, T., Maddux, C. (1984). A survey of perceived competence among psychologists who evaluate students with severe handicaps. Journal of the Association of Persons with Severe Handicaps, 9(2), 55-60.

Jenkins, J., & Pany, D. (1978). Standardized achievement tests: How useful for special education? Exceptional Children, 44, 448-453.

Kunc, N. (1984-85). Being realistic isn't realistic. Canadian Journal for Exceptional Children, (pp. 4-9) 1(1).

Lambert, N., Windwiller, Cole, L., Fequeroa, R. (1975). AAMD Adaptive Behavior Scale: Public School Version (1974 rev.). Washington D.C.: American Association on Mental Deficiency.

Langone, J. (1981). Curriculum for the trainable mentally retarded.. Or "What do I do when the ditto machine dies!" Education and Training of the Mentally Retarded, 16, 150-154.

La Vigna, G., & Donnellan, A. (1986). Alternatives to punishment: Solving behavior problems with nonaversive strategies. New York: Irvington.

McCormack, K., & Audette, R. (1977). Developing twenty-four hour service plans for severely handicapped learners. AAESPH Review, 2, 209-216.

McGuinnis, E., & Goldstein, A. (1984). Skill-streaming the elementary child Champaign, Illinois: Research Press Company.

McLean, J., Snyder-McLean, L., Rowland, C. (1986). The generic skills curriculum for severely/profoundly handicapped students. University of Kansas: Parsons Research Centre, Bureau of Child Research.

McPherson, J., & Carmichael, L., (1985). Peer Tutoring Program P.E.O.P.E.L. Physical Education Opportunity Program for Exceptional Learners. Niagara South Board of Education, Ontario Association for the Mentally Handicapped.

Meyer, L., Eichinger, J., Park-Lee (1987). A validation of program quality indicators in educational services for students with severe disabilities. The Association for Persons with Severe Handicaps, 12 (4) 251-263.

Neel, R.S., Billingsley, F.F., McCarty, F., Symonds, D., Lambert, C.

Lewis-Smith, N., & Hanashiro, R. (1983). Teaching autistic children: A functional curriculum approach. (Available from R.S. Neel, 103 Miller Hall, University of Washington, Seattle, WW, 98195).

Orelove, F., & Sobsey, D. (1987). Curriculum and instructional programming. In F. Orelove & D. Sobsey (Eds.). Educating children with Multiple Disabilities (pp. 157-182). Baltimore: Paul H. Brookes.

Peterson, J., Trecker, N., Egan, I., Fredericks, H.D., Bunse, D. (1983). Teaching Research assessment procedures for the secondary student with severe handicaps. Monmouth, Oregon: Oregon State System of Higher Education.

Rainforth, B., & York, J., (1987). Integrating related services in community instruction. Journal of the Association for Persons with Severe Handicaps, 12 (3) 190-198.

Reid, D., Parson, M., McCarn, J., Green, C., Phillips, J., Schiepis, M. (1985). Providing an appropriate education program for severely handicapped persons: Increasing and validating functional classroom tasks. Journal of Applied Behavior Analysis, 18 289-301.

Rusch, F., Schutz, R., Agran, M. (1982). Validating entry-level survival skills for service occupations: Implications for curriculum development. Journal of the Association for the Severely Handicapped, 8 32-41.

Sailor, W., Halvorsen, A., Anderson, J., Goetz, L., Gee, K., Doering, K., & Hunt, P. (1986). Community intensive instruction. In R.L. Meyer & H.D. Fredericks (Eds.), Education of learners with severe

handicaps: Exemplary service strategies (pp. 251-186). Baltimore: Paul M. Brookes.

Schleien, S., & Ray, M.T. (1988). Community Recreation and persons with disabilities: Strategies for integration. Baltimore: Paul H. Brookes.

Searl, S.J., Ferguson, D.L., & Bilken, D. (1985). In D. Bilken, Achieving the Complete School. Columbia University: Teachers College Press.

Skakun, V. (1987). Restructuring our educational system to meet the unique needs of every child: A position paper on integration within effective educational settings. Edmonton (unpublished paper).

Snell, M., (Ed.) (1987). Systematic instruction of persons with severe handicaps (3rd ed.). Columbus, OH: Charles E. Merrill.

Snell, Martha E., & Browder, Diane M. (1986). Community referenced instruction: Research and Issues. Journal of the Association for Persons with Severe Handicaps, 11(1) 1-11.

Sobsey, D., & Ludlow, B. (1984). Guidelines for setting instructional objectives. Education and Treatment of Children, 7, 157-165.

Stainback, W., & Stainback, S. (1984). A rationale for the merger of special and regular education. Exceptional Children, 51(2), 102-111.

Stain, P. & Odom, S. (1986). Innovations in the education of preschool children with severe handicaps. In R. Horner, L. Meyer & H.D. Fredericks (Eds.). Education of learners with severe handicaps: Exemplary service strategies (pp. 61-98). Baltimore: Paul H. Brookes.

Tawney, J., Knapp, D., O'Reilly, C., Pratt, S. (1979). Programmed environments curriculum. Columbus: Charles E. Merrill.

Test, D., Spooner, F., Cooke, N. (1987). Educational validity revisited. Journal of the Association for Persons with Severe Handicaps, 12(2), 96-102.

Thousand, J., Fox, T., Reid, R., Godek, J., Williams, W., & Fox, W. (1986). The Homecoming Model: Educating Students who Present Intensive Educational Challenges Within Regular Educational Environments. Vermont.

Tucker, J. (1985). Curriculum-based assessment: An introduction. Exceptional Children, 52(3), 199-204.

Vincent, L., Salisbury, C., Walter, G., Brown, P., Gruenewald, L, Powers, M. (1980). Program development and curriculum development in early childhood/special education: Criteria of next environment. In W. Sailor, Methods of instruction for the severely handicapped students (pp 303-328). Baltimore: Paul H. Brookes.

Voeltz, L., & Evans, I.M. (1983). Educational validity: Procedures to evaluate outcomes in programs for severely handicapped. Journal of the Association for Persons with Severe Handicaps, 8(1), 3-15.

Voeltz, L, Wuerch, B. & Bockhaut, C. (1982). Social validation of leisure activities training with severely handicapped youth. Journal of the Association of the Severely Handicapped, (4), 3-13.

Wehman, P., Renzaglia, A., Bates, P. (1985). Functional living skills for moderately and severely handicapped individuals. Austin: Pro-Ed.

White, (1980). Adaptive performance objectives: Form verses function. In W. Sailor, B. Wilcox, & L. Brown (Eds.), Methods of instruction for severely handicapped students (pp. 47-70). Baltimore: Paul H. Brookes.

Wickersham, C., & Bland, L., (Project Managers), (1977). Behavioral characteristics progression (BCP). Santa Cruz: The Office of the Santa Cruz County, Superintendent of Schools.

Wilcox, B., & Bellamy, T. (1987a). The Activities catalog: An alternative curriculum for youth and adults with severe disabilities. Balitmore: Paul H. Brookes.

Wilcox, B. & Bellamy, T. (1987b). A comprehensive to the activities catalog: An alternative curriculum for youth and adults with severe disabilities. Baltimore: Paul H. Brookes.

Wilcox, B., Jackson, C., Overdorff, C., & Flannery, B. (1987). Effective schools: Implications for programs serving high school students with moderate and severe handicaps. CASE: Council of Administrators of Special Education, A Division of the Council for Exceptional Children.

Wilcox, B., & Bellamy, T. (1982). Design of high school programs for severely handicapped students. Baltimore: Paul H. Brookes.

Ysseldyke, J., & Christenson, S. (1987). TIES: The instructional environmental scale. Austin: Pro-Ed.

York, J. & Rainforth, B. (1987). Developing instructional adaptations. In F. Orelove & D. Sobsey, Educating children with multiple disabilities. Baltimore: Paul H. Brookes.