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An investigation of eligibility decision congruence among school administrators, psychologists, and social workers for Virginia's developmentally delayed population

John William Faircloth

College of William & Mary - School of Education

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An investigation of eligibility decision congruence among school administrators, psychologists, and social workers for Virginia's developmentally delayed population

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AN INVESTIGATION OF ELIGIBILITY DECISION CONGRUENCE AMONG SCHOOL ADMINISTRATORS, PSYCHOLOGISTS, AND SOCIAL WORKERS FOR VIRGINIA'S DEVELOPMENTALLY DELAYED POPULATION

A Dissertation
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The Faculty of the School of Education
The College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

by
John William Faircloth
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AN INVESTIGATION OF ELIGIBILITY DECISION CONGRUENCE
AMONG SCHOOL ADMINISTRATORS, PSYCHOLOGISTS, AND
SOCIAL WORKERS FOR VIRGINIA'S DEVELOPMENTALLY
DELAYED POPULATION

by

John William Faircloth

Approved August 1991

Lori Korinek, Ph.D.
Chair of Doctoral Committee

Virginia Laycock, Ed.D.

Roger Ries, Ph.D.
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The study investigated the construct of eligibility decision congruence as it applied to professional decision-makers for children with suspected developmental delays. Professional status and judgement format were the key variables of interest. Three distinct professional groups were surveyed: school administrators, psychologists, and social workers. The control group used professional judgement to determine eligibility, whereas the experimental group used a structured worksheet and eligibility criteria. One hundred and twenty subjects participated in a simulation of the eligibility decision process. Each subject was given five case summaries. A correct determination of eligibility was established for each case based on the decision of one multidisciplinary team and application of the Virginia Department of Education criteria. The control group received a form containing five distinct eligibility outcomes to select from in their determination of eligibility, whereas the experimental group received the same choices as part of the structured worksheet. Results from the investigation
yielded a moderate level of congruence among the three professional groups. A weak positive correlation was also found with number of years experience on an eligibility team with the total number correct determinations of eligibility. Use of the structured format for determining eligibility improved the accuracy rate for the experimental group in one case with missing assessment components. Marginal congruence was noted in three of the five cases, leading to the conclusion that the professionals failed to use the criteria or applied the criteria incorrectly in their determination of eligibility for preschool services. Marginal to high degrees of accuracy were found in four of the five cases presented. The case with the lowest accuracy rate resulted in a false-negative error in which a child with disabilities was made ineligible for services. The overall accuracy rate in determining eligibility was 70.34%. Limitations and implications for further research were discussed.

JOHN WILLIAM FAIRCLOTH

SCHOOL OF EDUCATION

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA
AN INVESTIGATION OF ELIGIBILITY DECISION CONGRUENCE
AMONG SCHOOL ADMINISTRATORS, PSYCHOLOGISTS, AND
SOCIAL WORKERS FOR VIRGINIA'S DEVELOPMENTALLY
DELAYED POPULATION
CHAPTER ONE
Introduction to the Problem

The empirical data base regarding the classification of students with disabilities and the determination of eligibility for special education services has grown significantly over the last several decades. While much of the research has demonstrated the existence of significant problems with current classification and eligibility practices, such research was vital in the process of shaping social policy regarding the provision of services to children with handicaps. Continuation of research efforts to validate the classification and eligibility processes was noted to be particularly important in light of increased federal and state mandates concerning the provision of services for preschool children with disabilities (Bricker, 1986; Cook, Tessier, & Armbruster, 1987). Both federal and state mandates have addressed some of the concerns surrounding categorical classification systems and practices, especially for young children, by providing initiatives to serve children with developmental delays or high-risk for developmental delays (Department of Health, Education & Welfare, 1986).

However, due to the vast variations in services to preschool children with disabilities (Hanson, 1985), classification as developmentally delayed and/or high-risk
for developmental delays was noted to be susceptible to the same problems associated with categorical classification systems used in the determination of eligibility. Such problems have included dissatisfaction with current definitions used for classification (Kavale & Forness, 1985), use of a variety of definitions (Lessen & Rose, 1980; O’Connell, 1983; Spence & Trohanis, 1985), as well as failure to use definitions when classifying children with suspected disabilities (Epps, McGue, & Ysseldyke, 1982; Ysseldyke, Algozzine, Shinn, & McGue, 1982; Dangel & Ensminger, 1988). In essence, the use of the developmentally delayed and/or high-risk identifiers may continue to perpetuate the philosophical debate regarding labelling. Therefore, it was viewed as imperative to scrutinize the basic tenets of any means to classify and determine eligibility for young children needing early intervention and/or special education services.

**Eligibility**

Liberman (1985) indicated that eligibility was a two-tiered process. In the first tier children were classified as either having disabilities or not having disabilities. In the second tier the need for special education was determined for those classified as having disabilities. Therefore, young children must be identified as having disabilities and in need of special education
services in order to satisfy the two-tiered process for determining eligibility and receive educational intervention since states and localities generally do not provide general education services to preschool children without disabilities. On the other hand, older students may be identified as having disabilities but not in need of special education services and still receive educational intervention in the form of curricular adjustments or environmental modifications under the auspices of general education services (Virginia Department of Education, 1985).

Eligibility has been further defined as "... the process by which children with handicaps are determined to be in need of special education and related services. A decision regarding eligibility is reached only after thorough review of all pertinent information. Eligibility for services is not a permanent decision, but rather is subject to periodic review as the needs of children change" (Virginia Department of Education, 1985; p. 59). However, it should be noted that this definition applied only to special education services in the state of Virginia. Numerous authors (Senf, 1978; Hanson, 1985; Tharinger, Laurent & Best, 1986) have indicated that definitional parameters regarding eligibility were contingent upon the purpose for determining eligibility, the persons
determining eligibility, and the institution providing service delivery.

**Classification**

As previously noted, classification was the first step in the determination of eligibility for children with suspected disabilities. Hobbs (1975) cited a number of conceptual models used to classify children with disabilities. The two most prominent models have been the medical model and the social systems model. The medical model, as described by Mercer and Ysseldkye (1977), Mercer (1979), and Mercer and Lewis (1982), assumed that abnormal or deviant patterns of behavior or development were a result of underlying biological anomalies. The medical model further purported that biological anomalies were cross cultural, with such anomalies causing similar deviant patterns of behavior regardless of the social status or cultural group of the individual. Abnormal or deviant patterns of behavior were viewed as an inherent part of the individual. On the other hand, the social systems model, as described by Mercer (1979) and Mercer and Lewis (1982), consisted of an ecological perspective in classifying handicapping conditions. Deviant behavior or abnormal patterns of development were not considered as inherent to the individual, but rather as a discrepancy between what an individual had learned in a cultural context and the
expectations for normal behavior associated with a specific social role and setting. Judgements of deviance were noted to be social role and context specific. Algozzine and Korinek (1985) used these two models to contrast prevalence data. Less than two and a half percent of the total school-age population could be classified as having disabilities using the medical model, whereas seven to nine and a half percent of the total school-age population could be classified as having disabilities under the social system model.

Classification has been noted to serve any number of purposes. Zubin (1967) categorized three fundamental roles of classification: (a) to specify etiology, (b) to make a prognosis, and (c) to select or design a treatment. Of the three, Reynolds (1984) indicated that the allocation to treatment, or in this case, the determination of eligibility for special education services, was the legitimate purpose of classification in the schools. As such, the utility of the classification system should serve the basic purpose of delineating those children in need of educational services.

Reschley (1989) stated that the most important characteristics of a good classification system were validity and reliability. Cromwell, Blashfield, and Strauss (1975) suggested that classification could be based
upon historical data and/or upon currently available data. Furthermore, the reliability of a classification system was noted to be determined by the degree to which independent judges used the same information to arrive at the same classification. McDermott (1981) described reliability as the degree of agreement between two or more professionals for the classification of the same children or matched sets of children. The author termed such reliability as congruence and implied that the level of agreement among professionals should be greater than what would occur by chance alone.

On the other hand, the validity of a classification system was related to specific treatments and to knowledge regarding the effectiveness of those specific treatments. A valid classification system led to a diagnosis which, in turn, suggested a particular treatment or intervention known to be effective (Cromwell, Blashfield & Strauss, 1975).

Considerable philosophical debate has emerged regarding current categorical classification systems used in special education. Numerous authors have purported the use of a noncategorical classification system (Reynolds & Balow, 1972; Lucas, 1974; Hobbs, 1975), particularly with young children. Lerner, Mardell-Czudnowski, and Goldberg (1987) have stated, "Since early symptomatic conditions
are not easily identified and classified into deficits and categories by labels, it appears better to develop programs designed to meet functional needs rather than to perpetuate discrete and separate categories for young children" (pp. 18-19).

Three labels were noted to be employed by the state of Virginia in classifying young children with disabilities: preschool handicapped, developmentally delayed, or high-risk. Preschool handicapped children were defined as those "children below age five who meet the criteria for one or more of the following categories: mentally retarded, hard of hearing, deaf, speech and language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, autistic, deaf/blind, severely and profoundly handicapped, multi-handicapped, or have a specific learning disability" (Virginia Department of Education, 1985; p. 61). Developmentally delayed children were defined as "a child below age eight who exhibits a significant delay in one or more of the following areas of development: (a) cognitive ability, (b) motor skills, (c) social/adaptive behavior, (d) perceptual skills, and (e) communication skills (Virginia Department of Education, 1990; p. 12). High-risk children were defined as children, below the age of five, who exhibited a delay of 25% or greater in one or more of
the major developmental domains and included those children with diagnosed physical or mental conditions which had a high probability of resulting in a developmental delay (Virginia Departments of Education and Mental Health/Retardation, 1990). However, it should be noted that these definitional parameters were somewhat misleading as educational services were not mandated until the age of two.

A number of authors have attempted to categorize more fully the possible sources of developmental delays. Tjossem (1976) identified three categories of factors that placed children at risk for delays: established, environmental, and biological. The established risk category included those diagnosed conditions in which the outcomes were fairly well evidenced. Examples included children with Down's syndrome or cerebral palsy. The environmental risk category included children who were living in environments which were likely to produce delayed development. Bijou (1981) cited the following as environmental predictors of developmental delays: (a) poor economic conditions, (b) deviant parental practices, (c) strong and frequent aversive contingencies (e.g., child abuse), (d) meager social contacts and/or contacts with uncaring persons, (e) factors that strengthen antisocial behavior, (f) factors that promote helplessness,
and (g) persons who treat children as ill or abnormal. The biological risk category, also known as suspect risk (Keogh & Kopp, 1978), included those "children whose early developmental histories and conditions were suggestive of possible biological insult, e.g. extremely low birth weight, perinatal anoxia" (Keogh & Daley, 1983, p. 8).

Meier (1979) suggested two categories to describe developmental delays: intra-individual, and inter-individual/extra-individual sources. These were viewed as similar to Mercer's (1979) medical and social system classification schema to describe handicapping conditions. Intra-individual sources were conditions from within the child such as metabolic, genetic, or central nervous system dysfunction that may result in developmental delays. Inter-individual/extra-individual sources for developmental delays were those factors arising from the environment (e.g., poor economic conditions) and/or social interaction patterns (e.g., abuse or neglect).

**Eligibility Criteria**

The inclusion of the definition for developmentally delayed in Virginia's regulations and the definition of high-risk in Virginia's guidelines governing preschool children with disabilities were noted to be significant. Both provisions were in place prior to the enactment of Public Law 99-457 and appeared to address some of the
concern regarding the use of categorical labels, particularly with young children. In addition to the provision of definitional parameters for determining eligibility, Virginia's guidelines offered specific criteria to determine the presence of a significant developmental delay. The criteria were presented in the form of a matrix and expressed delays in terms of months, standard deviations, and percentages of delay (Virginia Department of Education, 1985; p. 60). The Virginia Departments of Education and Mental Health/Retardation (1990) jointly revised eligibility criteria for the young developmentally delayed population. The criteria included a standard of a 25% or greater deficit, based on chronological age, in one or more developmental domains. The criteria also specified specific physical or mental conditions or combinations of conditions which had a high probability of resulting in a developmental delay even though no delay currently existed. The absence or presence of such conditions were noted as a basic parameter for determining eligibility. Furthermore, age constraints, two to below five years of age, were also noted as another important variable in the determination of eligibility for those children served by local school divisions. These criteria were viewed as the basis for an operational definition for determining eligibility.
The use of definitional and criterial variables was viewed as one means of establishing basic congruence data regarding the classification and determination of eligibility for children with suspected developmental delays or high-risk for developmental delays in Virginia. As noted there has been a philosophical shift away from the use of categorical classification with young children. Smith (1980) reported that field testing in the state of Washington revealed no significant increase in the eligible population when using the definition of developmentally delayed versus a categorical approach.

**Multidisciplinary Teams and Eligibility**

The context in which eligibility criteria were utilized was noted to be of critical importance in obtaining eligibility decision congruence data. Both federal and state regulations mandated the use of a multidisciplinary team in the determination of eligibility. Virginia specifically required that "Membership of the eligibility committee shall include, but not be limited to, school division personnel representing the disciplines providing assessment components and the administrator of the special education program, or designee" (Virginia Department of Education, 1990; p. 53). However, due to purported difficulties with multidisciplinary team functioning (Fitzsimmons, 1977;
and disproportionate influence of specific team members (Gilliam, 1979; Gilliam & Coleman, 1981; Knoff, 1983), the collection of adequate congruence data in this context was suspect.

Numerous studies have examined the nature of barriers to the effective use of multidisciplinary teams. Fenton, Yoshida, Maxwell, and Kauffman (1979) reported that multidisciplinary teams had many functional problems related to their goals, organization, roles of team members, and the development of program plans. In assessing multidisciplinary teams, Fitzsimmons (1977) found major problems with the interpersonal relationships among team members. These included an inability of certain team members to accept and explore comments about a child from other team members, difficulty arising from differential status of team members, and team disagreement regarding the amount of time to be committed to developing goals. Pokorni (1977) cited a number of potential problems in team functioning which were more procedural in nature. Among these were holding to a discussion schedule, maintaining group focus, and team record keeping. Several process variables were also identified as problematic, which included the clarification of responsibilities and the management of conflict.
Bray, Coleman, and Gotts (1981) attempted to identify the major barriers which impeded effective team functioning. As a result of their work, the authors identified three broad classes of barriers. These barriers included: logistical/procedural concerns, group interactional concerns, and discipline related concerns. Logistical/procedural concerns emerged as the top rated area of concern and were viewed by the authors as susceptible to remediation through technical assistance or staff development.

Other studies have indicated significant disproportionate influence, participation, and satisfaction among multidisciplinary team members (Gilliam, 1979; Gilliam & Coleman, 1981). Knoff (1983) found that multidisciplinary team members exerted disproportionate influence on placement decisions. In particular, school psychologists were considered the most influential members in the placement decision process. Knoff recommended that the team chairperson should be responsible for analyzing the patterns of disproportionality, minimizing their effects on group processes, and coordinating steps toward acceptable resolutions. These recommendations were seen as necessary to reduce multidisciplinary team disagreements, increase team and individual satisfaction, and maximize group cohesiveness and productivity.
Conflicting data have been reported for the reliability of various professionals in determining eligibility for children with suspected disabilities, as well as for independent versus team eligibility decisions. Smith and Knoff (1981) and Knoff (1984) found adequate reliability data in the classification of suspected mentally retarded students when school psychologists and special educators were compared. However, Epps, Ysseldyke, and McGue (1984) reported that when resource teachers, psychologists, and naive judges used both school classification systems and federal definitions for learning disabilities, naive judges more reliably identified learning disabled students. Dangel and Ensminger (1988) and Pfeiffer and Naglieri (1983) found adequate reliability in team decision making. However, Ysseldyke, Algozzine, and Mitchell (1982) reported that specific team members participated little in the decision-making process and as such, the extent to which the final decision was an actual team decision had not been substantiated.

Liberman (1985) indicated that the determination for eligibility was a complicated process which should be based upon "the realm of professional competence and decision-making" (p. 64). In those cases where eligibility decisions were noted to be contrary to definitional parameters, numerous authors (Epps, McGue, & Ysseldyke,
1982; Dangel & Ensminger, 1988; Boyan, 1985; Vance, Bahr, Huberty, & Ewer-Jones, 1988) have concluded that the professional judgement of the decision-makers may have been instrumental in the determination of eligibility. As such, professional judgement was viewed as another significant variable which should be addressed when assessing the congruence of classification schema and eligibility determination for young children with disabilities.

Statement of the Problem

Special education research in the area of determining eligibility for special education services has been critical of past attempts of classifying children as handicapped (Edgar, 1988). As such, there has been a philosophical and legislative shift particularly in the classification and determination of eligibility for young children with disabilities. This shift was noted to employ the use of developmentally delayed and/or high-risk for developmental delay demarcations rather than discrete categorical classification schema. However, the actual usefulness of using the newer demarcations was not supported or addressed by the research.

One of the most basic methodological flaws of research and/or policy development has been perpetuated by the use of the newer developmentally delayed and/or high-risk for developmental delay demarcations. This methodological flaw included the lack of adequately defining the target
population both in terms of legislative mandates and special education policies (Edgar, 1988).

Classification schema and professional judgement are two of the most critical elements in the process of determining eligibility. As new classification schema are developed, research efforts need to be directed toward establishing basic parameters of reliability and validity. However, this has not been the case in the adoption of the developmentally delayed and high-risk demarcations currently allowed in the state of Virginia. To date no research has been found to support the utility of such a classification system in the determination of eligibility.

As eligibility decisions are fundamentally the responsibility of professional decision-makers, research efforts must be directed toward defining their role and influence in the decision-making process. One basic form of information necessary to assess the utility of classification schema in the decision-making process is eligibility decision congruence. Historically research has shown that congruence was often lacking in the use of other classification systems. Basic congruence also implies an independent professional judgement unbiased by extraneous variables. Prior research has demonstrated the adverse affect of dysfunctional teams on the decision-making process.
Purpose of the Study

In order to establish meaningful congruence data, definitional parameters and professional judgement need to be systematically manipulated. Initial research should control for known sources of variance in the determination of eligibility as the first step in developing a more reliable and, ultimately, a more valid classification system. Therefore, the purposes of this study are to explore variables which influence the determination of eligibility for young children with suspected developmental delays, as well as establish an eligibility decision congruence data base from which to conduct future research.

Research Questions

As a result of the previous discussion, the following specific research questions were generated: (a) Are there differences in eligibility decision congruence when school personnel use independent professional judgement versus a structured format for decision-making? and (b) Are there differences in eligibility decision congruence when the professional disciplines of administrator, psychologist, and social worker are compared?

Definition of Terms

The following definitions were provided to clarify terminology used in the text.

At-risk and/or high-risk: Children, below the age of five,
who exhibit a 25% or greater deficit in one or more of the major developmental domains. This definition also includes those children with a diagnosed physical or mental condition or combination of conditions which have a high probability of resulting in a developmental delay even though no delay currently exists (Virginia Departments of Education & Mental Health/Retardation, 1990).

**Classification reliability:** The degree to which independent judges use the same information to arrive at the same classification (Hobbs, 1975).

**Classification validity:** The determination of a specific diagnosis, which in turn, leads to a particular treatment or intervention which is known to be effective (Hobbs, 1975).

**Developmentally delayed:** Children, below the age eight, who exhibit a significant delay in one or more of the areas of development: cognitive ability, motor ability, social adaptive behavior, perceptual skills, and/or communication ability (Virginia Department of Education, 1990).

**Eligibility:** The process by which children with handicaps are determined to be in need of special education and related services. A decision regarding eligibility is reached only after thorough review of all pertinent information. Eligibility for services is not a permanent decision, but rather is subject to periodic review as the needs of children change (Virginia Department of Education,
Eligibility decision congruence: The degree of agreement among two or more professionals for eligibility determination given the same children or matched sets of children. This term implies the degree of agreement should be greater than what would occur by chance (McDermott, 1981).

Preschool handicapped: Children, below the age of five, who meet the criteria for one of more of the following categories: mentally retarded, hard of hearing, deaf, speech and language impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, autistic, deaf/blind, severely and profoundly handicapped, multi-handicapped, or have a specific learning disability (Virginia Department of Education, 1985). This term has been replaced by children with handicaps or children with disabilities to reflect recent legislative mandates (Dey, 1991).

Professional judgement: Decisions based upon the culmination of one's professional training, organizational socialization, and previous experience.

Limitations of the Study

A number of limitations are noted with this study which may preclude global generalizations concerning the congruence of eligibility decisions for developmentally delayed and high-risk children. Such limitations include:
the defined parameters of the target population, the use of independent decision-makers, and the use of simulated case materials.

Generalizations beyond the state of Virginia are noted to be limited. Due to the great variance in definitional parameters used by other states, the results of the investigation can only be compared to states which employ developmentally delayed and high-risk schema in the determination of eligibility for young children with disabilities. Similarly, only those states which serve a similar age range can be compared. Furthermore, generalizations to other states can be employed only to the extent that similar eligibility criteria are utilized.

The use of independent decision-makers is noted to significantly limit the generalizations of the study. However, the purpose of the study is to obtain basic congruence data to serve as a foundation on which to conduct further research. Additionally, such a limitation is viewed as a methodological control to diminish one possible source of variance stemming from the disproportionate influence of specific team members (Gilliam, 1979; Gilliam & Coleman, 1981; Knoff, 1983). Similarly, the use of the simulated eligibility materials is noted to be a limitation. While the simulated materials are composites of actual cases, information such as "reason for referral" is omitted to control for another possible
source of variance arising from biased referral information (Vance et. al., 1988).

**Delimitations of the Study**

A number of intentional delimitations are noted to be inherent to the study. Such delimitations include: the specific use of developmentally delayed and high-risk schema versus preschool handicapped classification, the use of independent decision-making versus multidisciplinary team decisions-making, the selection of distinct professional groups to serve as decision-makers, and the manipulation of case materials to control for such variables as the sex of the child and reason for referral.

One of the primary purposes of the study is to establish eligibility congruence data for developmentally delayed and high-risk schema. Both state and federal mandates are noted to address these populations. Furthermore, critics of traditional categorical systems support the use of more noncategorical classification systems when identifying young handicapped children.

The use of independent decision-makers is viewed as a methodological control of the study. Conflicting research data are reported on the reliability of independent decision-makers versus team decision-makers in determining eligibility for special education services. Additionally, the use of independent decision-makers is viewed as essential in controlling for possible sources of variance.
associated with dysfunctional multidisciplinary teams and disproportionate influence of specific team members (Gilliam, 1979; Gilliam & Coleman, 1981; Knoff, 1983). Once congruence data are obtained for independent decision-makers, more adequate comparisons of team decision-making can be made.

Similarly, the selection of specific professional groups is noted as another methodological control of the study. Group selection is based on typical representation in multidisciplinary teams as Virginia's regulations governing special education programs mandate the use of personnel who are familiar with each of the assessment components, as well as an administrator or designee for special education (Virginia Department of Education, 1990). School nurses are eliminated from this investigation, as only 38.5% of local school divisions directly employ nurses (Carpenter, Doherty, Lingaraju & Oswalt, 1987).

Finally, the manipulation of the case studies to eliminate data on the sex of the child and the reason for referral is viewed as necessary to control for additional sources of variance in determining congruence data. Research indicates that both the sex of the child (Ysseldyke and Algozzine, 1979) and the reason for referral (Vance et. al., 1988) influence the eligibility decision.
CHAPTER TWO
Review of Literature

The impetus to provide services for preschool children with disabilities has grown steadily over the last several decades (Bricker, 1986; Cook, Tessier & Armbruster, 1987). This impetus may be viewed as a manifestation of social policy. Social policy, as defined by Edgar (1988) is "the sum of prevailing attitudes toward a given topic" and includes "laws, rules, regulations, individual values, political influences, folklore, and social tradition" (p. 36). Edgar (1988) further stated that "The relationship between society and social policy is synergistic; each shapes and is shaped by the other" (p. 36). Boorstin (1974) noted that in American society education was viewed as the primary means for providing equality to all citizens. Thus the solution for many perceived social problems has fallen into the realm of education. Edgar (1988) has indicated that the decision to provide educational services for preschool children with disabilities rather than providing financial assistance or free medical care was based upon public sentiment rather than upon research.

The generation of public policy in the area of special education has often been the result of the passage of legislation by the United States Congress and its
subsequent implementation through laws by the executive branch of the government. Furthermore, concerned constituencies have been noted to be instrumental in the determination of federal policy (Bricker, 1986). As such, the content of legislation from which federal policy derives is determined by a slowly evolving political process of compromise and negotiation between legislative bodies, executive agencies, and concerned constituencies (Garwood, 1984; Noel, Burke, & Valdivieso, 1985).

The Office of Education and Rehabilitative Services (OSERS) has been identified as the lead federal agency in the development of policies regarding individuals with disabilities. This agency is directed by relevant legislation passed by Congress and is also responsive to public reaction. Policy developed by OSERS subsequently affects the development of state policy by state departments of education or departments of human services. State or human services departments also develop policy in response to laws enacted by state legislatures. Local school districts and other relevant public agencies, in turn, develop their policies based upon laws passed by their state legislatures and state departments of education or human services. Finally, service delivery personnel develop policy guidelines for their specific programs (Bricker, 1986). As such, social policy may be said to be a pervasive entity, particularly regarding preschool children with disabilities.
A number of significant events have influenced the provision of services for preschool children with disabilities, most notably in the form of federal legislation. The passage of successive pieces of legislation regarding preschool children with disabilities may be viewed as an example of the evolutionary process of the development of social policy. Therefore, an attempt has been made to summarize key pieces of legislation regarding preschool children with disabilities and its subsequent affect on the development of social policy at the federal, state and local levels.

Three specific purposes for the review of literature were noted. One purpose of the review was to provide a global historical perspective regarding the delivery of services to preschool children with disabilities by examining relevant variables at the federal, state, and local levels. A second purpose of the review was to examine a number of variables directly related to the determination of eligibility for special education services. The third purpose of the review was to focus upon issues related to the process of obtaining eligibility congruence data for developmentally delayed and high-risk schema found in the state of Virginia.

**Federal Level Considerations**

**Handicapped Children's Early Education Program**

Congress passed the first federal legislation
specifically targeted for preschool children with disabilities in 1968. The Handicapped Children's Early Education Program (HCEEP) or Public Law 90-538 authorized federal funds to establish a national network of demonstration programs designed to serve children with disabilities birth through eight years. The intent of the law, also known as the First Chance Program, was to provide "seed" money for the development of the model programs. State or local districts were to assume fiscal responsibility after thirty-six months. The act also required that the programs included parents, conducted in-service training, evaluated the children and the program, coordinated efforts with local school districts, and disseminated information to professionals and the public (Bricker, 1986; Cook, Tessier, & Armbruster, 1987).

Ackerman and Moore (1976) indicated that the issue of efficacy of early intervention was paramount in the passage of the Handicapped Children's Early Education Program. The purpose of the program was "to demonstrate the feasibility of early education to the American public" (p. 669). The authors further stated that these federal programs were to "be evaluated to show others their worth" (p. 670). However, Edgar (1988) has concluded that the provision of such services, with subsequent evaluative efforts to substantiate the merits of the programs, was yet another example of public sentiment fostering research efforts.
rather than research shaping social policy.

A number of evaluative studies have been completed to assess the merits of the Handicapped Children's Early Education Program. Swan (1980) reviewed the status of 21 of the original model programs. He found that 86% of the original programs had continued to provide services without federal assistance. Additionally, the types of handicapping conditions served under the model programs were noted to be more inclusive during the 10 year follow-up. Original programs primarily served children with multiple handicaps, neurological impairment, and/or severe/profound retardation exclusively, whereas 56% of the current programs serve children with all handicapping conditions. Subsequently, Swan (1981) reported that the total number of programs in 1980 funded through HCEEP was 177, 111 of which served infants. By 1981 more than 280 model programs were directly linked to HCEEP (Roy Littlejohn Associates, 1982).

Roy Littlejohn Associates (1982) further indicated the significant impact of HCEEP in an evaluative report to the Office of Special Education Programs. Highlights from the report included: model programs were active in every state and several territories, 55% of the children who left HCEEP demonstration projects were placed in integrated settings with children without disabilities which were less expensive than more specialized placements, 80% of the
programs received no direct funding from HCEEP, more than 30,600 children were served in continuation programs at no cost to HCEEP, replication programs served 107,850 children, and more than 3,000 products were developed by HCEEP programs.

**P.L. 90-248, P.L. 92-924 and P.L. 93-644**

Additional federal legislation has focused upon the needs of preschool children with disabilities. Bricker (1986) identified a number of federal policies targeted at young children such as Public Law 90-248, Public Law 92-924, and Public Law 93-644. Public Law 90-248, or The Early and Periodic Screening, Diagnostic, and Treatment Program, enacted in 1967, was implemented to establish the early detection and/or prevention of developmental disabilities in young children. The passage of this law was reflective of congressional concern regarding variations in state law and policy directed at children with disabilities or who were chronically ill (Allen, 1984). Public Law 92-924 of 1972 was an amendment to the Economic Opportunity Act which mandated that the Head Start Program serve children with disabilities. In 1974 another amendment was enacted, Public Law 93-644, which redefined the term "handicapped" to include more severely involved children under the Head Start Program. As a result of these amendments, up to 10% of the population served by the Head Start Program were to be children with disabilities.
The mainstreaming of preschool children with disabilities with children without disabilities has been noted as a major activity of the Head Start Program. By 1985, the enrollment of preschool children with disabilities in Head Start exceeded 60,000 (Cook, Tessier, & Armbruster, 1987).

The efficacy of the Head Start Program came under criticism soon after its conception. The Westinghouse Learning Corporation (1969) reported that children in the Head Start Program failed to make notable gains in development. Furthermore, their data indicated that measured gains in development often dissipated by the end of the first grade. There were no significant differences between the academic performance of children who had attended Head Start and those from the same types of environments who had not. However, the validity of the Westinghouse report came under close scrutiny. Proponents of early childhood education urged additional research before definitive denunciations were made regarding the efficacy of Head Start (Gotts, 1973; Ziegler, 1978).

This early philosophical debate regarding the efficacy of the Head Start Program may be viewed as yet another manifestation of the evolution of social policy. Concerned constituencies, proponents of early childhood education, directly affected the continuation of research efforts which, in turn, has assisted in shaping and redefining social policy regarding early intervention. In retrospect,
Guralnick (1988) stated:

In fact, it can be argued that considerable caution should be exercised in accepting long-term effects as primary criteria for evaluating the impact of early intervention programs. The face validity of short-term effects must be recognized. Improvements in cognitive, language, motor, and social skills, or in family functioning, for example, are clearly of value by any standard. Any attempt to establish long-term impact as a final and perhaps primary measure of the value of an intervention program must recognize the options available and the variability in quality that exists in post-early childhood environments. ...it is important to reemphasize that efficacy research in early intervention must be considered as an ongoing process, one that is dependent upon new knowledge, techniques, concentricities, intervention models, and approaches in the field. (pp. 85-86).

Section 504 of the Rehabilitation Act of 1973

There have been additional pieces of federal legislation which have impacted upon preschool children with disabilities. Section 504 of the Rehabilitation Act of 1973 or Public Law 93-112 was enacted as an antidiscriminatory measure to ensure the rights of individuals with disabilities. While Section 504 has had many significant ramifications, the act specifically prohibited discrimination of persons with handicaps in obtaining access to services or programs which were, in part, funded federally (Bricker, 1986). However, protection under Section 504 for preschool children with disabilities was noted to be limited. According to Bricker
"...if a state offers programs to nonhandicapped children, these services must also be available to handicapped children" (p. 110). If localities or states failed to comply with the mandates of Section 504, all federal monies to their Departments of Health and Human Services and their Departments of Education could be withheld (Ballard, 1977).

P.L. 94-142

One of the most significant pieces of federal legislation which has impacted upon preschool children with disabilities was Public Law 94-142. Public Law 94-142, or the Education for All Handicapped Children Act of 1975, guaranteed a number of basic rights for children with disabilities: the right to a free appropriate education, the right to nondiscriminatory evaluation, the right to an individualized education plan, the right to due process, the right to education in the least restrictive environment, and the right of parental participation (Gallagher, 1984).

Despite these major assurances, Edmister and Ekstrand (1987) have indicated that Public Law 94-142 established age limitations for preschool children with disabilities who were entitled to a free appropriate public education. Specifically, the law stated:

A free appropriate education will be available for all handicapped children ...
between the ages of three and twenty-one
... except that, with respect to handicapped
children aged three to five and aged
eighteen to twenty-one inclusive, the
requirements of this clause shall not be
applied in any State if the application of
such requirements would be inconsistent with
State law or practice, or the order of any
court, respecting public education within
such age groups in the State (Department of
p. 42481).

Therefore, unless mandated by state law, Public Law 94-142
did not require the provision of educational programs for
children with disabilities children below the age of five.
Part B of the Act did, however, offer small incentive
grants to encourage states to develop programs for
preschool children with disabilities (Bricker, 1986).

The response to Public Law 94-142 in many instances
has been critical. Due to the discretionary nature of the
regulations regarding preschool children with disabilities,
many authors (Cohen, Semmes, & Guralnick, 1979; Smith,
1980; Barresi, Bunte, & Mack, 1980) have stated that the
law served as a disincentive to states to offer educational
programs. These same authors noted that there was an
actual reduction in the number and kinds of services
offered by states for preschool children with disabilities
after the enactment of Public Law 94-142. As such, early
childhood special education proponents have argued that
preschool children with disabilities constituted an
underserved population. Furthermore, evaluative reports on
the implementation of the legislative mandates of the law revealed that compliance at the state and local levels had yet to be accomplished (United States Department of Education, 1980).


Constituency concern regarding the impact of Public Law 94-142 has had a direct affect on redefining federal policy. Public Law 94-142 has been followed by three subsequent amendments; Public Law 98-199, Public Law 99-457, and Public Law 101-476. Public Law 98-199, or The Education of the Handicapped Act Amendments of 1983, detailed a number of significant changes regarding preschool children with handicaps. The preschool incentive grants program was amended to include children from birth to three years. Additionally, state plans must make provisions for all children with handicaps from birth through five years of age. Furthermore, Public Law 98-199 emphasized the crucial role of parents in the education of their children with handicaps (Bricker, 1986).

Similarly, Public Law 99-457, The Education for the Handicapped Act Amendments of 1986, addressed a number of significant changes which have impacted upon preschool children with handicaps. The new law reauthorized discretionary programs under the act through 1989, repealed the preschool incentive grant program and established a new preschool grant program for state services to children with
handicaps three to five years, and authorized early intervention services for infants and toddlers with handicaps from birth to three years (Department of Health, Education, & Welfare, 1986) Additionally, the law permitted the following: classification of three to five year olds as "developmentally delayed" rather than using categorical labels, inclusion of the "high-risk" population, establishment of a state-level interagency council for early intervention, creation of the "individualized family services plan", specification of five areas of eligibility (physical, cognitive, speech and language, psychosocial, and self-help), and provision of funds for early intervention services (Cook, Tessier, & Armbruster, 1987). However, it should be emphasized that services to preschool children with handicaps under Public Law 98-199 and Public Law 99-457 remained discretionary and under regulatory control of individual states.

Public Law 101-476, or the Individuals with Disabilities Education Act, reauthorized discretionary programs for an additional five years. A number of mandates targeted young children and included:
(a) improving early identification efforts,
(b) facilitating the transition of infants and toddlers with disabilities from early intervention programs to preschool, (c) promoting the use of assistive technological devices, and (d) addressing the early intervention needs of
children exposed prenatally to drugs (Dey, 1991). One of the most striking components of the new act was its shift in labelling children "handicapped". Under the new act, children were referred to as individuals with disabilities instead of handicapped or disabled children.

**Efficacy Research and Classification Validity**

It was not within the purview of this discussion to review the extensive body of literature regarding the efficacy of early intervention programs. However, it should be noted that efficacy research was paramount in redefining social policy regarding preschool children with disabilities. Furthermore, the majority of research completed thus far in the area of early childhood special education has centered upon the issue of the efficacy of early intervention programs (Cook, Tessier, & Armbruster, 1987) and as such, formed the basis to determine the validity of various service delivery options. A number of authors have indicated that both the quantity and quality of research on the efficacy of early intervention has improved (Reynolds, Egan, & Lerner, 1983; Baily & Bricker, 1984). Longitudinal studies conducted by Lazar and Darlington (1982) indicated that there were long-lasting effects from early intervention programs, particularly in the form of a reduced need for special education services.

In order to overcome methodological and/or research design flaws in early efficacy research, Casto and
Mastropieri (1986) used a meta-analysis technique to analyze the findings of 74 studies on the effects of early intervention with heterogeneous groups of children with disabilities. Their data demonstrated that there were immediate benefits of early intervention with a wide variety of children, handicapping conditions, and types of programs. When intelligence or related cognitive measures of children who attended intervention programs were compared to those who had not, a significant mean effect of .85SD was found. However, when all developmental information, such as language, motor, and social skills, was included in the analysis, the mean effect of intervention was reduced to .68SD. Furthermore, when more stringent design criteria were employed, the mean effect of intervention was reduced to .43SD. The authors cautioned that only global inferences could be drawn regarding the efficacy of early intervention with preschool children with disabilities.

State Level Considerations

As noted earlier, state educational policy is generally derived from federal policy. However, Noel, Burke, and Valdivieso (1985) have argued that state and local policies have often compromised the intent of federal policy. Numerous authors have maintained that the ambiguous and discretionary nature of federal policy led to the creation of state policy which was inconsistent (Smith,
1980; Barresi, Bunte, & Mack, 1980; O'Connell, 1983; Bricker, 1986; Edmister & Ekstrand, 1987). Furthermore, federal funds have never been fully appropriated to meet the mandates of federal policy (Magnetti, 1982; Bricker, 1986). Citing Congressional testimony regarding the Preschool Incentive Grant Program, Smith (1980) argued that Congress' failure to fully fund appropriations for preschool children with disabilities created a disincentive for states to provide programs. Noel, Burke, and Valdivieso (1985) noted "Differences in state educational policies largely reflect the general wealth of an individual state, the strength of its commitment to the handicapped, and its available resources" (p. 27).

However, Magnetti (1982) indicated that the multiple levels of funding (federal, state and local) and related funding policies for special education programs created both fiscal incentives and disincentives that vary from jurisdiction to jurisdiction. Variations in fiscal incentives and disincentives involved the complex interaction of state and federal funding formulas and policies, state and local perceptions of funding and regulations, the influence of federal policies on state and local programs and priorities, and the combined use of special education programs for individuals with disabilities and other special-needs programs. Furthermore, it was noted that regulations and guidelines
that defined handicaps, described programs and services, and limited class size acted as constraints on funding formulas.

**Formation of Policy**

States have generally employed two strategies in the development of their laws or regulations regarding preschool children with disabilities. First, some states have simply lowered the age range for which they provide services. Preschool children with disabilities were then eligible to receive services under the same rules and regulations as school-aged children. The second strategy states employed was to create a new authority with rules and regulations specific to preschool children with disabilities (Smith, 1980). However, prior to 1986, few states had required that services be provided to all children with disabilities from birth (Bricker, 1986). Subsequently, with the passage of Public Law 99-457, states continued to have discretionary power over the extent to which preschool children with disabilities were served.

**Variations in State Definitions**

A number of studies have been completed to assess the variability in state definitions regarding preschool children with disabilities. Barresi, Bunte, and Mack (1980), under the auspices of the Policy Options Project for the Council for Exceptional Children, compiled all state education policies related to ages of eligibility for
special education and related services. Forty-six states were found to have provisions for the education of children with disabilities below the age of six. Twenty-one states mandated, in at least one policy document, that services were to be provided to some portion of the birth to five population. Sixteen states specified that services were permissive and under the discretion of localities, and nine states had conflicting policies. Eight states appeared to authorize services from birth, whereas five states had no preschool provisions.

To determine the impact of federal policy on state education policy, Barresi, Bunte, and Mack (1980) compared their compiled data to a similar 1973 study by Abeson and Trudeau. In the comparison, the authors found that seven states agencies had lowered the age of eligibility for mandated services, whereas twelve states had raised the age of eligibility. Of particular interest were the changes in state policy regarding permissive ages of eligibility. Several states had changed their preschool policies from mandatory to permissive, whereas other states had expressly written in permissive age ranges where none previously existed. Their data indicated an overall negative trend in service provision to preschool children with disabilities post implementation of Public Law 94-142.

Several other researchers have addressed the issue of state definitions regarding preschool children with
disabilities. Lessen and Rose (1980) contacted state consultants responsible for administering preschool special education programs to compile current state definitions and any existing guidelines for the identification and placement of preschool children with disabilities. Forty-four (88%) of the states responded. Of the states that responded, seven (16%) had a specific definition for preschool children with disabilities. The remaining thirty-seven states (84%) that did not have a specific definition were grouped along the following dimensions: no current guidelines or intent to comply with the requirements of Public Law 94-142 (43%; n = 19), use of existing category definitions (32%; n = 14), and use of miscellaneous criteria (9%; n = 4). When age of eligibility was assessed, five subgroups emerged: (a) three to five years, (b) below school age or birth through six years, (c) availability of service specified by age and category, (d) all individuals with disabilities below age twenty-one, and (e) age range left to the discretion of the local school district.

O'Connell (1983) conducted a similar study regarding mandated services for preschool children with disabilities. A survey was sent to state departments to elicit information pertaining to state legislation for subgroups of preschool children with disabilities, the birth to three and three to five year-old populations. Results indicated
that 16% (n = 8) of the states required educational services for all children with disabilities from birth to five years of age. Within the birth to three range, 8% (n = 4) of the states mandated educational services for limited subgroups of the target population. An additional 24% (n = 12) of the states have mandated that all children with disabilities in the three to five year-old range receive services. In 14% (n = 7) of the states, limited subgroups of the population were served.

One of the more comprehensive descriptive studies to assess the variability of services to preschool children with disabilities was conducted by Spence and Trohanis (1985). The authors compared state educational policies and programs on twelve dimensional variables including: legislation, statewide comprehensive plan, statewide planning advisory group, statewide needs assessment, early childhood in-service training, early childhood teacher certification, interagency agreements, early education guidelines, early childhood rules/regulations, statewide tracking system, state distribution of materials, and efficacy data. For the purpose of this discussion, variations in legislative and regulatory policies were the focus. States were noted to have either mandated or permissive statutes regarding the age of eligibility for educational services. Mandated services from birth were required by 18% of the states (n = 9). Mandated services
for all or part of the three to five year-old population were noted in 72% (n = 36) of the states. Permissive statutes regarding the age of eligibility were noted in 42% (n = 21) of the states for the three to five year-old population and 44% (n = 22) for the birth to three year-old population. Fourteen percent (n = 7) of the states had statutes which only provided services to specific subgroups of preschool children with disabilities birth through five years. Although all states were noted to have legislation regarding preschool children with disabilities, the variability was noted to be enormous. Furthermore, despite mandated and/or permissive legislation, only 64% (n = 32) of the states were noted to have rules/regulations regarding preschool children with disabilities.

The variability in state definitions regarding preschool children with disabilities may be thought of as a representation of ill-defined social policy. Not only may children be precluded from receiving needed services, but the evolutionary process of policy development may be hindered as well. Lessen and Rose (1980) cited a number of significant reasons for the development of a rigorous definition for preschool children with disabilities which would ultimately improve social policy. A more rigorous definition would promote: (a) development of adequate and appropriate diagnostic instruments, (b) homogeneity of populations for research purposes, (c) generality of
treatments, (d) communication among professionals, (e) more consistent guidelines for funding purposes; and (f) improved teacher training efforts.

Prevalence and Incidence

Prevalence and incidence figures have directly been affected by the variability of state definitions for preschool children with disabilities. Population estimates have ranged from 2% (Edgar, 1988) to as high as 17% (Garland, Stone, Swanson, & Woodruff, 1980). Edgar (1988) stated:

The definition of disability under federal regulations can be divided into: 1) disabilities that our technology can accurately measure (e.g., moderate to profound levels of retardation, orthopedic impairments such as cerebral palsy or spina bifida, and sensory impairments) and 2) disabilities that are inferred from low performance (speech-only problems, serious emotional disturbance, mild mental retardation, and learning disabilities. The clearly identifiable cases of disability represent less than 2% of the total population (p. 64).

The seventeen percent estimate reflected inclusion of the "at-risk" or "high-risk" population (Garland, et al., 1980).

Incidence figures for the number of preschool children with disabilities currently served in the United States were also noted to be contingent upon definitional parameters. Furthermore, these definitional parameters
were viewed as being politically dependent (Bartel & Ogel, 1980). As such, Bartel and Ogel (1980) indicated that a number of complicating factors have influenced efforts to determine the number of preschool children with disabilities being served. Such factors have included: children served by various programs often being counted more than once, lack of national reporting requirements, and multiple definitions being used for counting purposes.

**Program Variation**

Furthermore, the types of programs which serve preschool children with disabilities were noted to be varied. Hanson (1985) stated the range of service delivery models for early childhood special education:

... run the gamut from home-based models to classrooms in public school, from programs with active parent involvement to programs with none, from those based on an educational model to those with a medical focus, from programs in segregated special schools to models integrated in regular preschool programs, and from those funded solely through private means to those established by and in public institutions (p. 26).

As a result, programs differ substantially with respect to the populations they serve. Publicly funded programs were noted to be more restrictive in nature and generally only served those children who met specified criteria for eligibility. On the other hand, privately funded programs
served a wider variety of children, but were often more selective in nature (Hanson, 1985).

**Local Level Considerations**

While both federal and state policy have shaped social policy regarding preschool children with disabilities, the lack of comprehensive mandates and sufficient funding have impeded service delivery at the local or community level (Bricker, 1986). Bricker (1986) and Bailey and Wolery (1989) have identified a number of barriers which have adversely affected the implementation of programs for preschool children with disabilities at the local level. Bricker (1986) identified the following as the major local barriers: misinterpretation of ambiguous state mandates, lack of state mandates for services, disputes regarding agency responsibility, lack of interagency collaboration, inadequate state and local funds, lack of highly trained staff, lack of assessment and curricular materials, and inconsistent service delivery through various public and private organizations. Bailey and Wolery (1989) have categorized barriers into five global forms: conceptual, measurement, child, staff, and institutional barriers.

**Conceptual Barriers**

Conceptual barriers to local policy development and implementation arose from limitations regarding the understanding of the nature of child growth and development (Kopp, 1982; Fewell, 1983). A number of models have been
purported to describe child growth and development and include the developmental milestones approach, Piaget's stages of development, and the functional approach. Each have their distinctive characteristics and limitations. Problems were noted to arise from the lack of a common conceptual base among local service providers and professionals in the field.

**Measurement Barriers**

Directly related to conceptual barriers were measurement barriers. Due to the lack of a common conceptual base regarding child growth and development, assessment tools have been noted to vary significantly in their content. Furthermore, many of the assessment tools currently available were noted to have poor or limited reliability and validity data. Some assessment tools were also noted to address certain critical skill areas such as behavior or social skills inadequately. Brooks-Gunn and Lewis (1981) have also indicated that assessment tools which provided a single age-equivalent score rather than a developmental profile were far less useful.

Lehr, Ysseldyke, and Thurlow (1987) investigated the assessment practices of model early childhood special education programs. Their research revealed there was considerable variability in the types of instruments used for assessment purposes in the model programs. Of the nineteen most commonly used instruments, only three were
noted to have technical adequacy in terms of norms, validity, and reliability. The authors cautioned against using tests as the sole criteria for making educational decisions regarding young children.

Child Barriers

A number of child barriers have also been cited which may impede service delivery. The most notable barrier was that the assessment of young children was often difficult. Many examiners have had to rely upon overt motor behaviors to infer cognitive or language skills (Bailey & Wolery, 1989). In a significant study, Dunst and Rheingrover (1981) found that the stability and continuity of early development was generally unstable and discontinuous. The assessment of young children was compounded by the fact that certain classes of behaviors thought to be salient at one age may not be so at another age. Furthermore, some behaviors seen at one age that may precede other behaviors, may not necessarily be prerequisites for the later behaviors. As a result of developmental discontinuities and instabilities in young children, Dunst and Rheingrover (1981) have cautioned that the types of interpretations that could be made from assessment data were restricted. Hamilton and Swan (1981) stated that the detection of young children who will display significant developmental or learning problems in later life had met with limited success. Additionally, Bagnato and Neisworth (1981) have
stressed that traditional assessment practices, those which
made use of global, norm-referenced, intellectual measures
exclusively, were generally not appropriate for describing
normal preschool children, let alone the preschool children
with disabilities. This was noted to be important in light
of the fact that numerous authors (Cicchetti & Stroufe,
1976; Keogh & Sheehan, 1981; DuBose, 1981) have indicated
that developmental sequences or milestone attainment
differed significantly for children with disabilities as
compared to other preschoolers.

Staff Barriers

Staff barriers were noted to arise from a variety of
sources. One such barrier to local service delivery and
policy development was indicated by O'Connell (1983) in her
study of state policy regulating certification requirements
for teachers of preschool children with disabilities.
O'Connell (1983) found that 41 percent (n = 21) of the
states had no specific certification requirements.
Therefore, localities may have difficulty finding
appropriately trained personnel to serve preschool children
with disabilities. Bailey and Worley (1989) have also
indicated that professionals may have limited training in
formal assessment procedures with this population, as well
as little or no training in working collaboratively with
other professionals in conducting interdisciplinary
assessments.
Institutional Barriers

Finally, institutional barriers were also noted to emanate from a variety of sources. Lack of adequate funding and insufficient training of administrators for preschool special education programs were noted to be two such institutional barriers (Bailey and Wolery, 1989). Bricker (1986) indicated local policy development was impeded by the fact that programs for preschool children with disabilities were developed and maintained through a variety of agencies. Service delivery has included: (a) public schools with local and state support; (b) other state-supported agencies, such as mental health or human resources; (c) national nonprofit organizations; and (d) federally-supported programs, such as Head Start or the Handicapped Children's Early Education Program. Both Bricker (1986) and Hanson (1985) have stated that the regulations and guidelines for these various programs varied significantly along numerous dimensions and, as a result, have led to a number of programmatic inconsistencies.

Variation in Eligibility Criteria

At the center of these programmatic inconsistencies were local policies regarding criteria for the provision of services for preschool children with disabilities. Bricker (1986) has stated that the inconsistency of local policy resulted from the varied interpretation of ambiguous
federal and state mandates. Hanson (1985), on the other hand, has noted that the inconsistencies in eligibility criteria were a manifestation of the local policy of the particular agency providing services. Bailey and Wolery (1989) have suggested that inconsistencies in the nature of eligibility criteria were a direct result of the discretionary nature of federal legislation.

Public Law 99-457, reinforced the permissive nature of mandates for the provision of services to preschool children with disabilities. States and localities had the option of whether or not to serve the developmentally delayed and high-risk populations. Furthermore, if states or localities chose to serve such populations, it was up to the individual state and/or locality to establish specific eligibility criteria. With the advent of the use of the developmentally delayed label, states were no longer required to classify preschool children with disabilities by categorical disability. However, states and/or localities were to specify the degree of delay which entitled children to services. Inconsistencies were noted to arise from the methods used to describe a developmental delay. Developmental delays were noted to be expressed in terms of the number of months, standard deviation away from the mean, and/or in percentages of delay. Additionally, states and/or localities were given the option of determining whether children were eligible for services if
they exhibited a developmental delay in one developmental area or if the delay must be evidenced across multiple developmental domains.

As a result of these variations in state and/or local eligibility criteria, service delivery to preschool children with disabilities was inconsistent. Mercer, Forgnone, and Wolking (1976) indicated that all states have regulations which specify eligibility criteria for special education services. However, such criteria differed dramatically from state to state, as well as within states. Furthermore, the authors stated that there was considerable variation in the extent to which local education agencies utilized state criteria. Numerous authors concluded that children were classified differently and at different rates from one locale to another (Comptroller General, 1981; Ysseldyke, Algozzine, Shinn, & McGue, 1982; Glass, 1983). In fact, Glass (1983) stated that not only may a child be labelled differently from one locale to another, but may also be labelled handicapped in one locale and nonhandicapped in another.

**Variables Which May Affect Eligibility**

A number of important variables were identified as crucial in determining eligibility for children with suspected disabilities. Specifically this portion of the review of literature centered upon definitional considerations, the types and relative importance of
psychometric data employed, and the perceived status and influence of the decision makers. Additional variables which may affect eligibility were also included for consideration.

It should be noted that no studies were found which specifically addressed the issue of eligibility for preschool children with suspected disabilities. Additionally, no studies were found which addressed the use of developmentally delayed or high-risk schema to determine eligibility for young children with disabilities. Therefore, a cross sectional review of studies dealing with eligibility and a variety of categorical classifications was utilized.

Definitional Considerations

The Minnesota Institute for Research on Learning Disabilities has generated a preponderance of data regarding classification of students with disabilities and the determination of eligibility for special education services. A number of studies have addressed the issue of definitional variations and their impact upon eligibility decisions. Epps, McGue, and Ysseldyke (1982) used two different operational definitions to determine the extent to which professionals could distinguish between students with and without learning disabilities. In one condition, the student was considered as having a learning disability when the difference between intelligence and achievement
test scores was between 15 and 22 points (1.0 to 1.5 SD). For the second operational definition, the student was considered as having a learning disability when the difference between intelligence and achievement scores was 23 or more points (>1.5 SD). Eighteen postgraduate students with backgrounds in assessment, decision making, and learning disabilities were asked to classify 99 students as either having or not having a learning disability using both operational definitions. Fifty of the 99 students had previously been identified as having a learning disability by the school system. The judges were provided with 42 subtest scores in order to make their decisions. Results of the study revealed a high rate of inaccuracy in correctly identifying the students as either having or not having a learning disability when compared to the school classification and use of the two operational definitions. Lack of significant underwater reliability was noted. Furthermore, the judges were also noted to place emphasis on different types of empirical data.

Simarilarly, Ysseldkye, Algozine, Shinn, and McGue (1982) attempted to determine if professional decision-makers could distinguish between students with learning disabilities and students with low achievement on the basis of psychometric data. Profiles for 50 school identified students with learning disabilities and 50 students with low achievement, containing more than 40
psychometric measures, were compared. The study revealed no significant psychometric differences between the two groups and as much as 96% overlap in the measurement scores for the two groups. Of significant importance, the researchers found that the decision to provide learning disability services was influenced by teachers' observations of reported behavioral problems.

In a number of cases, professional decision-makers have contended there was a distinction between learning disabilities and low achievement when professional judgements were employed. Epps, Ysseldyke, and McGue (1984) provided resource teachers, psychologists, and naive judges (engineers) with profiles of students performance on norm-referenced tests. Using both school classification and the federal definition of learning disabilities as dependent measures, resource teachers and psychologists correctly identified students with learning disabilities 55% of the time, while the naive judges correctly identified students with learning disabilities 75% of the time.

The importance of definitional constraints in defining students with learning disabilities has been investigated by a number of authors. Ysseldyke, Algozzine, and Epps (1983) operationalized seventeen definitions for learning disabilities from more than forty found in the literature. When the definitions were applied to data on more than 300
normal students, at least 80% of the students were classified as having a learning disability. Furthermore, 75% of students with low achievement were classified as having a learning disability under one or more of the seventeen definitions. However, when the same definitions were applied to data for students currently classified as having a learning disability, only 75% of the students met the criteria for classification.

Of particular interest in the classification of students with suspected learning disabilities was the issue of a significant discrepancy between intelligence and achievement. Researchers have demonstrated that the use of different formulas to establish a severe discrepancy yielded different results. Ysseldyke, Algozzine, and Epps (1983) found that 65% of 248 normal students were identified as having a severe achievement discrepancy by one or more of a set of seven aptitude-achievement discrepancy formulas. These same seven formulas identified between 3 and 78% of a group of 50 school-identified students with learning disabilities. Forness, Sinclair, and Guthrie (1983) found that only 7 of 92 students referred for school problems were identified by all eight commonly used aptitude-achievement discrepancy formulas. Furthermore, Sinclair and Alexson (1986) found that only 64% of 137 students who had been identified as having a learning disability by multidisciplinary teams exhibited a
severe aptitude-achievement discrepancy when five different discrepancy formulas were employed.

In one of the most comprehensive uses of discrepancy formulas, Friedrich, Fuller, and Davis (1984) compared the use of 94 empirically derived formulas used to classify students as having handicaps. Profiles of 1,600 students who were classified as either learning disabled, educable mentally retarded, emotionally disturbed, other disabled, and regular students were utilized. The formulas were derived from analyses of variance, discriminant function, frequency, factor analyses, and regression statistics. None of the formulas resulted in more than a moderate degree of accuracy in identifying students with learning disabilities as compared to students with other disabilities. As part of an external validity study, the most consistent formula (MA-5 x age variant percent of expected achievement) was applied as a discriminant method for identifying students with learning disabilities. Results revealed that use of the formula resulted in only a 48% accuracy rate in identifying students with learning disabilities.

The use of discrepancy formulas to determine eligibility for special education services has generated considerable professional debate. In particular, when California mandated state-wide use of discrepancy formulas to determine eligibility for learning disability and
speech-language services, such use met with serious objections. Boyan (1985) detailed the evolutionary process of the development of California's criteria for determining eligibility. He lauded the state's attempt to systematically establish criteria which would more accurately identify students in need of learning disability or speech-language services.

The new criteria mandated use of a number of complex formulas to determine eligibility. The state regulations regarding determination of eligibility for learning disability services included: converting aptitude and achievement scores into standard scores, determining whether at least a 1.5 SD discrepancy existed between the scores, and calculating the standard deviation of the distribution of computed difference scores between the two tests. For speech-language services the key criteria included: scores at least 1.5 standard deviations from the mean, or below the 7th percentile, for the child's chronological or developmental age on tests of language development. The speech-language criteria also mandated collection of a language sample.

However, application of the criteria to actual case studies was noted to discriminate against students with lower aptitude scores. Students with higher aptitude scores and who were slightly below grade level on achievement measures qualified for services, whereas
students with lower aptitude scores and who were moderately below grade level did not qualify for services. This discriminatory factor, among others, resulted in a law suit being filed in Los Angeles Superior Court on behalf of the California Association for Neurologically Handicapped Children. One of the outcomes of the suit was the State Department's issuance of policy clarifying the role of the IEP team in establishing eligibility for special education. The policy statement included a disclaimer to the use of the discrepancy formulas by stating that the IEP team may find that a severe discrepancy did or did not exist based on other measures, information, or documentation. The disclaimer was interpreted to imply that much of the control for determining eligibility remained at the local level (Boyan, 1985).

Variations in definitional parameters have been noted to impact upon the classification and determination of eligibility with other categorical classification systems as well. Tharinger, Laurent, and Best (1986) compared the use of three sets of criteria to classify children referred for emotional and behavioral problems. In particular, use of Public Law 94-142 seriously emotionally disturbed guidelines, the DSM III (Diagnostic and Statistical Manual of Mental Disorders, 3rd edition, American Psychiatric Association, 1980), and the Child Behavior Checklist (CBCL, Achenback & Edelbrock, 1983) were compared. Records for 38
boys between the ages of 6 and 11 who were referred for suspected emotional or behavioral disturbance were reviewed. No operational definition was provided for the use of the Public Law 94-142 classification. Rather, the assumption was made that federal guidelines were employed in the determination of whether a student had or did not have a serious emotional disturbance. Classification resulted from the collective decision of a multidisciplinary team. Classification using the DSM III was accomplished by having two independent judges, graduate students in a doctoral school psychology program, assign a DSM III Axis I diagnosis. Interrater reliability was determined for partial and exact diagnostic consistency. Classification using the Child Behavior Checklist was accomplished by having the student's teacher complete the checklist and subsequently being scored by the multidisciplinary team's psychologist. Students were classified as having an internalizing behavior disorder if their total score equaled or exceeded the 90th percentile, and their internalizing score equaled or exceeded the 98th percentile and was 10 T-points above the externalizing score. Students were classified as having an externalizing behavior disorder if their total score equaled or exceeded the 90th percentile, and their externalizing score equaled or exceeded the 98th percentile and was 10 T-points above their internalizing score. Students were classified as
having a mixed behavior disorder if their total score equaled or exceeded the 90th percentile, their internalizing or externalizing exceeded the 98th percentile, and less than 10 T-points existed between the two. If none of the above conditions existed, the students were classified as having a nonsignificant CBCL and no behavior disorder.

Results of the study indicated that the students were classified differently and at different rates under each set of classification criteria. Under the Public Law 94-142 criteria, 35 of the 38 boys (92%) were classified as handicapped, 20 (53%) as seriously emotionally disturbed, 13 (34%) as learning disabled, and 2 (5%) as other health impaired. Three boys (8%) were declared nonhandicapped. Using the DSM III, 31 (82%) of the boys were assigned a DSM III Axis I diagnosis, 2 (5%) were assigned a DSM "V" Code (for conditions not attributable to a mental disorder that are a focus of attention or treatment), and 5 (13%) were not assigned any DSM III Axis I designation. Using the CBCL classification system, 25 of the 38 boys (66%) met the criteria for a significant behavior disorder, 1 (3%) as an internalizing disorder, 10 (26%) as an external disorder, and 14 (37%) as a mixed disorder. Thirteen boys (34%) had nonsignificant CBCLs.

Thus the three classification systems identified different percentages of the sample population as
emotionally or behaviorally disturbed: DSM III, 82%; the CBCL system, 66%; and Public Law 94-142 guidelines, 53%. A three-way comparison among Public Law 94-142 criteria, DSM III, and the Child Behavior Checklist resulted in only 11 of the 38 boys (29%) being classified as seriously emotionally disturbed. The lack of commonality between the classification systems was viewed in part as a result of the differences in the theoretical perspectives underlying the systems themselves, as well as that the systems were generally used for different purposes. However, the authors noted that it was important to realize that the systems were not only identifying different numbers of students, but different students as well.

As noted with attempts to identify the discriminate definitional variables used to classify students with learning disabilities, increased efforts have been employed to distinguish students who have serious emotional disturbances from students who have problems of social maladjustment. This was noted to be especially significant due to the exclusionary clause of federal guidelines regarding students who have problems arising from social maladjustment. Specifically, students who had problems of social maladjustment and did not have serious emotional disturbances were ineligible to receive special education services. In an attempt to assist local multidisciplinary teams in the decision making process regarding children
with suspected emotional disturbances, Clarizio (1987) developed a set of criteria to differentiate between a serious emotional disturbance and problem of social maladjustment. The original taxonomies were developed by reviewing pertinent literature on childhood psychopathology, research, and clinical experience. The items were submitted to eight school psychologists to assess underwater agreement. Each judge was asked to indicate their agreement, disagreement, or uncertainty as to whether each of the items differentiated a serious emotional disturbance from a problem of social maladjustment. Results revealed that eleven of the twenty items met with the approval of six of the eight judges. Four of the twenty items were identified by all eight judges as discriminating factors, while two of the twenty items were identified as discriminating factors by seven of the eight judges. As a result of this initial investigation, the author concluded that there were taxonomic distinctions between a serious emotional disturbance and a problem of social maladjustment. Furthermore, simplified, empirically verified, reliable, and valid classifications systems for not only the educational setting, but for correctional and mental health settings as well, could be developed from these taxonomic distinctions. However, no attempt was made in the present study to apply the discriminating factors to actual student
profiles.

One commonality found with the use of categorical classification systems has been described by Sarason and Doris (1979) as the "search for pathology". The broad categorical definitions purported by federal legislation have ultimately influenced the assessment process. In order for a student to be eligible under various categorical definitions, specific types of data were noted to be required. Consideration of eligibility as having a learning disability required a documented difference between aptitude and achievement, whereas eligibility under the category of mental retardation required evidence of subaverage intelligence and problems with adaptive behavior. As such, Ysseldyke (1983) concluded that assessment practices generally served the purpose of confirming the suspected condition.

Further evidence of categorical definitional influences in the determination of eligibility were noted for students with mental retardation. Both federal mandates and the American Association on Mental Deficiency (Grossman, 1973) have stipulated that a diagnosis of mental retardation must be based on measured intelligence and an adaptive behavior assessment. Multidimensional assessment practices became the norm due to inherent bias associated with a number of intelligence tests (Rubin, Krus, & Balow, 1973). Furthermore, a number of students were declassified
as having mental retardation when adaptive behavior measures were employed (Coulter, Morrow, & Tucker, 1978). Adaptive behavior measures were viewed as a means to compliment intelligence and achievement data in determining the presence of a handicapping condition and selecting the least restrictive placement alternatives (Grossman, 1973).

Types and Influence of Psychometric Data

Subsequently, a number of authors (Smith & Knoff, 1981; Knoff, 1984) investigated the relative importance of adaptive behavior measures on placement decisions regarding students with suspected mental retardation. Smith and Knoff (1981) investigated the relational influence of intelligence data and adaptive behavior measures on placement decisions regarding a simulated case study of a student with suspected mental retardation. Subjects included 11 school psychology and 19 special education graduate students. Each subject was given a case study containing identical information on the child which included: (a) home and school history; (b) the WISC-R (Wechsler, 1974) and behavioral observations; (c) the AAMD Adaptive Behavior Scale (Doll, 1965) percentiles and profile of strengths and weaknesses; (d) and the Daberon (Danzer & Lyons, 1984), Bender (Bender, Curren, & Shilder, 1938), and Goodenough (Goodenough & Harris, 1963) results. One-half of the students received the information in ABCD order, while the other half received the information in
ACBD order. Subjects were then asked to make a placement decision on a 5-point Likert Scale after reading section B, C, and D.

A 2 x 2 x 3 split-plot analysis of variance was employed to analyze the data. Student group was comprised of two levels: school psychology students and special education students. The two levels for Order of Presentation were: IQ first and AAMD first. The within factor, Amount of Information, had three levels: one piece of information (IQ or AAMD), two pieces of informations (IQ + AAMD or AAMD + IQ), and three pieces of information (IQ + AAMD + academic or AAMD + IQ + academic). Results revealed there were no significant differences between the rating of school psychology and special education students. There also were no significant differences between the IQ-first or AAMD-first groups' ratings. A significant main effect for Amount of Information and a significant interaction effect for Amount of Information x Order of Information Presentation were found. Significant interaction of Order of Information and Amount of Information was found to be a result of only the AAMD-first group. This group rated the child significantly higher when reading the adaptive behavior information first than when subsequently obtaining either the intellectual or academic information. Conversely, IQ information seemed to markedly decrease prior placement ratings based on adaptive skills. The
IQ-first group also did not increase their ratings when presented later with higher adaptive behavior scores. It appeared that the IQ score had a rigidifying effect upon the IQ-first group that reduced flexibility in alternating initial judgement sets. No matter when the IQ data appeared, it was noted to affect further variability in the problem solving.

Knoff (1984) replicated his 1981 study to determine the relative importance of intelligence data and adaptive behavior measures in determining placement decisions regarding students with suspected mental retardation. Four case studies were presented to four groups of subjects: 20 school psychologists, 20 special educators, 20 school psychology graduate students, and 20 special education graduate students. The case profiles contained Verbal, Performance, and Full Scale IQ scores for the WISC-R (Wechsler, 1974) with relevant test behaviors and the AAMD Adaptive Behavior Scale (Doll, 1965) percentiles with a description of the Adaptive Behavior Scale's nine daily living domains. For each case study the subject consistently received one of two experimental conditions: the test data were presented either in an IQ-first, AAMD-second order; or in an AAMD-first, IQ-second order. After each piece of information was presented, subjects were asked to make an educational placement decision along a 10-point Likert Scale.
A 2 x 2 x 2 x 4 x 2 Analysis of Variance (Profession x Status x Order x Case x Decision) for balanced repeated measures was used to analyze the data. Results revealed that there were no significant differences between the students and practitioners. Furthermore, final placement decisions were based upon the developmentally higher sides of the borderline data regardless of whether such information was a result of IQ or AAMD scores. The study revealed that these professionals shared similar perspectives of IQ and adaptive behavior data which resulted in complimentary placement decisions. The author questioned if similar results would be found in actual child study team or eligibility team placement decisions.

Therefore, the amount and types of data presented during the eligibility or classification process were noted to be influential. In a computer simulation of the diagnostic process, Ysseldyke, Algozzine, Regan, Potter, Richey, and Thurlow (1980) provided educational professionals with access to scores for 49 devices in order to make a number of decisions regarding a referred child. Subjects included both school psychologists and classroom teachers. Of the 159 subjects who participated in the study, the results revealed that the professionals used from 1 to 11 tests in making their decisions ($M = 6.4$ devices). The most frequently selected test domains were intelligence and achievement. For the intelligence tests,
67% of the participants made one selection, whereas 28% chose to review scores on two or more IQ tests. Thirty-eight percent of the subjects reviewed the scores of only one achievement test, whereas 63% reviewed scores from two or more.

The relative importance of psychometric data in actual multidisciplinary team meetings was investigated by Ysseldyke, Algozzine, Rostollan, and Shinn (1981). The researchers found that approximately 20% of the time spent in team meetings was devoted to the discussion of specific academic characteristics of the child, 10% of the discussion dealt with behavioral characteristics, and 1% dealt with physical characteristics. Team members spent almost half of the time discussing data: 38% of the time was spent discussing classroom data; 29% on achievement scores; 15% on intelligence scores; and 18% on other scores such as psycholinguistic, perceptual-motor, and personality test scores. The remainder of the time was spent presenting anecdotal information, clarifying procedural matters, and making comments irrelevant to the placement decision. Little time was spent receiving parental input or discussing placement alternatives. The authors concluded that the test data actually were irrelevant to the final placement decision.

This conclusion was substantiated by a subsequent study by Ysseldyke, Algozzine, Richey, and Graden (1982).
The authors conducted an investigation to address the question of whether there was a relationship between the data teams collect and the eligibility decisions teams make. Results of the study indicated that there was little relationship between the actual test data and the final eligibility decision. Teams were noted to make decisions regarding the eligibility for services based on factors other than psychometric devices. As many as 83% of the statements made during the team meetings were noted to be irrelevant to the final eligibility decision. Furthermore, Algozzine, Ysseldyke, and Hill (1982) found that the decision to classify a student as having a learning disability, emotional disturbance, or mental retardation was unaffected by the number of scores used to make that decision.

Likewise, Vance, Bahr, Huberty, and Ewer-Jones (1988) found that psychometric data had little, if any, predictive power in reliably determining placement decisions. A stepwise discriminant analysis procedure was used to review the case profiles of 123 students referred for academic problems. Of the 123, 63 had been placed in learning disabilities programs. Only moderate levels of discrimination between placed and nonplaced groups were obtained using three and four predictor variables. Furthermore, discriminate analysis accounted for only 33% of the total variance found between the groups. The
authors concluded that the lack of predictive ability for placement decisions may have been influenced by other variables such as: parental preference for placement, sex, race, teacher personality, administrative guidelines, child's personality, socioeconomic status, school environment, reason for referral, or other unknown factors. Additionally, the authors stated that standardized test data appeared to have little utility in making placement decisions for students with learning disabilities.

Ward, Ward, and Clark (1991) investigated the impact of type of referral question on classification congruence among school psychologists. One hundred seventy-five psychologists classified five case studies on the basis of intelligence, achievement, and behavioral scores. A multidisciplinary team decision and actuarial technique classifications were similar for the five cases. Reason for referral was the only item that varied in the case studies and was designated as either an academic or behavioral referral. The results indicated a lack of congruence among psychologists in their classification decisions. More incongruence was found in cases of students without disabilities. A behavioral referral resulted in students without disabilities being classified as students with learning disabilities more often than when an academic referral was presented. The overall accuracy
rate was 66.9%.

**Perceived Status and Influence of Decision Makers**

An effort has been made to explore other variables which may influence eligibility decisions. In particular, Knoff (1983) investigated whether there was disproportionate influence and status among members of multidisciplinary teams. The study surveyed school psychologists and special educators to determine their perceptions of the differential influence of multidisciplinary team members on special education placement decisions. Four independent samples participated in the study: 20 special education students, 20 school psychology graduate students, 20 school psychologists, and 20 special education teachers. The subjects rated 11 multidisciplinary team members on three separate 7-point Likert Scales: one independently rating each profession's influence on placement decisions based on P.L. 94-142 intent, one independently rating each profession's influence in the subject's actual experience, and one independently rating the desirability of each profession to chair the multidisciplinary team.

An Analysis of Variance for balanced repeated measures (Profession: School Psychologist vs. Special Educator x Status: Student vs. Practitioner x Multidisciplinary Team Profession x Decision) was used to assess team members' influence on placement decisions. The analysis revealed
significant differences for the Multidisciplinary Team Profession factor, the Decision factor, and the Multidisciplinary Team Profession x Decision interaction. Under both the perceived intent of P.L. 94-142 and actual experience conditions, school psychologists were rated as the most influential members of the team. Significant differences in the desirability of a particular profession to chair the team were also noted. No significant differences were found between the Status and Profession factors.

The author concluded that the results were significant for a variety of reasons. Perceived differences in the status and influence of the team members could lead to cognitive dissonance resulting in lowered expectations of some team members' relative importance to the team. As such, eligibility decisions could be adversely affected by a dysfunctional team.

Team Decisions versus Independent Decisions

Dangel and Ensminger (1988) questioned the validity of conducting research on eligibility outside the context of the multidisciplinary team. The records of 379 students referred for learning disabilities placement were examined, as were the actual placement team minutes. Aptitude-achievement discrepancy was determined by use of the following formula: $2CA+MA/3 - 5.2 = \text{grade expectancy level}$. Results revealed that a high percentage (81.5%) of
the students referred were placed in programs for learning disabilities services. Of the students placed, 246 (64.9%) met the criteria of exhibiting a severe discrepancy between aptitude and achievement, whereas 69 (16.6%) students did not. For students who failed to meet the criteria for a severe discrepancy between aptitude and achievement, there was a 50-50 chance of being declared eligible for learning disabilities services. Only 11 of the 257 students whose achievement scores fell below the severe discrepancy level were not placed in learning disabilities programs. No clear indication of the rationale for not placing a student who met such criteria was evidenced. The results of the voting of the multidisciplinary team were available for 328 of the 379 referrals. Classroom teachers voted for learning disabilities placement 92.5% of the time, learning disabilities representatives voted in favor of placement 91.2% of the time, and school psychologists voted for placement 87.5% of the time. These differences were noted to be insignificant using a chi-square analysis. The consistency of placement agreement between the professional decision makers in multidisciplinary teams was noted to be in contrast to other studies (Epps, McGue, & Ysseldyke, 1982; Epps, Ysseldyke, & McGue, 1984) which employed independent professional decision makers.

The full impact of possible disproportionate influence on the multidisciplinary team's final eligibility decision
has not been resolved. Pfeiffer and Naglieri (1983) investigated the decision-making process within multidisciplinary teams. Results of their investigation revealed that teams made more consistent placement decisions than did individual decision makers. However, Ysseldyke, Algozzine and Mitchell (1982) reported that specific team members, particularly teachers and parents, participated little in the actual placement decision. Therefore, the extent to which the final decision was actually a team recommendation has not been substantiated.

Additional Variables

In an attempt to determine what additional factors may influence the eligibility process, Christenson, Ysseldyke, and Algozzine (1982) identified a number of institutional constraints and external pressures. The perceptions of regular classroom teachers were used to identify those factors which either enhanced or constrained the referral process. Institutional factors identified as influencing the referral process included: organizational parameters such as referral format, processing time, or number limitations on types of referrals; availability of services; and procedural disincentives such as paperwork or inconvenient meeting times. External factors identified as influencing the referral process included: external agency influence, federal and state guidelines, parental pressure, and the sociopolitical climate of the school district.
Ysseldyke and Algozzine (1984) also identified community size as one potential barrier in the determination of eligibility for special education services. The authors stated the size of the community often affected the local school district's ability to fund special education programs. In rural communities, a limited number of students may exhibit a specific handicapping condition. Cost effective programs for limited numbers of students with disabilities were noted to be nonexistent. Cooperative programs between small school districts were also noted to incur excess costs for such items as transportation and personnel.

In a comprehensive review of the screening and referral process for preschool children with suspected disabilities, Thurlow, O'Sullivan and Ysseldyke (1986) examined a number of variables to assess the accuracy of early screening for special education. The records of more than 45,000 children were reviewed from 400 school districts. Of the children screened, 31% were identified as having a problem, and 24% were referred for further assessment. The highest percentages of problems and referrals were in the areas of hearing and development. Developmental delays included a significant proportion of suspected speech problems. Tremendous variability was noted among school districts in identifying delays. Some districts found delays in all the children they screened,
whereas others did not find delays with any of the children screened. Referral rates for further assessment also showed similar variability, ranging from 0 to 86% of the children screened. The reason for referral was noted to be school district specific. Some districts referred primarily for hearing problems, whereas others referred primarily for motor development delays.

An attempt was made to account for the variability in the referral rates between the school districts. The demographic variables of district size, funds for special education, and education levels of parents were compared to the school districts' referral rates. No significant relationship was found between the referral rates and any of the general social, economic, or educational factors. Interviews with screening program coordinators regarding the referral rates revealed that specific local district factors generally influenced the decision to refer. No single factor was noted to influence the referral rate more than another.

Summary

Efforts to establish basic congruence data for determining eligibility for young children with disabilities were noted to be susceptible to the complex interactive nature of federal, state, and local policies. As such, an attempt was made to delineate the major federal, state, and local variables which have impacted...
upon the delivery of services to young children with disabilities. To date there have been pervasive problems noted with the use of categorical classification systems in the determination of eligibility. Whereas federal mandates and state guidelines have attempted to address, in part, the problem of categorical classification by employing the use of developmentally delayed and/or high-risk schema, the usefulness of such schema in determining eligibility has not been reported.

Furthermore, the actual determination of eligibility at the local level was noted to be a tenuous process. The review of literature revealed that there were numerous variables which have affected the final eligibility decision. Definitional parameters have influenced the type of psychometric data collected. However, psychometric data appeared to have little, if any, direct bearing on many of the final eligibility decisions. Multidisciplinary teams were purported to produce more consistent eligibility decisions over individual decision makers. Yet research on team decision-making indicated that there was disproportionate influence of some team members on final decisions, as well as the lack of participation of all the team members. Therefore, it was critical that professional decision-making be addressed when determining congruence for the determination of eligibility. Finally, a number of external constraints such as the availability of funding
and school district size were identified as possible barriers in the provision of services to handicapped children. However, no conclusive data were offered to suggest the variable or set of variables which have ultimately affected the determination of eligibility.

Therefore, it was noted to be imperative to systematically review variables which may affect the determination of eligibility. As Edgar (1988) clearly indicated, the basic methodological flaw of the majority of educational research has been the failure to adequately define the target population. Inherently, federal, state, and local policies regarding handicapping conditions have been vague and ambiguous. As such, the utility of such policies in the decision-making process has been limited.

One basic premise which arose as a result of the review of literature was that the determination of eligibility should be directly related to a congruent classification system. Therefore, criteria for classification as developmentally delayed and high-risk for developmental delays should be tested to determine their congruence while controlling for those known variables which have been previously noted to adversely affect the determination of eligibility. Once basic congruence data were established for the determination of eligibility, further research could be conducted to systematically include additional variables to be considered in the
determination of eligibility.
CHAPTER THREE
Methodology

Subjects

Six independent subject groups were utilized in the study and included 20 school administrators, 20 school psychologists, and 20 school social workers each in the control and experimental groups. These professional groups were viewed as being representative of the composition of teams who routinely determined eligibility for preschool children with suspected handicaps, developmental delays, or high-risk for developmental delays. Virginia regulations require team composition to include individuals familiar with each of the major assessment components, as well as an administrator or designee for special education programs (Virginia Department of Education, 1990). School nurses were excluded from the sample as only 38.5% of the local school divisions directly employed nurses (Carpenter, Doherty, Lingaraju & Oswalt, 1987). Subjects met the criteria of having served or currently serve on an eligibility team, had obtained a masters degree, were board certified in their respective disciplines, and were employed by a school division in Virginia.

A randomly drawn sample of school districts was used to select the subjects for the control and experimental groups. A table of random numbers was used to select school districts for the study (Silverman, 1977).
Initially, 66 school districts in the state of Virginia were randomly selected from a pool of 139 divisions. Subsequently, an additional 30 school districts were randomly selected for a second mailing as the response rate from the first mailing was low. Each district was then designated as a control or experimental group using an odds/evens approach. The special education administrator in each school district was contacted by letter (see Appendix A) and asked to solicit volunteers within the district. All of the subjects within the same school district were similarly assigned to either the experimental or control group. An additional 15 subjects were asked to participate in the study directly by the investigator to obtain equal representation between the independent groups when the two mailings failed to obtain the minimum number of 120 subjects required for the statistical analysis.

Subjects were guaranteed confidentiality regarding their participation in the study. No personally identifiable information, such as their names or the school district names, was requested. In order to protect the confidentiality of the 15 subjects solicited directly by the investigator, their packets were interspersed with the remaining packets.

**Materials**

Each subject received a cover letter explaining the nature of the study, a demographic profile sheet, an
instruction sheet, five case study summaries, and five Preschool Eligibility Worksheets (see Appendices B - L). The control group received a modified form of the Preschool Eligibility Worksheet (see Appendix L) containing only the eligibility decision and eligibility justification sections. The experimental group received the complete form of the Preschool Eligibility Worksheet (see Appendix K). Additionally, the experimental group received the Virginia Department of Education matrix for determining a significant delay and criteria for determining eligibility (Virginia Department of Education, 1985) (see Appendix M). The revised criteria for determining eligibility for children with developmental delays or high-risk for developmental delays (Virginia State Departments of Education and Mental Health/Retardation, 1990) (see Appendix N) was also supplied to the experimental group.

The demographic profile sheet (see Appendix C) included the following variables: position, gender, race, highest degree, year highest degree was earned, institution granting highest degree, total years experience in current position, total years experience on an eligibility team, and total school district enrollment.

The case study summaries (see Appendices F - J) were developed from five actual comprehensive cases drawn from a sample of 264 case files of one local school division. Virginia requires that a comprehensive assessment must
minimally include: a developmental (educational) assessment, a psychological assessment, a sociological assessment, and a medical assessment (Virginia Department of Education, 1985).

The selection of the cases was based on a number of variables. One variable used in the selection process was the similarity of the instrumentation used in the assessments. Typically one or both of the following instruments had been administered for the developmental assessment; the Developmental Profile II (Alpern & Boll, 1980) and/or the Learning Accomplishment Profile (Sanford & Zelman, 1981). Additionally, the psychological assessment generally was in the form of the Bayley Scales of Infant Development (Bayley, 1969) or the Stanford Binet (Thorndike, Hagen & Sattler, 1986). A second variable used in the case selection process was the agency completing the assessment. Cases were selected to include assessments that had been completed by local school divisions, early intervention programs, and child development centers in order to control for possible tester bias. A third variable in the selection process was profile variety. One of the five children was found ineligible for preschool services for children with disabilities by a local school division. One of the five had missing assessment components, whereas another case reflected information consistent with normal development. Another case contained
psychometric data which indicated normal development, but had medical indicators for a potential developmental delay. Subsequently, the multidisciplinary team decision was compared with state department criteria by the investigator and one independent judge familiar with children having developmental delays to determine adherence with eligibility standards and to establish a "correct" decision for each of the five cases.

The case study profiles were developed to reflect similar information in each of the four major assessment domains. The case with missing assessment components was included to verify adherence to state mandates governing eligibility decisions. Psychometric data were provided for the developmental and psychological assessments. Narrative data were provided for the sociological and medical assessments. Additional assessment data were provided as reflected by actual case files. However, descriptive data other than chronological age was omitted from the profiles to control for possible bias on sex, race (Ysseldyke & Algozzine, 1979), and reason for referral (Vance et. al., 1988) variables.

The Preschool Eligibility Worksheet (see Appendix M) was developed to assist subjects in the eligibility decision-making process and to serve as the primary method of data collection. The worksheet included the following sections: (a) identifying information, (b) presence of
assessment components, (c) documentation review, (d) eligibility determination, (e) eligibility decision, and (f) eligibility justification. The design of the worksheet was based on a simplified version of a decision-making tree (Vroom & Jago, 1974). Included were a series of bipolar questions to aid the user in making an eligibility decision. The worksheet also included space for narrative clarification of the decisions. Content for the documentation review section was drawn directly from the Virginia Department of Education Guidelines for Early Childhood Special Education Programs (Virginia Department of Education, 1985). The eligibility decision section contained five distinct decision classifications to represent plausible decision-making outcomes.

The Preschool Eligibility Worksheet has undergone five revisions and format changes. The most notable changes occurred in eligibility decision section. Initially, the eligibility decision was bipolar; either a child was found eligible or ineligible. However, in the second revision the decisional outcomes were increased to five distinct classifications in order to detect greater variability in the decision making-process. Eligibility decisions included: (a) not eligible due to insufficient data or missing assessment components, (b) not eligible due to development within normal expectations, (c) eligible due to the presence of high-risk indicators for a developmental
delay, (d) eligible due to the presence of a delay in one area of development, and (e) eligible due to the presence of a delay in two or more areas of development. The third revision of the worksheet included the addition of narrative spaces in the documentation review section to allow for the qualification of responses to bipolar decisions. Revision three was informally field tested with members of one preschool eligibility team. Their major concern was the addition of another form to complete during their meetings. The fourth revision included the rank order component for the purpose of determining the relative importance of specific information in the subjects' decision making-process. The justification of eligibility section was added during the fifth revision of the worksheet to provide additional descriptive data in the comparison of the control and experimental groups.

The eligibility criteria were obtained from the state department guidelines. A review of ten other states' manuals for special education programs revealed no or only general recommendations regarding eligibility for preschool handicapped children. Virginia's guidelines offered a number of parameters for determining eligibility. The most general parameter for eligibility was contained in the definition of children with developmental delays. The definition included children, below age eight, who "exhibit a significant delay in one or more of the areas of
development: cognitive ability, motor ability, social adaptive behavior, perceptual skills, and/or communication ability" (Virginia Department of Education, 1990; p. 9). The guidelines also included a matrix for determining the significance of a developmental delay which was expressed in months, standard deviations, and percentages of delay. No specific criteria were provided to determine eligibility on the basis of observational data such as frequency counts or clinical impressions. The guidelines also listed a number of qualifying factors (high-risk, social/adaptive, communication, and motor) which may be considered in determining eligibility (Virginia Department of Education, 1985). Furthermore, a joint task force report (see Appendix N) from the Virginia Departments of Education and Mental Health/Retardation (1990) defining eligibility criteria in terms of percentage of delay based on chronological age and diagnosis of mental or physical conditions with a high probability of resulting in a developmental delay, was also provided to the experimental group.

**Procedures**

All of the materials were mailed to the administrator of special education for the 96 randomly selected school districts. A cover letter (see Appendix A) explained the purpose of the study and requested the assistance of the special education administrator in recruiting an
administrator, psychologist, and social worker from the district for participation in the study. After one month, the special education administrator was recontacted by mail and asked to circulate postcards to each of the volunteers. The postcards were used as an effort to increase the return rate.

Subjects were directed to complete the demographic profile. Subsequently, subjects were directed to read each case study and complete a Preschool Eligibility Worksheet. The subjects were asked to work independently and consider each case separately. Subjects in the control group were directed to use their professional judgement in making eligibility determinations. Professional judgement was defined as a decision based upon one's professional training, prior experiences, and observations. Subjects in the experimental group were directed to make their eligibility determinations based upon the eligibility criteria supplied, objectivity, and consideration of compliance assurance. Subjects were then asked to return the demographic profiles and Preschool Eligibility Worksheets. Returned packets were coded by group designation. Once all of the packets were obtained, they were randomly assigned numbers to aid in the analysis of the data. Packets were not reviewed until the minimal number of 120 was obtained in order to increase confidentiality for the subjects.
Data Analysis

Frequency data were calculated for the demographic variables. The Test for Significance of Difference Between Two Proportions was used to test for differences between the subject groups for dichotomous variables, total percentage correct, and justification of the eligibility decision. The t-Test for a Difference Between a Sample Mean and the Population Mean was used for demographic variables with a range of data. Descriptive data analysis was used for the justification of eligibility section of the worksheet. Rank order data were eliminated from the analysis as less than 9% of the subjects completed this portion of the worksheet. Multiple regression was used to determine which, if any, of the demographic variables correlated most highly with the correct determination of eligibility for the total sample. However, the primary means of data analysis used was log-linear analysis as it best represented the research questions stated in the study.

Log-linear Analysis

Log-linear analysis is a highly useful technique for model building and analysis of multidimensional contingency tables also known as crosstabulation. Gilbert (1981) defines a model as a theory or set of hypotheses which attempt to explain the connections and interrelationships between observed phenomena. Norusis (1985) indicates that
log-linear models are similar to multiple regression models. In the process of building a model, observed events or frequencies are compared to expected events or frequencies. In a general log-linear model each variable used for classification is considered as the independent variable, whereas the dependent variable is the number of cases in a cell of the crosstabulation. Cell frequencies are converted to their natural logs in the simple log-linear model. If the frequencies of observed and expected events are similar, the model is determined to be correct (Gilbert, 1981).

A second type of log-linear model is known as the logit model. In the logit model one of the variables is designated as the dependent variable. Furthermore, the log of the odds for the cell frequencies are used to test the model. The log of the odds is the ratio of the frequency that an event occurs and the frequency that it does not occur (Norusis, 1985). The odds for the cell frequencies are known as conditional odds as they are conditional on the level of the independent variable(s). The conversion to odds removes the effect of having different numbers on each level of the independent variables. A positive coefficient indicates an increased likelihood that an event occurred in response to the dependent variable, whereas a negative coefficient indicates a decreased likelihood that an event occurred in response to the dependent variable
Log-linear models can test the relationship between two or more variables. When two variables are related so that the level of one variable makes a difference in the distribution of the other, the relationship is termed association. However, when three variables are related in such a way that the association between two of them changes according to the level of the third, the relationship between them is called interaction (Gilbert, 1981).

When a dependent variable is specified or variables are viewed independently, a main effect measure can be calculated. Main effect measures the distribution across the categories of the marginal of a variable. Marginals are the total sum of the frequencies for all the cells for one variable. A variable in which each cell contains the same value has no main effect as the difference between the observed frequency and the expected frequency would be zero (Gilbert, 1981).

Once values are calculated, interpretation of the model can be completed. The most common measure of the significance of the results is chi-square. The chi-square test yields a probability figure which summarizes the cell by cell differences between the model and data tables, making allowances for the number of constraints (degrees of freedom) imposed on fitting the model. Generally a .05 level of confidence indicates that the model fits well...
The correctness or fit of a model can also be determined by using a maximum or log likelihood ratio ($L^2$), also known as a goodness of fit ratio ($G^2$) (Goodman, 1978). The method allows for examination of effects associated with multiple individual variables, as well as, interactions among the variables (Bigbee, 1986). This test also yields a probability figure which is conditional on the degrees of freedom in the model. As confidence levels approach one, there is a greater likelihood that the model fits.

One additional interpretation can be completed using the values generated by the model. Differences between the observed frequency and expected frequency of each cell in the model are known as residuals. One of the basic assumptions underlying the use of log-linear models is equiprobability (Norusis, 1985). Equiprobability assumes that the observed frequency and expected frequency of an event are equal which results in a residual of zero. Yet dichotomous data in the real world rarely meet this assumption. In order to interpret data which approximates the real world more closely, standardized residuals are calculated. Standardized residuals are the cell by cell differences which are squared and summed when calculating the chi-square statistic. Standardized residuals have a near normal distribution with a mean of zero and standard
deviation of one. Standardized residuals greater than 2 (1.96) or less than -2 (-1.96) indicate an interaction effect (Gilbert, 1981).

**Model Description**

Several models were formulated to examine the following research questions: (a) Are there differences in eligibility decision congruence when school personnel use independent professional judgement versus a structured format for decision-making? and (b) Are there differences in eligibility decision congruence when the professional disciplines of administrator, psychologist, and social worker are compared?

Contingency tables were created to address both questions simultaneously. The first design drafted was a 3 x 2 x 5 (Professional Status x Group x Eligibility Decision) contingency table. Professional Status was represented by the positions of administrator, psychologist, and social worker. Group represented assignment to either the control or experimental class. The control group was comprised of those individuals who used independent professional judgement to determine eligibility. The experimental group was comprised of those individuals who received the Preschool Eligibility Worksheet for determining eligibility and copies of relevant eligibility criteria. The eligibility decision was represented by the five distinct choices individuals
were given in determining the status of eligibility. However, due to the small sample size of 120, and 20 subjects in each of the six independent groups, there was a strong likelihood that there would not be an equal distribution among the five decisional choices. Subsequently, this contingency table was modified to take into account the basic assumption of equiprobability for log-linear models (Norusis, 1985).

Two additional designs were formulated to address the research questions, both using a 3 x 2 x 2 contingency table. In the first model the variables included professional status, group, and eligibility decision. Eligibility decision included classification as either eligible or not eligible. The original five choices included three types of eligible classification and two types of not eligible classification which were easily collapsed into a eligible/not eligible dichotomy.

In the second 3 x 2 x 2 contingency table, eligibility decision congruence was tested for correct eligibility determination. The following variables were in the design; professional status, group, and eligibility decision. Eligibility decision was dichotomized as correct or incorrect as compared to the decision of one multidisciplinary team and utilization of the state department criteria for determining eligibility.

Once the contingency table was designed, a number of
models were constructed. In testing a model for goodness-of-fit, the no interaction model was tested first. If $L^2$ in the no interactional model was nonsignificant it was retained as the best fit for the data. If $L^2$ was significant, subsequent models were tested to account for interaction between one or more of the variables. In each model the following variables were designated: eligibility decision (D), group (G) and, professional status (P). In order to account for cell frequencies of zero, a correction of .0001 was added to each of the models as suggested by Goodman (1971).

In each of the models eligibility decision (D) was designated as the dependent variable in order to address the postulated research questions. Model one was (D, G, P) or the no interaction model. In each of the successive models, the no interaction model, also known as the main effect model, was incorporated. The main effect of each marginal produced by the variable must be specified in the subsequent model. Models where one or more interactions were present produced an additional marginal which was derived from the main effect of each variable. This marginal was said to be a product of its lower order relatives (Gilbert, 1981).

The following models were generated. Model two was defined as (D, G, P, D by G). In this model eligibility decision (D) was said to have been influenced by assignment
to either the control or experimental group (G) with no effect by professional status (P). Model three was defined as (D, G, P, D by P). Eligibility decision (D) in this model was said to have been influenced by professional status (P) with no effect by group (G). Model four included (D, G, P, D by G, D by P) which tested for an interactive effect of group (G) and professional status (P) on eligibility decision (D), but separately. Model five was defined as (D, G, P, D by G, D by P, D by G by P). In this model, an interactive effect of both professional status (P) and group (G) were said to have influenced eligibility decision (D).
CHAPTER FOUR
Results

Return Rate

A total of 303 packets were distributed. In the initial mailing 198 packets were forwarded to special education administrators in 66 school districts. Fifty-one packets were initially returned within three weeks which resulted in a return rate of 25.8%. Thirty-two additional packets were obtained after sending a reminder to the subjects. A total of eighty-three packets were returned from the first mailing, resulting in a return rate of 41.9%. An additional 90 packets were distributed to 30 school districts. Twenty-two of these packets were returned, resulting in a return rate of 24.4%. Fifteen additional packets were distributed directly to subjects by the investigator in order to equalize group frequency. The return rate from this procedure was 100%. Seven additional administrators, 5 for the experimental group and 2 for the control group, were solicited. Six social workers, 4 for the experimental group and 2 for the control group, were solicited. Two psychologists were solicited for the experimental group. The overall return rate was calculated to be 39.6%.

Demographic Variables

Frequency data were calculated for the six independent
groups, three professional groups, and total group. The total sample included 36 (30%) males, 84 (70%) females, 87 (72.5%) white subjects, and 33 (27.5%) black subjects. Ninety-eight (81.7%) of the subjects held masters degrees, 17 (14.2%) held advanced degrees, whereas 5 (4.2%) held doctoral degrees. Due to negligible differences in the number of post-masters degrees and doctoral degrees, these data were collapsed in Table 1. Eighty-nine (74.2%) of the subjects had received their degrees from programs in Virginia, whereas 31 (25.8%) received their degrees from out-of-state programs. The mean years since receipt of highest degree was 7.9 (SD = 4.7), whereas the mean years in current position was 6.2 (SD = 4.7). The mean total years of experience on eligibility teams was 8.0 (SD = 4.7).

Two types of analysis were completed for the demographic variables: t-Test for a Difference Between Two Independent Means and Test for Significance of Differences Between Two Proportions. Individual t-tests were calculated between the groups, as well as between the total sample for range data. No significant differences were found at the .05 level of confidence between groups for any of the range variables. Obvious differences within groups were noted in the male/female, white/black, in/out state of training, and masters/masters plus degree proportions. Therefore, proportions were tested for between groups and between total group and groups. No significant difference
Table 1
Demographic Variables for Six Independent Groups, Three Professional Groups, and Total Group Expressed in Percentages and Means

<table>
<thead>
<tr>
<th>Group</th>
<th>M/F</th>
<th>W/B</th>
<th>MS/MS+</th>
<th>In/Out St</th>
<th>Yrs Post Degree</th>
<th>Yrs Pos Degree</th>
<th>Yrs Team Pos Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD-C</td>
<td>45</td>
<td>55</td>
<td>80 20</td>
<td>65 35 90 10</td>
<td>7.0 (3.8)</td>
<td>4.7 (3.1)</td>
<td>10.5 (4.3)</td>
</tr>
<tr>
<td>PS-C</td>
<td>25</td>
<td>75</td>
<td>25 75 25</td>
<td>90 10 60 40</td>
<td>8.8 (4.3)</td>
<td>7.1 (4.2)</td>
<td>8.5 (3.8)</td>
</tr>
<tr>
<td>SW-C</td>
<td>25</td>
<td>75</td>
<td>55 45 90 10</td>
<td>70 30</td>
<td>8.1 (5.2)</td>
<td>6.8 (4.9)</td>
<td>7.5 (4.2)</td>
</tr>
<tr>
<td>SW-E</td>
<td>10</td>
<td>90</td>
<td>60 40 90 10</td>
<td>85 15</td>
<td>8.4 (5.9)</td>
<td>7.5 (5.1)</td>
<td>7.4 (4.7)</td>
</tr>
<tr>
<td>ADM</td>
<td>45</td>
<td>55</td>
<td>85 15 63 37</td>
<td>83 17</td>
<td>7.2 (4.1)</td>
<td>5.1 (3.6)</td>
<td>9.4 (5.1)</td>
</tr>
<tr>
<td>PSY</td>
<td>28</td>
<td>72</td>
<td>75 25 93 7</td>
<td>63 37</td>
<td>8.5 (4.7)</td>
<td>6.4 (4.6)</td>
<td>7.4 (4.1)</td>
</tr>
<tr>
<td>SOW</td>
<td>17</td>
<td>83</td>
<td>57 43 90 10</td>
<td>78 22</td>
<td>8.3 (5.0)</td>
<td>7.1 (4.9)</td>
<td>7.4 (4.7)</td>
</tr>
<tr>
<td>TOT</td>
<td>30</td>
<td>70</td>
<td>73 27 82 28</td>
<td>74 26</td>
<td>7.9 (4.7)</td>
<td>6.2 (4.7)</td>
<td>8.0 (4.7)</td>
</tr>
</tbody>
</table>

Key
( ) = SD
AD-C = Administrators/Control
AD-E = Administrators/Experimental
PS-C = Psychologists/Control
PS-E = Psychologists/Experimental
SW-C = Social Workers/Control
SW-E = Social Workers/Experimental
ADM = Administrators
PSY = Psychologists
SOW = Social Workers
TOT = Total Group

IN/OUT ST= State of training
YRS POST = Years since degree
YRS POS = Years in position
YRS TEAM = Number years on eligibility team
at the .05 level of confidence was found for the variables of gender, race, or in/out state training. Significant proportional differences were found for race between social workers and the remainder of the sample (z = 5.6, p < .05). Race was equally distributed in the social worker sample, whereas whites significantly outnumbered blacks for the other groups and the total group. A moderate proportional difference (z = 1.99, p < .05) was found for administrators having more post masters degrees.

**Case I Analysis**

**Log-linear Analysis**

Case I represented a child with marginal cognitive delays, a significant fine motor delay, and a history of pre-existing medical conditions. The child was made eligible for special education services by the multidisciplinary team, as well as qualified under state criteria. The (D, G, P) model yielded a likelihood ratio chi-square of 2.09 with 5 degrees of freedom which was nonsignificant (p = .836). Both type of decision and accuracy congruence were assessed. The results indicated the three professional groups made similar types of eligibility decisions. There was a higher probability of this child being found not eligible. The was also a similar degree of accuracy among the groups. There was a higher probability of making an incorrect decision, resulting in a false-negative error. A false-negative
error included finding a child with disabilities ineligible for services. The overall accuracy rate was calculated to be 37.2%. Cell frequencies and percentages are reported in Table 2.

**Eligibility Justification**

One supplemental analysis was performed to examine the subjects' decision-making process. A $2 \times 4 \times 3$ contingency table was constructed to assess the variables of presence or absence of justification statement ($J$) by eligibility decision ($D$) by professional status ($S$). The results of the table indicated that professionals were similar in their inclusion of a justification statement for eligibility. A justification statement was included more often for an eligible decision than a not eligible decision. Administrators were more likely to include a justification statement regardless of the eligibility status (see Table 3).

**Case II Analysis**

**Log-linear Analysis**

Case II represented a child with significant cognitive delays, familial stressors, significant medical history, and the diagnosis of Down's Syndrome. Subsequently, the child was found eligible for special education services. The results of the ($D$, $G$, $P$) model yielded a likelihood ratio chi-square of 3.62 with 5 degrees of freedom which was nonsignificant ($p = .604$). Professionals in this case
### Table 2: Case I Cell Frequencies and Percentages for Professional Status by Group by Eligibility Decision

<table>
<thead>
<tr>
<th>GROUP</th>
<th>JUDGEMENT WORKSHEET</th>
<th>NE</th>
<th>EL*</th>
<th>NE</th>
<th>EL*</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMIN</td>
<td>15</td>
<td>5</td>
<td>12</td>
<td>8</td>
<td></td>
<td>37</td>
</tr>
<tr>
<td>PSYCH</td>
<td>12</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>SOCW</td>
<td>11</td>
<td>9</td>
<td>13</td>
<td>7</td>
<td></td>
<td>26</td>
</tr>
<tr>
<td>TOTAL</td>
<td>38</td>
<td>22</td>
<td>37</td>
<td>22</td>
<td></td>
<td>86</td>
</tr>
</tbody>
</table>

L² = 2.09 df = 5 p = .836

**Key**

- ET = Eligible
- NE = Not Eligible
- EL* = Correct Eligibility Decision

- 10.84% 6.74% 18.34% 10.08% 31.74% 38.78% 19.23% 18.34% 31.74% 38.78% 19.23%
<table>
<thead>
<tr>
<th></th>
<th>Admin</th>
<th>Psych</th>
<th>SocW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Present</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td>22.5%</td>
<td>20%</td>
<td>17.5%</td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td></td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td>12.5%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>22.5%</td>
<td>5%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Absent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>27.5%</td>
<td>25%</td>
<td>27.5%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>15%</td>
<td>25%</td>
<td>22%</td>
</tr>
</tbody>
</table>
made similar types of eligibility decisions. The child had a significantly high probability of being found eligible for services. One psychologist using the worksheet, found the child ineligible. Likewise, the professionals had a high degree of accuracy in determining the correct eligibility decision. The overall accuracy rate was calculated to be 98.2%. Results are presented in Table 4.

**Eligibility Justification**

A 2 x 4 x 3 contingency table was constructed to assess the variables of presence or absence of justification statement (J) by eligibility decision (D) by professional status (S). The results of the table indicated that professionals were similar in their inclusion of a justification statement for eligibility. A justification statement was included consistently if the child was found eligible. Only one justification statement was omitted in the table. Results of this analysis are presented in Table 5.

**Case III Analysis**

**Log-linear Analysis**

Case III represented a child with significant medical problems, a bilateral sensori-neural hearing loss, and borderline delays in communication skills. The child was found eligible for special education services. The specific recommendation included speech/language therapy and monitoring for potential developmental delays in the
Table 4
Case II Cell Frequencies and Percentages Professional Status by Group by Eligibility Decision

<table>
<thead>
<tr>
<th>GROUP</th>
<th>JUDGEMENT</th>
<th>WORKSHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NE</td>
<td>EL*</td>
</tr>
<tr>
<td>ADMIN</td>
<td>0 20</td>
<td>0 20</td>
</tr>
<tr>
<td>PSYCH</td>
<td>0 20</td>
<td>1 19</td>
</tr>
<tr>
<td>SOCW</td>
<td>0 20</td>
<td>0 20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>0 60</td>
<td>1 59</td>
</tr>
</tbody>
</table>

L^2=3.6  df=5  p=.604
Key
* = Correct Eligibility Decision
NE = Not Eligible
EL = Eligible
Table 5
Case II Percentages of Justification Statements Present or Absent by Eligibility Decision by Professional Status

<table>
<thead>
<tr>
<th></th>
<th>Admin</th>
<th>Psych</th>
<th>SocW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Present</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td>50%</td>
<td>47.5%</td>
<td>50%</td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Absent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>2.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
future. Communication delays fell under the broad scope of services under state guidelines. The results of the (D, G, P) model resulted in a likelihood ratio chi-square of .94 with 5 degrees of freedom which was nonsignificant (p = .98). Therefore, this model was retained for best fit of the data. As a group, the professionals made similar decisions regarding type of eligibility. The results further indicated that there was only a slightly higher probability of the child being found eligible for services. The professionals were also similar in their accuracy in determining eligibility. The overall accuracy rate in this case was calculated to be 60.8%. Cell frequencies and percentages are found in Table 6.

Eligibility Justification

A 2 x 4 x 3 contingency table was constructed to assess the variables of presence or absence of justification statement (J) by eligibility decision (D) by professional status (S). The results of the table indicated that professionals were similar in their inclusion of a justification statement for eligibility. There was a higher inclusion rate than omission rate. When eligibility justification was absent there was a higher probability of a not eligible determination. Results are presented in Table 7.
Table 6
Case III Cell Frequencies and Percentages for Professional Status by Group by Eligibility Decision

<table>
<thead>
<tr>
<th>GROUP</th>
<th>JUDGEMENT</th>
<th>WORKSHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NE</td>
<td>EL*</td>
</tr>
<tr>
<td>ADMIN</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>7.5%</td>
<td>9.2%</td>
</tr>
<tr>
<td>PSYCH</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>6.7%</td>
<td>10.0%</td>
</tr>
<tr>
<td>SOCW</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>5.8%</td>
<td>10.8%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>20.0%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>

L² = .53  df=5  p=.99

Key
* = Correct Eligibility Decision
NE = Not Eligible
EL = Eligible
Table 7  
**Case III Percentages of Justification Statements Present or Absent by Eligibility Decision by Professional Status**

<table>
<thead>
<tr>
<th></th>
<th>Admin</th>
<th>Psych</th>
<th>SocW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Present</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td>27.5%</td>
<td>30%</td>
<td>35%</td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>5%</td>
<td>7.5%</td>
<td>10%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td>27.5%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>11.5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Absent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>17.5%</td>
<td>12.5%</td>
<td>5%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>10%</td>
<td>15%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Case IV Analysis

Log-linear Analysis

Case IV represented a child with a normal developmental profile, superior cognitive abilities, and a diagnosis of mild cerebral palsy. A six month delay in fine motor skills was evidenced; however, a nine month delay was considered the significant delay criterion due to the child's chronological age. Subsequently, the child was found ineligible for special education services. The results of the (D, G, P) model yielded a likelihood ratio chi-square of 13.44 with 5 degrees of freedom which was significant (p = .020). Model two (D, G, P, D by G) resulted in likelihood ratio chi-square of 12.87 with 4 degrees of freedom which was significant (p = .012); therefore, Model Two was also rejected. Model Three (D, G, P, D by P) yielded a likelihood ratio chi-square of 2.67 with 3 degrees of freedom which was nonsignificant (p = .44). Model Three was retained as the model for best fit. These results indicated the three professional groups were dissimilar in the type of eligibility decisions made. Post hoc analysis, as suggested by Davis (1978), was performed. There was a nonsignificant difference between administrators and psychologists, whereas social workers were significantly different from the other two groups. Administrators and psychologists were more likely to find the child ineligible, whereas social workers were more
likely to find the child eligible.

Variability was also noted in the degree of accuracy in determining eligibility. Administrators had an overall accuracy rate of 77.5% and psychologists 65%, whereas social workers had an overall accuracy rate of 42.5%. Social workers were significantly different from the other two groups in their degree of accuracy. Model Three demonstrated that the determination of eligibility was influenced by professional status. Table 8 includes cell frequencies and percentages for Case IV.

**Eligibility Justification**

A 2 x 4 x 3 contingency table was constructed to assess the variables of presence or absence of justification statement (J) by eligibility decision (D) by professional status (S). Analysis of the table indicated that professionals were similar in their inclusion of a justification statement for eligibility. There was a higher inclusion rate than omission rate. When eligibility justification was absent, there was a significantly higher probability of a not eligible determination. Administrators more frequently omitted a justification statement than the other two groups. Percentages are presented in Table 9.

**Case V Analysis**

**Log-linear Analysis**

Case V described a child with multiple developmental
Table 8
Case IV Cell Frequencies and Percentages for Professional Status by Group by Eligibility Decision

<table>
<thead>
<tr>
<th>GROUP</th>
<th>JUDGEMENT</th>
<th>WORKSHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NE*</td>
<td>EL</td>
</tr>
<tr>
<td>ADMIN</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>14.2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>PSYCH</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>10.0%</td>
<td>6.7%</td>
</tr>
<tr>
<td>SOCW</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>8.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>31.5%</td>
<td>17.5%</td>
</tr>
</tbody>
</table>

$L^2 = 2.67$  $df=3$  $p=.44$

Key
* = Correct Eligibility Decision
NE = Not Eligible
EL = Eligible
<table>
<thead>
<tr>
<th></th>
<th>Admin</th>
<th>Psych</th>
<th>SocW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Present</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td>12.5%</td>
<td>15%</td>
<td>32.5%</td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>12.5%</td>
<td>27.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td>7.5%</td>
<td>20%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>27.5%</td>
<td>12.5%</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Absent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>25%</td>
<td>7.5%</td>
<td>5%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>15%</td>
<td>17.5%</td>
<td>22.5%</td>
</tr>
</tbody>
</table>
delays and significant familial problems; however, the medical component was missing in this case. The child was ineligible for services due to a missing assessment component. Once the component was obtained, the case would be reheard before the eligibility team. Model One (D, G, P) provided a likelihood ratio chi-square of 22.39 with 5 degrees of freedom which was significant (p < .0005). Model One was rejected as the best fit model. Model Two (D, G, P, D by G) yielded a likelihood chi-square ratio of 2.78 with 5 degrees of freedom which was nonsignificant (p = .733). The results indicated there were differences in the types and accuracy of eligibility decisions made on the basis of assignment to either the control or experimental group. Subjects in the experimental group, who used the structured format for determining eligibility, were in total agreement for type of eligibility decision made. The experimental group also had an overall accuracy rate of 100%. Accuracy rates in the control group were: psychologists 90%, administrators 75%, and social workers 70%. The total control group accuracy rate was 78.4%. Results are reported in Table 10.

Eligibility Justification

A 2 x 4 x 3 contingency table was constructed to assess the variables of presence or absence of justification statement (J) by eligibility decision (D) by professional status (S). The results of the table
Table 10
Case V Cell Frequencies and Percentages for Professional Status by Group by Eligibility Decision

<table>
<thead>
<tr>
<th>GROUP</th>
<th>JUDGEMENT</th>
<th>WORKSHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EL</td>
<td>NE *</td>
</tr>
<tr>
<td>ADMIN</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>4.2%</td>
<td>12.5%</td>
</tr>
<tr>
<td>PSYCH</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>1.7%</td>
<td>15.0%</td>
</tr>
<tr>
<td>SOCW</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>5.0%</td>
<td>11.7%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>13</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>10.8%</td>
<td>39.2%</td>
</tr>
</tbody>
</table>

L² = 2.78 df=5  p=.733

Key
* = Correct Eligibility Decision
NE = Not Eligible
EL = Eligible
indicated the professionals were similar in their inclusion of a justification statement for eligibility. There was a higher omission rate than inclusion rate. When eligibility justification was absent, there was a significantly higher probability of a not eligible determination. Table 11 reports results in percentages.

**Total Number Correct Analysis**

A number of procedures were used to analyze the total number of correct for the sample. A log-linear model (T, G, P) yielded a likelihood ratio chi-square of 18.8 with 15 degrees of freedom which was nonsignificant (p = .22). In Model One, total number of correct was designated as (T). The range included two through five total number of correct per subject. The control and experimental groups were designated as (G), whereas the three professional groups were labelled (P). The results indicated the professionals in both the control and experimental groups had a similar number of correct cases. Cell frequencies and percentages were collapsed for the control and experimental groups. Percentages in Table 12 reflect the proportion of cases for the total sample that were correctly identified (n = 600).

The percentage correct for each of the professional groups was calculated. Administrators had an overall accuracy rate of 72%. Psychologists had an overall accuracy rate of 71.5%, whereas social workers had a rate of 72.5%. The overall average rate of accuracy was 70.34%.
Table 11
Case V Percentages of Justification Statements Present or Absent by Eligibility Decision by Professional Status

<table>
<thead>
<tr>
<th></th>
<th>Admin</th>
<th>Psych</th>
<th>SocW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Present</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td>5%</td>
<td>12.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>12.5%</td>
<td>45%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Judgement-Eligible</td>
<td>7.5%</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>Judgement-Not Eligible</td>
<td>2.5%</td>
<td>37.5%</td>
<td>42.5%</td>
</tr>
<tr>
<td><strong>Absent</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet-Eligible</td>
<td>45%</td>
<td>42.5%</td>
<td>30%</td>
</tr>
<tr>
<td>Worksheet-Not Eligible</td>
<td>37.5%</td>
<td>42.5%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Table 12
Cell Frequencies and Percentages Profession by Number of Correct Cases

<table>
<thead>
<tr>
<th>Profession</th>
<th>2 (3.3%)</th>
<th>3 (9)</th>
<th>4 (11.33)</th>
<th>5 (3.3%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>1 (1.33)</td>
<td>18 (9)</td>
<td>17 (11.33)</td>
<td>4 (3.3)</td>
</tr>
<tr>
<td>Psychologists</td>
<td>1 (1.33)</td>
<td>18 (9)</td>
<td>18 (12)</td>
<td>3 (2.5)</td>
</tr>
<tr>
<td>Social Workers</td>
<td>5 (1.66)</td>
<td>17 (8.5)</td>
<td>16 (10.66)</td>
<td>2 (1.66)</td>
</tr>
<tr>
<td>Total Group</td>
<td>2.34%</td>
<td>53%</td>
<td>34%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

L² = 18.82  df = 15  p = .22  ( ) = % of Total Sample
Linear regression was used to determine whether or not any of the demographic variables significantly influenced the correct determination of eligibility. Individual linear regression was attempted for each of the five cases with no significant results. The procedure was also used with the number of total correct as a dependent variable. In the analysis, years experience on an eligibility team was positively correlated with correct determination of eligibility (R^2 = .206  df = 9, 110  Sign F = .0019). However, the relationship between the total number correct and years on an eligibility team was noted to be weak. Therefore, other unmeasured variables must account for the variance.

**Requests/Comments Concerning Study**

A number of individuals contacted the investigator by phone prior to returning their packets. Some individuals has as many as five requests for clarification and/or comments per contact. All of the contacts were tabulated and categorized.

The highest proportion of contacts involved clarification for using the matrix to determine the significance of a developmental delay. The majority of the questions dealt with the application of negative standard deviation to determine significance. Clarification of medical terms involved supplying a definition for unfamiliar terms. Questions concerning the criteria dealt
specifically with the revised criteria for determining eligibility of services. The new criteria are quite extensive and contain several different standards to apply, such as a 25% delay based on chronological age or the observation of three or more high-risk indicators. A number of the respondents questioned the validity of making independent decisions and stated specifically they depended on the team's assistance in making their decisions. Several individuals indicated they rarely had participated in determining eligibility for young children. One respondent from a small school district indicated his/her determination of eligibility was based upon program availability. Results are reported on Table 13.
Table 13
Type and Frequency of Contacts From Subjects

<table>
<thead>
<tr>
<th>Reason for Contact</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarification Using Matrix</td>
<td>27 (36.5)</td>
</tr>
<tr>
<td>Clarification of Medical Terms</td>
<td>19 (25.7)</td>
</tr>
<tr>
<td>Difficulty Using Criteria</td>
<td>15 (20.3)</td>
</tr>
<tr>
<td>Difficulty Making An Independent Decision</td>
<td>8 (10.8)</td>
</tr>
<tr>
<td>Lack of Experience with Population</td>
<td>4 (5.3)</td>
</tr>
<tr>
<td>Decision Based on Availability of Program</td>
<td>1 (1.4)</td>
</tr>
</tbody>
</table>

( ) = Percentage
CHAPTER FIVE
Discussion

Special education programs and services have increased significantly over the last several decades. This increase in programs and services has resulted from a dramatic shift in public and professional sentiment regarding the provision of services to children with disabilities (Edgar, 1988). Furthermore, there has been an unprecedented increase in legislative mandates to provide such programs and services. However, current legislative mandates were noted to be ambiguous which has led to numerous problems in the actual provision of special education services. Such problems have included the inconsistency of classification rates from one locality to another (Comptroller General, 1981; Ysseldyke, Algozzine, Shinn & McGue, 1982; & Glass, 1983), misclassification (Glass, 1983), as well as some populations being underserved (Smith, 1980).

Research in the area of determining eligibility for special education services has been particularly critical of past attempts to classify children as handicapped (Edgar, 1988). As such, there has been a philosophical and legislative shift, particularly in the classification of young children with disabilities. This shift was noted to employ the use of developmentally delayed and/or high-risk for developmental delay demarcations, rather than discrete
categorical classification schema. However, the actual usefulness of using the newer demarcations has not been supported or addressed by research.

One of the most basic methodological flaws of research and/or policy development has been perpetuated by the use of the newer developmentally delayed and/or high-risk for developmental delay demarcations. This methodological flaw included the lack of adequately defining the target population both in terms of legislative mandates and special education policies. Although Virginia's regulations governing preschool children with disabilities included parameters for determining eligibility for services, such parameters or criteria have not been adequately researched. In particular, no research data have been published on determining eligibility decision congruence for children with developmental delays.

Eligibility decision congruence was viewed as a necessary component of professional judgement when determining eligibility. However, due to purported difficulties with multidisciplinary functioning, the adequacy of the decision-making process became suspect. Disproportional influence of particular professional groups (Gilliam, 1979; Gilliam & Coleman, 1981; Knoft, 1983) was also noted which lead to the conclusion that particular groups should be investigated in determining eligibility congruence.
Therefore, the basic purpose of this study was to establish eligibility decision congruence data using the developmentally delayed and/or high-risk for developmental delay demarcations currently allowed in the state of Virginia. The study sought to answer two basic questions:
(a) Are there differences in eligibility decision congruence when school personnel use independent professional judgement versus a structured format for decision-making? and (b) Are there differences in eligibility decision congruence when the professional disciplines of administrator, psychologist, and social worker are compared?

Congruence

The construct of eligibility decision congruence was tested at two levels. The first test of eligibility congruence was whether or not professionals agreed when the parameter of eligible versus ineligible was imposed. In the second test, the degree of similarity in accuracy was tested. Results indicated the three professional groups were highly congruent for both type of decision and accuracy of eligibility determination. Congruence was found in Cases I, II, and III. Congruence was not found in Cases IV and V.

Decisional Congruence

Eligibility decision congruence dealt specifically with the degree of agreement among professionals in making
an eligible/ineligible decision. Three of the five cases exhibited marked congruence. However, only in Case II was the proportion of congruence high. Case II represented a child with Down's Syndrome and an estimated IQ score of 79. There was a 98.2% degree of agreement in the case. Cases I and III represented children with borderline deficits. The Case I profile included information indicating a delay in fine motor skills and an estimated IQ score of 82. Case III profiled a child with communication deficits of less than six months and a severe sensorineural hearing loss. The degree of congruence for Case I was 62.5% and 60.8% for Case III.

Diagnostic information may have influenced these results. It was evident professionals more readily agreed when presented with information consistent with a developmental delay such as in Case II. Borderline information, on the other hand, decreased the degree of agreement. McDermott (1981) characterized a number of errors diagnosticians routinely made. One type of error cited was the inconsistent weighing of diagnostic cues which included a diagnostician's unclear perception of relevant data. Apparently extraneous factors lead to a proportionately higher degree of disagreement.

Decisional congruence was not found in Cases IV and V. In Case IV the lack of congruence was caused by differences between the professional groups in their agreement for an
eligible/ineligible decision. Case IV represented a child with a normal developmental profile, superior intelligence, and a fine motor delay of 6 months. Due to the child's chronological age, the 6 month delay in fine motor skills was not significant when using the developmental delay matrix. This child had been found ineligible for special education services. Administrators and psychologists agreed more than social workers. Both groups had a higher proportion of ineligible decisions, whereas social workers more frequently found the child eligible. However, the overall degree of congruence of 60.7% was quite similar to Cases I and III. Social workers, on the other hand, found the child eligible more often than not, resulting in a false-positive error in which a child with normal abilities is found eligible for services.

Case V was included in the study to determine if professionals adhered to state regulations which required four major assessment components to determine eligibility. The medical component was excluded from the profile of an otherwise handicapped child. The lack of congruence in Case V was attributed to differences between the control and experimental groups. Subjects in the experimental group had a congruency rate of 100%. This indicated the structured worksheet was beneficial in verifying the presence of the four major components and determining the child ineligible. The eligibility decision appeared to be
more apparent to the subjects using the worksheet than to those using professional judgement alone.

**Accuracy Congruence and Rate of Accuracy**

Accuracy congruence dealt with the professionals' degree of similarity in making correct/incorrect eligibility decisions. Accuracy congruence did not imply a correct eligibility decision, whereas rate of accuracy did. Marked accuracy congruence was found in Cases I, II and III. Marginal to high rates of accuracy were found in four of the five cases.

Although there was marked accuracy congruence in Case I, there was only a 37.2% rate of accuracy in determining eligibility. A false-negative error was noted in this case in which a child with disabilities, as defined by an eligibility team and state department criteria, was found ineligible. As a group, professionals more frequently made an incorrect decision. Borderline scores profiled in the case summary may have affected the rate of accuracy.

Case III exhibited a accuracy rate of 60.8%. Similarly, a 60.7% was found in Case IV; however, congruence was not found. Therefore, there was more variability in Case IV between the professionals in both the control and experimental groups than in Case III, even though their rates of accuracy were equal. Marginal degrees of accuracy implied inconsistent or inaccurate application of the eligibility criteria or an incorrect
professional judgement.

The degree of accuracy was significantly higher in Cases II and V. In Case II the accuracy rate was 98.2%, and 89.1% in Case V. Case II clearly represented a child with disabilities, whereas Case V had a missing assessment component. Accuracy rates improved when the profile presented scores clearly consistent with a developmental delay and/or had missing assessment components.

Case V represented a typical occurrence in the decision-making process. Eligibility decisions were often deferred when one of the major assessment components was missing. Professionals using the structured format in Case V had a 100% accuracy rate. The first step in using the structured format signalled subjects to verify the presence of the four major assessment components. If a component was absent, the subjects were directed to make an immediate determination of ineligibility. The control group, on the other hand, may have been signalled to find the child ineligible by the specific nature of the decisional choices provided. One of the five choices included: the child is ineligible to receive special education at this time due to insufficient data and/or missing assessment components.

Response to cues was noted to be an important ramification in the assessment of the decision-making process (McDermott, 1981). Accuracy congruence was found in Case II, but not in Case V. Accuracy congruence was adversely
affected by subjects in the control group making an incorrect decision when the majority of the entire sample made the correct decision.

**Total Group Accuracy**

The three professional groups were highly similar in the degree of accuracy in determining eligibility. Administrators had an overall correct determination rate of 72%, psychologists 71.5%, and social workers 72.5%. The total group accuracy rate was 70.34%.

Marginal to high levels of accuracy were found in four of the five cases. Case I represented a child with disabilities being found ineligible for services resulting in a false-negative error. The overall accuracy rate for Case I was 37.5%. Although there was a marginal rate of accuracy in Case IV (60.7%), there were significant differences among the three professional groups. Social workers had the lowest overall accuracy rate in this case. Social workers made more false-negative errors in Case IV by finding an ineligible child eligible.

Overall accuracy was higher in Case V for the experimental group using the worksheet which signalled subjects to check for missing assessment components. The use of the structured format for determining eligibility improved the overall accuracy rate in this case. There has been a substantial increase in litigation regarding the determination of eligibility. Furthermore, as Ballard,
Ramirez and Weintraub (1982) reported, a significant number of cases were won on technical inadequacies rather than on the substantive issues.

The overall accuracy rate in this study of 70.34% was marginally higher than the 66.9% rate reported by Ward, Ward, and Clark (1991). However, error patterns in determining eligibility remained a significant issue. Liberman (1985) indicated the determination of eligibility was a two-tiered process. In the first tier, children were identified as having disabilities or not having disabilities. In the second tier, the need for special education services was determined for those children identified as having disabilities. Decisional errors can occur in either tier.

For young children, the labelling effect using a bipolar classification of developmentally delayed or not developmentally delayed was significantly different than labelling issues raised by Ward, Ward, and Clark (1991). In the Ward study, there was a supposition that different categorical classifications resulted in differences in intervention. However, the assignment of a label to young children simply permits access to intervention since many preschool programs are noncategorical. Therefore, the most significant type of error for children with developmental delays was a false-negative error. A false-negative error results in a child with developmental delays being found
ineligible for services as occurred for Case I.

The regression analysis revealed a positive, but weak, correlation between total group accuracy and the number of years served on an eligibility team. Therefore, other unmeasured variables must account for the variance in the sample's accuracy rate.

**Eligibility Worksheet**

The results from the ten contingency tables revealed the structured worksheet had little influence on increased congruence. The one exception occurred for Case V in which the worksheet appeared to improve the subjects' ability to identify missing assessment components. Providing eligibility criteria as an addendum to the worksheet had no observable effect on improving congruence.

Contingency tables were also constructed to analyze the use of the justification for eligibility section of the worksheet. A number of consistencies were noted. Professionals were more likely to omit the justification statement for children found ineligible and, conversely, included the statement for children found eligible. This trend may have been influenced by the specific nature of the eligibility decision choices provided. Justification of eligibility analysis may have been improved if the eligibility decisions had remained bipolar.

Participants routinely supplied responses to the bipolar decisions in each of the sections. However, when
asked to qualify their responses, these portions of the worksheet were generally omitted. The amount of time required to complete a worksheet for each case may have been a factor. Analysis of rank order information could not be completed as only 9% of the participants supplied information on this section of the worksheet. Written clarification of the decisional process would have added significantly to the results of this investigation, as well as provided a basis for improving the internal reliability and content validity of the worksheet.

It was apparent that the criteria for eligibility were not employed or were inaccurately used. Ysseldyke, Algozzine, Rostallan and Shinn (1981) reported a similar finding in their study of eligibility team processes. Incorporation of the eligibility criteria directly on the worksheet may have increased the use of the criteria. Furthermore, one-third of the subjects in the experimental group contacted the investigator regarding clarification in the use of the criteria which have been in existence since 1984. This may have indicated a lack of experience employing the criteria in the determination of eligibility. Resolution of this issue was viewed as imperative to improve the accountability of the eligibility process.

Conclusions

The results of the investigation clearly indicated
there was significant congruence between the three distinct professional groups for both decisional and accuracy congruence in three of the five cases presented. A marginal to high rate of accuracy was found in four of the five cases presented. The overall accuracy rate of 70.34% was marginally higher than the results obtained by Ward, Ward, and Clark (1991) in their examination of classification congruence for psychologists when reason for referral was manipulated. However, in the current investigation, reason for referral was omitted as a methodological control which may account for the differences in the two studies.

Regression analysis yielded a slight positive correlation for number of years served on an eligibility team with the total number correct. The relationship between the two variables was noted to be weak. Thus, other unexplained sources of variance must account for the differences in the overall rate of accuracy.

The use of the structured worksheet for determining eligibility had little effect on improving decisional or accuracy congruence. However, the worksheet did improve the rate of accuracy for all three groups when the subjects were signalled to make an ineligible decision on the basis of a missing assessment component. Subjects completed bipolar responses to items, but rarely provided written clarification as requested. The process may have been too
time consuming in the context of study participation. Furthermore, the supplied criteria were either disregarded or used inaccurately as evidenced by the marginal and low rates of accuracy in three of the five cases.

Although the results indicated marked levels of congruence, caution should be taken in the generalization of the findings. The sample may not have been representative of the larger population of professional decision-makers as the return rate was low and volunteers were utilized. The use of independent decision-makers significantly restricted generalization to the actual eligibility decision process of teams. Also the effect of omitting reason for referral and sex of the child must be taken into account when assessing variance associated with the decision-making process. Furthermore, the fact that one-third of the subjects in the experimental group received additional assistance from the investigator in using the supplied criteria may have contaminated the results.

This study provided inconclusive results as to whether or not professional decision-makers actually used the developmentally delayed demarcation as a basis for their determination of eligibility. It was assumed that the developmentally delayed demarcation would create a decisional mind-set for the subjects. The use of the structured worksheet and criteria should have also focused
the experimental groups' attention to characteristics associated with developmental delays. Even though the overall accuracy rate was high, there was no evidence that the use of the developmentally delayed demarcation, as compared to the use of more traditional categorical approaches, altered the subjects' perceptions when determining eligibility.

**Implications for Future Research**

This study should be viewed as a preliminary investigation into factors which may influence the eligibility process for children with suspected disabilities and professional decision-making. The establishment of eligibility decision congruence data was viewed as a necessary first step in more clearly defining the target population for potential special education services.

Repeated quantitative research has failed to conclusively determine the sources of variance associated with the decision-making process of multidisciplinary teams. Therefore, use of a phenomenological qualitative approach (Bogdan & Biklen, 1982) may more adequately explain such sources of variance. A phenomenological investigative approach attempts to draw conclusions related to a particular event by interviewing subjects after the event. In order to determine the decisional process used in the determination of eligibility, subjects would be
interviewed after the eligibility meeting. Repeated interviews with a number of subjects are compared. The investigator then seeks to find trends or patterns in the decisional process which can later be substantiated by quantitative methods.

A number of interesting trends appeared in the data of the current investigation which should be explored via a phenomenological approach. In one case, social workers were significantly different than administrators and psychologists in their determination of eligibility. Use of the phenomenological approach may determine what, if any, differences there are between the professional groups. Interesting patterns were also detected when the lowest and highest number of correct determinations of eligibility were compared for each of the three professional groups. This approach may verify whether the differences were real or occurred by chance.

The current study could also be replicated using independent decision-making as a pretest condition to team decision-making. The establishment of a data base was the primary focus of this study. However, since eligibility decisions are a product of teams, this context should be explored as well.

Furthermore, measures of accountability in the determination of eligibility should be investigated in order to protect the rights of children with suspected
disabilities and decrease the number of cases of litigation. One suggestion for improving the accountability process is to provide in-service training for the application of the eligibility criteria in conjunction with a structured format for determining eligibility. Another means to improve accountability would be to implement a follow-up procedure for those children found ineligible for special education services in order to diminish the consequences of false-negative decisional errors.

As the results of this study were inconclusive regarding the use of the developmentally delayed demarcation, further research efforts should be directed in this area. Comparison of traditional categorical approaches versus the use of developmental delay criteria should be examined. Additionally, actuarial assessment systems, as described by McDermott (1990), should be employed to establish classification schema which have predictive ability, take into account differences in child functioning, and enable classifications to be made with increased accuracy. Actuarial assessment systems take into account the variance among children in development as they naturally occur. A data base is established and patterns of atypical development are identified. These atypical patterns are statistically weighted to provide predictive quantification of the data. Case profiles are systemically
compared to the original data base. Diagnosticians respond to a series of bipolar questions which are intended to discriminate between child with and without disabilities. McDermott and Watkins (1987) have written a computer program which can be utilized for assessment data of two through eighteen year-olds. Not only does the program provide systematic classification, but also develops an individualized educational program. The individualized educational program reflects goals directly linked to the data provided. Furthermore, the program establishes levels of intervention, rather than discrete categorical classification. Therefore, use of an actuarial assessment systems approach for determining eligibility may increase the objectivity of the decision-making process. Initially, this approach should be compared to traditional methods of determining eligibility for children with developmental delays to ascertain congruence data between the two methods.
References


Ballard, J. (1977). *Public Law 94-142 and Section 504 - Understanding what they are and are not.* Reston, VA: Governmental Relations Unit, The Council for Exceptional Children.


Virginia Departments of Education & Mental Health/Retardation (1990). Definition of eligibility for services. Richmond, VA: Division of Early Childhood Special Education Programs.


Dear Madam/Sir:

Your school division has been selected to participate in a study designed to examine a number of variables associated with determining special education eligibility for the preschool-aged population.

With your assistance, the results from this study may assist local school districts in enhancing their ability to make more reliable and consistent eligibility decisions regarding young children.

While your school division's participation in the study is completely voluntary, your selection was based upon achieving a representative sample of professionals throughout the state. In order to increase the confidentiality of the participants involved, please forward the enclosed packets to an administrator, school social worker, and school psychologist who routinely serve on an eligibility committee. At no point in the study will your school district or employees will be personally identified. Completed packets should be returned no later than April 15, 1991.

I would like to thank you in advance for your assistance. If you or your colleagues have any questions or concerns regarding the study please do not hesitate to contact me. Furthermore, results from this study will be available upon request.

Sincerely,

John W. Faircloth
Doctoral Candidate
College of William & Mary
Letter to Participants

1709 F. Birch Trail Circle
Chesapeake, VA 2332U
804-424-8198

Dear Colleague:

You and your school district have been selected to participate in a study designed to examine a number of variables regarding the determination of special education eligibility for preschool-aged children. Your assistance in this study could ultimately affect the eligibility process throughout the state by improving the reliability and consistency of the decision-making process.

Enclosed you will find a demographic profile sheet, five case studies, and five Preschool Eligibility Worksheets. Complete and return the demographic profile sheet and the five Preschool Eligibility Worksheets. The case studies may be discarded. All materials should be returned no later than April 15, 1991.

All of your responses will be regarded as strictly confidential. The study was designed to maximize your personal rights as a study participant. At no point throughout the study are you or your school district personally identified. Both you and your school district were randomly selected to participate in the study to increase the representativeness of the sample.

If you have any questions or concerns regarding any of the materials or your participation in the study, please do not hesitate to contact me.

I would like to thank you in advance for your cooperation and time. Furthermore, I will be more than happy to share the results of this study with you upon request.

Sincerely,
John W. Faircloth
Doctoral Candidate
College of William & Mary
DEMOGRAPHIC PROFILE SHEET

1. What is your current position with the school system?
   _____ Special Education Administrator
   _____ General Education Administrator
   _____ Principal
   _____ School Social Worker
   _____ School Psychologist
   _____ Other (Please specify) ________________

2. What is your gender? (Circle appropriate choice)
   Female / Male

3. What is your race? (Circle appropriate choice)
   Asian Black Hispanic Oriental White Other _____

4. What is the highest degree which you have earned? (Circle one) BA BS MA MS CAS EDS EDD PHD

5. What was the year in which you earned your highest degree?
   __________

6. From what institution did you earn your highest degree?
   ______________________

7. How many total years experience in your current position?
   __________

8. How many years total have you served as a member of an eligibility team?
   __________

9. What is the total enrollment of your school district?
   _____ <1000
   _____ 1000 - 5000
   _____ 5000 - 10,000
   _____ 10,000 - 20,000
   _____ >20,000
Control Group
INSTRUCTIONS

1. Complete the demographic profile.
2. Read one case study and complete the accompanying Preschool Eligibility Worksheet.
3. Repeat #2 for cases 2-5.
4. Discard the case studies.
5. Return the demographic profile sheet and the five Preschool Eligibility Worksheets in the envelope provided by April 15, 1991.

GENERAL REMINDERS

* Work independently and do not discuss the cases or your responses with your colleagues.
* Each case should be reviewed separately.
* Completion of each case should take approximately 10 - 15 minutes.

Eligibility decisions should be based upon your professional judgement.
APPENDIX E
Experimental Group
INSTRUCTIONS

1. Complete the demographic profile.

2. Review eligibility criteria provided.

3. Read one case study and complete the accompanying Preschool Eligibility Worksheet.

4. Repeat #2 for cases 2-5.

5. Discard the case studies.

6. Return the demographic profile sheet and the five Preschool Eligibility Worksheets in the envelope provided by April 15, 1991.

GENERAL REMINDERS

* Work independently and do not discuss the cases or your responses with your colleagues.

* Each case should be reviewed separately.

* Completion of each case should take approximately 15 minutes.

Your decision should reflect use of the eligibility criteria provided.
CASE PROFILE

Identifying Information:  Case I  C.A. 24 months

Developmental Assessment:

Learning Accomplishment Profile

<table>
<thead>
<tr>
<th>Fine Motor: Manipulation</th>
<th>Developmental Age</th>
<th>20 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Motor: Writing</td>
<td>Developmental Age</td>
<td>18 months</td>
</tr>
<tr>
<td>Cognitive: Matching</td>
<td>Developmental Age</td>
<td>20 months</td>
</tr>
<tr>
<td>Cognitive: Counting</td>
<td>Developmental Age</td>
<td>N/A</td>
</tr>
<tr>
<td>Language: Naming</td>
<td>Developmental Age</td>
<td>22 months</td>
</tr>
<tr>
<td>Language: Comprehension</td>
<td>Developmental Age</td>
<td>24 months</td>
</tr>
<tr>
<td>Gross Motor: Body Movement</td>
<td>Developmental Age</td>
<td>21 months</td>
</tr>
<tr>
<td>Gross Motor: Object Movement</td>
<td>Developmental Age</td>
<td>21 months</td>
</tr>
</tbody>
</table>

Psychological Assessment:

Bayley Scales of Infant Development
(M = 100, SD = 16)
- Mental Developmental Index 82
- Psychomotor Development Index 87

Vineland Adaptive Behavior Scales
(M = 100, SD = 15)
- Composite Score 86

Medical Assessment:

Height: 35 1/3 in.; Weight: 34 lbs.; Head Circumference: 49 cm. Vision and hearing within normal limits. Immunizations were current. Apnea noted during first year, monitor no longer used. History of lactose intolerance. Child is well nourished. Cranial nerves intact and gross motor movements were normal. Fine motor skills not observed during the examination. Bodily systems appeared normal.

Sociological Assessment:

Child resides with mother and older sibling. Moderate income. Parents are separated, but father has frequent contact with child. Mother works outside the home. Child is cared for by neighbor during the day. Adequate toys were present in the home. Familial stressors included concern regarding Apnea, food allergies, and marital separation.
CASE PROFILE

Identifying Information:  Case II  C.A.  25 months

Developmental Assessment:

Learning Accomplishment Profile

<table>
<thead>
<tr>
<th>Fine Motor: Manipulation</th>
<th>Developmental Age 23 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Motor: Writing</td>
<td>Developmental Age 20 months</td>
</tr>
<tr>
<td>Cognitive: Matching</td>
<td>Developmental Age 22 months</td>
</tr>
<tr>
<td>Cognitive: Counting</td>
<td>Developmental Age N/A</td>
</tr>
<tr>
<td>Language: Naming</td>
<td>Developmental Age 20 months</td>
</tr>
<tr>
<td>Language: Comprehension</td>
<td>Developmental Age 22 months</td>
</tr>
<tr>
<td>Gross Motor: Body Movement</td>
<td>Developmental Age 23 months</td>
</tr>
<tr>
<td>Gross Motor: Object Movement</td>
<td>Developmental Age 23 months</td>
</tr>
</tbody>
</table>

Psychological Assessment:

Bayley Scales of Infant Development
(M = 100, SD = 16)

- Mental Developmental Index 78
- Psychomotor Development Index 82

Vineland Adaptive Behavior Scales
(M = 100, SD = 15)

- Composite Score 79

Medical Assessment:

Early history of ear infections. Myringotomy tubes were in place. Vision and hearing within normal limits. Chromosomal tests confirmed diagnosis of Down's Syndrome. Upper respiratory infections with subsequent high fevør were recurrent. Bodily systems were within normal limits at present. High activity levels were noted during the physical. Immunizations were current.

Sociological Assessment:

Child resides with both parents and older sibling. Moderate income. Father is employed and mother is a homemaker. Home environment was noted to be stimulating, with an abundance of toys and educational materials. The older sibling responds well to the child. Familial stressors included the child's diagnosis of Down's Syndrome and the child's activity level. Mother and child have participated in stimulation and enrichment programs.
CASE PROFILE

Identifying Information: Case III C.A. 30 months

Developmental Assessment:
Alpern Boll
   Physical Age: 30 months
   Self Help Age: 32 months
   Social Age: 28 months
   Academic Age: 30 months
   Communication Age: 26 months

Psychological Assessment:
Bayley Scales of Infant Development
(M = 100, SD = 16)
   Mental Developmental Index 92
   Psychomotor Development Index 96

Leiter International Performance Scale
(M = 100, SD = 16)
   Adjusted IQ Score 104
   Mental Age 2-8

Medical Assessment:
Early history of ear infections. Myringotomy tubes were in place. Vision was within normal limits. A bilateral sensorineural hearing loss secondary to meningitis was documented at 10 months. Most recent audiometric results indicate a 75db left ear threshold and 90dB right ear threshold. Aided speech detection threshold was 45dB. Upper respiratory infections were noted to be common. Tonsils and adnoids were removed at 28 months due to chronic infection. Bodily systems check revealed no significant abnormalities at present other than the hearing loss.

(case continued next page)
Case III - Additional Information

Sociological Assessment:

Child resides with mother as parents were divorced. Moderate income. Mother works outside the home. The child attends a private preschool program. The home was considered stimulating. Mother indicated that the child enjoys video tapes and will attend for approximately a half hour. Familial stressors included the child's diagnosis of a hearing loss, repeated illnesses, and the mother's apprehension that the child will lose additional hearing.

Speech/Language Assessment:

Peabody Picture Vocabulary Test Age Equivalency 2 years, 1 month

Preschool Language Scale: Language Age 2 years, 2 months

Goldman Fristoe Test of Articulation: Developmental errors noted; residual nasality secondary to tonsil and adenoid removal; conversational speech judged to be 75% intelligible.
APPENDIX I
CASE PROFILE

Identifying Information: Case IV C.A. 42 months

Developmental Assessment:

Vineland Adaptive Behavior Scale
(M = 100, SD =15)

<table>
<thead>
<tr>
<th>Standard Score</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>118</td>
</tr>
<tr>
<td>Daily Living</td>
<td>96</td>
</tr>
<tr>
<td>Socialization</td>
<td>105</td>
</tr>
<tr>
<td>Motor Skills</td>
<td>90</td>
</tr>
</tbody>
</table>

Psychological Assessment:

Stanford Binet
(M = 100, SD = 16)

Mental Age 48 months

Medical Assessment:

Vision and hearing within normal limits. Birth anoxia was noted and subsequently mild cerebral palsey was diagnosed. Upper right extremity involvement was observed. No other significant medical history was documented. Bodily systems examination indicated no major problems. Child has received private occupational therapy to facilitate use of right hand.

Sociological Assessment:

Child resides with both parents and is the youngest of seven children currently living in the home. Father is employed and mother is a homemaker. Family resides in an upper middle class neighborhood. Family was noted to be a strong functioning unit. Numerous educational toys and resources were available in the home. No significant familial stressors were identified.

Occupational Therapy Assessment:

Peabody Motor Development Test

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Motor</td>
<td>Age appropriate</td>
</tr>
<tr>
<td>Fine Motor</td>
<td>36 months</td>
</tr>
</tbody>
</table>
CASE PROFILE

Identifying Information: Case V  C.A. 27 months

Developmental Assessment:

Learning Accomplishment Profile

<table>
<thead>
<tr>
<th>Activity</th>
<th>Developmental Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Motor: Manipulation</td>
<td>23 months</td>
</tr>
<tr>
<td>Fine Motor: Writing</td>
<td>18 months</td>
</tr>
<tr>
<td>Cognitive: Matching</td>
<td>20 months</td>
</tr>
<tr>
<td>Cognitive: Counting</td>
<td>N/A</td>
</tr>
<tr>
<td>Language: Naming</td>
<td>16 months</td>
</tr>
<tr>
<td>Language: Comprehension</td>
<td>20 months</td>
</tr>
<tr>
<td>Gross Motor: Body Movement</td>
<td>24 months</td>
</tr>
<tr>
<td>Gross Motor: Object Movement</td>
<td>24 months</td>
</tr>
</tbody>
</table>

Psychological Assessment:

Bayley Scales of Infant Development
(M = 100, SD = 16)

<table>
<thead>
<tr>
<th>Index</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Developmental Index</td>
<td>69</td>
</tr>
<tr>
<td>Psychomotor Development Index</td>
<td>72</td>
</tr>
</tbody>
</table>

Vineland Adaptive Behavior Scales
(M = 100, SD = 15)

<table>
<thead>
<tr>
<th>Composite Score</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>66</td>
</tr>
</tbody>
</table>

Sociological Assessment:

Child resides with mother. Location of father was uncertain. Family lives in publicly assisted housing and income was noted to be marginal. Few toys were available. Mother indicated child enjoyed playing with other children and looking at television. Child periodically stays with an aunt who lives in the neighbor. Hygiene was noted to be poor.
APPENDIX K
PRESCHOOL ELIGIBILITY WORKSHEET

Student _________________________________ D.O.B. ___________ C.A.________

1. Are the minimum assessment components available for review?
   a. Developmental (Educational) Assessment Yes____ No____
   b. Psychological Assessment Yes____ No____
   c. Sociological Assessment Yes____ No____
   d. Medical Assessment Yes____ No____

If the minimum assessment components are available proceed to Item 2
If the minimum assessment components are not available proceed to Item 9

Documentation Review

2. Did the Developmental (Educational) Assessment reveal a significant delay or findings in one or more of the following areas:
   a. Cognitive Ability Yes____ No____
   b. Motor Skills Yes____ No____
   c. Social/Adaptive Behavior Yes____ No____
   d. Perceptual Skills Yes____ No____
   e. Communication Skills Yes____ No____

Please specify: _____________________________________________________

3. Did the Psychological Assessment reveal a significant delay or findings in one or more of the following areas:
   a. Cognitive Ability Yes____ No____
   b. Social/Emotional Development Yes____ No____
   c. Behavior Yes____ No____
   d. Learning Style Yes____ No____

Please specify: ____________________________________________________

4. Did the Sociological Assessment reveal a significant delay or findings in one or more of the following areas:
   a. Child development Yes____ No____
   b. Functioning of the family unit Yes____ No____
   c. Familial perceptions of the child's problem Yes____ No____
   d. Impact of the home environment on the child's behavior & development Yes____ No____
   e. Social-adaptive behavior Yes____ No____
Sociological Assessment
Please specify__________

<table>
<thead>
<tr>
<th>Area</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Prenatal and birth history</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Previous history of disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Medical reactions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Allergies and their management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Seizures and their management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Sensory screening Vision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Sensory screening Hearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Regular medication and their purpose</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Doctor's recommendations about health or medical conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>amount or place of instruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Level of activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>j. Chronic Illnesses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>k. Immunizations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please specify:________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________  
_____________________________________________________________________________________  

6. Did additional information available reveal a significant delay or findings?

<table>
<thead>
<tr>
<th>Area</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Speech/Language Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Occupational Therapy Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Physical Therapy Assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Qualifying Factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Other (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please specify:________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________  
_____________________________________________________________________________________  
_____________________________________________________________________________________  


Eligibility Determination

7. Did the following support this child's need for special education services?
   a. Developmental (Educational) Assessment  Yes___  No___
   b. Psychological Assessment  Yes___  No___
   c. Sociological Assessment  Yes___  No___
   d. Medical Assessment  Yes___  No___
   e. Additional Information  Yes___  No___

8. Rank order from most important to least important the specific information which support this child's need for special education services.
   a. _______________________
   b. _______________________
   c. _______________________
   d. _______________________
   e. _______________________
   f. _______________________
   g. _______________________
   h. _______________________
   i. _______________________
   j. _______________________

9. Please check the appropriate statement:

   _____ The child is ineligible to receive special education services at this time due to insufficient data and/or missing assessment components.

   _____ The child is ineligible to receive special education services at this time due to no developmental delays or high-risk indicators for potential developmental delays were identified.

   _____ The child is eligible to receive special education services at this time due to the presence of high-risk indicators for potential developmental delays.

   _____ The child is eligible to receive special education services at this time due to the presence of a significant developmental delay in one developmental domain.

   _____ The child is eligible to receive special education services at this time due to the presence of a significant developmental delay in two or more developmental domains.

Eligibility Justification

The above decision was based upon ________________________________
APPENDIX L
PRESCHOOL ELIGIBILITY WORKSHEET

Student ___________________________ D.O.B. ___________ C.A. ___________

ELIGIBILITY DECISION

Please check the appropriate statement:

____ The child is ineligible to receive special education services at this time due to insufficient data and/or missing assessment components.

____ The child is ineligible to receive special education services at this time due to no developmental delays or high-risk indicators for potential developmental delays were identified.

____ The child is eligible to receive special education services at this time due to the presence of high-risk indicators for potential developmental delays.

____ The child is eligible to receive special education services at this time due to the presence of a significant developmental delay in one developmental domain.

____ The child is eligible to receive special education services at this time due to the presence of a significant developmental delay in two or more developmental domains.

ELIGIBILITY JUSTIFICATION

The above decision was based upon ____________________________________
APPENDIX M
### Section 2.3.2  Matrix for Identifying a Significant Delay

Significant delays can be expressed (a) in terms of standard deviations by using normed or criterion referenced instruments, or (b) in months or percentages by using developmental assessments based on such scales.

The following matrix lists ages and the corresponding identification of a significant delay expressed in standard deviation, month, and percentage formats:

<table>
<thead>
<tr>
<th>AGE</th>
<th>DELAY IN DEVIATIONS</th>
<th>DELAY IN MONTHS</th>
<th>DELAY IN PERCENTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 1-6 years</td>
<td>-1</td>
<td>4.5 months</td>
<td>25% +</td>
</tr>
<tr>
<td>2 years</td>
<td>-1</td>
<td>6 months</td>
<td>25% +</td>
</tr>
<tr>
<td>3 years</td>
<td>-1</td>
<td>9 months</td>
<td>25% +</td>
</tr>
<tr>
<td>4 years</td>
<td>-1</td>
<td>12 months</td>
<td>25% +</td>
</tr>
</tbody>
</table>

This matrix can be applied to the evaluation data collected by each of the professionals contributing to the four assessment components. The eligibility team then uses the individual data to make a collective professional judgement as to whether a delay is significant or not.

### Section 2.3.3 Categorical Criteria

In addition to the noncategorical label of "Developmentally Delayed," preschool handicapped children below age 5 may be determined eligible for special education and related services if they meet the criteria for one or more of the following: Deaf; deaf-blind; hard of hearing; mentally retarded; multihandicapped; orthopedically impaired; other health impaired; seriously emotionally disturbed; specific learning disability; speech impaired; and/or visually handicapped.
...It should be noted that state and federal definitions of handicapping conditions are written in terms of their effect on educational performance. Since this standard does not readily apply to preschoolers, it is more useful to consider how this condition affects "developmental functioning." That is, the handicapping condition adversely affects development of functions other than educational performance.

Section 2.3.5. Problems of Social/Emotional Development

Children may exhibit behavior that is not readily measurable on developmental scales. In such instances, data collection -- such as documentation of frequency and type of inappropriate behavior -- in addition to clinical observations may be necessary to determine the significance of a delay.

Section 2.3.6 Qualifying Factors

Test scores or other measures of delay must be considered in light of additional factors which may influence the interpretation of scores, child performance, or behavior. Examples of such factors include:

1. High Risk:
   a. history of medical problems; and
   b. experiential and/or nutritional deprivation.

2. Social/Adaptive:
   a. socially unacceptable behavior;
   b. behavior which inhibits development, increases distractibility, shortened attention span;
   c. inappropriate interpersonal relationships with peers and adults.

3. Communication:
   a. inability to follow directions;
   b. frustration with communicating efforts;
   c. low level of intelligibility;
   d. overuse of gestural language in place of verbal communication;
   e. overriding dialectical influences;
   f. word retrieval problems;
   g. evidence of echolalia;
   h. poor oral motor functioning;
   i. fluctuating hearing problems.

4. Motor:
   a. lack of quality of movement or awkwardness;
   b. poor eye-hand coordination;
   c. poor spatial relationships
   d. poor motor planning
APPENDIX N
DEFINITION FOR ELIGIBILITY FOR SERVICES

I. For the purpose of providing services to infants and toddlers with handicapping conditions in Virginia under P.L. 99-457, "developmentally delayed" is defined in A and B below.

A. A 25% or greater deficit, based on chronological age, in one or more of the following areas:
   1. cognitive;
   2. physical development including fine motor, gross motor, vision, and hearing;
   3. speech and/or receptive, expressive or pragmatic language;
   4. psycho-social or emotional;
   5. self-help

B. Atypical development in any of the above areas. Atypical development includes, but is not limited to:
   1. quality of developmental skills;
   2. significant gaps within or between the developmental areas listed above;
   3. behavior patterns that may interfere with the acquisition of developmental skills

II. Other children who will be eligible for services include those with a diagnosed physical or mental condition which has a high probability of resulting in a developmental delay even though no delay currently exists.

A. Seizures/significant encephalopathy
B. Significant central nervous system anomaly
C. Severe grade 3 intraventricular hemorrhage
D. Symptomatic congenital infection
E. Effects of toxic exposure
F. Myelodyplasia
G. Congenital or acquired hearing loss
H. Visual disability
I. Chromosomal abnormalities
J. Brain or spinal cord trauma
K. Inborn errors of metabolism
L. Microcephaly
M. Severe detachment disorders
N. Failure to thrive
Children at risk for developmental delay because of combination of 3 or more of the following:

1. maternal age 15 or less
2. birth weight less than 1500 grams
3. oxygen therapy greater than 28 days
4. Apgar Score of 0-3 at 5 minutes
5. persistent pulmonary hypertension
6. hyperbilirubinemia requiring exchange transfusion
7. periventricular leucomalacia
8. neonatal seizures
9. documented systemic infection
10. polycythemia
11. small of gestational age
12. major congenital anomalies
13. positive maternal human immunodeficiency virus
14. familial history of deafness or blindness
15. environmental/social risk factor
16. menigitis
17. brain/spinal cord trauma
18. lead poisoning
19. chronic otitis media
20. seizure disorder
21. no well-child care by 6 months
22. severe chronic illness
23. diagnosed genetic disorders
24. child abuse/neglect
VITA

John William Faircloth

Birthdate: November 29, 1956
Birthplace: Norfolk, Virginia

EDUCATIONAL BACKGROUND

August 1991 College of William and Mary
Doctorate of Education
Educational Administration,
Special Education Administration

August 1987 College of William and Mary
Educational Specialist Degree
Educational Administration,
Special Education Administration

August 1984 James Madison University
Master of Science
Speech/Language Pathology & Audiology

June 1979 James Madison University
Bachelor of Science
Speech/Language Pathology & Audiology