



Individual differences and equity attitude scale : measurement of attitudes toward the accommodation of individual differences
by Katharin Alcorn Kelker

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:

The Individual Differences and Equity Attitude Scale (IDEAS) is an instrument the purpose of which is to determine the principles of fairness that teachers use in deciding how to distribute the benefits of education among students with and without disabilities. The eight dilemmas which constitute the instrument are based upon realistic situations which juxtapose the needs of a student with disabilities against the needs of the other students in the classroom. Each dilemma invites the respondent to consider four possible options for dealing with the situation; these options represent applications of three different principles of distributive justice, Hierarchical, Collaborative, and Liberal, and an "other" category which presents divergent options following no particular standard. The respondent is asked to arrange the options in order from the most fair to the least fair solution to the problem. Information from this instrument provides insight into the principles respondents use to determine what is equitable and the degree to which they see the accommodation of the special needs of students with disabilities as fair.

Evaluation of the validity and reliability of the IDEAS instrument through jury review, pilot testing, field testing, participant interviews, and test-retest procedures indicates that the instrument has construct and content validity, but the reliability of the instrument fails to reach the generally accepted minimum level of .70. Field testing of IDEAS with 204 individuals showed that the teachers in the field-test sample preferred the Collaborative and Liberal solutions over the Hierarchical and Other categories and that the teachers sampled selected Collaborative and Liberal solutions in almost equal numbers. Data collected from the field-test participants and national jury members indicates that, despite its weak reliability, IDEAS has potential for use as an assessment tool in qualitative research, a self assessment instrument, a vehicle for teacher training on core values in public education, and as a stimulus for discussion among individuals and groups with a stake in public education.

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ACCOMMODATION OF INDIVIDUAL DIFFERENCES

by

Katharin Alcorn Kelker

A thesis submitted in partial fulfillment
of the requirements for the degree

of

Doctor of Education

MONTANA STATE UNIVERSITY
Bozeman, Montana

April 1993

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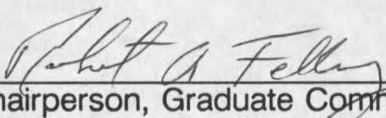
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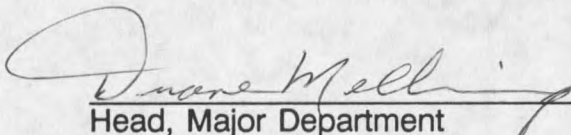
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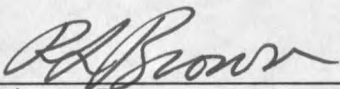
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This paper is dedicated to my father, Robert Willard Alcorn, who understands well the human art of reflection.

. . . the greatest danger of our time is that the calculating way of thinking that is part of the technical revolution will become the dominating and exclusive way of thinking. Why is this so dangerous? Because then we would find, together with the highest and most successful development of our thinking on the calculating level, an indifference toward reflection and a complete thoughtlessness . . . then humanity would have renounced and thrown away what is most its own, its ability to reflect. What is at stake is to save the essence of humanity. What is at stake is to keep alive our reflective thinking.

Heidegger, M. (1959). *Gelassenheit*. Verlag Gunther Neske, Pfulingen, p. 25.

ACKNOWLEDGEMENTS

This research project could not have been completed without the help of my family, friends, colleagues, and teachers. Many thanks go to the members of my national juries for their guidance on all aspects of IDEAS. Though the jury members are busy teachers and researchers, they willingly took the time to review IDEAS and make valuable suggestions for revisions. My gratitude also goes to my dissertation committee, Dean Randy Hitz, Dr. John Kohl, Dr. Elizabeth Viau, Dr. Gary Conti, Dr. Don Pierre, and Dr. Bob Fellenz, for their patience in reading various drafts of this paper and their diligence in making suggestions for its improvement. Special thanks go to Anita Harris for her extensive work on the participant interviews, to Dr. Linda Christensen, Dr. Mary Susan Fishbaugh, and Dr. Susan Gregory for analysis of the participant interview transcripts, and to Roger Holt for helping with data management and preparation of the manuscript.

Most of all, I thank my husband, Paul, two best friends, Karen and Carol, and my children, Steve, Matt, Chris and Sara, for their sacrifices and encouragement which allowed me to complete this project.

I am grateful, too, for all the children, with and without disabilities, who caused me to think seriously about individual differences and how best to accommodate each other's needs in schools and communities.

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ABSTRACT

The Individual Differences and Equity Attitude Scale (IDEAS) is an instrument the purpose of which is to determine the principles of fairness that teachers use in deciding how to distribute the benefits of education among students with and without disabilities. The eight dilemmas which constitute the instrument are based upon realistic situations which juxtapose the needs of a student with disabilities against the needs of the other students in the classroom. Each dilemma invites the respondent to consider four possible options for dealing with the situation; these options represent applications of three different principles of distributive justice, Hierarchical, Collaborative, and Liberal, and an "other" category which presents divergent options following no particular standard. The respondent is asked to arrange the options in order from the most fair to the least fair solution to the problem. Information from this instrument provides insight into the principles respondents use to determine what is equitable and the degree to which they see the accommodation of the special needs of students with disabilities as fair.

Evaluation of the validity and reliability of the IDEAS instrument through jury review, pilot testing, field testing, participant interviews, and test-retest procedures indicates that the instrument has construct and content validity, but the reliability of the instrument fails to reach the generally accepted minimum level of .70. Field testing of IDEAS with 204 individuals showed that the teachers in the field-test sample preferred the Collaborative and Liberal solutions over the Hierarchical and Other categories and that the teachers sampled selected Collaborative and Liberal solutions in almost equal numbers. Data collected from the field-test participants and national jury members indicates that, despite its weak reliability, IDEAS has potential for use as an assessment tool in qualitative research, a self assessment instrument, a vehicle for teacher training on core values in public education, and as a stimulus for discussion among individuals and groups with a stake in public education.

CHAPTER 1

INTRODUCTION

The Problem

Regular classroom teachers have to cope with a broader range of student abilities and behaviors than they did prior to the passage of the Education for All Handicapped Children Act (EHA) in 1975. Both federal and state law require classroom teachers to follow the Individualized Education Programs (IEPs) of special education students and to make accommodations for their individual differences which may entail modifying assignments, tolerating extra equipment in the classroom, grading students on different scales, or employing different discipline policies for some students. Resistance toward bending standards or treating students differently is strong among classroom teachers because accommodating individual differences seems to fly in the face of what many teachers view as the fair or right thing to do (Martin, 1974; Salend, 1984).

In their classrooms, teachers have control over a variety of opportunities and benefits of education. These benefits include: access to knowledge and opportunities to generate knowledge, individualization of instruction, distribution of teacher time and attention, access to materials and

equipment, opportunities to participate in activities and socialize with others, chances to exercise leadership, access to privileges (e.g., free time, choice of activities), and distribution of praise and recognition. By virtue of their status as authority figures in the educational realm, teachers have the power to distribute the material benefits of education and to ensure that students with disabilities are not denied educational opportunities because of neglect, discrimination, or prejudice. How teachers decide to allocate resources and in what ways they choose to protect the rights of the individual depends upon their understanding of their duties as professionals; their internalization of the school system's standards for teacher conduct, and their personal principles of fairness as they are applied to their students.

Special education law which governs, in part, the treatment of students with disabilities by their teachers, establishes a standard of fairness based upon the accommodation of individual differences. This standard says that the individual needs of students with disabilities are to be accommodated in the classroom in order to compensate for the barriers that disabilities pose, and further that these students, despite their disabilities, are to be provided with equal access to the opportunities to participate and learn (Turnbull, 1986). The principle of accommodation does not guarantee to special education students greater educational benefits than may be afforded nondisabled students (e.g., the "best possible" education) nor does it mandate that students with disabilities be guaranteed the achievement of the

same outcomes as may be achieved by other students, but it does imply that special education students will be provided whatever supports and modifications may be necessary to allow them access to the benefits of the educational process (Rothstein, 1990).

Depending upon the circumstances of the situation and their own experiences, values and perceptions of their duties, teachers may or may not choose to utilize or apply consistently the principle of accommodation as a principle of fairness in their classrooms. Certainly, there are other principles that may be used. Barry in his analysis of Rawls' explanation of the liberal theory of justice (1973) has suggested that there are three basic models for social justice which in a logical sense exhaust the available possibilities. These models are identified by Barry as hierarchical, liberal and altruistic (1973, p. 167). In simple dyadic terms, these models can be applied to the accommodation of individual differences in the following way: *A* will accommodate the needs of *B* (a) because *B* merits, deserves or earns accommodation (hierarchy), (b) because *B* is disadvantaged and this disadvantage is to be redressed so that the greatest benefit is provided to the least advantaged (liberalism), or (c) because *A* wants to help *B* (altruistic).

The principle of accommodation which underlies the special education law is an instance of the liberal model of social justice. It is based on the premise that the distribution of talents, abilities and physical attributes is unequal. Individuals with disabilities have been disadvantaged in their ability

to access the opportunities of public education because they lack certain skills and abilities which others have as birthrights. The privilege of access to public education has been offered by the states to children as a means for preparing them to accept their roles as citizens in a democracy and to become productive members of society (Dewey, 1916). Prior to the enactment of the Education for All Handicapped Children Act, access to public education was denied to children with disabilities on the basis of their status as individuals who lacked certain physical, cognitive, or behavioral characteristics. The federal special education law represents an effort to redress previous harm done by denying children an opportunity to participate in public education and to guarantee in the future that children with disabilities would continue to enjoy such participation (Martin, 1974).

But the law goes one step further than providing access. It also says that children with disabilities have a right to certain accommodations and services which compensate for their disabilities and allow them to benefit from their education (Rothstein, 1990). In other words, not only does the law open the doors to public schools for students with disabilities; it also guarantees that once inside these students will have an equal chance to participate in and benefit from education. This compensatory clause of special education law is an application of what Rawls (1972) has called the Maximin Criterion of the liberal theory of justice. The Maximin Criterion says that social and economic inequalities are to be arranged so that they are to the greatest

benefit of the least advantaged. In the case of students with disabilities, application of the liberal Maximin Criterion suggests that social inequalities represented by differences in physical, behavioral and cognitive characteristics are to be redressed, utilizing whatever means necessary and without regard to cost, so that students with disabilities are able to benefit to the greatest extent possible from education despite whatever barriers their disabilities present (Turnbull, 1986).

Classroom teachers find themselves in the position of applying the principles of the special education law in an arena in which resources for all students are limited and in which there are multiple demands on teachers' time, energy, and good will. In addition, most regular classroom teachers have little experience with and training in the accommodation of individual differences related to disabilities (Grosenick, 1982). Many teachers have the expectation that because they are teaching in "regular" education that they will not have to be knowledgeable about disabilities and the special needs of individuals who have disabilities (Harasymiw, Horne, & Lewis, 1976). Attitudes of teachers toward students with special educational needs and toward the accommodation of their individual differences are shaped by a combination of their experiences and their expectations. These attitudes then influence the day-to-day decisions that teachers make about how to treat students and how to distribute the benefits of education which are at their disposal.

Because of the crucial role attitudes play in shaping teachers' behavior, teachers' attitudes toward disabilities and toward having students with disabilities in their classrooms have been a frequent object of study (Garvar & Schmelkin, 1989; Yuker, 1988). Regular classroom teachers have been determined to have attitudes toward persons with disabilities that are like those of the general population (Donaldson & Martinson, 1977; Henisch, 1981). Gottlieb and Corman (1975) have found that members of the general public favor the segregation of exceptional children in the schools and that teachers' views are similar. For example, in a Tennessee study of 326 teachers, supervisors and administrators, Gickling and Theobald (1975) found that 60% of regular classroom teachers thought that segregated self-contained special classes provided more effective instruction for special needs students than placement in the regular classroom.

Not surprisingly, regular classroom teachers are not reported to be supportive of integration of special needs students into their classrooms. According to Charles and Malian (1980), regular classroom teachers are unwilling to accept students "who require unusual accommodations, individual instruction, special teaching methods and special materials and services not provided for non-handicapped students" (p. 6). Panda and Bartel (1972) have found that in terms of social desirability teachers rank students with all different types of disabilities significantly below students considered to be normal or gifted. Contrary to the expectations created by Jaffe's earlier work

(1966), Panda and Bartel also found that teachers with special education course work and experience did not respond any more favorably toward students with disabilities than did teachers with no background.

In general, research seems to show that teachers prefer normally achieving students and view special class placement as more appropriate for the exceptional student (Winzer, 1985). Teachers fear that the placement of exceptional students in the regular classroom dilutes academic programs (Bradfield, Brown, Kaplan, Rickel, & Stannard, 1973; Hudson, Graham, & Warner, 1979); they argue for the retention of special classes to "get the slow ones out" because teachers are concerned about a decrease in their effectiveness when students with disabilities are in the classroom (Barngrover, 1971). In addition, exceptional students are viewed as potential creators of classroom disturbance (Hudson et al., 1979) and as demanding a disproportionate amount of the teacher's time (Brulle, Barton, Barton, & Wharton, 1983a).

Because of the generally negative findings in research concerning attitudes of regular classroom teachers toward mainstreaming, concerns have been raised regarding the capabilities of regular educators to meet the needs of students with disabilities in the regular education program (Mesinger, 1985). Two large scale investigations indicate that given appropriate conditions, there may be a potential for a "promainstreaming" attitude among regular educators (Albrecht, 1984; Knoff, 1985). There is, however, a lack of

clarity about whether attitudes of teachers can routinely be modified in ways that prove helpful in addressing the needs of special education students (Garvar & Schmelkin, 1989).

Although research is clear on acceptance-rejection issues and delineates the negative attitudes of regular classroom teachers toward mainstreaming, it provides no clear direction regarding the variables that contribute to positive attitude formation. This aspect, although studied, has been relegated to secondary status, receiving scant attention as compared to administrative and organizational concerns (Winzer, 1985). Recently, however, there has been a growing awareness of the importance of teachers' attitudes as a determiner of the success of mainstreaming situation (Schmelkin, 1981).

Prior to the Education for All Handicapped Children Act (EHA), attitudes of regular classroom teachers toward students with disabilities were not important because their involvement with such students was highly limited. Special education teachers, administrators, and therapists were the dominant groups of professionals involved in the delivery of services for students with disabilities. However, since the passage of EHA, regular educators have been asked to take on roles previously assumed exclusively by special educators (Roffman, 1983). In fact, in many cases the primary responsibility for integrating special needs students into the academic and

social life of the classroom has become the role of the regular education teacher (Biklen, 1985).

Research has shown that the manner in which regular education teachers respond to the challenge of teaching students with a wider range of abilities and special needs and teachers' attitudes toward these new responsibilities are crucial factors in the success of exceptional students. Haring (1957) and others (Kingsley, 1967; Knoblock & Barnes, 1979; Nietupski, Hamre-Nietupski, Shuetz, & Ockwood, 1980) have found, for example, that regular education teachers' attitudes are influential in determining the intellectual, social and emotional adjustment of exceptional students, and negative attitudes held by regular classroom teachers toward exceptional students and mainstreaming are clear impediments to educational programming for such students in regular classes (Martin, 1974). Since most exceptional students receive a majority of their instruction in the regular classroom, the importance of the regular classroom teacher's attitudes toward the delivery of that instruction is apparent.

In addition, regular classroom teachers play an important role in the referral of students for special education assessment and placement (Pugach, 1985). While teachers are not the only ones who can make referrals for special education testing, teachers are mentioned specifically in special education law as sources for referral and in practice the decision-making process for eligibility for special education is commonly activated by a referral

made by the classroom teacher (Poland, Thurlow, Ysseldyke, & Mirkin, 1982). Since the majority of students who are referred for evaluation are assessed and placed in special education (Algozzine, Christenson, & Ysseldyke, 1982; Shepard & Smith, 1981), the teacher's personal decision to initiate a referral is pivotal. Thus, placement decisions for students with learning or behavior problems may be dependent to a degree upon how these students are viewed by their regular classroom teachers.

Besides the impact that regular classroom teachers have on instruction and on the referral process for exceptional students, teachers also have strong influences on the attitudes of their students toward classmates with disabilities. Lapp (1957), for example, has noted that whether the teacher accepts or rejects the exceptional child affects the attitudes that the regular students will assume. In other words, if the teacher displays either an accepting or rejecting attitude, it is likely that the students in the classroom will respond similarly toward the exceptional student.

Because of the potential effects of teachers' attitudes on the placement, instruction, and social acceptance of exceptional students, teachers' attitudes toward students with disabilities and mainstreaming have been a focus of special education research over more than a 25-year period (Garvar & Schmelkin, 1989; Yucker, 1988). In general, results of available attitude studies indicate that teachers' attitudes toward disabilities and students with disabilities tend toward the negative (Horne, 1985). This global

kind of information, however, provides little insight into the complex nature of attitude formation. Current methods for examining attitudes toward disabilities and persons with disabilities have contributed to knowledge of the content of stereotypes concerning disability, but they have not provided much information about broader underlying concepts related to the formation of attitudes toward individual differences (Garvar & Schmelkin, 1989).

One such underlying concept is the general notion of equity or fairness. Evidence from the research on teacher's attitudes toward mainstreaming indicates that some teachers resent mainstreaming and the burdens it places upon them to change their classroom routines and adjust to a greater variety of needs among students. These teachers openly express the view that "it is not fair" to give extra help or to reduce the workload of some students without providing the same privileges to all students. This sense of violation of basic fairness leads some teachers to be openly defiant toward their responsibilities under the special education law and causes others to comply only in a grudging fashion (Myles & Simpson, 1989).

Concepts of fairness may underlie and influence the attitudes of teachers toward accommodating individual differences among students. Recent research indicates that attitudes toward disabilities and individual differences are formulated on a complex base of beliefs, values, and experiences which reflect the total development of the individual (Garvar & Schmelkin, 1989). To date, however, there has been no mechanism for

exploring some of the underlying values and beliefs which create and sustain attitudes toward disability and mainstreaming. With some exceptions, the available instruments focus on acceptance or rejection of persons with disabilities. Still needed are ways of analyzing the specific mechanisms which influence a teacher's attitudes toward accommodating individual differences of students with disabilities. A problem for research, therefore, is to develop a means for determining what principles of fairness teachers use for deciding how to distribute the benefits of education. Do teachers associate the accommodation of individual differences--an important concept in special education law--with equity? Do teachers use the accommodation principle in making judgments or do they use some other principle for determining how to distribute benefits? Do teachers use a consistent principle for judgment or do they use a variety of principles? These and other related questions can be addressed through the development of an attitude scale focusing on teachers' decision-making processes in situations commonly faced in the classroom.

The Purpose

The purpose of this research has been to develop and validate an instrument capable of determining the principles of fairness that teachers use in deciding how to distribute the benefits of education and the degree to which teachers see accommodating the special needs of students with

disabilities as equitable. The intent of the instrument developed through this research is to provide a means for gathering information about teachers' attitudes toward mainstreaming and accommodating individual differences which goes well beyond the like-dislike accept-reject types of attitude scales which have been in common use. The items for the instrument are based upon realistic situations which occur in educational settings and which have been documented in the literature as concerns of classroom teachers (Carpenter, Grantham, & Hardister, 1983; Engleberg & Evans, 1986). Each item invites the respondent to consider four possible options for dealing with the situation; these options represent applications of three different principles of justice, hierarchical-status, liberal-contractual, and altruistic collaborative, and an "other" category which presents divergent options following no particular principle. The respondent is asked to arrange the options in order from the most fair to the least fair solution to the problem. Information from this instrument provides insight into the relative value that respondents place on the three principles of distributive justice and the degree to which they associate the accommodation of individual differences with fairness.

The Significance of the Problem

Attitudes of teachers toward students with disabilities and their placement in the regular classroom are complex in nature. Schmelkin (1981) and others (Britton, 1983; Lieberman, 1983) have documented the need to

get beyond treating attitudes as unitary entities and to begin looking at their underlying dimensions. Garvar and Schmelkin (1989) have done preliminary work with multidimensional scaling which indicates that perceptions of disabilities are indeed complex and multifaceted. These authors suggest that further research needs to be done on the influences of such individual factors as level of maturity, personality characteristics, individual biases, types of previous experiences, and contacts with individuals with disabilities on teachers' attitudes. Garvar and Schmelkin further suggest the need to explore attitudes in relation to real, rather than stereotypical, situations.

The need for greater depth in attitudinal studies and greater emphasis on practical situations is clear. However before these studies can be conducted, instruments must be developed and validated which can measure or describe individual characteristics of teachers in relation to their attitudes toward disabilities and mainstreaming. The Individual Differences and Equity Attitude Scale (IDEAS) developed in this research project is one such instrument since it has been demonstrated to provide a means for determining the relative value that teachers place on three principles of justice when deciding how to distribute the benefits of education. The results from the instrument provide insight into the reasoning of the respondents and indicate potential areas in which attitude formation can be influenced or modified.

The IDEAS instrument can be used by teachers in a self-assessment situation to identify for themselves their attitudes toward accommodation of students with disabilities. Teacher educators and providers of inservice training can use IDEAS to assist in the focusing of training and as a tool for opening up discussion of the ethical issues surrounding accommodation of individual differences in the classroom. The instrument represents a rather specific values clarification exercise, calling upon the respondent to determine equity based upon their value systems. As such, the ideal climate for using the instrument is one in which the respondents feel comfortable in exploring their values for the purposes of their own development or as a part of a training and professional development activity, rather as a means of evaluating individual performance.

The instrument also has potential for use in research as a source of descriptive information about the basis teachers use for making decisions on the accommodation of individual differences. In addition, the instrument can be used to measure the effect of particular types of training or experiences upon teachers' notions of equity and how those notions are applied in specific educational situations.

Because of the potential benefits of mainstreaming for students with special needs, the field of special education is looking for the means to make this type of integration work more effectively. Attitudes of classroom teachers are critical to the success of any mainstreaming effort, so the importance of

describing teachers' attitudes more fully and finding ways to modify those attitudes are central issues in the profession of special education. This research project addresses some of these important issues by developing and validating an instrument with the potential to add a new dimension to the understanding of classroom teachers' attitudes toward mainstreaming and the accommodation of individual differences.

Assumptions

The researcher has made three major assumptions for the purpose of this study. The first assumption, which is made on a philosophical rather than empirical basis, is that mainstreaming as a method for delivering special education is a potentially beneficial model for most students with special needs and for their peers in the regular classroom. This assumption is made despite some conflicting evidence in the literature which shows that mainstreaming is not necessarily beneficial in some instances (Kauffman & Hallahan, 1990). The assumption of inherent value in mainstreaming is based on the observation that separation of students with special needs from their peers provides an unequal educational opportunity and deprives students with disabilities of a chance to reach their maximum potential. Also, the separation of students with disabilities from their nondisabled peers deprives students who do not have disabilities of the opportunity to learn how to get along with people who have physical or mental limitations (Goetz, 1990).

Another important assumption of this research is that there is a moral or ethical component in the judgments that teachers make concerning the accommodation of students with disabilities in the regular classroom. Certainly, the placement of students with disabilities in the regular classroom is required by law, but teachers have the opportunity to decide how they will comply with the requirement. It is when teachers decide how to respond that it is assumed that an ethical dimension enters the teachers' thinking. As Brown (1965) has noted, the study of attitudes and attitude change can be more properly termed the study of morality and ethics or, in education, the study of values and character development. This research project has adopted Brown's integrative view of attitudes which involves a combination of moral, social, and cognitive components rather than the more narrow behavioral explanation posited by some in American psychology (Skinner, 1968).

A third assumption is that teachers, consciously or unconsciously, adopt some principle on which they base their decisions about how to allocate educational resources in the classroom and that the choices of these principles and how they are applied can be influenced. It is speculated that some teachers may make decisions on a situational basis, weighing the factors in each situation and deciding on a case-by-case basis. Others may decide based upon the needs of individual students, some calculation of the good of all students, school rules, the principal's guidelines, or some absolute

standard like excellence. No matter what model for decision-making teachers use, the assumption is that they rationalize their decisions according to their own level of moral cognition, sensitivity, or awareness (Zeichner & Liston, 1987).

Most of the time, the framework that teachers use for decision-making goes unnoticed and unexamined. If asked why they grade in a certain way or attend to one student more than another, teachers may not have a ready answer (Strike, Haller, & Soltis, 1988). Yet the assumption is that decisions are made on some basis, the result of some internal struggle within the individual's conscience and external struggle with factors of the situation and with contemporary political and institutional norms. This research has assumed that the more conscious this internal and external struggle over decision-making can be made, the more that teachers can be made aware of the principles they use, the more likely it is that their decisions can be influenced and even moved in new directions (Kohlberg, 1987).

Delimitation of Knowledge and Theory Base

The theoretical base for this research will be limited to the extensive literature related to the theoretical basis for federal special education law, the concepts and practices of mainstreaming, and the attitudes of educators toward mainstreaming and the accommodation of individual differences. Of interest will be the theoretical and legal basis of mainstreaming, including the

liberal theory of justice and theories of distributive justice, definitions of mainstreaming, effects of mainstreaming on the roles of regular education teachers, and the benefits of mainstreaming for students. Also, of concern will be the types of research done on teachers' attitudes toward disabilities and the evolution of instruments used to measure these attitudes. Some regard will be given to the research base in attitude formation, but no attempt will be made to develop fully the theoretical framework of attitude change theory which constitutes an extensive, separate field in psychological research. The types of attitudinal measures currently in use in the field will be described and their strengths and weaknesses delineated, but no attempt will be made to provide a complete critique of all the available instruments.

Delimitation of Population Base

The population base used to develop and validate the instrument in this study will consist of college students preparing to teach and regular classroom teachers trained to teach grades K-12. Participants were gleaned from educational programs at Eastern Montana College and Montana State University and from cooperating school districts in Billings, Moore, Belgrade, Missoula, and Thompson Falls, Montana.

Definitions

The following definitions will be used throughout the study and represent terms used by providers of service to persons with disabilities and terms in common usage in educational administration.

Accommodation: The amount of special assistance necessary to ensure that a student with disabilities not only receives educational services but that he or she also benefits from this education (Rothstein, 1990, p.11.)

Disability: Restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being (World Health Organization, 1980). For the purposes of this study, disability is synonymous with handicap.

Education of All Handicapped Children Act: Legislation passed by Congress in 1975 which guarantees a free, appropriate public education to all handicapped children, regardless of the nature or severity of their handicaps (also called P.L. 94-142 and, more recently, Individuals with Disabilities Education Act or IDEA).

Exceptional Student: A student in special education whose behavior or academic performance is significantly different from the norm in regular education.

Fair: Providing equity or balance among the competing needs of individuals; even-handed treatment.

Handicap: A disadvantage for a given individual resulting from an impairment or disability that limits or prevents the fulfillment of a role that is normal for that individual (World Health Organization, 1980). For the purpose of this study, handicap will be synonymous with disability.

Individualized Education Program: A statement, specifying instructional goals and any special education and related services a child may need, which must be written and reviewed annually. Included are (a) the present educational levels of the child; (b) a statement of annual goals; including short-term objectives; (c) a statement of specific services, if needed, (d) the programs; (e) the date when special services are to begin and the expected duration of these services; and (f) the tests and other requirements or information used to gauge the child's progress to determine if the instructional objectives are being met (Cartwright, Cartwright & Ward, 1984, p. 467).

Individuals with Disabilities Education Act: The federal special education law, reauthorized in 1990, which mandates free appropriate, public education for all children with disabilities and provides federal funding for a portion of these services (20 United States Code, Sections 1401-1468; 34 Code of Federal Regulations, Part 300).

Least Restrictive Alternative: Handicapped children are to be educated in the placement option--regular classroom, resource room, special class, special school, residential or hospital setting--which meets their

educational needs and which is the regular education environment experienced by children who are not handicapped or which as closely as possible approximates the regular education environment (Section 1413 (a) of EHA, 1976).

Least Restrictive Environment: "... to the maximum extent appropriate, handicapped children ... are to be educated with children who are not handicapped, and that special education, separate schooling or other removal of handicapped children from the regular education environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily" (Section 1412 (5) (b) EHA, 1976).

Mainstreaming: A term in common parlance referring to "a form of educational programming that integrates special needs and non-special needs children in regular classrooms" (Meisels, 1977).

Normalization: The principle that persons with disabilities should experience life in the same proportions and states as nondisabled persons; persons with disabilities should experience each stage of life with its responsibilities, obligations, and risks (Wolfensberger, 1980).

Regular Education: A term in common parlance meaning instruction provided in the common school curriculum in public schools; that is, general

instruction not individualized to meet the unique needs of particular students.

Regular Educator: A teacher who is properly trained and licensed to teach the common school curriculum in public schools.

Special Education: Specially designed instruction, at no cost to the parent, to meet the unique needs of a handicapped child, including classroom instruction, instruction in physical education, home instruction, and instruction in hospitals and institutions (Code of Federal Regulations, Part 300.14).

Special Educator: A teacher with proper training and background to meet state standards for providing special education to eligible students.

Student with a Disability: A student of preschool age (3-5) or in grades K-12 who, on the basis of appropriate assessment, has been determined to have the characteristics of one of the eleven disabilities recognized by the Individuals with Disabilities Education Act.

Summary

Mainstreaming is a potentially valuable experience for students with disabilities, providing them with greater academic and social opportunities than can be found in segregated settings. The success, however, of the mainstreaming experience is highly dependent upon the role that the regular classroom teacher plays. The current evidence is that regular classroom

teachers are not entirely comfortable with their responsibilities for the integration of disabled students into the regular classroom. Teachers are beset by feelings of insecurity and uncertainty about how to handle an exceptional student which result in negative attitudes.

Measurement of teachers' attitudes to this point has been largely one-dimensional, using scales which measure acceptance-rejection, preference of disability, or preferred level of social distance. This research goes beyond one-dimensional scales by developing and validating an instrument which measures one of the underlying factors on which attitudes toward accommodation of disability may be formed; that is, the individual's concept of equity or fairness. The Individual Differences and Equity Attitude Scale (IDEAS) identifies the relative value that teachers place on three principles of distributive justice when they are deciding how to distribute the benefits of education and the degree to which teachers see the accommodation of individual differences as fair. Information gleaned through this instrument provides insight into how teachers' attitudes influence their behavior toward students with disabilities in their classrooms.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The purpose of this research is to develop and validate an instrument capable of determining the relative value that teachers place on three principles of distributive justice when they are deciding how to distribute the benefits of education and how to accommodate individual differences in the classroom. This review summarizes research about the nature of attitudes and one theory of attitude change, McGuire's Logical Consistency Theory, which relates to the conceptual basis for the Individual Differences and Equity Attitude Scale developed in this study. This review also synthesizes the major issues related to the particular types of attitudes measured by the proposed instrument; that is, regular classroom teachers' attitudes toward disabilities and accommodating individual differences. The following areas of investigation are reviewed: the nature of attitudes and attitude change, the theoretical and legal basis of mainstreaming, teachers' roles in mainstreaming, teachers' attitudes toward mainstreaming, attitudes of teachers toward particular disabilities, the importance of teachers' attitudes in relation to

student outcomes, and research on instruments used to measure teachers' attitudes toward students with disabilities and mainstreaming.

The Nature of Attitudes and Attitude Change

Problems of attitude change have generated widespread interest in the field of social psychology and have formed the basis for numerous experiments to determine how attitudes can be measured, influenced, or modified. Beginning with the work of Hovland and his colleagues in the Yale Communication Research Program (Hovland, Janis, & Kelley, 1953), an increasing amount of attitude change research has moved away from problem specific experimentation to studies explicitly related to stated theoretical orientations. Insko (1967) identifies ten leading attitude change theories: reinforcement theory (Hovland et al., 1953), assimilation-contrast theory (Sherif & Hovland, 1961), adaptation-level theory (Helson, 1964), congruity theory (Osgood & Tannenbaum, 1955), belief congruence theory (Rokeach, 1961), balance theories (Heider, 1958; Newcomb, 1959), affective-cognitive consistency theory (Rosenberg & Abelson, 1960), dissonance theory (Festinger, 1964), psychoanalytic theory (Sarnoff, 1965), and logical-affective consistency theory (McGuire, 1960a). Though these diverse theories explain more than nontheoretically-based experiments, they often have been limited to solving specialized problems. Insko has noted, however, that there are themes among these theories indicating that "many . . . are characterized by

one or both of two emphases, the importance of reward, reinforcement or need reduction and the importance of consistency" (1967, p. 347).

Hovland and Rosenberg (1960) have argued that these two principles of reinforcement and consistency can be reduced still further to one general explanation of attitude change. They contend that the motivation to reduce inconsistency can be explained on the basis of reinforcement-produced learning. This learning can occur as a consequence either of adaptation to the environment or of deliberate social training. According to Hovland and Rosenberg's line of reasoning, if the individual is going to adapt successfully to the environment, he or she will have to achieve consistent relationships among feelings, beliefs, and behaviors; otherwise conflicts could not be resolved in a manner which produces reinforcement. Eventually consistency may itself become a rewarding state of affairs and thus be a learned incentive.

Hovland and Rosenberg (1960) further claim that examples of direct social training for consistency are easy to find in typical social interactions. For example, individuals are frequently criticized for holding inconsistent opinions or for behaving in ways that are inconsistent with their stated opinions or beliefs. Hovland and Rosenberg note that all known societies have sanctions against logical inconsistency between beliefs and behaviors and that, therefore, it can be concluded that there is a strong universal social norm favoring consistency.

Consistency theories of attitude change are based on the whole notion that logical relationships do exist among the ideas and opinions that help to shape attitudes. In other words, consistency theories assume a cognitive basis for attitudes. Several authors (Allport, 1935; Sherif, Sherif, & Nebergall, 1965; Doob, 1967), however, have pointed out that attitudes are more than ideas. A common conceptualization of attitudes has three parts: affective, cognitive and behavioral components. The affective component is said to deal with feelings of liking or disliking about the attitude object. Cognition refers to the knowledge or beliefs a person has about the attitude object, and the behavioral component of attitude refers to the intentions or actions of a person toward an attitude object or how the person actually behaves.

Many authors, however, are not satisfied with this three part explanation of attitudes. Triandis (1964) suggests that the term attitude implies evaluation of the attitude object, so that any explanation of attitude must include reference to values and judgments. Shaw and Wright (1967) also emphasize the evaluative nature of attitudes, and they clarify much of the complexity in defining attitude by limiting its theoretical construct to an affective component which is "based upon cognitive processes and is an antecedent of behavior" (p. 3). Anderson and Fishbein (1965) and Osgood (1957) offer a similar view, suggesting that an attitude is the evaluative dimension of a concept. These authors further argue that the attitude toward an object is the sum of the strength of individual beliefs about the object and

the evaluative aspect of these beliefs. Shaw and Wright (1967) build upon these evaluative conceptualizations and provide the following comprehensive definition of attitude:

A relatively enduring system of evaluative, affective reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or class of social objects. (p. 3)

An attitude is, then, a predisposition to think, feel and act in a particular way toward a referent or social object. This predisposition is based upon a set of related opinions, beliefs, values, memories, and perceptions which form the attitude and sustain it over time.

Shaw and Wright (1967) have described six general characteristics of attitudes: (a) Attitudes are based upon evaluative concepts which motivate behavior toward the referent object, (b) attitudes vary in quality and intensity on a continuum from positive through neutral to negative, (c) attitudes are learned, rather than innate or a result of development or maturation, (d) attitudes have specific referents, (e) attitudes possess varying degrees of interrelatedness to one another, and (f) attitudes are relatively stable and enduring. For an attitude change theory to be useful, it must take into account these characteristics and multiple components of attitude and the underlying beliefs, opinions and feelings which shape attitude sets.

McGuire's Logical Consistency Theory

One promising formulation of attitude change theory which does take into account both the affective-evaluative nature of attitudes and their underlying cognitive structure is McGuire's Logical Consistency Theory (1960a) which states that "a person tends to change his or her opinions on logically related issues in the direction of mutual consistency when he or she is asked to state these opinions in close temporal contiguity" (p. 345). This theory is based on two related postulates--one dealing with the cognitive component of attitudes and the other related to the affective component. The cognitive postulate states that there is a tendency for an individual's beliefs or expectations to be related in a manner required by the rules of formal logic. The affective or "wishful thinking" postulate states that there is a tendency for an individual's beliefs to be consistent with that individual's desires or wishes.

According to McGuire, the individual attempts to minimize the inconsistencies among his or her beliefs as well as the inconsistencies between beliefs and ideas (cognition) and desires or wishes (affect). When the individual is made aware of inconsistencies, he or she experiences discomfort. To alleviate discomfort, the individual tries to resolve the inconsistencies in ideas, beliefs and feelings; this resolution results in a reorganization of the attitude set and a change in attitude.

In their unexamined state, the attitudes that a person forms based upon an underpinning of beliefs, opinions, and values may be "loosely

coupled" (Birnbaum, 1989, p. 166); that is, they may be logically inconsistent with one another but the inconsistency goes unnoticed because the individual does not focus on all of the related beliefs, opinions, and values at once.

However, according to McGuire, when the individual is called upon to examine a set of attitudes in close proximity of time, the individual notices the inconsistency and has a tendency to revise the attitude set in the direction of becoming more logically consistent. McGuire calls the whole process of movement toward a greater degree of logical consistency following the relatively simultaneous elicitation of inconsistent feelings and beliefs "the Socratic effect."

Operationally, McGuire (1960b, 1960c) suggests that if an individual is influenced by a reorganizing event (e.g., an argument or discussion) to change an attitude set, then other logically-related beliefs will also change so as to maintain logical consistency. This effect occurs even though the remote, logically-related beliefs are not directly mentioned in the reorganizing event. On the basis of a cognitive inertia assumption, however, this prediction is qualified somewhat. Due to the existence of cognitive inertia, McGuire states that the amount of change in the remote beliefs will be less than that which is logically required for complete consistency. In addition, the effect on the remote beliefs will not occur all at once but gradually over time. Inertia results in less and slower change in the remote beliefs than in the target belief affected by the reorganizing event.

Though McGuire's postulates concerning inertia effect have not been supported with strong results in replicated studies, his theories concerning the logical repercussions of changes in attitude sets have been consistently replicated (Insko, 1967, p. 111). Dillehay, Insko, and Smith (1966), for example, have tested the logical repercussions of changes in two studies utilizing syllogisms, communication and instructions derived from McGuire's work. Their results from direct and indirect effects of the persuasive communications indicate that the communications had a significant effect upon the logical premises which are directly addressed and that this effect carried over to unmentioned but logically related conclusions.

McGuire's theory of logical consistency presents some promising leads concerning the nature of attitude change and suggests that a cognitive-affective approach to attitude change may yield results on a whole set of attitudes, beliefs and values. McGuire's methodology of bringing about attitude change by generating cognitive reorganization, Horne (1985) has suggested, may have some application to attitude change toward persons with disabilities. However, to this point the methodology has not been studied in relation to modification of disability stereotypes (Horne, 1985).

Mainstreaming

Measuring and potentially modifying teachers' attitudes toward the process of "mainstreaming" students with disabilities into regular classrooms

are matters of particular interest in this study. However, in order to explore these topics, it is necessary first to examine the literature surrounding the subject of mainstreaming and determine from that literature what mainstreaming is and how it affects the classroom teacher.

Mainstreaming is a result of the implementation of the federal special education law called originally the Education for All Handicapped Children Act (EHA). The history of the Education for All Handicapped Children Act begins with the civil rights case of Brown v. Board of Education (1954) in which the Supreme Court decided that separate schooling provided on the basis of race was inherently unequal and therefore unconstitutional. In the Brown decision, the court articulated a philosophy of integration based upon the Fourteenth Amendment which prohibits states (1) from depriving anyone of life, liberty or property without due process of law, and (2) from denying equal protection of the laws. The court reasoned that no federally protected right guarantees education, but once a state determines to provide public education, that state has granted to its citizens a property right to education (Rothstein, 1990). Thus, to deprive a child of education is to deny due process of law as well as equal protection of the laws.

Education for students with disabilities is a direct extension of Brown. The legal theories of due process and equal protection first articulated in Brown v. Board of Education were applied to educational rights of children with disabilities in numerous law suits across the United States. In two of

these cases, Pennsylvania Association for Retarded Children (PARC) v. Pennsylvania (1971) and Mills v. Board of Education (1972, 1980), trial courts enjoined states from denying education to children with disabilities in the absence of due process of law. The Mills case was settled by a consent decree which defined due process rights applicable to education of children with disabilities; including, procedures for the evaluation, labeling, and placement aspects of the special education process. (Rothstein, 1990). The due process procedures identified included a right to hearing (with representation, a record and an impartial hearing officer), a right to appeal, a right to have access to records, and a right to written notice at all stages of the process.

In disability-related cases like PARC and Mills, advocates for students with disabilities successfully argued that when a state undertakes to provide a free public education system for its school-age citizens, the state denies equal protection of the law if it treats students with disabilities differently by denying them an opportunity to attend school or by inappropriately assigning them to special education programs (Turnbull, 1986). In addition, the courts found that denying disabled students access to education unfairly discriminates against such students on the basis of unalterable and unchosen traits--their disabilities. Such discrimination is as constitutionally unacceptable as discrimination on the basis of race, economic level, gender or age (Turnbull, 1986, p. 12).

During the period of 1960-1970, many states responded to the educational needs of children with disabilities by creating special education programs; however, implementation of these programs was uneven across the states and was judged by Congress not to provide equal opportunity for education. Against this background of uneven state provision of special education, Congress determined that it needed to act to provide a basic floor of educational opportunity for children with disabilities. On November 25, 1975, Congress passed P.L. 94-142--the Education for All Handicapped Children Act (EHA)--which guaranteed a free, appropriate public education for all handicapped children, regardless of the nature or severity of their handicaps.

Equal Educational Opportunity

The federal special education law, P.L. 94-142, is based upon a concept of equal educational opportunity which is unique in American law. Brown and other school desegregation cases interpreted the equal protection doctrine as requiring equal educational opportunity and therefore equal access to education for all students. In Brown, the court demanded that black students be given equal access to the same resources as whites. Subsequent court decisions have ruled that when a school system provides facilities to white children, exactly the same facilities (not an equivalent separate set of facilities) must be made available on the same terms to black children (Stevens & Wood, 1992, p. 10).

Disability-related cases like PARC and Mills and the Educational for All Handicapped Children Act have expanded the doctrines of equal opportunity and equal access beyond what was outlined in the Brown case. In disability-related law, the right to education for disabled students has been interpreted to require that schools furnish all disabled children equal opportunities to develop their own capabilities. Thus, schools are required to provide different programs and facilities for pupils with different needs. In other words, the courts have concluded that children with disabilities must be given special or different treatment if such accommodations are necessary in order for the children to benefit from education (Turnbull, 1986, p.60). Disability law established a new equal access (or equal opportunity) doctrine by claiming that disabled children require compensatory opportunities--namely, access to additional or different types of resources for different purposes--in order to have genuine access to an education that is equal to that which is provided to nondisabled children.

This compensatory notion of equal educational opportunity is different from the customary one. The usual meaning of equality is equal access to the same resources for the same purposes. The new meaning for equality which has been established in disabilities law is "access by disabled children to different resources for different purposes" (Turnbull, 1986, p. 60).

According to the courts, the major reason that children with disabilities can lay claim to special treatment is the fact that these children have disabilities

which require different educational approaches in order for the children to benefit from education (Stevens & Wood, 1992, p. 16).

In addition, educational access for these children must be provided on an individualized basis, so some students with disabilities may receive no accommodations and be treated exactly like nondisabled students. Other disabled students can be treated substantially like nondisabled students, but may require some modifications or accommodations in order to participate in educational programs. Examples of such accommodations might include interpreters for deaf students, braille training for blind students, or provision of taped materials for students with learning disabilities. A third group of students with disabilities may need to be treated quite differently from their nondisabled counterparts. For example, educating students with severe disabilities may require separate classes, using a different curriculum and different methods of instruction. This different set of circumstances may provide severely disabled students with educational opportunities that, for them, are comparable to the opportunities provided to nondisabled students who are educated in the regular classroom.

This new access doctrine articulated in the Education for All Handicapped Children Act established the precedent for requiring not only that disabled students be provided with public education, but also with education which is appropriate to their capabilities and suited to their needs. Recent cases decided by the Supreme Court, such as Board v. Rowley and

Irving Independent School District v. Tatro, have upheld this new equal access approach and confirmed the requirements both for access and appropriate, individualized education that have become the foundation for special education law.

Least Restrictive Environment

In Brown v. Board of Education the Supreme Court interpreted the equal protection doctrine also to imply that separate education for the white and black races is inherently unequal. Further, the Court ruled that separation of the races in educational settings deprives children of the opportunity to interact with children of other backgrounds and imposes a stigma upon those educated separately. Much the same logic as was used in the Brown case became the basis for claims that children with disabilities should not be excluded from school or educated separately from other children. Disability advocates argued that--as much as possible--children with disabilities should be educated in regular classrooms with nondisabled peers (Turnbull, 1986).

A key provision of the special education law--Section 1412 (5) (b)--was the concept of placement in the "least restrictive environment" which requires states to:

Establish procedures to assure that to the maximum extent appropriate, handicapped children . . . are to be educated with children who are not handicapped, and that special education, separate schooling or other removal of handicapped children from the regular education environment occurs only when the nature or severity of the handicap is such that education in

regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.

This section of the law creates a strong preference for placing children with disabilities in the regular classroom by requiring that educators not only tailor each child's educational program to meet the child's special needs, but that they also educate the child to the maximum extent appropriate in the regular educational environment.

"Least restrictive environment" (LRE) is a legal, rather than educational, term. Several authors (Deno, 1970; Peterson, Zabel, Smith, & White, 1983; Reynolds, 1962) have attempted to elaborate upon the term to give it educational significance by offering a continuum of educational alternatives in rank order; including, separate special schools, resource rooms, and individual tutoring. The term LRE implies placement in the regular classroom as a preference, but also includes the notion of a continuum of placements, each gradually more restrictive as they differ more and more from the regular classroom environment. Although the concept of LRE is the foundation of integrated educational programming and the term LRE is used in both legal and educational circles, placement of children with disabilities in the regular classroom has come to be commonly called mainstreaming.

The term "mainstreaming" is an educational corollary to the Scandinavian principle of "normalization" (Dybwad, 1980). Normalization suggests that people with disabilities be exposed to, and placed in, environments that approximate normal environments to the maximum extent

possible in light of their disability. One environment is the educational setting, and special education law does require the placement of students with disabilities in the mainstream of public education (i.e., regular classes) to the maximum extent possible.

Kaufman, Gottlieb, Agard, and Kukic (1975) have proposed a definition of mainstreaming that incorporates three major components: (a) integration, (b) educational planning and programming processes, and (c) clarification of responsibilities among educational personnel. It has been argued (MacMillan & Semmel, 1977) that if all three components must be present, then few, if any, programs meet the definition of mainstreaming. A more practical definition of mainstreaming may be one that attends to the amount of time that students with disabilities spend with their nondisabled peers. In fact, the most common element used to define mainstreaming in practice is temporal integration or the amount of time children with disabilities have the opportunity to interact with nonhandicapped children. A common figure cited for the amount of temporal integration required to constitute "mainstreaming" is 50% or more of the school day (Gottlieb, 1981). However, that 50% is not exclusively academic learning time because it usually also includes time spent between classes, in the hall, at lunch, at recess and so forth (Zigler & Muenchow, 1979).

Mainstreaming has been advanced as a worthwhile educational practice on the assumption that placement of students with disabilities with

their nondisabled peers would result in increased academic and social development for the students with disabilities (Birch, 1974; Christopher & Renz, 1969; Dunn, 1968; Kaufman, Gottlieb, Agard, & Kukic, 1975) as well as in a reduction of stigma from being educated in segregated special education settings (Dunn, 1968). The research on the efficacy of mainstreaming has, however, been inconclusive (Carlberg & Kavale, 1980). Several researchers have reported that mainstreaming has not resulted in significant educational and social growth in students with disabilities (Budoff & Gottlieb, 1976; Gottlieb, 1981; Gresham, 1982). However, others have shown that regular class placements can have positive effects on the development of students with disabilities (Grosenick, 1982; Guerin & Szatlocky, 1974; Haring & Krug, 1975; Macy & Carter, 1978; Voeltz, 1980, 1982).

Initial research related to mainstreaming was primarily concerned with its impact on the academic, social, and emotional growth of students with disabilities. Recently, there has been a growing awareness that the climate within which mainstreaming is to be implemented is probably one of the most important determiners of its outcomes (Gearheart & Weishahn, 1976; Gottlieb, 1975; MacMillan, Jones, & Aloia, 1974; Schmelkin, 1981; Zermanek & Lehrer, 1977). Research studies have, therefore, begun to deal with some of the major players in the mainstream situation with particular focus on regular classroom teachers.

Teachers' Roles in Mainstreaming

Teachers are expected to be the primary agents of the implementation of mainstreaming (Jenkins, Pious, & Jewell, 1990). In fact, basic to the mainstreaming model is the notion that regular classroom teachers, rather than turning over the responsibility for educating low achieving students to specialists, assume instead a major role in educating these students in the regular classroom. The mainstreaming model is based on the notion that regular classroom teachers have the overall responsibility for making and monitoring most instructional decisions for all the students in the class, including those identified for special education, and that special educators serve only in a supportive capacity by working with students on areas specified in the students' Individualized Education Programs (IEPs) as needing remediation or requiring alternative teaching methods.

In addition, regular classroom teachers are bound by the IEPs for identified special education students to provide alternative activities and modifications of the regular curriculum to meet the individual needs of each student with a disability (Jenkins, Pious, & Jewell, 1990). Regular education teachers receive support and assistance from special educators in the design and modification of materials, but the actual implementation in the classroom is usually left to the teacher. Thus, in the mainstreaming model, the regular classroom teacher remains the primary instructor of children with learning problems, and he or she assumes the additional responsibility of

implementing modifications to the curriculum and classroom discipline that are specified in each child's IEP.

As critical as this teaching role may be, the regular classroom teacher also has another important role in the special education process--that of evaluator. The decision-making process in special education is only activated when a referral is made. Though referrals for special education assessment can be made by anyone, in practice the classroom teacher is the most common source of a referral (National Association of State Directors of Special Education, 1980; Poland et al., 1982; Weatherly, 1979). The individual teacher's decision whether or not the student's learning problems or behavior are enough different from the norm to warrant special assessment becomes pivotal, therefore, in beginning the special education process. The importance of this teacher-made decision is underscored by the evidence in the literature that students who are referred for special education evaluation almost without exception undergo a lengthy case-study assessment (National Association of State Directors of Special Education, 1980; Poland et al., 1982; Weatherly, 1979). Subsequent to evaluation, a majority of referred students are declared eligible to receive special education, typically in resource rooms for students with mild disabilities. Algozzine, Christenson and Ysseldyke (1982) found that 73% were so classified and in Colorado 80% of all students evaluated for special education were positively identified (Shepard & Smith, 1981).

According to Pugach (1985), the day-to-day referral practices of classroom teachers appear to govern, de facto, the operation of special education identification procedures, yet despite the importance of these teacher-made decisions the evidence is that teachers make referrals for special education testing on a highly subjective basis. In a study of 105 teachers, each of whom had recently referred an elementary student for consideration for learning disabilities services, Ysseldyke et al. (1982) found that teachers offered general, highly variable and subjective reasons for initiating referrals. Other studies (Medway, 1979; Ysseldyke et al., 1982) have found that teachers almost always view learning or behavior problems as residing within the student or as a result of home-based difficulties, but not as being due to any shortcoming on the part of the referring teacher.

Because teachers play such an important role in the referral and placement of students in special education and because the evidence is that these decisions are often subjective and based on teachers' opinions rather than on objective observations of the students, teachers' attitudes toward students who are different from the norm become an important object for study. In addition, teachers' general attitudes toward mainstreaming or having direct contact with students known to be disabled also are of significance.

Attitudes of Teachers Toward Mainstreaming

The mainstreaming literature reveals that many regular education teachers are opposed to having exceptional children in their classrooms (Jamieson, 1984; Jones, Gottlieb, Guskin, & Yoshida, 1978). Knoff (1985) asked regular education teachers in two eastern states if they would be willing to accept exceptional students into their classrooms if special education programs were discontinued. Seventy-nine percent of the respondents expressed an unwillingness to accommodate pupils with disabilities. Other researchers, including Hudson et al. (1979), have reported similar findings. These researchers surveyed the attitudes toward mainstreaming of 151 regular education teachers in two midwestern states. Approximately two-thirds of the respondents considered special class placement for exceptional students to be superior to regular class placement. Although 31% of the survey respondents were supportive of mainstreaming, there was moderate agreement that such placement would negatively influence teaching effectiveness and that exceptional pupils were an educational detriment.

The question of whether teacher willingness to mainstream exceptional students is influenced by diagnostic labels also continues to be a significant topic of debate (Gullung & Rucker, 1977; Moore & Fine, 1978). Rosenthal and Jacobsen (1968), in their historic book, *Pygmalion in the Classroom*, suggest that teacher's expectations of students may become self-fulfilling prophecies. Similarly, Dunn (1968), in his classic article on the efficacy of

special education, has heightened concern over the use of diagnostic labels by suggesting that children with identified disabilities may fail because of teacher's lowered expectations. Thus, discussions of labeling effects have focused on whether teachers have lowered expectations for students whose disabilities are specified and whether diagnostic labels influence students' performance.

Some researchers have reported a hierarchy of preferences based on attitudes toward particular disability labels. Williams and Algozzine (1979) have found that teachers were more likely to reject the idea of having mildly retarded and behaviorally disordered students in their classrooms than students with learning disabilities. Reporting similar findings, Vandivier and Vandivier (1981) have noted that regular education teachers viewed mainstreaming behaviorally disordered and learning disabled students more favorably than mainstreaming pupils classified as retarded. In addition, students with learning disabilities were preferred over children with behavior problems. In support of the notion that labels make a difference in teacher evaluations, Foster, Ysseldyke, and Reese (1975) reported that preservice special education college students rated a nondisabled child shown on a videotape lower in academic performance and social adjustment when informed he was learning disabled or behaviorally disordered.

While this body of research on the attitudes of teachers toward mainstreaming students with disabilities, overall, shows negative findings, two

more recent, large scale investigations (Albrecht, 1984; Knoff, 1984) indicate that regular educators may be more in favor of mainstreaming than earlier research has indicated. In fact, some of the most significant and promising research on how teachers can meet diverse student needs within heterogeneous learning environments is being conducted by regular educators (Stainback & Stainback, 1985). For example, researchers in regular education such as Wang, Peverly, and Randolph (1984) have been successfully working with the Adaptive Learning Environments Model to provide adaptive and individualized programming within the mainstream of education for students with diverse needs, including those labeled handicapped. Slavin, Madden, and Leavey (1984) have been successful with an individualized, cooperative learning approach as a way to enhance the social-emotional behavior of students labeled handicapped.

Reports of successful mainstreaming projects exist in the literature, but the views of classroom teachers seem to be formed more on the basis of their individual experiences, opinions and attitudes. Overall, it appears that teachers view mainstreaming with some skepticism, and that for certain categories of disability teachers think that special class placements are more appropriate than mainstreaming in the regular classroom. Since the ability to maximize the educational experiences of students with disabilities depends to such a high degree upon the attitudes of teachers, it becomes important to

analyze the basis for teacher's perceptions of disabilities and determine what influences and perhaps may change these perceptions.

Research on Attitudes Toward Disabilities

Attitudes Toward Specific Disabilities

Examination of the relevant literature on disabilities reveals two basic approaches to the study of perceptions of disabilities. The first and most prevalent approach has focused on one or two disabilities at a time in order to try to arrive at the stereotype of the particular disability. For example, a great deal of work has been done in the area of mental retardation (e.g., Gottlieb, 1975; Gottlieb & Corman, 1975; Gottlieb & Gottlieb, 1977). In general, the stereotypes about persons who are mentally retarded have been found to be mainly negative (Baker & Gottlieb, 1980), particularly when contrasted with the stereotype of "normal." Similar research results have also been found with other disabilities, including speech disorders (Phillips, 1976), blindness (Kang & Masoodi, 1977), deafness, mental illness (Berman & Fry, 1978), emotional disturbance (Yamamoto & Dizney, 1967), and learning disability (Foster, Ysseldyke, & Reese, 1975; Ysseldyke & Foster, 1978).

The approach of examining disabilities in isolation or small clusters has contributed to knowledge of the content of stereotypes of individual disabilities, but has not provided information about how attitudes toward disabilities may be related to broader concepts of individual differences. The

second major approach to research on attitudes toward disabilities takes a look at broader concepts and commonalities among disabilities.

Representative of this approach are studies by Antonak (1980), Harasymiw, Horne, and Lewis (1976), Panda and Bartel (1972), and Tringo (1970). These studies indicate that, in their perceptions of disabilities, individuals focus on the similarities and differences among the varying disabilities. Some of the organizing dimensions suggested by this line of research include organic (stressing medical and physical conditions), functional (psycho-educational, psychosocial), sensorimotor, visibility, interference in communication, social stigma, reversibility prognosis, extent of incapacity, difficulties in daily routine, and normal versus exceptional attributes.

Most of these conceptually broader studies, though they provide a more global understanding of attitudes toward disabilities, still focus on one or two dimensions as organizing principles. More recent research (Garvar & Schmelkin, 1989) has begun to look at the multi-dimensional nature of attitudes toward disabilities. In their study Garvar and Schmelkin investigated the perceptions of disabilities of four groups of educators: elementary school principals, special education administrators, regular elementary teachers, and special education teachers. Multi-dimensional scaling was used to determine the perceptual structures of the four groups. The first dimension contrasted disabilities that were visible with those that had few visible signs. The second dimension contrasted organic/physical disabilities with functional or "societal"

disabilities. The third dimension seemed to contrast several socially acceptable disabilities with those that appeared to be more ostracized in society. The four groups of educators studied differed in their perceptual structures, but did cluster in their impressions of disabilities around the three dimensions of visible vs. no visible signs of disability, physical vs. functional disabilities, and socially acceptable vs. socially unacceptable disabilities.

Other studies have also reached similar conclusions about the relevant dimensions of disability which influence attitudes. In an investigation of the hierarchy of attitudes toward exceptionality, Antonak (1980) suggested differential attitudes toward organic and functional-psychosocial disabilities. In an investigation of the perceptions of disabilities held by special education teachers, regular teachers, and nonteachers, Schmelkin (1982) found that the most important dimensions to emerge were behavioral-emotional disorders, cognitive impairments, and physical impairments, as well as generalized contrast between normal and disabled. Lieberman (1983) was able to differentiate among attitudes toward physical disabilities, cognitive impairments, sensory impairments, and behavioral and mental disorders. In a study using a larger data set and a sorting method Schmelkin (1985) developed a four-dimensional explanation of attitudes toward disabilities, with the following dimensions emerging: physical disabilities, behavioral-emotional versus cognitive disabilities, specific versus diffuse disabilities, and visibility.

Hierarchies of Preference

Specific investigations of teachers' attitudes toward students with disabilities have usually involved comparison of their attitudes toward two or three selected handicapped populations; thus, because there have not been studies in which all disabilities are compared at once, it is difficult to say exactly which exceptionality groups are regarded most positively or most negatively by classroom teachers. Shotel, Iano, and McGettigan (1972) found that after contact with each group, teachers preferred learning disabled students over those who were emotionally disturbed and over the educable mentally retarded, who were the least preferred. Teachers demonstrated a similar ranking based on information gathered through a questionnaire (Vandivier & Vandivier, 1981). Hirshoren and Burton (1979) also found teachers were more accepting of disturbed than retarded students. In another study, Parish, Dyck, and Kappes (1979) noted that future teachers rated students labeled physically handicapped more positively than students who were labeled learning disabled and mentally handicapped. In contrast, physical education teachers indicated they felt more able to work with mentally retarded students than with students who had physical handicaps (Aloia, Knutson, Minner, & Von Seggern, 1980). In a study by Williams and Algozzine (1977) teachers were more willing and felt they were better equipped to teach physically handicapped and learning disabled students than socially-emotionally disturbed or educable mentally retarded students.

When findings concerning teachers' preferences are examined overall, it appears that students who are gifted, speech impaired, epileptic or learning disabled seem to be among the more favored groups, and emotionally disturbed and mentally retarded students among the least favored. However, even in these general findings there is some variability (Horne, 1985). Consequently, it is necessary to look for specific factors that possibly influenced teacher attitudes. As a general rule, the less obvious and intrusive the disability is, the more favorable the teacher's attitude is toward the student. In addition, the student's personal characteristics--attractiveness of personality, ability to get along with others, ability to meet teacher expectations for performance and social behavior--may be more influential than perceptions of disability itself (Horne, 1985). This more individual view of attitudes toward disability has not, however, been thoroughly investigated, particularly in the natural setting of the classroom.

Importance of Teachers' Attitudes

The attitudes of regular classroom teachers toward students with disabilities are important for a number of reasons. First of all, there is evidence that teachers' attitudes toward exceptional students influence the attitudes of nondisabled students toward their classmates with disabilities. Secondly, teachers' attitudes may influence their expectations and treatment of students, thus having an effect on student's perceptions of themselves and

their ability to learn. Third, teachers' attitudes impact the quality of their relationships with exceptional students.

Social Status and Teacher Attitudes

Some research suggests that there is a relationship between teacher and peer attitudes toward class members. Gronlund (1953), for example, found that sixth graders and their teachers were largely in agreement in their judgments about the most and least preferred students. Gronlund concluded that there are apparently aspects of a student's behavior that are important for acceptance by both teachers and peers, but it seems that teacher perceptions of students may dominate the attitudes classmates form toward one another. Brown and Macdougall (1973) in a similar study also found that a significant relationship exists between peer and teacher acceptance of elementary school students. According to Flanders and Havumaki (1960), positive interactions with the classroom teacher increase a student's status with peers; that is, students praised by the teacher were chosen more often by their classmates on sociometric tests. Also, it has been shown that students are aware of the differential treatment high and low achievers may receive from classroom teachers (Silberman, 1969; Weinstein & Middlestadt, 1979; Weinstein, Marshall, Brattesani, & Middlestadt, 1982.)

In this same vein, studies have demonstrated that teachers have a significant influence on the acceptance of students with disabilities by their classmates. Based on an experiment to test the effect of teacher attitude

statements on students, Gallagher (1977) concluded that peer attitudes toward children with speech defects were: (a) most positive when the teacher does not express any attitude, (b) more positive if the teacher expresses a positive statement, and (c) less positive when the teacher makes negative remarks. In a similar experiment, Foley (1979) demonstrated that peer acceptance ratings of children labeled "normal," "mentally retarded," or "emotionally disturbed" were significantly higher for all groups when teacher behaviors toward each group were depicted positively rather than negatively.

Research indicates that the classroom teacher is a high status social figure and role model for students; thus, attitudes of the teacher are readily emulated by students. Because of their stature with students, it appears that there is ample evidence that teachers can influence, both positively and negatively, the attitudes of students toward peers with disabilities (Horne, 1985).

Teachers' Expectations

Reviews of the literature on teacher expectations (Braun, 1976; Brophy & Good, 1974; Dusek, 1975) indicate that teachers do not appear to bias students' learning as a result of correct or incorrect knowledge they have about them. However teachers do form expectations that may result in their according differential treatment to students, which may in turn influence student performance (Dusek, 1975). Reports on classroom observations of teacher-student interactions are reasonably consistent in demonstrating that

high achieving students receive more attention from teachers than low achieving students. Brophy and Good (1970), for example, studied first-grade classrooms and found that the students ranked by teachers as high achievers received more praise and support; in addition, teachers demanded better performance from the high achievers. Numerous studies have shown that student gender, student attractiveness, race, socioeconomic status, conduct, personality characteristics, even first name (Garwood, 1976) can have an influence on their treatment by teachers. What is not clear, however, is the specific influence of any one variable, or combination of variables, on teacher attitudes. Confounding this issue are the personal and background characteristics of the teachers; such as, their age, sex, or level of experience (Horne, 1985).

For students with disabilities, the problem of teacher expectations is made even more complex by the presence of a disability label and perhaps some physical signs of "differentness" or abnormality. However, research findings on the effects of the handicap label on teacher expectations have not been universally negative. Surprisingly, there have been few empirical studies involving actual classroom observations of teachers interacting with mainstreamed special education students and those which have been undertaken do not necessarily show negative effects from labeling. Thompson, White, and Morgan (1982) compared the interaction third-grade teachers had with high achieving, nonhandicapped students, low-achieving

nonhandicapped students, learning disabled students, and behaviorally disordered students. Their observations of teacher interactions showed there were some minor differences in the patterns of interaction but there was ". . . no strong evidence that general preferential treatment or treatment likely to result in better educational gains or a more effective learning environment is consistently provided to any one group of students" (p. 233).

Several authors have even suggested that the presence of a handicapping condition is not necessarily a detriment for students in their relationship to their teachers. Quinn and Wilson (1977), for example, have suggested that special services provided for learning disabled children may mitigate against the negative effects of the label. Similarly, when MacMillan et al. (1974) investigated the effects of the mentally retarded label, they concluded that empirical evidence of detrimental effects of the label were not to be found (p. 257). There is some evidence, too, that the negative effect of a label may have on a teacher's initial attitudes toward a student may be overcome by the behaviors the student displays in the classroom. Reschly and Lamprecht (1979) found, for example, that the longer a teacher was exposed to a student, the less effect the label had on the teacher's attitude toward the student.

Teacher expectations of students with disabilities may, in the end, be most strongly affected by the teacher's desire to work with high achieving students. According to Solomon and Kendall (1977), teachers' perceptions of

students' academic ability and performance are "primary and influence perceptions of all other attributes" (p. 412). Thus, if students with disabilities are able to meet the performance criteria for achievement in the regular classroom, they are more likely to be perceived positively by teachers than if their performance does not meet classroom norms.

Instruments to Measure Teachers' Attitudes

Toward Disabilities and Mainstreaming

Attitude scales attempt to determine what an individual believes, perceives, or feels about an attitude object (Gay, 1987). There are four basic types of scales used to measure attitudes: Likert or summated rating scales, semantic differential scales, Thurstone or equal appearing interval scales, and cumulative or Guttman scales. The most commonly used technique in assessing attitudes toward disabilities is the summated rating scale, followed by equal-appearing interval scales, and semantic differential scales. Although some studies have used Guttman methodology, this technique is probably used least frequently (Horne, 1981).

Likert-Type Scales

A Likert scale asks respondents to indicate whether they strongly agree, agree, are undecided, disagree or strongly disagree with a series of statements. Each response is associated with a point value, and an individual's score is determined by summing the point values for each

statement. There are numerous examples in the literature of the use of Likert-type scales to measure educator attitudes toward disability groups (Berman & Fry, 1978; Carroll & Reppucci, 1978; Whiteman & Lukoff, 1964). Basically, this methodology has been used to determine respondents' preferences among types of disabilities or to determine the degree of acceptance or rejection the respondents have toward individuals with disabilities. For example, Efron and Efron (1967) designed a 70-item questionnaire to study teacher attitudes toward individuals with mental retardation. The teachers responded to each of the attitude statements using a six-point continuum (strongly agree, agree, not sure but probably agree, not sure but probably disagree, disagree, and strongly disagree) to respond to such items as "It would be kinder to establish separate communities for retardates where they would not feel so out of place" (p. 103).

Besides measuring teachers' attitudes toward disabilities, Likert-scales have also been used to measure attitudes of the general public (Gottlieb & Corman, 1975; Gottlieb & Siperstein, 1976), attitudes of high school and elementary-aged students (Foley, 1979; Sheare, 1974), and parental attitudes (Gumz & Gubrium, 1972) toward people with disabilities.

Probably one of the best known and most widely used instruments for measuring attitudes toward persons with disabilities, the Attitude Toward Disabled Persons Scale (ATDP), utilizes a Likert-type scale. The ATDP has been the criterion measure for over 60 dissertations and in over 300 studies

in 12 countries. The 30 statements on the ATDP suggest that persons with disabilities are either the same as or different from people who are physically normal. Approximately half of the items refer to similarities or differences in personality characteristics, while the other half deal with the question of special treatment of persons with disabilities. Subjects are given a six-point response scale, ranging from agree very much to disagree very much. For nondisabled respondents, high scores on the scale are interpreted to represent acceptance of disabled persons, i.e., a favorable attitude toward disabled persons (Shaw & Wright, 1967, p. 480).

Mainstreaming questionnaires, representing a current trend in the literature on measurement of attitudes toward disability, often utilize the Likert-type scale format. For example, Larrivee and Cook (1979) developed a thirty statement mainstreaming questionnaire focusing on behavior of students with disabilities in the regular classroom. The instrument requires teachers to respond using a 5-point Likert scale (strongly agree to strongly disagree). There are numerous other examples of mainstreaming questionnaires in the literature (Graham, Hudson, Burdg, & Carpenter, 1980; Gickling & Theobald, 1975; Harasymiw & Horne, 1976; Hudson et al., 1979; May & Furst, 1977; Ringlaben & Price, 1981). Questionnaires also have been developed to measure attitudes toward mainstreaming particular groups of students with disabilities (Berryman & Neal, 1980; Olley, Devellis, Devellis, Wall, & Long, 1981; Vacc & Kirst, 1977), the frequency and importance of support services

for mainstreaming (Speece & Mandell, 1980), and attitudes toward all aspects of Individualized Education Programs (Semmel, 1979).

Equal-Appearing Interval Scales

Equal-appearing interval or Thurstone scales ask the respondent to select from a list of statements that represent different points of view those with which he or she is in agreement. Each item has an associated point value between 1 and 11; point values for each item are determined by averaging the values of the items assigned by a number of judges. An individual's attitude score is the average point value of all the statements checked by that individual.

The equal-appearing interval scale has been used in a number of instruments designed to measure social distance and attitudes toward disability. A social distance instrument asks the respondent to indicate how closely involved he or she would like to be with a particular type of individual or group. Choices might include levels of involvement like social distance and attitudes toward disability. A social distance instrument asks the respondent to indicate (a) no involvement, (b) distant acquaintance, (c) neighbor, (d) friend, (e) marriage partner. Tringo (1970), for example, utilized this technique in developing the Disability Social Distance Scale which he administered to several different groups like high school students, undergraduates, education majors, therapists, graduate students, and rehabilitation workers to determine their attitudes toward 21 disability groups.

The Perception of Social Closeness Scale (Horne, 1981) was developed using Thurstone's procedures to measure classroom social distance. This instrument has the advantage of providing interval level measurement of pupil and teacher attitudes toward every other class member. The Social Closeness Scale has been used to measure peer and self status (Horne, Seider, & Harasymiw, 1978; Horne & Powers, 1983) and student attitudes toward disability and occupation groups (Harasymiw, Horne, & Lewis, 1976, 1977).

The Comfortable Interpersonal Distance Scale (Duke & Nowicki, 1972) takes a visual approach to social distance. This instrument requires that the respondent indicate on a diagram how closely he or she would like to be associated with other people. This instrument was used by Schaefer and Brown (1976) to measure the attitudes of young emotionally disturbed boys toward other students with different ethnic origins, who were all residing in a residential treatment center. The boys pointed on a diagram of the classroom to where they wanted a classmate to sit. Their attitude score was computed on the basis of how far away they wanted to sit from other classmates.

Another variation of the social distance format is the Rucker-Gable Educational Programming Scale (RGEPS) which measures teacher attitudes toward students with mental retardation, emotional disorders and learning disabilities. Respondents are presented with thirty brief descriptions of children who exhibit behaviors typical of these three groups of students. The

respondents are asked to read about each child and to select the most appropriate educational placement for the child from a continuum of services (regular classroom placement, regular classroom placement with consultation, regular classroom placement with consultation and short-term direct services, regular classroom placement with resource room placement for up to 2 hours per day, part-time enrollment in a special class, and full-time special class placement).

The teacher's attitude score is indicated by the placement selection made since it is considered a measure of the degree of social distance the teacher prefers to maintain between himself or herself and the student. For example, higher scores are achieved by choosing placements in the regular classroom instead of placements in a special class.

Semantic Differential Scales

Semantic differential scales ask the respondent to give a numerical rating to the subject of the attitude scale on a number of bipolar adjectives such as good-bad, friendly-unfriendly, positive-negative. The respondent indicates the point on the continuum between the extremes that represents his or her attitudes. Each position on the continuum has an associated score value; by totalling score values for all items, it can be determined whether the respondent's attitude is positive or negative. Semantic differential scales usually have 5 to 7 point intervals with a neutral attitude being assigned a score value of 0.

The semantic differential technique has been used with professionals, peers, and parents to measure their attitudes toward various disabilities (Casey, 1978; Halpin, Halpin, & Tillman, 1973; Noe, 1970; Novak, 1975). This technique has also been used to identify hierarchies of attitudes toward disabilities (Buttery, 1978), and to explore the efficacy of attitude modification procedures (Brooks & Bransford, 1971). Panda and Bartel (1972) used a semantic differential scale to determine the effect of contact with persons with disabilities on the attitudes of educators. In a similar fashion Gottlieb (1969) and Gottlieb, Cohen, and Goldstein (1974) utilized a semantic differential scale to judge the effect of levels of psychological adjustment on attitudes toward disabilities.

Guttman Scales

A Guttman Scale attempts to determine if an attitude is unidimensional; an attitude is considered unidimensional if it produces a cumulative scale. In a cumulative scale, an individual who agrees with a given statement also agrees with all related preceding statements. For example, if the respondent agrees with statement five, he or she will also agree with statements one through four.

With a Guttman Scale the respondent is asked to select from a continuum of statements that represent different points of view about an attitude object those statements with which he or she agrees. An example of a Guttman scale is the Social Tolerance Scale constructed by Yamamoto and

Dizney (1967). This scale uses the following continuum of tolerance levels: classmate, fellow organizational member, co-worker, roommate, date, marriage partner. The items in the continuum are cumulative, in that if an individual selects marriage partner as the preferred relationship, then it follows that the individual would also select all the other relationships in the continuum.

Trends in Assessment of Attitudes Toward Disability

The measurement techniques already discussed like preference, rank order scales, or semantic differential scales share the disadvantage of depending on the researchers' a priori conceptions of the relevant dimensions of the particular attitude set. Respondents are restricted to preselected vocabulary or a preselected continuum of choices. Consequently, it is not possible to determine what part of the responses are due to the perceptions of the respondents and what part are due to the constraints placed on the respondents by the format.

Recent trends in assessing attitudes toward disabilities show a movement away from the preference or rank order types of instruments because there is growing interest in the field in discovering more about the complexity of attitude formation. Because it is less constraining and potentially more revealing of attitudinal complexity, the method of response

elicitation in multi-dimensional scaling seems to be gaining in popularity as a measurement of attitudes toward disabilities.

Garvar and Schmelkin (1989) have done an important multi-dimensional scaling study of special and regular education administrators' and teachers' perceptions of disabilities. The procedure they used was to develop a stimulus set consisting of 30 disability labels. Each participant in the study received a set of 30 cards, on each of which was affixed a disability label. In an accompanying booklet, all respondents were asked to sort the disabilities into as few or as many categories as they saw fit, depending on whether they thought the disabilities belonged together. No other frame of reference was given to the subjects.

Results of this study indicated that perceptions of disabilities were indeed multi-dimensional and that disability categories were perceived differently by the four groups studied. However, despite the differences in perceptions, the groups shared some commonalties relating to physical, behavioral-emotional, perceptual, and sensory disabilities. Garvar and Schmelkin conclude that the findings of their study suggest the need to further examine (a) the perceptual structures of individuals involved in efforts to mainstream students with disabilities as well as (b) the relations that may exist between these structures and subsequent behaviors of teachers and administrators (p. 474).

Summary

Because the attitudes of teachers are so influential in the success or failure of mainstreamed situations for students with disabilities, there is widespread and continuing interest in the nature of educators' attitudes toward disabilities, how they are formed, and how they can be modified. A study of the literature on the nature of attitudes and attitude change indicates that some potentially fruitful cognitive-affective theories may have implications for understanding and influencing educators' attitudes. One such theory is McGuire's Theory of Logical Consistency.

In order to devise effective means for understanding and modifying teachers' attitudes, it is necessary to have measurement instruments that provide insight into how teachers view disabilities and make judgments about treatment of students with disabilities. Existing instruments used to measure teachers' attitudes toward disabilities have limitations in that they are constructed on one dimensional concepts of attitude formation and constrained by the author's preselected vocabulary or continuum of choices. Instruments which assess attitudes on more complex and open-ended dimensions are gaining in favor, and there is potential for new methods of inquiry based upon measurement instruments that are based on more complex models of attitude formation.

CHAPTER 3

DESIGN OF THE STUDY

Introduction

Mainstreaming and the accommodation of individual differences are facts of life for teachers because of the requirements of both federal and state special education law. Yet the evidence is that teachers consistently resist dealing with the requirements of mainstreaming. Often the explanation given is that "it does not seem fair" to treat one student differently from another or "to allocate so many resources to one student, especially a student who appears to have less potential for development and for contributing to society." Special education law is based on a principle of fairness which says that students with disabilities must be given equal access to education and must be given special accommodations so that they can benefit from their education. This compensatory interpretation of equal educational opportunity may or may not correspond with teachers' deeply held beliefs about how to treat students fairly in the classroom. Of interest, therefore, in understanding the whole phenomenon of mainstreaming and teachers' reactions to it are the concepts of fairness on which teachers rely when they decide how to allocate resources and opportunities in the classroom.

The purpose of this research study was to develop and validate an instrument capable of determining the principles of fairness that teachers use in deciding how to distribute the benefits of education. In addition, this instrument is intended to provide information about whether or not teachers use the special education standard of accommodation when they make decisions about how to treat students with disabilities in the classroom. The instrument developed in this research is the Individual Differences and Equity Attitude Scale (IDEAS) which consists of eight classroom dilemmas in which the teacher must decide how to allocate resources or opportunities to a student with special needs and to other members of the class. The research followed a step-by-step process of development, testing, review, and revision to determine the degree to which the instrument (a) measures the intended underlying hypothetical construct of principles of fairness, (b) measures the intended content area, (c) discriminates among differences among respondents, and (d) measures consistently what it purports to measure.

The procedures used to develop and test the validity and reliability of the IDEAS instrument include: (a) development of a conceptual framework, (b) design of the instrument, (c) evaluation of the format of the instrument by a national jury of experts on tests and measurement (Format Jury), (d) evaluation of the conceptual framework and the underlying constructs of the instrument by a national jury of experts in education, ethics, and law (Construct Jury), (e) review of the content of IDEAS by a national jury of

regular and special educators (Content Jury), (f) pilot testing, (g) revision of test items, (h) a second pilot testing and revision, (i) field testing, (j) interviews of selected field-test participants, and (k) test-retest procedures to evaluate the reliability of IDEAS.

Conceptual Framework

The Individual Differences and Equity Attitude Scale (IDEAS) is based upon three theoretical models of justice and their applications to situations involving teachers as authority figures and decision-makers about the distribution of rewards and opportunities in the classroom. Questions of distributive justice are at issue in each of the eight dilemmas that make up the instrument, and potential solutions presented in the response items for each case represent specific applications of three theories of distributive justice-- hierarchical, liberal, and collaborative. Also offered for each dilemma is a fourth response option which is a divergent solution not related to any particular theory of justice or to generally accepted guidelines in educational practice or special education law. The fourth option is intended to insure that the response options do not fall into an obvious pattern of three similar types of choices for each dilemma.

The respondent is asked to rank the four response items from the most fair to the least fair; in the process of performing this ranking the

respondent reveals what principles of justice he or she uses most frequently in decision-making.

Standards of Reference for Justice

In the *Nichomachean Ethics*, Aristotle claims there are two basic standards of reference for justice (Ross, 1987). The first is justice in relation to law. In the United States, for example, parties to a legal case are treated as equals, and the law must determine if someone has been wronged and how to rectify the situation. Justice, understood in this way, is the correct application of law so that arbitrariness and favoritism are avoided.

Aristotle's second standard of reference for justice is the concept of equal distribution or the sense of receiving one's fair share (distributive justice). Aristotle explains the idea of a fair distribution in terms of proportion. He argues that there should be the same equality between what is distributed, such as material goods, as there is between persons themselves. According to Aristotle, equal persons ought to receive equal shares, and unequal persons receive unequal shares. In other words, fair distribution should occur "to each according to his deserts" (Ross, 1987, pp. 109-114).

Aristotle's "just deserts" concept of distributive justice is not universally accepted; however, there is general consensus on his two basic principles of justice: evenhanded treatment and fair distribution (Pavlak & Pops, 1991, pp. 74-75; Sutherland, 1956, pp. 64-94). In a society, the principles of evenhanded treatment and fair distribution help define the rights and

obligations of people in relation to each other and to the social institutions of which they are a part. These same principles define to whom and for what society's rewards ought to be distributed.

The tension between evenhanded justice and fair distribution is obvious since not everyone agrees on how to decide who and what deserves to be rewarded. Deciding what is fair becomes a matter of building consensus on guidelines for behavior on the part of authority figures and of individuals so that no one feels exploited or denied some legitimate claim. Fairness is then a matter of common expectations as to how people will be treated. People feel unfairly or unjustly treated when agreed-upon expectations are not fulfilled or when those in authority deny them their due (Stevens & Wood, 1992, pp. xiii-xiv).

Because public schools are called upon to serve so many individual, group, and public interests, questions of individual fairness and social justice often arise (Stevens & Wood, 1992, p. xiv). The IDEAS instrument focuses on one set of social justice issues related to the application of special education law in the classroom. The law requires providing access to education for students with disabilities and further demands that students with disabilities be given special considerations if they need them in order to benefit from their education (Turnbull, 1986). Making decisions about how to accommodate students with disabilities while still treating other students in the class equitably raises question of distributive justice for the teacher. For

example, a teacher may ask: What are the fair ways of distributing teacher time and attention, classroom materials, or special opportunities? How does one grade the work of students who have unequal abilities? What is the fairest way to discipline students with varying capacities for self control? Answering these questions requires the teacher to consider what is fair in light of (a) the teacher's own background and values, and (b) whatever policies, procedures, or legal restrictions may be imposed by the educational system or society at large.

Models of Distributive Justice

In the United States, the relationship between education and the problem of justice has usually been seen in terms of the concepts of merit, equality, and opportunity (Hochschild, 1981; Stevens & Wood, 1992). Models of distributive justice stress these concepts in different ways. The following three categories have been described as exhausting the logical possibilities for models of distributive justice (Barry, 1973, p. 167), and because of their comprehensiveness, these models form the conceptual basis for the response items in the IDEAS instrument.

Merit-Based/Hierarchical Theories of Justice. The concept of a society based on merit evolved historically as a reaction to aristocratic theories and practices, which assumed that rewards should be based on inherited social status and wealth (Sandel, 1982; Stevens & Wood, 1992). The idea of merit,

on the other hand, rested on the assumption that the individual is free and capable of making decisions in his or her best interests. That is, the individual is free to choose and is morally responsible for that choice. In a meritocracy, it is effort and achievement that should be rewarded, providing the purposes and outcomes of the choices are worthy of reward.

Therefore, in a meritocracy, just or fair distribution involves providing rewards to those who have earned them on the basis of the quality of their performance (Strike, 1982). In the school setting, application of the merit principle of justice requires that absolute standards of measurement be used so that whatever rewards students receive come to them on the basis of their unassisted performance which is evaluated against an unvarying standard. Application of this model of distributive justice leads inevitably to the ranking of students into a hierarchy for each of the subject or performance areas measured. Those students with talent who perform well rank high and receive more rewards, and those with less talent who perform less well rank lower and receive fewer (or lesser) rewards. In other words, students receive whatever they earn when measured against an absolute standard of excellence; students with less ability or talent or who experience barriers to learning like disabilities, illness, hunger, or poor teaching receive fewer rewards unless they are, on their own, able to overcome whatever barriers they experience and produce a superior performance. Fairness consists in

letting all students participate and be governed by the same rules of performance and evaluation (Bricker, 1989).

Proponents of the application of the merit principle of distributive justice point out that this standard is both fair and practical because it prepares students for the experiences of real life (Nozick, 1974). According to this line of reasoning, in the adult world individuals succeed or fail as a consequence of their own merit. Thus, in school students must learn to earn the rewards they seek (e.g., good grades, teacher attention, or awards and recognition) on the basis of their own merits and efforts.

When applied to the situation of the student with a disability, the merit/hierarchy standard suggests that students with disabilities be treated exactly like other students and be provided no special accommodations. The rewards that students with disabilities receive should be earned on the same basis as other students. Again, this approach is justified by proponents because it prepares the student with disabilities to deal with the adult world in which no special accommodations are made.

Liberal/Compensatory Theories of Justice. The liberal theory of distributive justice places greater emphasis on equal opportunity than on merit. The basis for the liberal model of distributive justice is the belief that equity is best achieved if all individuals have access to social opportunities. Like meritocracy, the liberal ideal also emerged as a challenge to inherited wealth and status and the seemingly arbitrary authority that accompanied

them. Thus, one of the enduring concerns of the liberal ideal of equality has been that historical inequalities not be perpetuated from generation to generation (Rawls, 1971). The liberal assumption is that talent and ability are widely distributed and do not belong only to a privileged class.

In the educational realm, the liberal view of equal opportunity came to the fore when public education became compulsory. Education was seen as an avenue for upward social and economic mobility. The liberal interpretation of equal educational opportunity meant that no matter what the student's background, he or she had a right to access to an education and the advantages that education could afford. However, with the rapid expansion of education at the secondary level in the early twentieth century, it became evident that the common curriculum was out of step with the realities of the abilities and occupational futures of most students. Many were not college-bound, and the traditional liberal arts and language-oriented curriculum of nineteenth-century secondary schools lacked relevancy for large numbers of students. Different students had different occupational futures, and equality of opportunity required providing different curricula for each type of student (Stevens & Wood, 1992). In other words, equal educational opportunity for an individual did not mean the same opportunity, but rather it meant the opportunity that was appropriate relative to the type of student.

Recognition of individual differences as a factor in determining equity became an important component of the liberal theory of distributive justice

(Barry, 1971; Strike & Soltis, 1985). This liberal concept of individualization could be applied in a variety of educational situations, including those involving students with disabilities. For example, in the liberal model it might be considered fair if teachers awarded grades on the basis of effort rather than with reference to an absolute standard. In this way, the student with limited academic abilities could participate and be rewarded with "good" grades if he or she made maximum effort and reached an individual goal for excellence. Another example of this type of "fairness" might be the situation in which a teacher directs one student to do just 10 problems while another student must do 25. Each student has the opportunity to participate in the activity, but each is required to do a different amount of practice based upon the teacher's judgment about the needs of each student. Viewing this situation from the perspective of the liberal theory of justice, the assignments would be considered fair, not because they make equal demands on the students, but because they meet each student's individual needs in a comparable way.

In the 1960s time-honored liberal concepts of equal opportunity came under greater scrutiny, particularly as a result of the passage of civil rights and equity legislation in the United States (Coleman, 1968). Emerging from this civil rights debate was the work of American philosopher John Rawls who argued for a modification of the liberal model of justice which took into even greater account the question of individual differences. In his major work

entitled *A Liberal Theory of Justice* (1971), Rawls contended that to allow a "natural" system of rewards to emerge on the basis of individual talent and effort is morally indefensible. According to Rawls, even if equal opportunity is present in the sense of all participants being protected from cheating and discrimination, the reward system is still unfair. This is so because rewards are made on the basis of talents, characteristics, and attitudes that are controlled by factors (e.g., genetic and environmental) unrelated to an individual's choices. In other words, Rawls argued that individuals should not be rewarded (or punished) for characteristics that were an accident of birth. Instead, Rawls advocated for moving beyond equal opportunity as meaning all receive the same amount or the same access to a situation in which equal opportunity implies compensation or correction for social and cultural disadvantages (Fishkin, 1983; Fullinwider, 1980; Rawls, 1971).

In his second principle of justice, Rawls outlined a compensatory model for providing equal opportunity:

Second Principle. Social and economic inequalities are to be arranged so that they are both: (a) to the greatest benefit of the least advantaged . . . and (b) attached to offices and positions open to all under conditions of fair equality of opportunity.
(Rawls, 1971, p. 302)

Rawls' second principle implies that, in order for the distribution of rewards to be fair, those who are disadvantaged by circumstances beyond their control should receive more benefits than those who may, in fact, have greater ability or merit (Boxill, 1991).

Application of Rawls' liberal theory of distributive justice to educational situations clearly leads to the notion of compensatory education for the disadvantaged and to accommodations for persons whose learning is hampered by disabilities (Stevens & Wood, 1992). Applications of Rawls' theory might operate, for example, in much the same fashion as "handicapping" does in sports like horse racing or golf in which compensation is made for the differences in ability of the participants. That is, in order to make the competition between two participants with unlike capacities more fair, the more talented performed is given a "handicap."

This notion of handicapping applies to the idea of accommodating individual differences caused by disability in that accommodations made to compensate for certain aspects of disability are similar to handicaps provided in sports. When an individual with a disability is provided with certain supportive devices (e.g., adapted computers) or personal assistance (e.g., a personal care attendant), these supports compensate for the limitations caused by disability so that the individual with disabilities can participate on an equal footing with those who do not have disabilities.

Utilitarian Theories of Justice. Utilitarian theories of justice are less interested in the fair treatment of the individual and more concerned about the general benefit to all of society. Classic utilitarianism defines the rightness of acts or rules as "maximization of the aggregate utility" (Brock, 1982; Buchanan & Mathieu, 1986). In other words, the aggregate utility produced

by an act or by general compliance with a rule is the sum of the utility produced for each individual affected. Utility is defined as "pleasure, satisfaction, happiness, or as the realization of preferences, as the latter are revealed through individuals' choices" (Buchanan & Mathieu, 1986, p. 23). For the utilitarian, there is only one feature of a distribution of benefits that is relevant to judging it just or unjust: Does it maximize overall utility? Put another way, does it enhance the good of all?

Utilitarianism has been soundly criticized on moral grounds for two reasons: (a) It fails to take seriously the value of fairness to the individual; and (b) it does not provide an adequate foundation for equal civil and political liberties (Buchanan & Mathieu, p. 25). If liberalism can be criticized for too much emphasis on the individual, utilitarianism has been chastised for too little individual concern. For example, in the utilitarian model, if it happened to be the case that distributing almost all of the goods to a minority and leaving the majority to do without maximized overall utility, then this grossly inequalitarian distribution would be required by utilitarianism. Similarly, it is at least possible that maximizing overall utility might permit or even require that members of one segment of society lead lives of slavery, lacking even the most basic civil and political liberties. According to the utilitarian, such an arrangement would be just so long as the contribution the slaves made to the utility of their masters exceeded the slaves' own lack of utility (Buchanan & Mathieu, p. 26).

Communitarian Theories of Justice. Communitarian theories of justice are instances of utilitarianism which attempt to deal with the worst features of utilitarian theory--that of potential mistreatment of the individual in order to create collective good-- and with the potential abuses wrought by extreme individualization of some liberal theory. Communitarian theory like other utilitarian theory is concerned with the collective good but in a unique way. The starting point of this counter-theory is a conception of human nature grounded in Aristotle, who says in the Politics that humans by nature are not self-contained but are "polis dwelling" animals (Schuman, 1992, p. B2). Thus, according to Aristotle, communities create individuals; individuals do not create communities.

Communitarians see the self or the individual as being grounded in community since from birth the individual is not an autonomous and unencumbered being but is instead immediately a part of collective activities (Schuman, 1992). The community situates individuals and binds them together in a web of support and obligation, providing identities and different roles. In learning the practices and values of their communities, individuals are constituted as selves. As they become conscious and reflective, they discover that they are encumbered by relationships, connections, and obligations to others. Rather than being autonomous individuals, who are authors of their own lives, they are instead parts of particular communities with collective needs and objectives. The concern is for the good of all in the

community but should not be at the expense of the relationships among individuals.

Justice for the communitarian involves defining the good life by consensus. Deciding what is fair depends upon how the decision affects all the members of the group. Communitarians claim that individuals are motivated by the common purposes of their communities and by a desire to achieve the well-being of all. Moreover, the common pursuit of goals develops desirable human relations, friendships, generosity, solidarity, and caring. These "good" results of participating in a community are experienced as extrinsically worthwhile, but they are also what motivates individuals to treat one another well. The communitarians argue that the experience of community is far more likely to motivate individuals to treat others ethically than are abstract concepts like "respect for persons" or "honoring civil rights." According to this theory, the motivation for just or human treatment of others comes from the bonds of community and not from rules, social norms, or dictates of the law. To communitarians, justice is not about distribution but about human relationships; the right distribution is necessary to and made possible by the right relationships but is morally of subordinate importance (Titmuss, 1970).

The application of communitarian theory to education suggests collaboration in the classroom and mutual support of students for one another. Rather than the teacher being the sole arbiter of how benefits are

distributed, students are involved in decision-making and the distribution of rewards. Students working together in groups as a matter of course accommodate each other's differences in order to produce a collective product that meets the group's standards (Bricker, 1989).

For example, if a group of fifth grade students is working on a vocabulary lesson and the group includes an individual who has learning disabilities and learns slowly, a utilitarian might reason that the students in the group who are good at vocabulary should concentrate on helping their disabled colleague in order to raise the group's average. However, in every class there is a limited amount of time to help people. For the utilitarian the issue really is one of knowing what is the most effective way to help people in order to maximize the good in a limited amount of time. Putting a large amount of time into helping a student who learns slowly might not be the best strategy. Instead it might be better to concentrate on those who learn quickly and who therefore achieve the greatest gains in the least amount of time. The utilitarian principle would condone this action because the principle concentrates on the amount of good and not on the individual person who receives good.

The communitarian, on the other hand, might react in an entirely different way and choose to assist the student with learning disabilities out of generosity or concern for the individual. This response would not be the most efficient in terms of increasing vocabulary scores, but it might be the

best strategy for enhancing relationships within the community of the classroom (Gilligan, 1982; Margolis, 1982).

Theories of Justice as Theoretical Framework for IDEAS

Three theories of justice--hierarchical, liberal and utilitarian--suggest three different concepts of fairness and equal opportunity. Barry (1973) has argued persuasively that these three basic models for social justice, which he identifies slightly differently as hierarchical, liberal, and altruistic/collaborative, exhaust the logical possibilities (p. 167). Using Barry's reasoning, these models can be applied in simple dyadic terms to the accommodation of individual differences in the following way: *A* will accommodate the needs of *B* (a) because *B* merits, deserves or earns accommodation (hierarchy); (b) because *B* is disadvantaged and this disadvantage is to be redressed so that the greatest benefit is provided to the least advantaged (liberalism); or (c) because *A* wants to help *B* (altruistic).

Design of the Instrument

The design of the Individual Differences and Equity Attitude Scale (IDEAS) utilizes the three theories of distributive justice identified by Barry and an "other" category which is based on no particular theory. These four theoretical constructs form the basis for the four subscales of the instrument: Hierarchical, Collaborative, Liberal and Other. The format of the instrument

consists of eight dilemmas, each involving a situation in the classroom in which the teacher must decide how to distribute educational benefits in an equitable manner. Following each dilemma are four response items which represent different concepts of fairness and relate to one of the four subscales which constitute the instrument. For example, items generated from the hierarchical theory of justice and related to the Hierarchical Subscale describe situations in which the person with a disability has to earn a particular educational benefit or opportunity without receiving any special help or accommodations from the teacher. Items in the Liberal Subscale and based on the liberal theory of justice closely resemble the requirements of special education law and demand that accommodations be made so that the person with a disability has access to a particular benefit or opportunity. Response items in the collaborative mode and related to the Collaborative Subscale show accommodations being made for the student with a disability by the teacher or the students out of a spirit of generosity or altruism or for the general good. However, the accommodations suggested in the collaborative solutions may not be as extensive as required by special education law. Response items in the Other Subscale do not relate to any of the three theories of distributive justice; they represent highly divergent approaches to equity.

In overall design, IDEAS most closely resembles instruments intended to measure attitudes, values, and evaluative orientations (Anastasi, 1976).

The approach taken in IDEAS is similar to the one proposed by Kohlberg (1969, 1974) for assessing moral development. Kohlberg's Moral Judgment Scale utilizes nine hypothetical dilemmas. A typical example from Kohlberg's Scale involves a man whose wife is dying of cancer but might be saved by a new drug for which an exorbitant price is demanded. Unable to raise the money, the husband steals the drug. Respondents to the scale judge the husband's behavior as either right or wrong. The evaluator asks the respondents to explain their judgment of the husband's actions and elicits fuller explanations from the respondents through probing questions. The evaluator can then judge the level of moral development of the respondents based on a comparison between the respondents' rationales and descriptions of Kohlberg's six stage cognitive model of moral development.

Similar to Kohlberg's scale, IDEAS utilizes eight ethical dilemmas which are based upon realistic situations which occur in educational settings and which have been documented in the literature as concerns of classroom teachers. Each classroom dilemma depicts a situation in which the needs of an individual who has a disability or a learning problem are juxtaposed against the needs, desires, and interests of others. Unlike the Kohlberg scale, in IDEAS no course of action is presented in the dilemma itself. Instead, the respondents are given four possible choices of solutions which are to be arranged in order from the most fair solution to the least fair.

The respondent who is analyzing each dilemma must decide how to distribute benefits or educational opportunities in an equitable manner. In each case, the respondent must examine the competing interests of the individual with disabilities, the teacher, and the other students in the class to determine what the most fair course of action might be. The directions for the scale suggest that the "most fair" course of action should be "one that is based upon . . . (the respondent's own) ideas of fair treatment of the individuals who are involved in the situation."

Format of the Instrument

The format of the IDEAS instrument consists of eight dilemmas each followed by four response options. The four solutions for each dilemma are arranged in random order. The respondent is asked to read each dilemma and reflect upon the suggested courses of action in the four statements. Then the respondent is to rank order the statements from the most fair solution to the least fair solution by placing the number of the statement in the appropriately ranked position on a scale provided on the answer sheet (Henerson, Morris & Fitz-Gibbon, 1978).

The method for recording answers to IDEAS involves placing choices in rank order in four boxes representing a continuum from A through D. Boxes A and D represent the extremes on the continuum with A being the location for the "most fair" solution and D being the location for the "least fair" solution. The ranking of B represents a "less fair" solution than A and C a

"less fair" solution than B. There is no neutral choice since each statement is considered to be fair or not fair in some degree.

The four statements offered as choices for each dilemma are numbered, but they bear no indication of their possible rank. The distinctions to be made among the choice items depend upon the respondent's particular views of what is fair. All of the response items may be considered "fair" in some degree by the respondent, some of them may appear "fair," or none of them may appear completely "fair" according to the respondent's own value system, beliefs and attitudes. In every case, however, the respondent must order the responses on a relative scale from the most fair to the least fair solution from those items offered as choices. From the respondent's point of view, the instrument does not ask for new solutions to the dilemmas but rather asks for the respondent to consider the response items as the available universe of choices. The task for the respondent is to determine from the choices given which is the most fair, somewhat less fair, still less fair, and the least fair solution.

Scoring of the Instrument

Scores on the IDEAS instrument are determined by awarding a place value of 4 for items chosen as "most fair," 3 for items considered to be "somewhat less fair," 2 for items "still less fair," and 1 for items chosen as "least fair." Each response item is categorized according to its content as pertaining to one of the four subscales, either Hierarchical, Liberal,

Collaborative, or Other. Scores for each subscale are computed by adding up the place values assigned for all eight items attributed to that particular subscale. The subscale scores show which principle of fairness (which of the four categories) is given more weight as a fair solution and which categories are given less weight. Overall, the instrument yields a profile of the relative value the respondent places on the categories of fairness.

The highest possible score for any subscale is 32, a score which would occur if the respondent chose the same principle as producing the most fair solution in all eight cases. The lowest possible score for a subscale would be eight, a score which would occur if the respondent found a particular principle to produce the least fair solution in all eight cases.

Scores on IDEAS are ipsative in that the strength of each respondent's commitment to a particular principle of justice is expressed not in absolute terms but in relation to the strength of the individual's commitment to the other principles. Because the individual responds by expressing a relative preference for one item against another, the resulting score is relative. In other words, the frame of reference in ipsative scoring is the individual rather than a normative sample (Anastasi, 1976).

A computer program has been developed for scoring the IDEAS instrument automatically (see Appendix A). This program uses if/then statements to assign appropriate position scores to each of the respondent's choices. The program provides totals for each of the subscales, Hierarchical,

Liberal, Collaborative, or Other, and indicates the degree to which the respondent found each of the four principles to yield an equitable solution to the dilemma presented. The resulting information is a profile of the relative value the individual respondent places on each principle as a source of fair solutions.

Construction of the Instrument

Development of Dilemmas

The eight classroom dilemmas in IDEAS were developed by culling the literature (Bricker, 1989; Carpenter, Grantham, & Hardister, 1983) and using a national jury of experts in special education and regular education to determine which dilemmas occur commonly and represent significant issues for classroom teachers (see Appendix B). From an initial pool of 30 potential problem situations, the group of dilemmas was narrowed to 6 concerning the topics of (a) honor roll or student academic awards, (b) assigning grades, (c) participation in field trips, (d) distribution of teacher attention, (e) teacher-designed rules for making up work when the student is absent, and (f) access to special equipment or materials. During pilot testing, an additional two topics were added: (a) reactions to inappropriate behavior on the part of a student with disabilities and (b) discipline of students with disabilities.

Development of Response Items

The response items used in the instrument were developed in the following manner. Approximately 100 statements concerning the accommodation of individual differences were accumulated from the special education literature. These statements included items like: "Students should receive grades based upon their individual potentials and the amounts of effort they expend," or "students with disabilities should be provided with whatever accommodations they need to function in the regular classroom." A group of 20 judges (see Appendix C) who were faculty members (10) and graduate students (10) in special and regular education and rehabilitation counseling were asked to sort the statements into three groupings: (a) statements pertaining to questions of fairness, equal educational opportunity, and accommodation of individual differences, (b) statements not germane to questions of fairness, equal educational opportunity, and accommodation of individual differences, or (c) unclear statements. Statements which were placed in widely differing groupings were eliminated, as were statements that all judges found to be unclear or not germane. This process produced 36 statements which were retained for further consideration.

Descriptions of the three principles of fairness -- hierarchical, liberal, and collaborative -- were developed. A second group of 15 judges who were faculty members (5) and graduate students (10) in special and regular

education and rehabilitation counseling (see Appendix C) were given an opportunity to study the descriptions of the categories and asked to sort the 36 potential response items into the 3 groups according to whether the response items reflected a hierarchical, liberal, or collaborative principle of fairness. From this sort, 19 response items were found to be suitable for use in the IDEAS instrument in that the judges consistently placed them in the same categories.

Then another set of 20 response items was developed and the second group of judges were asked to sort these items into hierarchical, liberal and collaborative groups. From this sort, five more response items were selected as fitting into hierarchical, liberal or collaborative groups. From the group of 30 items which remained unselected after the first, second and third sorting processes, an additional 8 response items were selected to be used in the "other" category. These responses had consistently not been considered by the judges to fit into the categories of hierarchical, liberal, or collaborative principles of fairness.

Format Jury Review

The complete format for the IDEAS scale is comprised of directions for the instrument, an answer sheet, and the instrument itself, including the eight dilemmas with four response items representing the Hierarchical, Liberal, Collaborative, and Other subscales. This instrument format was reviewed by

a jury of experts in the field of tests and measurement, including two designers of attitudes toward disabilities scales, two professors specializing in tests and measurement, and a state director of special education who is a licensed school psychologist (see Appendix D). These experts made extensive suggestions for revision, particularly in the presentation of the dilemmas themselves. The format jury's suggestions were incorporated into the field-test version of the IDEAS instrument.

Construct Jury Review

The items in IDEAS were developed from concepts found in the special education literature which relate to the constructs of fairness and accommodation of individual differences. In order to establish the legitimacy of the relationships between these ideas and the constructs on which IDEAS was based, the instrument was reviewed by a national jury (see Appendix E) consisting of the following types of professionals: attorney (1), ethicists (3), professors of teacher education (3), and professors of special education (3). The attorney and ethicists were placed on this jury because of their knowledge of theories of justice and their practical applications. Professors of special and regular education were on the jury to attest from their point of view as educators to the appropriateness of the conceptual framework of the instrument and the underlying constructs of fairness which are the focus of each of the eight dilemmas in the instrument.

The members of the Construct Jury were given a description of the conceptual framework of the instrument and a questionnaire asking for their opinions about the relationship of the constructs implied by the dilemmas and the response items in the instrument to broadly understood concepts of equal educational opportunity, fairness, and accommodation of individual differences (see Appendix E). For example, in Dilemma 1 in which the respondent is asked to consider whether or not it is fair for MB to be on the honor roll even though she has received extra help, the jury considered whether or not this case is based upon underlying questions of fairness, equal educational opportunity, and accommodation of individual differences. In addition, the jury was asked to consider whether the response options for each dilemma truly represent the hierarchical, collaborative, and liberal theories of justice and an "other" category and whether or not the response options are logically and clearly distinct from each other.

The analysis that the Construct Jury was asked to perform was intended to serve as part of the basis for establishing the construct validity of IDEAS. Construct validity is the degree to which an instrument measures an intended hypothetical construct (Gay, 1987). The hypothetical constructs assumed to underlie the dilemmas and response options for IDEAS are fairness, equal educational opportunity, and the accommodation of individual differences. It was assumed for the purposes of this research that if the construct jury members reached at least 75% agreement on the presence of

an underlying construct in the dilemmas and response options that this was strong evidence of the validity of those particular dilemmas and response options.

Content Jury Review

The charge of the Content Jury was to evaluate whether or not IDEAS has content validity. Content validity is established deductively by defining a universe and sampling systematically within the universe (Lennon, 1968, pp. 175-76). The conceptual universe for the IDEAS instrument includes concepts of fairness and equity related to (a) special education law, (b) equal educational opportunity as defined in both law and practice, and (c) established principles in regular and special education for the accommodation of individual differences in the classroom and in social situations.

To determine whether or not IDEAS measures an intended content area, the instrument was reviewed by the Content Jury consisting of 10 professors of teacher education who train either special or regular education teachers (see Appendix F). These Content Jury members have wide experience in the practices of teaching and are familiar with the range of topics covered in teacher education. In particular, they are knowledgeable about the universe of ideas related to accommodating individual differences in

the classroom and the cultural and social values associated with equal educational opportunity and fair distribution of benefits in the classroom.

The Content Jury members were given a copy of the conceptual framework of the IDEAS instrument and a questionnaire which asked their opinions about whether or not the dilemmas (a) reflect situations commonly reported in the special and regular education literature, (b) reflect situations commonly experienced in the field, (c) reflect a significant ethical decision for teachers, (d) involve applying principles of distributive justice, (e) juxtapose the needs of the individual against the needs of others, and (f) describe a situation in which the teacher has the power to decide.

The Content Jury members were also asked to evaluate the response options by considering whether they (a) reflect an action commonly reported in the literature, (b) describe an action within a teacher's power to take, (c) describe an action which is commonly taken in the field, and (d) exhaust the universe of possible actions to take.

It was assumed that if the Content Jury members reached at least 75% agreement that the content of an item met the criteria of relevance and comprehensiveness that the item had content validity. If Content Jury members felt the items in IDEAS were not comprehensive or relevant, jury members were asked to supply additional dilemmas or response options which would improve the content of IDEAS.

Pilot Testing

The pilot test was conducted with two groups of classroom teachers and prospective teachers in the teacher education program at Eastern Montana College in Billings, Montana. Pilot Group 1 consisted of 30 practicing teachers in regular or special education, and Pilot Group 2 consisted of 5 practicing teachers in regular education and 20 prospective teachers preparing to teach in special or regular education. The pilot testing groups consisted of individuals who were (a) similar to the people who will typically be assessed with the IDEAS instrument and (b) likely to express the whole range of attitudes being examined. In other words, the participants in the pilot tests were students studying to become teachers and practicing classroom teachers with varying degrees of knowledge about special education and varying degrees of experience with mainstreaming and accommodating special education students.

Pilot Test Group 1 took Version 1 of IDEAS which included the following dilemmas: Honor Roll, Grading, Valedictorian, Wrestling, Field Trip, Restaurant, Teacher Attention, and Makeup Work. The first pilot test and the Construct Jury and Content Jury reviews revealed serious flaws in three of the eight original dilemmas. For example, Dilemma 6 (Restaurant), which dealt with the situation of an adult with a disability being asked to leave a restaurant, was eliminated because it strayed from school-related topics. Dilemma 3 (Valedictorian), which concerned whether or not it was fair for a

student who had received special education assistance to be the valedictorian, was eliminated because the potential of this type of situation occurring was considered to be very low. Dilemma 4 (Wrestling), which concerned eligibility of overage special education students for participation in sports, was eliminated because it was considered to be a low potential item and oblique to the central issues of mainstreaming.

To replace the dilemmas eliminated in the first pilot testing, three new dilemmas were developed. Pilot Test Group 2 took Version 2 of IDEAS which included the following dilemmas: Honor Roll, Grading, Field Trip, Teacher Attention, Makeup Work, Computer Usage, Anxiety Attack, and Discipline. After scores were computed for Pilot Test Group 2, the high and low scorers were identified in each of the subscales--Hierarchical, Collaborative, Liberal and Other. Then each statement on the instrument was analyzed according to how high and low scorers responded to it. Those items which provided good discrimination between high and low scorers were retained for the field-test version of IDEAS (see Appendix B).

Field Testing

Field Test Population

The field test population consisted of 204 participants, 105 females and 99 males, who were college students preparing to teach and practicing teachers trained to teach regular or special education in grades K-12.

Participants were gleaned from teacher education programs at Eastern Montana College and from cooperating school districts in Billings, Moore, Belgrade, Missoula, and Thompson Falls, Montana.

The field test participants were evenly divided between those who were currently certified to teach and those earning certification. Among those currently certified, 32 participants were relatively new teachers, having taught less than 5 years; 20 had taught 6 to 10 years; 38 had taught 11 to 20 years; and 12 had taught more than 21 years. Grade levels taught by the certified participants were distributed in the following fashion: 27 primary (K-3), 16 intermediate (4-6), 20 middle school (7-8), 20 high school (9-12), and 19 special education teachers (K-12). Of the participants, 79 had relatives who were served in special education, and 125 did not. In terms of courses taken in special education, 18 participants reported taking no courses in special education, 97 had taken 1 or 2 courses, and 89 had taken 3 or more courses.

Field-Test Purpose and Procedures

The purpose of the field-testing process was to gather information about (a) how a typical sample of the population of prospective and practicing classroom teachers would respond to the IDEAS instrument; (b) whether such factors as age, gender, certification, years of teaching experience grade level taught, number of courses the individual had taken in special education, whether or not the individual had a relative in special

education were related to the principle of fairness ranked highest by the individual; (c) whether or not the responses on IDEAS truly reflect the thought processes of the field-test participants; and (d) whether a significant correlation exists between the responses on individual items and subscale scores (internal consistency).

The methods used to collect the field-test data included: (a) collecting demographic data by administering a questionnaire to the 204 participants in the communities of Billings, Moore, Thompson Falls, Belgrade, and Missoula; (b) administering the IDEAS scale to the 204 participants; and (c) collecting interview data concerning the thought processes of 16 field-test participants.

Administration of the IDEAS Field Test. The IDEAS instrument was administered in five locations in Montana: Billings (160 participants), Missoula (6), Thompson Falls (15), Moore (15), and Belgrade (8). The administration of IDEAS at each site involved the following activities: (a) an explanation of the research study in progress, including assurances concerning confidentiality (see Appendix G); (b) an opportunity for individuals to decide whether or not to participate in the study; (c) signing of statement of participation; (d) filling out of the demographic questionnaire (see Appendix G); (e) reading aloud the directions to the test and discussing the sample test item; and (f) administration of IDEAS itself. The complete administration procedure took an average of 40 to 50 minutes with 20-30 minutes spent on answering the scale itself.

Demographic Questionnaire. The demographic questionnaire consisted of a series of questions concerning the age, gender, level of certification, years of teaching experience, grade levels taught, the number of courses the individual had taken in special education, and whether or not the individual had a relative being served by special education. The completed demographic questionnaires were numbered and matched to the test answer sheets for each individual. Individual field-test participants were then identified exclusively during the research project by their assigned numbers.

Information gleaned from the demographic questionnaires was analyzed using the chi square procedure to determine whether or not individual factors such as gender, age, grade level taught, years of experience, number of college course in special education, or having a relative in special education were related to highest subscale scores. This test was conducted to determine whether the factors under consideration might be predictors of a particular way of responding to the IDEAS instrument; that is, a preference for using one principle of distributive justice more than another.

Participant Interviews. Of the 204 field-test participants, 16 were selected for in depth interviews to determine how accurately the answers on the IDEAS scale reflected the thought processes of the respondents in regard to underlying constructs of fairness or equity. Individuals who scored two standard deviations above the mean on one of the particular subscales of

Hierarchical (3), Collaborative (3), Liberal (3), or Other (2) and selected individuals who received tied scores between subscales (5) were interviewed. Individuals scoring two standard deviations above the mean were selected for interview because it was thought that these individuals would display the strongest commitment to a particular principle of distributive justice. The individuals receiving tied scores were interviewed to see if their rationales for their responses to the dilemmas reflected commitment to principle, lack of commitment, or ambivalence about the principles.

The interview participants included nine females and seven males. Four interviewees fell into the age category of 21-30; 6 in the category of 31-40; 6 in the category of 41-50; and none were 51 or older. Nine interviewees had less than 5 years teaching experience, and seven had 6 or more years of experience. The grade levels taught by the interviewees included: five at the primary level, two at the intermediate level, none at the middle school level, and nine at the high school level. None were special education teachers. Ten interviewees had taken one or two special education courses; six had taken three or more courses in special education. Eight interviewees had no relatives served in special education, and eight had relatives in special education.

The interviews were conducted by a graduate student in special education with 8 years of experience working as a consultant to regular and special educators (see Appendix C). The interviewees were given copies of

Dilemma 4 (Teacher Attention) and their own responses to this item, and they were asked to reread the dilemma and their responses and to consider how they had gone about responding to the dilemma. Then interviewer asked a standard series of the following eight open-ended questions:

- From your experience as a classroom teacher, do you think the situation described in this dilemma is a realistic one? Why or why not? In your opinion, do such situations actually occur in schools? Describe some examples from your experience.
- In your experience, do teachers make decisions like the ones described in the four choice options for this dilemma?
- Why did you select _____ as most fair?
- Why did you select response _____ as least fair?
- Is there another response you would like to have chosen which was different from the options provided?
- How do you go about deciding what is fair in your classroom? What guiding principles do you (or would you) use?
- What do you think "equal educational opportunity" means?
- What uses, if any, do you think an assessment tool like IDEAS might have?

The interviewer was free to delve more deeply into the rationales of the interviewees by following up the standard questions with amplifying or clarifying questions.

The interviews were recorded and transcribed verbatim. Answers to interview Questions 3, 4, 6, 7, and 8 on the verbatim transcripts were then coded by three independent raters who determined whether responses fit into the categories of hierarchical, collaborative, liberal, other or were unknown (see Appendix C). Raters gave each respondent an overall rating, indicating which principle of fairness was used by the individual most frequently. If a category of fairness could not be determined for a particular individual, the rater was instructed to classify that individual's category as "unknown." Inter-rater reliability was determined, and raters' choices were compared to scores achieved by the interviewees on the IDEAS scale.

In addition, the transcripts of the interviews were analyzed to determine if they reflected any particular patterns or "recurring themes" (Guba, 1978) in the thought processes of the participants. Ideas which reappeared in the rationales of several of the participants were grouped into themes, and the themes were refined still further into categories. The analysis of patterns, themes, and categories yielded information about commonalities in the thought processes of the 16 interviewees and provided insight into their methods for responding to IDEAS.

Internal Consistency. Based on the data from the field test, scores on individual items on the IDEAS instrument were correlated with the respondent's total scores on the subscales of the instrument to determine if a significant correlation existed between the responses on individual items and

the overall subscale scores. This measure of correlation was calculated in order to determine whether or not the overall subscales and the individual items measure related concepts and to demonstrate whether or not the individual items explain their expected amount of the variance in the subscale scores.

Measurement of internal consistency is one method of demonstrating the validity of an instrument. Fundamentally, procedures for determining test validity are concerned with the relationships between performance on the instrument and other independently observable facts about the behavior characteristics under consideration. Most measures of validity use an independent criterion like another instrument which measures the same behavior or a related behavior (e.g., intelligence tests and achievement tests) or some indices of related behavior like grade point average or actual job performance. Measurement of validity by internal consistency is different from the usual methods of validation because it does not use an external criterion but utilizes instead the test itself as a criterion.

The process used in measuring internal consistency is to correlate scores on individual test items with the overall scores on the test. An instrument is said to possess internal consistency if there is a significant correlation between scores on test items and the overall score on the test. In applying the process of measuring internal consistency to the IDEAS instrument, a variation of the procedure was used. Since IDEAS yields four

subscale scores and no total score for the instrument, the measurement of internal consistency was done by subscale. Correlation coefficients were computed between response items for a particular subscale and the total score on the subscale. A similar use of subscale correlations as a measure of internal consistency has been reported in the literature by Napier (1972) who argues that when the items on an instrument cluster in subsets "an equally reasonable approach" to measurement of internal consistency is to correlate items pertaining to the subsets with summary totals for the subsets (p. 161).

When analyzing the internal consistency of the IDEAS subscale scores, perfect consistency would mean that the individuals responding to the instrument always ranked the response item for a particular subscale in a particular place (e.g., as the "most fair" option). However, with real data, response patterns that exhibit no inconsistencies do not ordinarily occur (Ferguson & Takane, 1989, pp. 457-458). Some variation in selection is expected, but highly inconsistent scores may be an indication that the instrument lacks clarity or construct validity. Of interest then in evaluating the IDEAS instrument is whether or not an item in a subscale accounts for its expected share of the variance in the total subscale score.

To determine the internal consistency of IDEAS, correlations of the item-subscale scores were calculated. These correlations were to be considered significant if they demonstrated that the particular item explained

its share of the variance for the whole subscale. This criterion for significance was based on the assumption that since there are eight items in the subscale, each item should explain at least $1/8$ or 12% of the variance. Since the calculated correlation squared is equal to the amount of variance, an item can be said to explain its share of the variance if the square of the correlation between the item and subscale scores is equal to at least $1/8$ or 12%. In other words, to be considered significant the item-subscale correlation must be equal to or greater than .3464 because .3464 squared is equal to .12 or 12% (Gay, 1987, p. 233).

Test-Retest Procedures

Test-retest procedures were used in this research study to evaluate the reliability of the IDEAS instrument. Reliability refers to the degree to which an instrument consistently measures what it purports to measure. The more reliable an instrument is, the more confident the researcher can be that the scores obtained from an administration of the instrument are essentially the same scores that would be obtained if the instrument were re-administered (Gay, 1987). Thus, an acceptable level of test reliability implies a high degree of confidence in the consistency of measurement.

The test-retest method for establishing reliability involves administering the instrument to a group and retesting the same group after an interval. The instrument is considered reliable according to the degree to which scores on

it are consistent or stable over time. In other words, one way of describing reliability is to determine the degree of consistency between two measures of the same things (Mehrens & Lehmann, 1973, p. 102).

Such a test-retest method was employed in this research to measure the stability of the scores on the IDEAS over time. After the field-testing, the revised form of IDEAS was administered to a group of 36 individuals in a research design class at Montana State University in Bozeman, Montana. The same form of the instrument was re-administered to these individuals after a 14-day interval. The data generated from the test and retest procedures were examined in two ways: (a) to determine if a statistically significant correlation exists between the rankings of the subscales from the test and retest administrations of IDEAS and (b) to determine whether or not differences in ranks from test and retest administrations are statistically significant.

The test-retest data were analyzed by means of the Spearman Rank Order Correlation or Spearman's rho and the Wilcoxon Signed Ranks Test. These statistical techniques were chosen because the assumptions on which these statistics are based are better suited to the nature of the data collected by the IDEAS instrument (Ferguson & Takane, 1989, p. 431). The IDEAS measures the degree of commitment that the respondent has toward using particular principles of justice. The data collected is ordinal in that the respondent ranks the four choices for each of the eight items in the

instrument, indicating the relative weight the respondent gives to three principles of justice and an "other" category. Because the data are ordinal or ranked and demonstrate relationships, rather than fixed intervals, the data were analyzed using nonparametric statistics (Huck, Cormier, & Bounds, 1974, p. 197). While more powerful parametric procedures could be used, the Spearman rho correlation and the Wilcoxon Signed Ranks Test were utilized because they are designed specifically to glean the most accurate information from ranked data. In addition, Spearman rho and Wilcoxon Signed Ranks Test were considered appropriate statistics because they provide profiles and rankings and supply information about consistency of ranking instead of consistency of scores. In analyzing the reliability of IDEAS, what was of interest was the rank of the participants in the group rather than an exact duplication of subscale scores.

Spearman Rank Order Correlation

As a test of correlation, the Spearman Rank Order Correlation compares paired observations to determine whether or not there is a statistically significant relationship between them. The Spearman coefficient takes into account rank as well as the values of the matched pairs. It assumes a value of +1 when the paired ranks are in the same order, a value of -1 when the ranks are in an inverse order, and expected value of 0 when the ranks are arranged at random with respect to each other (Ferguson & Takane, 1989, p. 415).

In this study, the Spearman's rho coefficient was applied to the paired IDEAS test-retest data to test the null hypothesis at the .05 level that no significant relationship exists between the ranking of the principles of fairness between test and retest. If the null hypothesis were to be demonstrated true that would be an indication that the rankings of the principles of fairness from test to retest are dissimilar, and the IDEAS instrument has not produced consistent results. However, if the null hypothesis were demonstrated false and there is a significant correlation between the test and retest results, this would be an indication that the rankings on the test and retest are stable. The IDEAS instrument could then be said to measure the respondents' choices in a consistent manner from test to retest. The Spearman rho test was used, therefore, to demonstrate whether or not the test-retest data were correlated, thus indicating to what degree, if any, the rankings of the IDEAS' subscales might be considered stable from one administration to another.

Of interest in this comparison is whether or not the participants ranked the subscales relative to each other in a consistent fashion from test to retest. IDEAS does not produce a total score; instead it yields a profile of rankings indicating the relative weight that participants place on the utilization of three principles of distributive justice and an other category. If the profiles of the rankings are found to be stable from test to retest, then this is an indication of the level of reliability of the instrument.

However, it is important to keep in mind that statistical significance does not necessarily demonstrate a level of correlation that reaches the generally accepted minimum level for reliability. As Gay (1987) has pointed out, reliability coefficients in the .90s are expected for most tests, though reliability in the low .70s is acceptable for certain kinds of tests like personality measures and attitude scales (p. 234). Anastasi (1976) concurs suggesting that correlation coefficients in the .70s may be acceptable for attitude scales (pp. 109-110). Since IDEAS is an attitude scale, it was expected that the subscales of the instrument should achieve a minimum correlation of .70 in order to be considered reliable.

Wilcoxon Matched-Pairs Signed Ranks Test

The Wilcoxon Matched-Pairs Signed Ranks Test was used to test whether the differences in rankings between test and retest on the subscales of the IDEAS were statistically significant at the .05 level. The Wilcoxon matched-pairs signed-ranks test is a nonparametric alternative to the t test for two related samples (Huck, Cormier, & Bounds, 1974, p. 204). Use of the Wilcoxon requires that the data be at least ordinal and that the samples being compared must be meaningfully related as in a pretest-posttest or test-retest design.

The Wilcoxon makes complete use of the data in ranked pairs in that it takes into account the magnitude as well as the direction of the differences between the pairs. The procedure in applying the Wilcoxon is that the

difference, d , between each pair is calculated. If the two observations in a pair are the same, then $d = 0$ and the pair is deleted from the analysis.

Values of d (the differences between paired scores) may be either positive or negative, but the d s are ranked in two columns without regard to sign; that is, the absolute values are ranked. A rank of 1 is assigned to the smallest d , of 2 to the next smallest, and so forth. If two or more d s are tied, the tied ranks are assigned the mean of the ranks they would have been assigned if they had differed. The sign of the difference d is attached to each rank. If d is positive, the rank is positive; if d is negative, the rank is negative. The null hypothesis is that no statistically significant difference exists between the rankings.

In applying the Wilcoxon to the data from the IDEAS, the differences between each respondent's test and retest scores on each of the four subscales, Hierarchical, Collaborative, Liberal, or Other, were calculated and ranked. $W+$ (number of positive differences times appropriate rank) and $W-$ (number of negative differences times appropriate rank) were computed to obtain critical Wilcoxon T values.

For samples of 5 or larger, the distribution of $W+$ (or $W-$) approaches the normal form. Consequently for samples of 5 or greater, the normal approximation may be used (Ferguson & Taken, 1989, p. 440). Since the test-retest sample included 36 matched pairs, the normal form was assumed,

and z scores were calculated for each Wilcoxon T value and tested for significance using a nondirectional test at the .05 level.

In applying the Wilcoxon to IDEAS scores, the null hypothesis being tested was that no differences exist between the ranked scores on the test and the retest. In evaluating this hypothesis, it is important to take into account the ties which may occur between matched pairs. In other words, if there are tied scores for matched pairs from test to retest, this is an indication that the respondents ranked this item exactly the same both times. The tied scores, therefore, provide valuable information and evidence of consistency in ranking from test to retest. Roscoe (1975) has noted that the Wilcoxon procedure has a weakness because it discards the information about tie scores. However, there is a modification of the Wilcoxon which takes into account the ties (Feldman, Gagnon, Hofmann, and Simpson, 1987, pp. 198-199). Both the traditional Wilcoxon procedure and this modified procedure were used in evaluating the IDEAS data because of the importance of accounting for occasions when the rankings were exactly the same from test to retest.

The usual application of the Wilcoxon is in situations in which it is important to demonstrate a significant difference between the ranking of one set of scores and another matched set. However, in applying the Wilcoxon to the IDEAS scores the desired result is the opposite. Of interest is the substantiation of no significant difference in the rankings. IDEAS is an

instrument which yields no overall score; instead the results consist of a profile of rankings among the four subscales, Hierarchical, Collaborative, Liberal, and Other. Rather than being concerned with the stability of a total score, with IDEAS what is important is the stability of the relative rankings of the subscales. The Wilcoxon test provides information about whether or not the rankings of matched pairs are the same or different. If no difference is found between the rankings of the test and retest results from IDEAS, this is an indication that the rankings are stable and therefore consistent from test to retest. In other words, if there were no significant differences between the rankings from test to retest, the results from the instrument are stable and therefore consistent, thus demonstrating the reliability of the instrument. If, however, significant differences were found in the rankings from test to retest, this would be an indication that the rankings on IDEAS are not consistent from test to retest and the instrument is not reliable.

Summary

The Individual Differences and Equity Attitude Scale is an experimental instrument designed to determine the principles of fairness used by regular classroom teachers in deciding how to distribute the benefits of education among students with varying abilities and needs. The design of the instrument provides a means for linking the items in IDEAS to the literature in

the field of special and regular education and for testing the validity and reliability of the instrument.

During field testing, IDEAS was administered to 204 teacher education students and practicing educators to determine their scores on the four subscales of the instrument, Hierarchical, Collaborative, Liberal, and Other. The chi square procedure was used to determine if such factors as age, gender, years of teaching experience, grade level taught, number of college courses in special education, or having a relative in special education influenced an individual's highest subscale score.

The construct validity of the items in IDEAS were evaluated by a national jury of experts in education, law, and ethics. After the field-testing of IDEAS, 16 participants were interviewed to determine how accurately the instrument's results reflect the thought processes of the respondents and whether or not the scale is accurately identifying the respondent's underlying concepts of fairness. In addition, field-test results were used to determine the internal consistency of the instrument as a further indication of the construct validity of IDEAS.

The content validity of IDEAS was evaluated through pilot testing and review by a national jury of experts. The reliability of the instrument was tested by re-administering the instrument to a group of 36 individuals after a 14-day interval and analyzing the consistency of the test-retest data by correlating subscale rankings using Spearman's rho and by applying the

Wilcoxon Matched-Pairs Signed Ranks Test to determine if there is a statistically significant difference between the ranks of the test and retest subscale scores.

This research has examined the validity and reliability of the IDEAS instrument through jury review, pilot and field-testing, participant interviews, and test-retest procedures. This evaluation process was designed to determine (a) if the IDEAS instrument identifies the relative weight teachers assign to certain principles of fairness in deciding how to distribute educational opportunities and rewards and (b) the degree to which the instrument consistently measures what it purports to measure.

CHAPTER 4

FINDINGS

Introduction

This research evaluated the validity and reliability of the Individual Differences and Equity Attitude Scale (IDEAS), an experimental attitude scale designed to identify the relative weight that classroom teachers place on particular principles of fairness when deciding how to distribute the benefits of education. The findings of tests of validity and reliability on the IDEAS instrument include results of jury review, pilot and field testing, participant interviews, and test-retest procedures.

Overall, measures of the validity and reliability of the IDEAS instrument demonstrated an acceptable level of construct and content validity and moderately consistent results in terms of test reliability. The field-testing conducted with 204 preservice and regular classroom teachers identified 44% of the participants as relying more frequently on a collaborative principle of fairness and 43% as relying on the liberal principle. Only 2% were found to use a hierarchical model and 1% most frequently selected the other category. Of the 204 participants, 20 received tie scores: 16 tied between liberal and

collaborative, 3 tied between liberal and other, and 1 tied between collaborative and other.

Chi Square Analysis of Factors

The chi square procedure was used to determine if age (.6406), gender (.0060), certification (.6635), years of teaching experience (.0047), grade level taught (.1090), number of courses the individual had taken in special education (.4755), and whether or not the individual had a relative in special education (.4929) were related to the principle of fairness ranked highest by the individual. Results of the chi square procedure indicated that none of the actual cell counts differed significantly from expectancy, demonstrating that none of the seven factors tested were related significantly to the principle of fairness given highest ranking by the individual. In other words, those who used a particular principle such as collaborative, for example, did not necessarily come from a particular gender, experience level, grade level taught and so forth. These findings confirm earlier studies (Fanning, 1970; Kinnison, 1972; Overline, 1971) which also concluded that sex, age, and teaching experience alone are not directly related to teacher attitudes toward the concept of mainstreaming students with disabilities.

Construct Validity

The construct validity of the IDEAS instrument was established in three ways. These were (a) through analysis by a national jury of experts; (b) by interviewing participants in the field-testing process to determine if their responses to the scale were reflective of their thought processes concerning fairness, equal educational opportunity, and accommodation of individual differences; and (c) through a test of internal consistency using the field-test results.

Jury Review

The items in the IDEAS instrument were reviewed by a national jury of experts in the fields of teacher education, ethics, and law. These individuals were selected for the Construct Jury because of their recognized expertise in the application of such concepts as equal educational opportunity, accommodation of individual differences, and distributive justice. In the directions provided to them, jury members were asked to consider the eight dilemmas which constitute the instrument and determine if each dilemma poses a question logically related to the constructs of fairness, equal educational opportunity, and accommodation of individual differences as the jury members themselves defined these terms (see Appendix E).

The jury reviewed the IDEAS dilemmas twice. The first group of dilemmas reviewed were in Version 1 of IDEAS and covered the following

range of topics: (a) determining who should be on the honor roll, (b) deciding how to assign grades, (c) deciding whether or not a student who had received special help should be the valedictorian, (d) deciding if an overage student with disabilities should participate in wrestling, (e) deciding how to and whether to include a student with physical disabilities on a field trip, (f) determining what to do when a person with disabilities is refused service in a restaurant, and (g) deciding how to distribute teacher attention in the classroom (see Appendix E).

In the first review, jury members displayed a high degree of dissatisfaction with three dilemmas (Valedictorian, Wrestling, and Restaurant). Jury members felt that the Restaurant dilemma was inappropriate because it did not deal with a classroom situation, and the Valedictorian and Wrestling dilemmas were judged unacceptable because they dealt with issues over which a classroom teacher had no direct control. Per the jury members suggestions, the three inappropriate dilemmas were dropped and replaced with three new dilemmas which focused on classroom issues and situations over which the classroom teacher has some control.

The revised version of the scale, Version 2 of IDEAS, included eight dilemmas, five from Version 1 and three new dilemmas involving the topics of computer access, reactions to inappropriate behavior, and application of discipline policies. The dilemmas in Version 2 all described situations in which the teacher has the power to decide the fair way to distribute the

benefits of education among a whole class of students which includes a student with a disability. The dilemmas involved the following topics in this order: (a) determining who should be on the honor roll, (b) deciding how to assign grades, (c) deciding how to include students on a field trip, (d) deciding how to distribute teacher attention in the classroom, (e) deciding how to apply teacher-designed rules for making up work when a student is absent, (f) deciding who should have access to a computer, (g) deciding how to react to inappropriate behavior on the part of a student with disabilities, and (h) deciding how to apply discipline policies to students with and without disabilities (see Appendix B).

In addition to examining the dilemmas, the Construct Jury was requested to evaluate the four response options for each dilemma and determine (a) if the items were accurate representations of the hypothetical constructs of hierarchical, collaborative, liberal, and other; and (b) if the items were clearly and logically distinct from each other. Table 1 depicts the results of the Construct Jury's second review of the dilemmas and response items in IDEAS.

Overall in considering the validity of the dilemmas, the jury members found the dilemmas to be logically related to constructs of fairness (92.5%), equal educational opportunity (93%), and accommodation of individual differences (97%). Four dilemmas were consistently rated valid with 100% approval ratings, and three dilemmas had an average rating of 90% approval.

Table 1. National Jury Evaluation of Construct Validity of IDEAS Dilemmas and Response Options.

Dilemmas	1		2		3		4		5	
Response Options	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Honor Roll	9	1	8	2	10	0				
1.1 H							10	0	10	0
1.2 O							6	4	5	5
1.3 L							10	0	10	0
1.4 C							5	5	5	5
% Yes							77.5		75	
Grading	10	0	10	0	10	0				
2.1 L							6	4	7	3
2.2 H							10	0	10	0
2.3 O							5	5	6	4
2.4 C							5	5	6	4
% Yes							65		70	
Field Trip	8	2	9	1	9	1				
3.1 O							7	3	9	1
3.2 C							9	1	10	0
3.3 L							10	0	10	0
3.4 H							7	3	10	0
% Yes							82.5		97.5	
Teacher Attention	10	0	10	0	10	0				
4.1 H							10	0	10	0
4.2 C							10	0	10	0
4.3 L							10	0	10	0
4.4 O							7	3	9	1
% Yes							92.5		97.5	
Make-Up Work	10	0	10	0	10	0				
5.1 O							9	1	10	0
5.2 C							10	0	10	0
5.3 H							10	0	10	0
5.4 L							9	1	10	0
% Yes							95		100	

Table 1. Continued.

Dilemmas	1		2		3		4		5	
Response Options	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Computer	9	1	8	2	10	0				
6.1 O							7	3	8	2
6.2 L							10	0	10	0
6.3 C							10	0	10	0
6.4 H							10	0	10	0
% Yes							92.5		95	
Anxiety	8	2	10	0	9	1				
7.1 O							8	2	10	0
7.2 C							10	0	10	0
7.3 L							7	3	10	0
7.4 H							10	0	10	0
% Yes							87.5		100	
Discipline	10	0	10	0	10	0				
8.1 C							10	0	10	0
8.2 O							7	3	10	0
8.3 H							10	0	10	0
8.4 L							10	0	10	0
% Yes							92.5		100	
Total	74	6	75	5	78	2				
% Yes	92.5		93		97					

1. Does the dilemma pose a question logically related to the construct of fairness?
2. Does the dilemma pose a question logically related to equal educational opportunity?
3. Does the dilemma pose a question related to the accommodation of individual differences?
4. Is the response an accurate representation of the principle of fairness indicated?
5. Is the response item clearly and logically distinct from the other response items?

Thus, all eight dilemmas received approval ratings which exceeded the predetermined criterion of 75% approval. The Field Trip Dilemma, which dealt with how to accommodate a student with physical disabilities on a class trip to an inaccessible recycling plant, received the lowest average approval rating (86%). In their written comments, two jury members noted that the Field Trip example appeared less valid because it "stretches the concept of equal educational opportunity" and "muddies the waters by bringing in concerns about physical accessibility of public buildings." Also, one jury member noted that the Field Trip Dilemma did not seem as "educationally important" since it involves an "extra" activity taking place outside of the classroom. Other jurors, however, contended that if field trips are part of the educational program, then they must come under scrutiny for "accessibility, educational value, and fairness of distribution."

Participant Interviews

Sixteen participants in the field-testing were interviewed in depth to determine if their answers on the IDEAS scale reflect their thought processes in regard to underlying constructs of fairness, equal educational opportunity, and accommodation of individual differences. The individuals who were interviewed all scored two standard deviations above the mean on a particular subscale or received tied scores between subscales. The 16 individuals who were interviewed included 3 identified as using a hierarchical principle, 3 using a collaborative principle, 3 using a liberal principle, 2 choosing the category of

other, 3 individuals whose scores showed a tie between liberal and collaborative, 1 with a tie score between liberal and other, and 1 with a tie score between collaborative and other. Only two individuals were interviewed from the other category because only two persons in the field-test group selected that category as their highest subscale.

The participants were given a copy of Dilemma 4 (Teacher Attention), the dilemma with the highest overall approval rating which dealt with the fairest way to distribute teacher attention between a student with disabilities and the other students in the class. The interviewees were also provided with the response options for Dilemma 4 and their answers for that question. Each of the interview participants was asked to reread the dilemma and their responses. The interviewer asked a series of eight open-ended questions and follow-up questions (See Appendix). The mean length of the interviews was 32 minutes with two interviews lasting more than 60 minutes.

The interviews were recorded and transcribed verbatim. Answers to interview Questions 3, 4, 6, 7 and 8 on the verbatim transcripts were then coded by three independent raters who determined whether rationales used by the interviewees fit into the categories of hierarchical, collaborative, liberal, other or were unknown. Looking at all the statements in the verbatim interview transcripts, 51% of the statements could be identified as relating to either the hierarchical, collaborative, or liberal theories or the other category. Of these classifiable statements, 5% were judged to be hierarchical, 3% other,

47% collaborative and 45% liberal. The 49% of the total statements which were not classified into categories related to IDEAS were statements of the following types: (a) overall comments on the instrument, (b) comments on the participants' experiences taking the test, (c) suggestions for improvement of the instrument or the testing process, (d) personal comments or questions, and (e) miscellaneous comments.

Analyzing the interview data for individual participants, the raters identified none of the participants as falling into an "unknown" category. The three raters reached 100 % agreement on the highest category for 10 of the participants. Two of the three raters agreed on a high category for six of the participants. For these six participants where there was 67% agreement on the high category by the raters, five of the six participants had received tied scores on IDEAS and one (#100) had not. Table 2 depicts the ratings of the individual interview results by the three raters.

To determine whether or not IDEAS correctly identified the respondent's personal convictions concerning principles of fairness, the raters' evaluations of the respondents' interview answers in which the interviewees verbalized their rationales for choosing particular solutions to the dilemmas were compared to the highest subscale scores the interviewees achieved on the instrument. This comparison revealed that the highest subscales scores on IDEAS were the same as the category identified for that individual by the raters in 10 of the 16 cases. Participants #94, #159, and

Table 2. Ratings of Interview Results from Interviews with 16 IDEAS Field-Test Participants.

Subscale	Participants	Rater 1	Rater 2	Rater 3	Percent of Agreement
Hierarchical	#94	H	H	H	100
	#159	H	H	H	100
	#172	H	H	H	100
Collaborative	#21	C	C	C	100
	#87	C	C	C	100
	#99	C	C	C	100
Liberal	#75	L	L	L	100
	#100	L	C	L	67
	#126	L	L	L	100
Other	#68	O	O	O	100
	#196	O	O	O	100
Tied					
L/C	#3	L	L	C	67
L/C	#28	C	L	L	67
L/C	#40	C	C	L	67
L/O	#114	L	L	O	67
C/O	#57	C	O	C	67

#172 were identified by the raters as using hierarchical rationales, and these individuals received their highest subscale score on IDEAS on the Hierarchical Subscale. Similarly, participants #21, #87, and #99 were identified by the raters as most frequently using collaborative rationales, and these participants achieved their highest subscale scores on the Collaborative Subscale.

Participants #75 and #126 were identified as using liberal rationales and participants #68 and #196 were identified as using rationales categorized as "other." Participants #75 and #126 achieved their highest subscale on IDEAS

on the Liberal Subscale; and participants #68 and #196 achieved their highest subscale on IDEAS on the Other Subscale. Only with participant #100 was there disagreement between the raters and the actual highest subscale score received. Two of the three raters identified #100 as using liberal rationales, and #100 had the Liberal Subscale as the highest subscale. However, one rater for #100 identified this individual as using collaborative rather than liberal rationales most frequently. In total, the raters' identification of highest subscales matched the actual highest subscale scores for interviewees not receiving tied scores 10 out of 11 times.

For the five interviewees who had received tied scores on IDEAS, all received mixed ratings of their rationales. In every case, the raters identified two rationales for these individuals, and the rationales the raters identified were the same two categories that were tied as highest subscales on IDEAS. For example, for participant #3 two of the raters said this individual used liberal rationales most frequently, and one rater said participant #3 used collaborative rationales most often. Individual #3 received a tied score on IDEAS between the Liberal and Collaborative Subscales. Similarly, in each of the other four cases (#28, #40, #114, and #57) the raters identified two rationales for the individual and these two categories were the same two categories identified in that individual's tied score on IDEAS. Table 3 compares ratings of the interviewees' rationales to their highest subscale scores.

Table 3. Comparison of IDEAS Scores and Interview Rating.

Participant	IDEAS Scores				Interview Rating			
	Hierarchical	Collaborative	Liberal	Other	Hierarchical	Collaborative	Liberal	Other
#94	29	13	13	25	R-1, R-2, R-3			
#159	29	13	13	25	R-1, R-2, R-3			
#172	28	20	16	16	R-1, R-2, R-3			
#21	15	30	19	16		R-1, R-2, R-3		
#87	15	30	21	14		R-1, R-2, R-3		
#99	11	30	25	14		R-1, R-2, R-3		
#75	14	20	30	16			R-1, R-2, R-3	
#100	11	29	30	10		R-2	R-1, R-3	
#126	12	23	30	15			R-1, R-2, R-3	
#68	13	22	20	25				R-1, R-2, R-3
#196	20	17	19	24				R-1, R-2, R-3
#3	12	27	27	14		R-3	R-1, R-2	
#28	12	27	27	14		R-1	R-2, R-3	
#40	9	27	27	17		R-1, R-2	R-3	
#114	14	20	23	23			R-1, R-2	R-3
#57	16	22	20	22		R-1, R-3		R-2

Overall, the ratings of the rationales for the 16 interviewees matched closely with the actual highest subscale or tied subscale scores achieved by the participants on IDEAS. This close match is a strong indication that scores on IDEAS represent a true reflection of the thought processes of the individual's responding to the instrument.

Patterns in the Interview Data

Beyond the frequency data on rationales identified for individual interviewees, the interview data provide substantial additional information about the thought processes of the teachers and prospective teachers who were in the field-test sample. Of interest is the total fabric of the interviews for what it revealed about the values, beliefs, attitudes, and concerns of the teachers interviewed. Analysis of the verbatim transcripts for what Guba (1978) calls "recurring themes" yielded the following 10 major themes or statements of belief:

- Every student should have the opportunity to grow and flourish.
- One student should not be rewarded at the expense of others.
- When resources are scarce (or rationed), it is difficult to decide whether the available resources should go to those who are most in need or those who are most likely to benefit.
- If I had a choice, I would rather that someone else decided how resources should be allocated.

- I have never really thought about the principles I might use in making decisions about how to allocate resources in the classroom.
- I feel pressure to be accountable for my students' achievement and their conduct.
- The real world is not fair; in the real world, accommodations are not made for individual differences.
- The best way to solve problems related to the allocation of resources is to provide more resources.
- I now feel some commitment to model just decision-making.
- I need to talk about my feelings toward accommodating individual differences.

These 10 themes occurred so consistently throughout all 16 interviews that they constituted a recognizable pattern for each individual consisting of these five overarching categories: (a) beliefs about students, (b) uncertainty about teacher roles, (c) discomfort with reflection, (d) pragmatics, and (e) future plans.

Beliefs About Students: Balancing Needs of Individuals and the Class.

In terms of frequency, comments made about the individual worth of students were by far the most common statements in the interviews. In justifying their solutions to the dilemmas, the participants frequently made reference to the value of each student as an individual "of infinite worth," entitled to "respect," "love," and "fulfillment of potential." Also commonly mentioned was the right of every student "to flourish and grow" in the school environment. Particularly

with reference to the students with disabilities mentioned in the dilemmas, the participants emphasized that these students had worth, not based on their accomplishments, but on their existence as human beings. A corollary to this type of statement was the assertion that "there is no acceptable reason for violating the dignity of a child or providing a child a lesser opportunity just because he or she is disabled."

But almost as strong as the comments about individual worth were statements about the "classroom as a community" where everyone is valued and no one is more important than another. Several participants placed emphasis on the need to consider the welfare of the "whole class as well as the welfare of the individual child." Three participants argued strongly that the teacher is also a member of the classroom community, and the teacher's needs have to be considered as well as those of the students. Fourteen of the 16 participants expressed discomfort at visibly rewarding a student with privileges which could not be provided to the other students (e.g., exclusive use of a computer). The same 14 individuals also argued that it was "totally inappropriate" to meet the needs of one student "at the expense of the others." Three individuals suggested that meeting the specific needs of students with disabilities might actually do them harm because of the "backlash" from other students who might be jealous of the special attention.

Fifteen of the sixteen interviewees expressed some discomfort over "what the special education law required them to do" and what they felt was

the "right thing to do." One participant said, "Sometimes I think that the special ed law goes too far in protecting the individual. All the kids should have rights and we should be able to decide for ourselves what to do in each situation." All 16 persons interviewed spoke at least once about having to strike a balance in the classroom between meeting individual needs and "keeping the whole class on an even keel." As one participant put it, "I think we have to be flexible in the way that we follow the special education law. Special ed students need extra help, but other kids do, too. We have to balance every-one's needs and do the best we can to reach all the kids."

In the comments of all the participants interviewed, there was an obvious tension between their desire to meet individual needs and their concern about the class as a whole. The elementary level teachers spoke more often than the secondary level teachers about "having to strike a balance." The secondary teachers (with one exception) seemed to imply that individual needs could only be met within the context of the whatever the whole class might be doing.

Uncertainty About Teacher Roles: Decision-Making and Rationing.

Remarkable in the interview data is the number of references by the participants to their uncertainty about who should decide how accommodations are made in the classroom. On the one hand, most of those interviewed thought teachers had the power to decide about the distribution of teacher attention, but this certainty about teacher's decision-

making powers wavered when faced with the specific dilemma. When confronted with a difficult choice about how to distribute teacher attention, all but one of the teachers said that such decisions should be "made according to a schoolwide policy," "decided by the principal," "up to the school board," or "a responsibility of the whole staff." Two participants said that they were "uncomfortable" in making choices like the ones posed in the dilemma. One teacher said, "I make decisions about these kinds of things every day, but frankly I don't like to think about them too much. I realize that I've probably done some kids a disservice over the years. I don't always think about their individual needs." Another teacher remarked,

I tend to think that the decisions about special education types of kids should be made by someone else who understands them better. I don't want to hurt those kids by making the wrong decision, yet I am uncomfortable at times with giving them special treatment. Frankly, I'd rather have someone else decide so I didn't have to think about it.

Even though the interviewees were not specifically asked about Dilemma 3 (Field Trip) or Dilemma 6 (Computer Access), several of them mentioned these dilemmas as causing them discomfort. In the Field Trip Dilemma the teacher must decide what to do about a planned field trip to a recycling plant which is not handicapped accessible. The teacher has a physically disabled student in the class who cannot participate in the field trip unless special accommodations are made. In the Computer Access dilemma a student who is deaf and blind can participate in regular classroom activities only if he has access to the use of a computer. The computer is noisy and

distracting to other students, and the other students in the class do not have computers to use. The teacher must decide what is fair in terms of providing computer access for the student with disabilities and the rest of the class.

The discomfort that interviewees expressed in relation to the field trip and computer access dilemmas seemed to be derived from feelings about rationing (Computer Access) or denying an opportunity (Field Trip). Eleven of the sixteen interviewed said that they experience rationing of opportunities all the time in their classrooms. Some reported not having enough textbooks or equipment. Most complained about not having enough time to reach every student. Four of the participants were particularly troubled by having to decide whether to provide the opportunity to the student most in need or to the student most likely to succeed. One teacher suggested that "maybe the computer should go to a gifted student," rather than to a deaf-blind student (as in Dilemma 6). "The gifted student," he argued, "is much more likely to be productive and benefit all of society." Two teachers expressed "disgust" at the waste of resources on some special education students "like the deaf-blind boy" who are not likely to benefit. One teacher commented, "I have to say it, but I do get angry when I see some of the special ed kids with things that the other kids don't have and won't ever have. I can't make up the difference. There's no way I can pick up the slack." The fact that resources are often rationed made some of the participants feel as though decisions

were out of their control and subject to whoever had the power to allocate resources like computers and buses for field trips.

Lack of Reflection and Wishful Thinking. All of the individuals interviewed commented repeatedly about how difficult it was for them to think about the dilemmas. Some said, "I really don't like to think about these kinds of things. I usually just let things happen and hope for the best." Others said that they had "never really taken the time to analyze what goes on in the classroom in terms how individuals are treated." One teacher explained:

I don't normally think about what I'm doing in terms of meeting individual needs. We pay a lot of lip service in education to meeting individual needs, but the truth is--at least in my classroom--that I don't think about things much. I'm in the "survival" mode which means I show up and do what I can, depending on my mood and the mood of the kids on a particular day.

Another teacher explained that "it's just not possible or realistic to agonize over what to do for each individual kid. You just react at the moment and hope that your instincts are usually good."

Those interviewed suggest that they normally do little reflecting about how they allocate resources in the classroom. Much more likely than reflection appears to be what might be termed "wishful thinking." All 16 participants mentioned solving one or more of the dilemmas by getting more resources. For example, in commenting on the Teacher Attention Dilemma, seven of the respondents said the teacher should not have to decide which students receive attention and which do not. All the students should receive

the attention they need. To insure enough teacher attention for all the students, teachers "should have a classroom aide" to help. Also some participants recalled Dilemmas 7 and 8 which both involve discipline problems and suggested solving these dilemmas by having an aide to monitor the behavior of the special education student. A common thread in the data is that dilemmas of distribution should not occur because adequate resources should be available. In other words, the problem of how to distribute limited resources should be solved by providing enough resources for everyone.

Pragmatics. At the same time as the participants were engaging in wishful thinking, they also were highly pragmatic. Two respondents suggested "pressure for accountability" might force teachers to ignore the needs of the student with a disability in favor of providing attention to the students who were more likely to be productive and meet academic standards. "There is only so much time to go around," said one teacher. "And you've got to decide how best to spend it." Several respondents also pointed out that making special accommodations in the classroom can be misleading to special education students because "accommodations are not made in the real world." An elementary school teacher suggested that "accommodations have to be made all the way 'round. All the kids have to adjust to each other, and we have to learn to share what we've got. It may not be the best for one particular child, but we can't always 'be best' for everybody."

One teacher argued for accommodations of students with special needs because "in the long run meeting their needs in the regular classroom is cheaper. If those kids can function in the regular class, then they are more likely to be able to do 'regular' things when they grow up." Another teacher commented that providing what was required by law for the special education student was practical because it was probably "easier to comply than to get into some kind of political or legal hassle."

Future Plans. All of the participants who were interviewed indicated that responding to IDEAS was a kind of values clarification exercise for them. Taking the test caused them to think about their values and how they make decisions. The process of responding to the IDEAS test seemed to create an interest in several of the participants in doing more thinking about the issues raised by the test. Seven of the participants said they wished they could have "talked about the test after taking it." Five participants asked if they could have copies of IDEAS to use in their schools, and six asked if they could have their answer sheets and tests to keep. Four individuals suggested that teachers in training should "have a chance to discuss" classroom dilemmas so that they can hear the ideas that others have and learn about solutions that have been tried.

One individual suggested that she was going to give some thought to how she could do a better job of modeling fairness in her classroom. After thinking about the dilemmas, this teacher decided that situations like those in

the dilemmas could provide the teacher with good opportunities for teaching the students about how fair decisions are made. Another individual said he would like to use the dilemmas with his students to see how they would react and what suggestions they would make for solutions.

Internal Consistency

Internal consistency is a method of validation which uses the instrument itself as a criterion. An instrument is said to show internal consistency if each item differentiates in the same direction as the total score. Validation by internal consistency is a common methodology used for evaluating subjective types of tests that measure emotional, motivational, interpersonal, and attitudinal characteristics as distinguished from abilities (Anastasi, 1976). Since IDEAS is an attitude scale yielding subjective and relative data, validation by internal consistency was one of the methods used to establish construct validity. Individual items in each of the subscales were correlated with total subscale scores to see if the items correctly contributed to identifying the characteristics.

It was assumed that since there are eight items in each subscale, each choice should explain at least $1/8$ of the variance (12%). To determine if each individual item was explaining its "expected" share of the variance, each answer was correlated with the total score for a particular subscale. Since the calculated correlation squared is equal to the amount of variance, an item was assumed to explain its share of the variance if the square of the

correlation between the item and subscale scores was equal to at least $1/8$ or 12%. In other words, to be considered significant the item-subscale correlation must have been equal to or greater than .3464 because .3464 squared is equal to .12 or 12% (Gay, 1987, p. 233).

The data collected on the items in IDEAS indicated a high level of internal consistency for the instrument (see Table 4). Of the 32 coefficient correlations, 31 reached the standard of .3464 or greater; thus 31 out of 32 items explained at least 12% of the variance. The only item which failed to reach criterion was the Liberal option in Dilemma 2.

Table 4. Internal Consistency of IDEAS Response Options.

Subscale	Dilemma 1	Dilemma 2	Dilemma 3	Dilemma 4
Hierarchical	.4724*	.6707**	.6091**	.5574**
Collaborative	.5221*	.5766**	.3831**	.6140**
Liberal	.4320**	.2103	.5230**	.5327**
Other	.4146**	.5657**	.4416*	.5606**
Subscale	Dilemma 5	Dilemma 6	Dilemma 7	Dilemma 8
Hierarchical	.6482**	.6197**	.5091**	.5145**
Collaborative	.5084**	.4518**	.5319**	.6125**
Liberal	.5142**	.6244**	.6292**	.5705**
Other	.4689**	.3844**	.5913**	.4854**

Summary of Construct Validity Findings

The construct validity of IDEAS has been established by means of review by a national jury of experts, corroboration through interviews of

field-test participants, and measurement of the internal consistency of the items in the instrument. The Construct Jury found that the eight dilemmas and the response options in IDEAS were logically related to the underlying constructs of fairness, equal educational opportunity, and accommodation of individual differences. The evaluation of the rationales of the field-test participants who were interviewed indicated that their thought processes concerning the IDEAS dilemmas were accurately reflected in the highest subscale scores they received on the IDEAS. Ten out of eleven of the participants' highest subscale scores were the same as those found in the ratings of their rationales. In addition, the 5 interviewees who received tied scores on IDEAS were identified as using rationales reflective of their two highest subscale scores. Further support of the construct validity is the finding that 31 out of 32 of the coefficient correlations computed on the IDEAS items explained their expected share of the variance. Overall, the findings from jury review, participant interviews, and measurement of internal consistency establish construct validity for IDEAS.

Content Validity

Content validity involves the systematic examination of an instrument to determine whether it covers a representative sample of the domain being measured (Gay, 1987, p. 129). The content validity of IDEAS was tested through review by a national jury of experts in special and regular education

and evaluation by 16 field-test participants who were interviewed concerning the contents of the instrument.

Content Jury Review

To determine whether or not IDEAS accurately samples the universe of ideas concerning fairness, equal educational opportunity, and accommodation of individual differences, 11 dilemmas prepared for the instrument were reviewed by the content validity jury comprised of 10 special and regular educators. The content jury members were asked to consider the dilemmas in light of the following questions:

- Does this dilemma reflect situations commonly reported in the literature?
- Does this dilemma reflect situations commonly experienced in the field of special education?
- Does this dilemma center around a significant ethical decision for teachers?
- Does this dilemma juxtapose the needs of the individual against the needs of other individuals in the group?
- Does this dilemma describe a situation in which the teacher has the power to choose a just solution?

The results of the content jury evaluation (see Table 5) show that three dilemmas--Valedictorian (38%), Wrestling (37%), and Restaurant (43%)--were rated low in terms of their sampling validity. The other eight dilemmas

Table 5. Content Jury Rate of Approval of Content Validity of IDEAS Dilemmas.

Dilemmas	1		2		3		4		5		6		Total Yes	Percent Yes
Response	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No		
Honor Roll	5	5	9	1	8	2	10	0	10	0	5	5	47	78
Grading	10	0	10	0	10	0	10	0	10	0	9	1	59	98
Valedictorian	0	10	2	8	2	8	10	0	9	1	0	10	23	38
Wrestling	1	9	3	7	0	10	8	2	10	0	0	10	22	37
Field Trip	8	2	10	0	10	0	10	0	10	0	10	0	58	96
Restaurant	2	8	9	1	0	10	5	5	10	0	0	10	26	43
Teacher Attention	10	0	10	0	9	1	10	0	10	0	10	0	59	98
Make-up Work	8	2	10	0	9	1	10	0	9	1	10	0	56	93
Computer	8	2	7	3	10	0	10	0	10	0	7	3	52	86
Anxiety	8	2	8	2	9	1	9	1	10	0	8	2	52	86
Discipline	10	0	10	0	10	0	9	1	10	0	9	1	58	96

1. Does this dilemma reflect situations commonly reported in the literature?
2. Does this dilemma reflect situations commonly experienced in the field?
3. Does this dilemma reflect a significant ethical decision for teachers?
4. Does this dilemma involve applying principles of distributive justice?
5. Does this dilemma juxtapose the needs of the individual against the needs of the others?
6. Does this dilemma describe a situation in which the teacher has the power to decide?

received approval ratings of 78% or better with the mean approval rating being 91%.

After eliminating the three low scoring dilemmas, a revised version of IDEAS containing the eight approved dilemmas was presented to the Content Jury who were asked to consider the following question: Does this selection of eight dilemmas provide an appropriate cross-section of the significant issues related to just distribution of opportunities and benefits in the regular classroom? Jury members were encouraged to suggest additional dilemmas if they felt there were content areas not covered by the eight dilemmas. Eight out of ten jury members found the group of eight dilemmas in the revised version of IDEAS to be an accurate sampling of the possible decision-making situations which classroom teachers actually face on a regular basis. The two dissenting jury members were not able to supply any additional dilemmas which dealt with new concerns and with situations over which teachers have direct control. Thus, the eight dilemmas in the recommended version of IDEAS (Version IV) all exceeded the predetermined standard of at least 75% approval.

In addition to evaluating the dilemmas in the IDEAS instrument, the Content Jury was also asked to consider the content of the four response items for each dilemma. To evaluate the response items, the Content Jury considered the following questions:

- Does this response option reflect an action commonly reported in the literature?
- Does this response option describe an action within a teacher's power to take?
- Does this response option describe an action which is commonly taken in the field?
- In a logical sense, does this series of four options presented for this dilemma exhaust the universe of possible actions to take? If the universe is not exhausted, what other courses of action might be suggested?

The Content Jury identified five response items as weak: 1.1, 1.4, 2.1, 2.3 and 3.1 (see Table 6). All other response items received at least 73% approval with most receiving approval ratings from 83-96%. The one exception was option 1.3 which received a 50% approval rating. The content of option 1.3 was revised per the comments of the Content Jury and appears in revised form in Version IV of IDEAS (see Appendix B).

The Content Jury had 13 different types of suggestions for additional response items (see Table 7), but there was not a broad consensus among the jury members for additional response options. Most of the suggestions were offered by just one or two individuals with one alternative being offered five times. Some of the suggestions would have denied an opportunity entirely to the student with a disability. Other ideas involved providing an

Table 6. Content Jury Rate of Approval of IDEAS Response Options.

Response	1		2		3		Total Yes	Percent Yes
Options	Yes	No	Yes	No	Yes	No		
1.1	4	6	3	7	7	3	14	46
1.2	8	2	3	7	7	3	22	73
1.3	7	3	7	3	5	5	19	50
1.4	0	10	2	8	2	8	4	13
2.1	1	9	0	1	0	10	1	3
2.2	7	3	10	0	10	0	27	90
2.3	4	6	3	7	2	8	9	30
2.4	7	3	8	2	7	3	22	73
3.1	2	8	3	7	4	6	9	30
3.2	8	2	7	3	7	3	22	73
3.3	7	3	9	1	8	2	24	80
3.4	9	1	10	0	10	0	29	96
4.1	10	0	10	0	9	1	29	96
4.2	7	3	9	1	9	1	25	83
4.3	8	2	8	2	10	0	26	87
4.4	9	1	7	3	9	1	25	83
5.1	10	0	8	2	10	0	28	93
5.2	10	0	9	1	10	0	29	96
5.3	9	1	9	1	8	2	26	86
5.4	8	2	10	0	7	3	25	83
6.1	9	1	10	0	9	1	28	93
6.2	7	3	9	1	9	1	25	83
6.3	9	1	9	1	10	0	28	83
6.4	8	2	8	2	9	1	25	83
7.1	10	0	7	3	8	2	25	83
7.2	9	1	9	1	7	3	25	83
7.3	8	2	9	1	8	2	25	83
7.4	7	3	10	0	8	2	25	83
8.1	10	0	10	0	9	1	29	96
8.2	10	0	10	0	9	1	29	96
8.3	9	1	9	1	10	0	28	93
8.4	8	2	8	2	10	0	26	86

1. Does this option reflect an action commonly reported in the literature?
2. Does this response option describe an action with a teacher's power to take?
3. Does this response option describe an action which is taken in the field?

Table 7. Content Jury Suggestions for Additional IDEAS Response Options.

Dilemma	Response Options	Frequency
Honor Roll	• MB should be placed on a separate honor roll for special education students.	5
	• Special education students should never be allowed on the honor roll.	2
Grading	• FJ should be graded on a pass/fail basis. • FJ should receive separate grades in the resource program and the regular classroom	3
Field Trip	• Students should carry KM into those parts of the recycling facility which are not accessible.	1
	• Students should see a film instead of going on the field trip.	1
Teacher Attention	• LF should learn to self-monitor so that he can keep himself on task.	2
Make-up Work	• PR's make-up assignments should be done at home.	1
	• PR should not have to make up assignments unless she doesn't understand the material.	1
Computer Access	• In these times when all school equipment is rationed, students like RV should get no special privileges. • A computer is an unnecessary crutch so RV should not become dependent on one.	1
Anxiety Attack	• NM should be in a separate special education program where he can get specialized help.	5
Discipline	• SS should be placed in in-school suspension when she misbehaves.	2

alternative opportunity for the student with a disability which was so different from the opportunities afforded to other students that it would have had the effect of excluding or separating the student with a disability. Some of the suggestions placed greater burdens on the student with disabilities than are placed on other students. Two suggestions would have provided the student with disabilities with greater benefits than other students received. None of the additional response items offered by the Content Jury was incorporated into Version IV of IDEAS because the suggestions did not have broad consensus among jury members and because they either (a) did not fit as well into the categories of hierarchical, collaborative, liberal, or other as the existing response options; or (b) called for "harsher" responses than would be acceptable legally or professionally.

Response options 1.1, 1.4, 2.1, 2.3 and 3.1 were revised per the suggestions from the Content Jury and tested on 32 of the 36 individuals who had been involved in the test-retest process. These revised items appear in the final, recommended version of IDEAS (Version IV).

Interviewees' Review of IDEAS Content

Questions 1 and 2 in the interview process asked the participants (a) whether Dilemma 4 (Teacher Attention) is realistic, and (b) whether the response options for this dilemma are realistic. Question 5 asked the respondents if there were additional response options they would have liked to be able to choose in order to resolve this dilemma. All 16 of those

interviewed agreed that the dilemma was realistic, but there was greater variability in the evaluation of the response options. About 30% of the interviewees did not find the response items to be realistic.

In answer to Question 5 about additional choices for response items, interviewees provided five alternatives. The dilemma being considered involves the teacher having to decide how to distribute his or her attention to the students in the classroom. The dilemma poses the question: Is it fair for the teacher to devote so much attention to the student with disabilities that other students are neglected. The response options provided in IDEAS do not allow for expansion of resources, but in answering Question 5 in the interview process, the interviewees wanted to provide the teacher with options that depended on increasing the teacher's resources or reducing the teacher's workload. The most popular alternatives would assist the teacher in responding to the disabled student's individual needs by providing additional adult assistance through a classroom aide or by reducing the teacher's workload by reducing class size (see Table 8). The interviewees suggestions for additional response options for Dilemma 4 (Teacher Attention) were not incorporated into IDEAS because these suggestions called for additional resources and did not deal directly with alternatives related to distributive justice.

Table 8. Field-Test Participants' Responses to Interview Questions 1, 2, 5.

Interviewees	Question 1	Question 2	Question 5	
			Response	Frequency
#94	Yes	No	• Provide the teacher with an aide.	7
#159	Yes	No		
#172	Yes	Yes	• Reduce the size of the class.	4
#21	Yes	Yes		
#87	Yes	Yes	• Keep LF after school to complete assignments.	
#99	Yes	No		
#75	Yes	Yes		
#100	Yes	Yes	• Urge LF's parents to take him to the doctor and get medication.	1
#126	Yes	Yes		
#68	Yes	No		
#196	Yes	Yes	• Give LF shorter assignments	1
#3	Yes	Yes		
#28	Yes	Yes		
#40	Yes	Yes		
#114	Yes	No		
#57	Yes	Yes		

Question 1: Are the IDEAS dilemmas realistic?

Question 2: Are IDEAS response options realistic?

Question 5: Are there additional responses for Dilemma 4 (Teacher Attention) you would have liked to choose?

Summary of Content Validity Findings

Content validity of IDEAS has been established through an extensive review of the dilemmas and response options by a national jury of teacher educators who are experts in either special or regular education. These experts have wide experience with best practices in teaching and are familiar with professional standards for accommodating individual differences in the classroom and the cultural and social values associated with equal educational opportunity and equitable distribution of benefits in the classroom. The Content Jury awarded the eight dilemmas an average approval rating of 91% and the response items an average approval rating of 85%. Overall, the Content Jury found the content of the instrument to be relevant to the universe of ideas being considered and comprehensive in terms of the range of ideas covered. The data from the field-test participant interviews corroborated the Content Jury findings with the interviewees in 100% agreement that the dilemmas presented realistic situations and in 70% agreement the response options presented realistic solutions.

Reliability

The reliability of IDEAS was examined using test-retest methodology. After field-testing, IDEAS was administered to a group of 36 graduate students at Montana State University. The same form of the instrument was re-administered after a 14-day interval. Table 9 shows that 19 of the

Table 9. IDEAS Test-Retest Raw Data.

Participant		Subscales				Highest Subscale
		Hierarchical	Collaborative	Liberal	Other	
1	Test	9	26	24	21	C
	Retest	10	26	28	16	L
2	Test	9	25	29	17	L
	Retest	8	24	29	19	L
3	Test	12	25	22	21	C
	Retest	16	26	23	15	C
4	Test	12	22	26	20	L
	Retest	10	26	24	20	C
5	Test	11	23	26	20	L
	Retest	17	26	24	13	C
6	Test	16	21	22	21	L
	Retest	13	25	22	20	C
7	Test	19	19	26	16	L
	Retest	16	18	26	20	L
8	Test	17	24	23	16	C
	Retest	20	22	21	17	C
9	Test	14	27	20	19	C
	Retest	13	30	18	19	C
10	Test	17	26	23	14	C
	Retest	13	28	25	14	C
11	Test	14	23	21	22	C
	Retest	12	21	29	18	L
12	Test	14	24	27	15	L
	Retest	14	25	27	14	L
13	Test	14	23	25	18	C
	Retest	13	25	24	18	C
14	Test	14	23	25	18	L
	Retest	13	25	24	19	C
15	Test	11	24	26	19	L
	Retest	12	20	29	19	L
16	Test	9	27	25	19	C
	Retest	8	27	25	20	C
17	Test	11	28	20	21	C
	Retest	10	29	19	22	C
18	Test	8	26	25	21	C
	Retest	15	26	23	16	C

Table 9. Continued.

Participant		Subscales				Highest Subscale
		Hierarchical	Collaborative	Liberal	Other	
19	Test	17	23	20	20	C
	Retest	19	20	23	18	L
20	Test	9	22	29	20	L
	Retest	10	21	25	24	L
21	Test	15	25	23	17	C
	Retest	12	26	24	18	C
22	Test	9	30	25	16	C
	Retest	10	30	21	19	C
23	Test	15	22	27	16	L
	Retest	15	23	25	17	L
24	Test	12	27	26	15	C
	Retest	11	22	28	19	L
25	Test	14	21	21	24	O
	Retest	16	20	25	19	L
26	Test	11	26	28	15	L
	Retest	11	27	25	17	C
27	Test	11	22	27	20	L
	Retest	16	20	28	16	L
28	Test	12	25	28	15	L
	Retest	9	28	26	17	C
29	Test	10	28	26	16	C
	Retest	9	27	28	16	L
30	Test	11	25	26	18	L
	Retest	11	24	22	23	C
31	Test	20	22	22	16	C/L
	Retest	19	19	25	17	L
32	Test	11	24	26	19	L
	Retest	12	20	28	20	L
33	Test	14	22	24	20	L
	Retest	13	23	26	18	L
34	Test	8	25	23	24	C
	Retest	9	22	26	23	L
35	Test	14	26	22	18	C
	Retest	11	25	26	18	L
36	Test	12	28	20	20	C
	Retest	13	25	22	20	C

respondents maintained the same subscale as their highest category (10 had Collaborative as their highest subscale and nine had Liberal as the highest subscale) from test to retest. For the 17 individuals who changed their highest subscale score, the relative rankings of the four subscales remained virtually the same even though individual subscale scores varied slightly. Thirty of the 36 participants had the Collaborative and Liberal subscales ranked as either highest or second highest subscale scores on both the test and retest administrations of the instrument. When changes occurred in the highest subscale score, seven of the changes were from Collaborative to Liberal and eight changes were from Liberal to Collaborative. In other words, 30 of the 36 test-retest participants chose either the liberal or collaborative solutions to the dilemmas most of the time, and the respondents were almost equally drawn to the liberal and collaborative solutions. The rankings of liberal and collaborative solutions remained high for most of the participants from test to retest even though there might have been a shift in the highest subscale score.

Overall, 21 of the 144 subscale scores were exactly the same from test to retest. Where differences in subscale scores occurred, the differences were small with the mean difference for Hierarchical being 2.1563, for Collaborative 2, for Liberal 2.4516, and for Other 2.3846. These data could be misleading, however, since group data could mask wide variations for individual respondents.

Spearman Rank Order Correlation

To clarify whether or not the rankings remained stable for individuals from test to retest, the field-test data were analyzed using the Spearman's Coefficient of Rank Correlation. As Table 10 shows, the Spearman correlations (corrected for ties) for the Hierarchical (.63), Collaborative (.67), and Liberal (.46) subscales reached statistical significance at the .05 level. However, the correlation for the Other Subscale failed to reach statistical significance. Using Anastasi's (1976) terminology and standards, the three statistically significant correlations were "moderate" for the Hierarchical and Collaborative subscales, and "low moderate" for the Liberal Subscale (pp. 109-110).

Applying the Pearson product-moment procedure to the same test-retest data also showed stability in the same three areas: Hierarchical (.66), Collaborative (.69), and Liberal (.49), but no stability in the Other Subscale (.33). Examination of scattergrams of the Pearson correlations (Figures 1-4) for the Hierarchical and Collaborative subscales showed a typical distribution of scores corresponding to a positive correlation. The scores clustered close to the regression line; the trend was in the positive direction, though there was a certain amount of scatter for individual entries. The scattergram for the Liberal Subscale showed a weaker positive trend with more "outlying" points and low moderate positive correlation, and the scattergram for the Other Subscale exhibited greater scatter and less clustering about the regression line.

Table 10. Spearman Correlations of Test-Retest Scores on IDEAS Subscales.

Subscale	#X Ties	#Y Ties	Rho	Rho Corrected	Z	Significance	Z Corrected	Significance
Hierarchical	7	9	0.644	0.637	3.808	p = .0001	3.767	p = .0002
Collaborative	8	10	0.675	0.67	3.995	p = .0001	3.966	p = .0001
Liberal	10	8	0.472	0.463	2.792	p = .0052	2.737	p = .0062
Other	8	7	0.284	0.27	1.68	p = .093	1.596	p = .1104

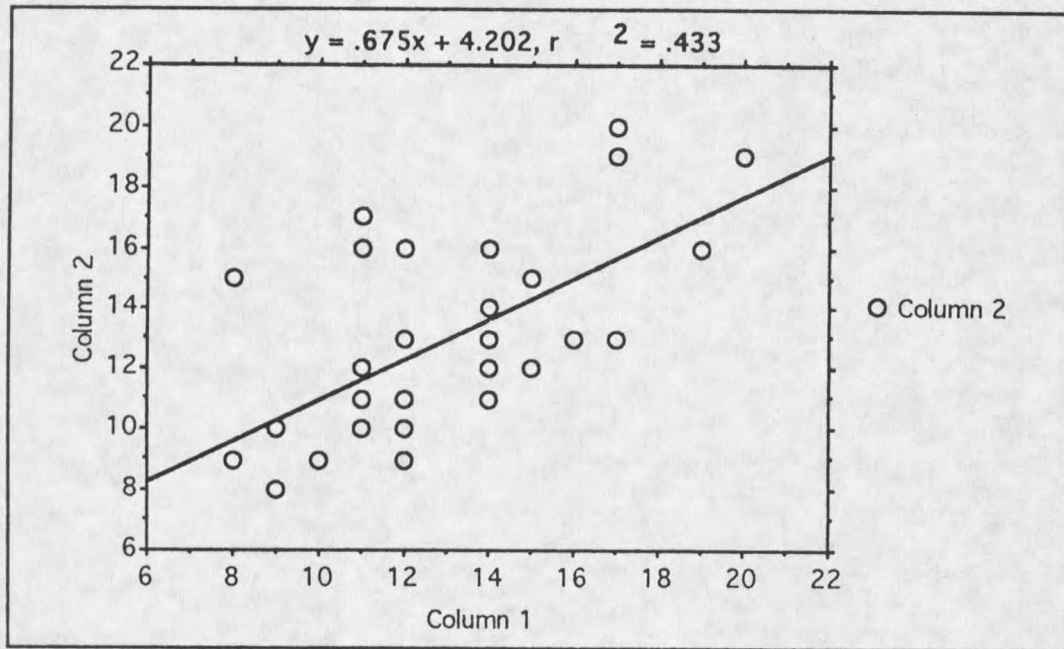


Figure 1. Scattergram of Pearson Correlations Between Test-Retest Data on the Hierarchical Subscale of IDEAS.

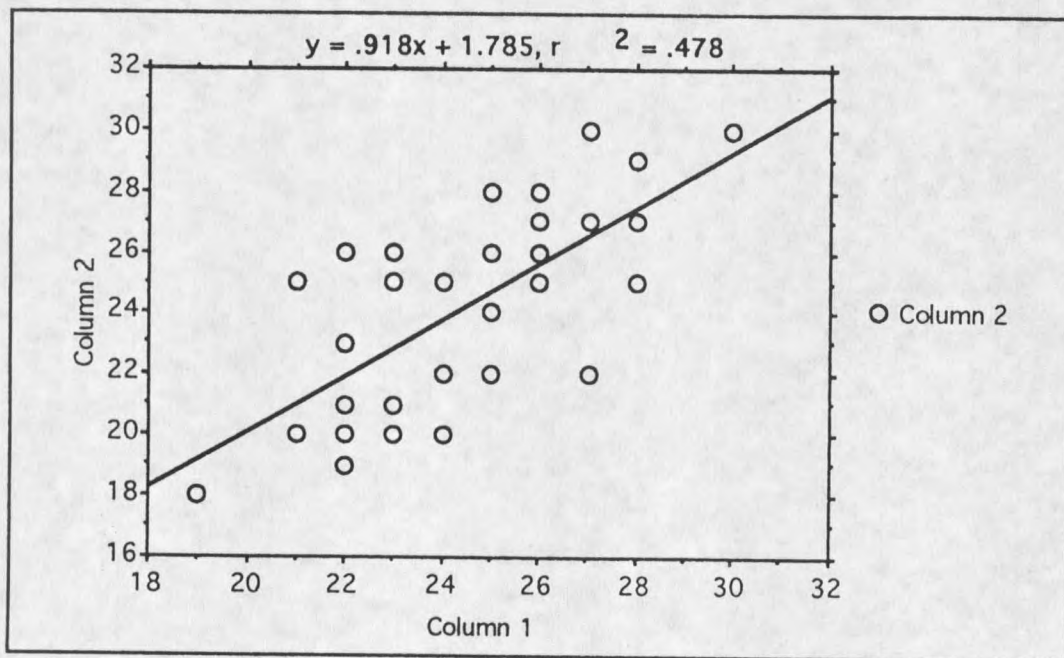


Figure 2. Scattergram of Pearson Correlations Between Test-Retest Data on the Collaborative Subscale of IDEAS.

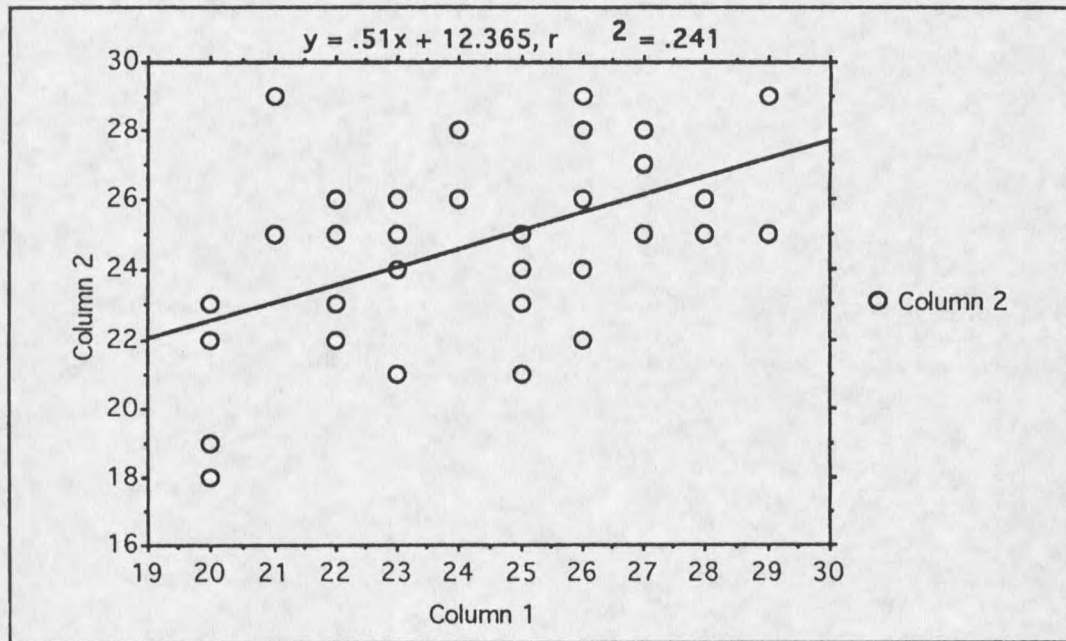


Figure 3. Scattergram of Pearson Correlations Between Test-Retest Data on the Liberal Subscale of IDEAS.

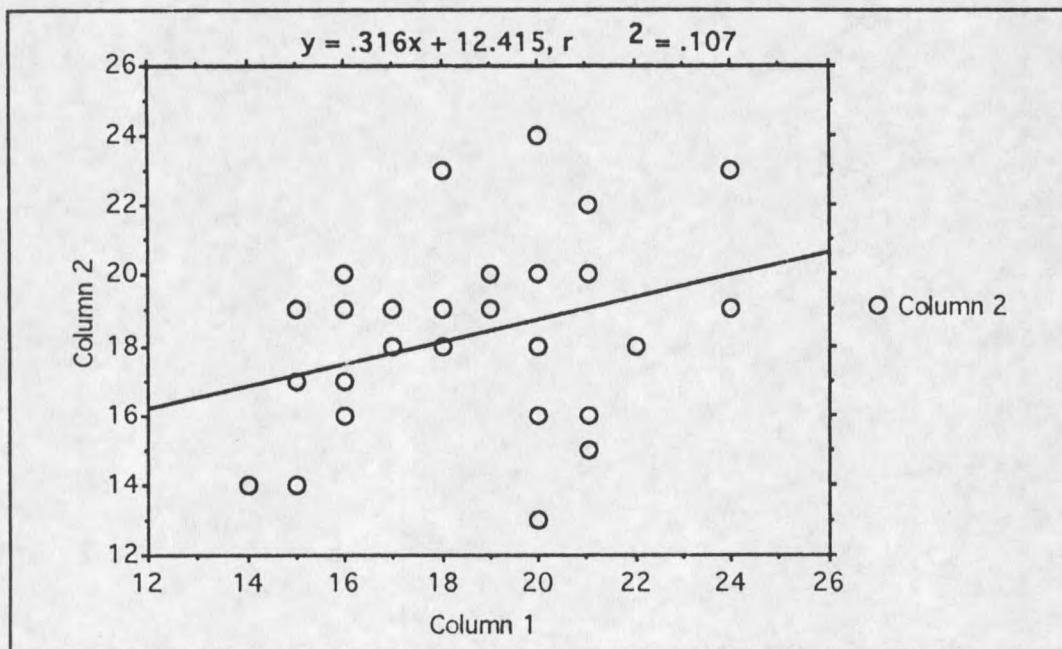


Figure 4. Scattergram of Pearson Correlations Between Test-Retest Data on the Other Subscale of IDEAS.

Even though paired scores for three of the subscales had correlations reaching statistical significance, these correlations were lower than the .70 level which is the generally accepted minimum level for establishing test reliability (Ferguson & Takane, 1989, pp. 476-77). The raw data indicated that shifting in position had occurred in the responses from test to retest. In fact, only 53% of the respondents retained the same highest scoring category on the retest. However, the consistency of the highest scoring subscale was not as important in analyzing the test-retest data as the stability of the overall rankings of the subscales. While the correlations of the subscales did not reach the minimum level for establishing test reliability, the statistically significant Spearman rho correlations and corroborating Pearson correlation data indicated that the ranking of three of the subscales, Hierarchical, Collaborative, and Liberal, was stable from test to retest.

Wilcoxon Signed Ranks Test

Since the IDEAS yields ranked data, another way of examining the level of consistency between the test and retest data was to consider the magnitude of difference in the ranks of the matched pairs of scores and whether those differences were statistically significant. The Wilcoxon Signed Ranks Test was used to test the differences in ranks between test and retest on the subscales of IDEAS. The null hypothesis for this test was that there would be no statistically significant differences at the .05 level between the ranked scores on the test and retest. The usual application of the Wilcoxon

is in situations in which it is important to demonstrate a significant difference between the ranking of one set of scores and another matched set.

However, in applying the Wilcoxon to the IDEAS scores the desired result was the opposite. Of interest was the substantiation of no difference because this would demonstrate a consistency in ranking from test to retest.

Results of the Wilcoxon Test reported in z scores (corrected for ties) showed that for all four subscales -- Hierarchical, Collaborative, Liberal, and Other -- there were no statistically significant differences between rank scores on the subscales (see Table 11). In order to be considered significant the z scores would have had to reach the critical level level of 1.96.

Table 11. Wilcoxon Signed Ranks Test Comparison of Ranks Between IDEAS Test-Retest Data.

	Number	Σ Rank	Mean Rank	Z	Z Corrected
Hierarchical				-0.299	-0.305
- Ranks	14	248	17.714		
+ Ranks	18	280	15.556		
Collaborative				-0.524	-0.530
- Ranks	15	236	15.733		
+ Ranks	17	292	17.176		
Liberal				-0.823	-0.832
- Ranks	17	290	17.059		
+ Ranks	14	206	14.714		
Other				-0.262	-0.264
- Ranks	16	191.5	11.969		
+ Ranks	12	214.5	17.875		

Since none of the z scores reached the critical level of 1.96, there was no evidence to reject the null hypothesis of no difference. In other words, the ranking (relative positions) of the four IDEAS subscales did not differ significantly from test to retest.

Because responses on IDEAS are a forced-choice resulting from the ranking of items, any position change in a subscale causes change in one or more of the other subscales. An absolute consistency of ranking or position is, therefore, highly unlikely. However consistency for individuals in patterns of responding on the subscales is more probable. It is this pattern of responding which has been shown to be consistent by the Wilcoxon Signed Ranks Test data when no statistically significant differences were found in ranks on the subscales from test to retest.

Summary of Reliability Results

The reliability of IDEAS was evaluated using the test-retest procedure. The test-retest data were analyzed using two nonparametric statistics, Spearman Rank Order Correlation and Wilcoxon Signed Ranks Test, which are both designed to describe relationships between pairs of ranked data. The Spearman correlations indicated statistically significant relationships between the rankings on test and retest, but the correlations failed to reach the generally acceptable minimum level of test reliability of .70. However, the stability of the rankings found with the Spearman rho procedure for three of the subscales, Hierarchical, Collaborative, and Liberal, was corroborated by

similar data on the same three subscales using Pearson product-moment correlations. In addition, application of the Wilcoxon Signed Ranks Test to the test-retest data indicated no significant differences in the rankings of all four subscales from test to retest. In other words, the Wilcoxon analysis indicates stability in the rankings of the IDEAS subscales from test to retest.

Potential Uses for IDEAS

The final question in the interview process asked the field-test participants to speculate about whether or not the IDEAS instrument had potential uses in the field of education. All 16 interviewees indicated that they could envision potentially worthwhile activities involving the use of the IDEAS instrument (see Table 12), and they were able to generate a lengthy list of possibilities, including (a) self assessment, (b) preservice and inservice training, and (c) encouragement of discussion by various groups involved in public education. Most of the participants indicated that they personally would like to use the instrument either for their own development, for working with other staff members, or for generating discussion with their students.

Summary

The Individual Differences and Equity Attitude Scale (IDEAS) has been evaluated with several procedures to determine its validity and reliability. Methodologies for determining construct validity indicated that the instrument

Table 12. Field-Test Interviewees' Suggestions for Potential Uses for IDEAS.

Response	Frequency
• To assist individual teachers in clarifying their own thinking and values	16
• To generate discussion in inservice training	15
• To train preservice teachers	15
• To help staffs clarify schoolwide policies concerning classroom resources	14
• To train staff for inclusion	12
• To start a dialogue between special and regular education teachers	9
• To help teachers and parents to mutually set expectations for sharing resources among students in the classroom	7
• To serve as part of the program at a PTA or Parent Advisory Committee meeting	5
• To spark discussion between teachers and administrations about who makes decisions about classroom resources	4
• To generate discussion among students about how classroom resources should be allocated	3
• Use with school Quality Planning Teams	1

is based on underlying constructs of fairness, equal educational opportunity, and accommodation of individual differences and that the items in the instrument are internally consistent. Tests of content validity showed that IDEAS includes an appropriate selection of situations from the possible universe of dilemmas related to fairness and the accommodation of individual differences in the classroom. Further, the response items for each of the eight dilemmas generally appeared to identify an appropriate array of logically distinct options representing the concepts of hierarchical, collaborative, and liberal principles of distributive justice and an other category following no particular principle.

Although strong evidence supporting the validity of IDEAS was demonstrated, reliability data on the instrument were not as conclusive. Test-retest data were analyzed using Spearman Rho correlations and the Wilcoxon Signed Rank Test. Correlations of test-retest scores though statistically significant did not verify a minimal level of reliability of .70 or better (Ferguson & Takane, 1989, pp. 476-77). However, the correlation data for the three subscales representing principles of justice did show a level of reliability well beyond random selection (e.g., .46, .63, and .67). Further evidence for stability in the rankings between test and retest was found when the Wilcoxon Signed Rank Test was applied. Differences in the paired subscale rankings were not determined to be statistically significant, thus indicating that the rankings were similar and stable from one administration to another.

Though test-retest data showed consistency, reliability of the instrument was not definitively established. The instrument has been demonstrated to produce a consistent profile of the respondent's relative preferences for certain principles of justice over others, but the correlations between test and retest data did not reach the generally accepted minimum level.

The overall results of the evaluation of the IDEAS instrument established its validity but indicated that its reliability does not reach generally accepted minimum standards. In addition, the evaluation process raised a number of questions about the nature, value, and potential uses of this measurement tool. The field-test results, which find the majority of the respondents clustered in two categories or achieving tie scores between the same two categories, generated questions about what the instrument is measuring. Data from the participant interviews indicated an enthusiasm for the instrument on the part of those who have used it, yet the interviewees also indicated some difficulty in responding to the items in the scale. The positive results concerning validity and the mixed results in assessing reliability of the IDEAS instrument indicated the need for a thorough analysis and careful interpretation of the possibilities suggested by the data.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The purpose of this research has been to develop and validate an instrument capable of determining the principles of fairness that teachers use in deciding how to distribute the benefits of education and the degree to which teachers see accommodating the special needs of students with disabilities as equitable. Data collected on the Individual Differences and Equity Attitude Scale (IDEAS) through jury review, pilot and field-testing, participant interviews, and test-retest procedures indicate that the instrument has construct and content validity, but fails to reach a generally accepted minimum level of reliability. The instrument does, however, yield information about teachers' attitudes toward accommodation of individual differences of students with disabilities, and, despite its weak reliability, it has potential for use as a self assessment tool, a vehicle for teacher training on core values in public education, and as a stimulus for discussion among individuals and groups with a stake in public education.

Generally, attitude scales have had a reputation for weak validation and "meager" reliability (Anastasi, 1976, p. 547). In fact, Towner (1984) in her

review of the literature on methodologies for measurement of attitudes toward people with disabilities has noted that most attitude research has been conducted with researcher-designed instruments for which no documentation of validity or reliability is provided. Those instruments for which validity and reliability information is supplied (e.g., Attitude Toward Disabled Persons Scale and the Minnesota Teacher Attitude Inventory) show serious deficiencies in validity or reliability or in both (Horne, 1985). The unique and subjective nature of the IDEAS instrument makes it as subject to technical problems as other attitude scales, but its focus on specific components of attitudes (e.g., principles of justice) gives it the advantages Towner (1984) describes as characteristics of better designed instruments; that is, greater clarity of purpose and sharper focus of measurement (p. 254). Field testing and analysis of IDEAS confirm that the instrument measures the concepts it is intended to measure and that it provides revealing information about the thought processes of respondents concerning the distribution of educational benefits and the accommodation of individual differences.

Overall, the data collected on IDEAS are encouraging in terms of the value of further research on the instrument and its potential usefulness as an evaluation tool. The following six general conclusions are supported by the data:

- Factors Influencing Concepts of Fairness. Concepts of fairness are not influenced by such general factors as gender, age, years of

teaching experience, grade levels taught, whether or not the respondent has taken courses in special education, or whether or not the respondent has a relative who receives special education.

- **Construct and Content Validity.** The Individual Differences and Equity Attitude Scale (IDEAS) has credible construct and content validity.
- **Reliability.** Reliability for IDEAS has not been established at the generally accepted minimal level because of a combination of factors related to the nature of the responding mechanism for the instrument and the instability of the respondents' commitment to particular principles of distributive justice.
- **Teachers' Decisions.** Teachers make decisions about the distribution of the benefits of education and the accommodation of individual differences of students with disabilities which are based not on the consistent application of the principles of fairness measured but instead on their personal analysis of the situation on a case-by-case basis.
- **Teachers' Beliefs.** Individual teachers hold conflicting beliefs about what is fair in the distribution of educational benefits and about how to accommodate individual differences of students with disabilities.
- **Potential Uses of IDEAS.** IDEAS has potential uses as (a) an instrument for self analysis, (b) a tool for enhancing preservice and

inservice training concerning the core values of public education, and (c) a vehicle to encourage thinking about and discussion of the accommodation of individual differences by various groups involved in public education.

Conclusions

Factors Influencing Concepts of Fairness

This research tested the relationship between a number of general factors and the choices of principles of fairness that field-test participants made in order to solve the IDEAS dilemmas. It was assumed that such factors as gender, age, years of teaching experience, grade levels taught, number of courses taken in special education, or whether or not the respondent had a relative served by special education might influence how respondents thought educational benefits should be distributed. An analysis of all seven of these factors using the chi square procedure indicated no statistically significant relationship between any of these factors and the respondents' choices of principles of fairness. The interview process revealed instead that the participants were probably influenced in their decision-making less by personal factors and more by the nature of the situation described. The factors which the interviewees described as having the greatest influence on their thinking about the dilemmas included (a) a pragmatic assessment of the resources available, (b) a sense of the specifics of the situation, and (c) a level of confidence in their own freedom to decide.

These factors correspond to ones noted by Jamieson (1984) in her analysis of predictors of success or failure in mainstreaming efforts (p. 219).

Construct and Content Validity

Construct and content validity were tested for the IDEAS instrument using jury review, participant interviews, and statistical analysis of the field-test data. Much of the data supporting validity is subjective because it comes from the judgment of the jury members and from confirmation by the field-test participants who were interviewed. However, these data carry weight since the jury members are all distinguished representatives of the fields of education, special education, law and ethics and because ratings of the interview data from the field-test participants show remarkable consistency in identifying the principles of fairness which make up the instrument. In addition, the analysis of internal consistency also met standards of statistical significance. Overall, the data reveal that the jury members' analyses of the instrument's validity were consistently positive, the presence of the principles of fairness in the thought processes of the participants were confirmed, and the internal consistency of the test items was substantiated statistically, thus leading to the conclusion that the validity of the instrument is credible.

Construct Validity. Construct validity has been one of the weakest technical areas in the development of attitude scales. Towner (1984) has noted in her review of 47 attitude change studies that a significant deficiency

in the instrumentation used is a lack of focus on "specific component(s) of attitudes being examined" (p. 254). According to Towner, attitude scales tend to measure one attribute of an attitude but that attribute is not always clearly defined or discernible. In designing the IDEAS instrument, an attempt was made to provide a clear, logical and focused theoretical framework which is the conceptual basis for every aspect of the instrument. The underlying concepts which form the basis of the instrument are questions of fairness, equal educational opportunity, and accommodation of individual differences. These concepts are undergirded by three alternative theories of distributive justice--hierarchical, collaborative, and liberal.

The conceptual framework of the instrument and its underlying constructs were examined in this study in two ways: (a) through analysis by a national jury of experts and (b) by interviewing participants in the field-testing process to determine if their responses to the scale were reflective of their thought processes concerning fairness, equal educational opportunity, and accommodation of individual differences. In considering the construct validity of IDEAS, members of the Construct Jury considered the dilemmas and the potential solutions both separately and together.

Jury members concluded that the constructs of fairness, equal educational opportunity, and accommodation of individual differences were evident in each of the eight dilemmas in the version of IDEAS selected for the field-testing process. As one jury member put it, "Each of the eight dilemmas

deals with fair treatment, though some dilemmas emphasize access more than fair dealing." Another jury members suggested,

The dilemmas each juxtapose the needs of the individual student against those of each of the other members of the class. Sometimes the issue centers around resources, sometimes around teacher assistance, and other times around access to opportunities or rewards. Still all of the dilemmas focus on individual needs and the limitations on resources and teacher time.

Among jury members, there was 92.5% agreement that the dilemmas pose questions logically related to the underlying construct of fairness, 93% agreement that the dilemmas are related to equal educational opportunity, and 97% agreement that the dilemmas relate to questions of accommodation of individual differences. These data support the conclusion that the IDEAS instrument is valid.

The 16 respondents who were interviewed answered three opened-ended questions concerning the relationship of IDEAS to the underlying constructs of fairness, equal educational opportunity, and accommodation of individual differences. All of those interviewed found that these concepts were evident in the dilemmas. One participant noted that "after finishing the first dilemma, I found myself thinking about 'what is fair' throughout the rest of the test. I think the test really brought out ideas of fairness." Another participant suggested that "the dilemmas did make you think about the rights of the individual versus the rights of the others in the class." Respondents seemed somewhat less clear about the presence of questions of equal educational

opportunity. One of the interviewees commented, "I'm not sure about whether equality is something that you necessarily think about. My responses, anyway, were more practical--based on the situation itself. I wasn't thinking about equality per se."

Construct Jury members seemed to be more aware than the respondents of the questions of equal educational opportunity raised by the dilemmas. For example, one jury member pointed out that "the dilemmas raise questions about what equal educational opportunity means in light of the fact that students are not all equally talented and equally capable of benefitting from education." According to a majority of the jury members, one of the concerns of all the dilemmas is "what is meant by 'equal opportunity' when the students themselves are not equally endowed either mentally or physically."

There was, however, less unanimity among jury members about the logical connections between the response items and the principles of distributive justice they are intended to represent. Agreement of jury members concerning the effectiveness of response items varied from 65% rating to 100%. However, the mean rating was 85% for accurate representation of the categories and 92% for logical distinction, indicating that overall the jury members found the response items to be reflective of the constructs intended and that the constructs were logically distinct from each other.

While basically satisfied with the underlying constructs of the instrument, some jury members pointed what they thought there were inherent problems with the conceptual framework. Two jury members argued that the three categories--liberal, collaborative, and hierarchical--did not necessarily exhaust all the logical possibilities for principles of distributive justice. Other jury members wished to give the categories different titles. Still others would have chosen more, or fewer, categories. Some objected to the "other" category used as a distractor in the instrument, arguing that the other category presents "too many perspectives" and is unnecessary for the effectiveness of the instrument.

However, all the jury members and participants agreed that the conceptual framework which was chosen as the basis for IDEAS is a valid one, though not the only valid one. In addition, given this particular framework, the jury and participants agreed that the response options appeared to be adequate, though some individuals had questions about the quality or wording of individual response items. Overall, jury members indicated that their criticisms of the construct validity of the instrument were minor ones. Despite some reservations, their total analysis of the conceptual framework and underlying concepts in IDEAS indicated that the jury members supported the conclusion that IDEAS has satisfactory construct validity.

In addition to jury review, the construct validity was evaluated through a measure of the internal consistency of the instrument. The item validity of

the IDEAS instrument was tested by computing correlation coefficients between the scores of response options in a subscale and the total subscale score. The correlations were computed on the data from the 32 individuals who responded to Version III of IDEAS which includes the five revised response options. It was assumed that since there are eight items in each subscale, each choice for each subscale explains $1/8$ of the variance (12%). The variance is equal to the correlation squared; thus, individual correlations had to be .3464 or better because .3464 squared equals .12 or 12%.

Thirty-one of the 32 correlations between predictive response options and total scores on a subscale met the criterion of .3464 or better; that is, they explained at least 12% of the variance. With almost all of the response options reaching the established criterion, the IDEAS instrument is internally consistent within its own conceptual framework. However, one response option, the liberal choice in Dilemma 2, still needs refinement.

Content Validity. IDEAS was analyzed for content validity through review by a national jury which was asked to determine how well the instrument samples the total content area it is intended to cover. The national jury agreed that the eight dilemmas used in Version 2 of IDEAS reflected situations commonly reported in the literature and commonly experienced in the field. All eight dilemmas were judged to reflect significant ethical decisions which were in the province of teachers' decision-making. The overall approval ratings for the dilemmas ranged from a low of 78% to a

high of 98% with the mean at 91%. Though jury members could think of other situations that might be included in the instrument, they expressed satisfaction that the eight chosen represented an adequate cross-section of topics and concerns, posing significant ethical questions and illustrating the opportunities that teachers have for making choices related to distributive justice.

In addition to evaluating the content of the dilemmas, the content jury also considered the content of the four response items for each dilemma. All except six of the response options in the Version 2 of IDEAS received at least 75% approval from the Content Jury. However, the jury did identify the following six response items as weak: 1.1, 1.3, 1.4, 2.1, 2.3, and 3.1. After the field-testing was completed and on the Content Jury's recommendation, five of these items (1.1, 1.4, 2.1, and 3.1) were revised and tested with 32 of the original 36 individuals who participated in the test-retest procedure. The results from testing the revised options supported their inclusion in the recommended version of IDEAS. Item 1.3 was revised separately and the revisions approved by the Content Jury. The revised Item 1.3 also appears in the final recommended version of IDEAS (see Appendix B). Inclusion of these revised items in IDEAS must, however, be considered provisional at this point because of their limited testing.

The Content Jury and the 16 individuals interviewed from the field-test population had a number of suggestions for additional response options, but

most of them involved providing additional resources to the classroom. In other words, the suggested responses would have resolved the conflict between providing resources to an individual that could not be provided to the whole group by increasing the supply of resources. For example, if the student with disabilities required a computer and only one computer was available, some jury members suggested getting enough computers for all the students. These types of suggestions were not adapted because the decision to increase the amount of resources is seldom within the province of the classroom teacher to make. Increasing resources would, in some cases, resolve dilemmas of distributive justice, but would not address the realistic situation of rationed resources which is common in American public school classrooms.

Overall, the data supported the conclusion that IDEAS has content validity. Coupled with the data on construct validity, it can be concluded that validity has been established for the IDEAS instrument.

Reliability

Reliability of IDEAS was tested using the test-retest methodology and the data were analyzed using Spearman Rho correlations and Wilcoxon Signed Ranks Test. Statistical analysis of the test-retest data indicated that the correlations between test-retest ranking scores were significant but did not reach the generally accepted minimum level of test reliability (.70). These findings demonstrate that the relative rankings of the four subscales were

consistent (e.g., related to each other) from test to retest, but the correlation did not reach the .70 level. Further analysis of the rankings of the subscales with Wilcoxon Signed Ranks Test revealed no statistically significant difference between the rank scores from test to retest; thus, supporting the conclusion that the rankings of the subscales remained stable (not different) from test to retest.

While the evidence of stability in the rankings of IDEAS subscales from test to retest suggests some consistency of measurement, the data require drawing the conclusion that IDEAS lacks an acceptable level of test reliability. This conclusion is not an unexpected one given the nature of attitude scales in general. Fishbein (1967), Summers (1970), and Anastasi (1976) have all suggested that the establishment of reliability in an instrument which measures attitudes and values presents unique challenges. Whether attitudes expressed in surveys or scales can be regarded as indicators of "real" attitudes has frequently been questioned (Gay, 1987, p. 148). With attitude scales, there is always the danger that, instead of expressing their "true" attitudes, respondents will give answers they think are more socially acceptable. This tendency to answer in a socially acceptable rather than an accurate manner may lead an individual to respond differently from one administration of an instrument to the next. While it is generally accepted in attitude change theory that attitudes are deeply felt beliefs, values and opinions which are not themselves subject to rapid change (Hovland &

Rosenberg, 1960; Insko, 1967; Shaw & Wright, 1967), the public expression of attitudes (e.g., responding to an attitude survey) has been found to be situation specific. In other words, an individual may respond one way on a given day and an entirely different way on another occasion, depending on the circumstances of the situation (LaFave, Haddad, & Marschall, 1974; Mischel, 1968; Peterson, 1968).

Besides the problem with public and private expressions of attitudes, attitude scales are subject to all the other technical problems related to reliability. Reliability can be influenced by a number of factors, including (a) the "learning" which may take place while taking the test, (b) ambiguity in wording of items, (c) conditions of administration, (d) status of the participants at the time of testing, or (e) any combination of these factors. Establishing reliability for attitude scales is, therefore, generally considered to be difficult and often attitude scales are designed and used without any attempt to establish reliability. As Anastasi (1976) has noted, reliability data on attitude scales is generally "meager." Many attitude scales used in attitude change studies are designed specifically for those projects and no data is reported on their reliability (Towner, 1984; Horne, 1985).

In the specific case of the IDEAS instrument, the lower than acceptable level of test reliability is related to two factors: (a) the nature of the response process in the instrument itself, and (b) the instability of the respondents'

commitment to a particular principle of distributive justice due to the ad hoc nature of the respondents' decision-making processes.

IDEAS utilizes a somewhat unusual method of responding which requires the respondent to rank all of the options for each item from the most fair to the least fair. Participants in both the pilot and field-testing described the process of responding to the instrument as "arduous" and complained that the instrument required a high degree of concentration and "took a long time." In the pilot and field-testing, the actual time required to complete the instrument was reasonable, ranging from 20 to 30 minutes, but the respondents described themselves as feeling as though taking the test took a long time because it required so much effort on their part.

Evidence from the participant interviews suggests that respondents concentrated so hard on the instrument because they had difficulty settling on their second and third choices in the ranking. According to the interviews, most fair and least fair choices "come easily," but the other two choices were difficult to make. Commitment to the middle two choices, therefore, was minimal, suggesting that second and third choices in the first administration of the instrument could change in the second. Any change in the second and third ranks then influenced one or more subscales and had a "ripple" effect on the overall results. So a lack of commitment to some of the rank choices contributed to instability in the subscale scores and less than satisfactory reliability.

Another factor influencing the reliability of the data was the instability of the respondents' commitment to a particular principle of distributive justice. The test-retest data support the explanation of ambivalence and lack of specific commitment to principle on the part of respondents. For example, the highest subscale scores of 17 of the 36 participants changed from the first to the second administration of the scale. Thirty of the participants had scores on the collaborative and liberal subscales which were close in value and ranked either first or second. On retest, seven of these individuals switched from collaborative to liberal and eight changed from liberal to collaborative, indicating that perhaps they were (a) drawn to both principles, (b) undecided about which principle to use, or (c) making decisions depending on their view of the situation at the time of testing.

Evidence from the participant interviews indicates that the respondents made decisions concerning the dilemmas on an ad hoc basis. Most interviewees described their decision-making process as being based on how they were feeling at the time. Several indicated that their choices might change from one time to the next, depending on circumstances when they were responding. One participant said, for example: "I've really been thinking about a couple of the dilemmas since I took the test and now I think I would respond differently." When asked if he thought his opinions might continue to change over time, this same individual responded, "Yes, I think I might continue to change. I've never really thought about this kind of stuff

before. I think now that maybe I should think about it. I might change as I go along."

None of the interviewees mentioned using a consistent method for making decisions; none indicated relying on any particular principle as a standard for making choices. Because the respondents had no paradigm for deciding upon their answers, it is not surprising to see that their ranking of choices changes slightly from one administration of the test to the next. Their overall pattern of responding, however, remains fairly consistent as the data from the Wilcoxon Signed Ranks Test indicates.

The less than adequate reliability data on the IDEAS instrument is related to a combination of (a) technical problems with the instrument itself, particularly the use of ranking as a response mechanism, and (b) characteristics of the decision-making process of the respondents. Though the reliability data fail to reach the generally accepted minimum level of .70, there is a consistency in the patterns of responding from one administration to another, indicating that the respondents, though unstable in their commitment to particular principles, generally favor collaborative and liberal solutions over other possibilities.

Teachers' Decisions

Two important assumptions of this research concerned how teachers make decisions about the distribution of educational benefits and the accommodation of individual differences of students with disabilities. One

assumption was that there is a value-laden, moral or ethical component to the judgments that teachers make about how to treat students in the classroom, particularly students with special needs. Certainly, the placement of students with disabilities in the regular classroom is required by law, but teachers have the opportunity to decide how they will comply with the legal requirement. It was assumed that when teachers decide how to respond that an ethical dimension enters their thinking. Any of the three principles of distributive justice, hierarchical, liberal, or collaborative, provides ethical choices for respondents; some of the choices, however, are not in compliance with the law. Only the liberal options are fully compliant with the requirements of special education law.

The second research assumption was that teachers, consciously or unconsciously, adopt some particular method for making their decisions about how to allocate educational resources and accommodate individual differences in the classroom. This method could involve the consistent application of a principle of judgment, a case-by-case type of decision-making, or the deferment of decision-making power to others.

The data collected in the field-testing of IDEAS, participant interviews, and test-retest processes have shed some light on the assumptions of this research and have allowed some conclusions to be drawn about how teachers actually make their decisions. The field-test data indicate that teachers use the collaborative and liberal principles most often and that even

though these principles are quite different in nature, teachers are drawn to them almost equally. The response options in the Liberal subscale directly follow the requirements of special education law. When respondents choose liberal options, they are choosing actions which comply with legal requirements and provide accommodation for the individual with disabilities in a legally acceptable way. When the respondents select the collaborative options, they are choosing actions which take into consideration the welfare of all the students and emphasize sharing and altruism in the classroom but may not comply fully with legal requirements to accommodate the individual with disabilities. Even though the collaborative and liberal options emphasize quite different approaches to distributive justice (e.g., group welfare vs. individual welfare), the data collected in this study indicate that most participants prefer the collaborative and liberal options and that there is a high degree of switching between these principles even though they represent entirely different approaches to fairness.

The interview data confirm the interest in collaborative and liberal choices and a lack of commitment to either principle. During the interviews, all 16 of the field-test participants reported that they were strongly drawn to both the liberal and collaborative choices, and they had a difficult time choosing one over the other. Five of those interviewed indicated that their choice of the liberal or collaborative response would "depend on the situation." They might decide "for the student with the disability" on one

occasion and "for the other kids in the class" on another occasion.

Fourteen of those interviewed indicated they saw the hierarchical choices as least fair, but the other choices all had appeal. Which of the other three options would be chosen at any given time again "depended on the situation."

Though all of the participants used language that indicates they rely on collaborative and liberal principles of justice and to some degree on the hierarchical principle, nowhere in the transcript does any one of the 16 mention or describe a process of decision-making which involves consciously using a particular principle in order to make a decision. Instead, there is repeated mention by the participants of being guided by the situation itself, or, to a lesser degree, of hoping for guidance from some outside source like authority figures (e.g., principal, school board). There are some instances in the transcript in which participants complain about allocating resources in a way that "does not seem fair." The word "fair" is used 247 times in the transcript, but the meaning of the word clearly varies from individual to individual and within the transcript for a particular individual. So, though the participants were concerned about fairness, they did not articulate a consistent definition of fairness or mention any one idea of fairness as a guiding principle for making decisions. Instead the teachers described a process of assessing the particular situation and making a judgment on the merits of the case at the time. Analysis of the interview

data leads to the interpretation that teachers either (a) are using principles in their decision-making which are different from those offered in IDEAS and which they cannot or do not articulate or (b) are making decisions based not on the consistent application of principle but on their analysis of the characteristics of each individual situation. It can be concluded, therefore, on the basis of the IDEAS data that teachers make decisions about the distribution of educational benefits not based on the consistent application of the principles of fairness measured by IDEAS but instead on a case-by-case basis.

Teachers' Beliefs

The data from the field-testing of IDEAS and the participant interviews support the conclusion that individual teachers have beliefs about distributive justice but that they simultaneously hold conflicting beliefs. By far the majority of the field-test participants chose collaborative or liberal solutions for the dilemmas, suggesting perhaps that these solutions might be similar in nature. But the facts are that these alternatives are not similar; they are instead in obvious conflict with each other. For example, in Dilemma 4 (Teacher Attention), the collaborative choice says that the dilemma of how to distribute the teacher's attention between the student with special needs (LF) and other students in the class should be resolved by assigning peer tutors to redirect LF's attention when he becomes distracted, thus freeing the teacher to work with the rest of the class. The

liberal choice for this dilemma suggests that the problem be resolved by having the teacher alone redirect LF's attention. These solutions are obviously not the same; either the teacher must remain responsible for serving LF's needs (while perhaps neglecting the needs of others), or the teacher does not serve LF's needs but rather assigns this task to other students in the class.

These solutions are logically distinct, but teacher respondents do not see it that way. According to the interview data, the respondents are drawn to both solutions and want to implement them both, even though the solutions are incompatible. They want to decide "for the student with the disability" and "for the other kids in the class." The teacher respondents report being uncomfortable with the rationing of educational benefits by choosing either to serve the student with a disability or the needs of the other students in the class. When given the opportunity to suggest other alternatives, the respondents inevitably turn to solutions which involve increasing the resources available so that there is no need for rationing. For example, in the case of limitations on the teacher's attention, the respondents want to put an aide in the classroom so that all the children can receive an appropriate amount of attention from an adult.

Birnbaum (1989) has suggested that in their unexamined state, the attitudes that a person holds may be "loosely coupled" (p. 166); that is, they may be logically inconsistent with one another but the inconsistency goes

unnoticed because the individual does not focus on all of the related beliefs, opinions, and values at once. Teachers seem to have "loosely coupled" beliefs about the distribution of classroom benefits; they want to serve the individual and the group simultaneously and, unless compelled to do so, they do not examine the incompatibility of their beliefs. For example, teachers believe simultaneously that every student should have the opportunity to grow and flourish and that one student should not be rewarded at the expense of others. In situations where it is necessary to compromise one of these beliefs because resources are limited, teachers want to increase resources rather than compromise their beliefs.

Potential Uses for IDEAS

The weak reliability of IDEAS limits its use as a diagnostic tool or an instrument for quantitative research, but it potentially can be an effective tool for qualitative research, self assessment, preservice and inservice training, and encouragement of discussion by various groups involved in public education. The participants who were interviewed about their reactions to the IDEAS instrument indicated that they "enjoyed" the test, found it "interesting to take," and found themselves "thinking about the dilemmas and talking about them with friends" after the testing was completed. It appears that responding to the instrument is a demanding task, but one which stimulates an interest on the part of participants that continues for some time after the scale is completed. Participants who were

asked for suggestions about how IDEAS could be used effectively were able to generate a lengthy list, including clarification of personal values concerning the accommodation of individual differences, the encouragement of reflection by preservice and inservice teachers, and the generation of discussion among special and regular educators, administrators, parents, students and the general public. Several respondents indicated that they would like to have copies of the instrument for their personal use. Many said they were curious about their scores and were interested in their results as a matter of self analysis--to know, in other words, what their answers might tell them about their own values. Others suggested that they would like to use the instrument with their students or with members of their school staffs.

The data, therefore, support the conclusion that there are several less formal potential uses for IDEAS. More formal uses as a diagnostic tool or as an instrument for quantitative research should take into account that the reliability of the instrument is weak.

Recommendations

The preliminary technical analysis of the IDEAS instrument presents a wealth of data, including encouraging results concerning validity, less than optimal reliability results, and interesting corroborating data from participant interviews. Taken altogether, these results have substantiated six conclusions

relating to (a) factors influencing teachers' concepts of fairness, (b) construct and content validity of IDEAS, (c) reliability of IDEAS, (d) teacher's decision-making processes, (e) teachers' beliefs, and (f) potential uses of the IDEAS instrument. These conclusions have generated several recommendations for further analysis, refinement, testing, and use of the instrument.

Factors Influencing Concepts of Fairness

Conclusion: Concepts of fairness are not influenced by such general factors as gender, age, years of teaching experience, grade levels taught, whether or not the respondent has taken courses in special education, or whether or not the respondent has a relative who receives special education.

Recommendation: It is recommended that further analysis be done of teachers' perceptions to determine what aspects of classroom situations have the greatest impact on their decision-making concerning the accommodation of individual differences.

The underlying purpose for assessing teachers' attitudes concerning fair distribution and the accommodation of individual differences is, of course, to use this assessment information to determine how teachers' attitudes can be influenced. It is apparent from data collected using IDEAS

that general factors like gender, age, years of experience and grade levels taught are not critical factors in influencing teachers' choices. Nor does it appear that taking courses (or not taking courses) in special education has an impact. Even having a relative who receives special education does not appear to be influential. Instead the data indicate that teachers are more influenced in their opinions by the situation itself and its characteristics. They mention specifically being swayed by three factors: (a) a pragmatic assessment of the resources available, (b) a sense of the specifics of the situation, and (c) a level of confidence in their own freedom to decide.

In their work integrating students with dual sensory impairments into Vermont schools, Giangreco, Dennis, Cloninger, Edleman, and Schattman (1991) have noted similar findings. Giangreco has discovered that teachers harbor conflicting beliefs about accommodating students with special needs. On the one hand, teachers value the individual disabled student, but on the other hand, they feel threatened by the demands that the disabled student may make. Teachers are concerned that they will be asked to make accommodations which exceed their personal and professional resources. According to Giangreco et al. (1991), no amount of inservice training or advance preparation changes teachers' perceptions (p. 32). Instead what influences them is the situation itself--actually having the child with the disability in the classroom and managing the resources of the class on a daily basis.

In Giangreco's research, 17 of 19 regular classroom teachers who integrated a student with dual sensory impairments into their classrooms described the experience as a positive, even "transforming" experience. By transformation, Giangreco means that teachers experienced increased ownership and involvement with the student with severe disabilities in their classes. Those teachers who experienced a transformation challenged their original expectations for the student with severe disabilities and for themselves. They increased their responsibility for the student's educational program and their personal interaction with the student. The cautious and negative comments used to describe their initial reactions were replaced by such descriptors as, "positive," "good," "successful," "interesting," "amazed," "pleased," "great," "wonderful," and "enjoyment" (Giangreco et al., 1991, pp. 13-14).

In analyzing his data, Giangreco (1991) has raised the question, which has also been raised by this research: What factors about the situation of having a child with a disability in the classroom are "transforming" or attitude changing. Giangreco has suggested that the following situational factors may be influential: shared framework and goals, physical presence of support personnel, validation of the teacher's contribution, and teamwork (p. 19).

Of interest would be some further exploration of the situational factors that influence attitude changes. In this regard, IDEAS could be used to

evaluate groups of teachers who have had the experience of integrating students with truly challenging disabilities into their classrooms and groups of teachers who have not had this experience to see if there are any differences in their choices of principles of distributive justice. Also potentially useful would be an analysis of the teacher's reasoning processes in solving the IDEAS dilemmas. The research questions would center around whether or not actual classroom experience with a student who has significant disabilities influences teachers' thought processes and underlying attitudes and values. Of additional importance would be the situational factors that teachers mention as having had an impact on their decision-making.

Validity

Conclusion: The Individual Differences and Equity Attitude Scale (IDEAS) has credible construct and content validity.

Recommendation: To examine the criterion-related validity of IDEAS by systematically observing teachers to see if their actions in classroom situations reflect the types of behaviors predicted by their scores on IDEAS.

The IDEAS instrument has met standards for both construct and content validity, and the data collected to this point support its use in a number of contexts. Still to be examined, however, is the

criterion-related validity of IDEAS; that is, whether an individual who scores higher on a particular subscale actually shows evidence of using that principle of distributive justice in real situations. Independent studies should be done to examine how scores on IDEAS relate to an individual's performance in situations demanding application of principles of distributive justice.

With a subjective attitudinal scale like IDEAS, it is expected that the correspondence between scores on the scale and respondents' actual behavior will be less direct than the correspondence between, for example, the behavior samples in a road test for a driver's license and actual driving behavior. Nonetheless, the worth of IDEAS as a diagnostic tool can be established through a methodology that demonstrates empirically some significant correspondence between respondents' performances on the scale and in real life teaching situations. The greater the correspondence between the scores on IDEAS (predicted behavior) and actual behavior, the more useful and trustworthy the instrument for diagnostic purposes.

Observing teachers in terms of how they distribute their attention and the other benefits of education presents new challenges for the observer. Though there have been studies which have analyzed how much time teachers devote to disabled and nondisabled students and to students with particular types of disabilities (Brulle et al., 1983; Horne, 1985), there have not been studies which look at the whole spectrum of educational benefits

and how they are distributed in the classroom. It is, however, in this type of broadly focused study that IDEAS may prove to be of particular value.

Reliability

Conclusion: Reliability for IDEAS has not been established at the generally accepted minimum level because of a combination of factors related to the nature of the responding mechanism for the instrument and the instability of the respondents' commitment to particular principles of distributive justice.

Recommendation: To address concerns about reliability of IDEAS, it is recommended that two variations of the response process should be field tested to see if either version is easier for respondents to use and produces more consistent results.

The reliability of scores on the IDEAS instrument is influenced to some degree by the nature of the response mechanism which asks respondents to rank all four response options from most fair to least fair. It has been demonstrated that respondents are more committed to their choices at the extremes (e.g., most fair, least fair) and less committed to the middle two rankings. So greater stability might be achieved in IDEAS scores if the response mechanism were set up differently.

One method of changing the response mechanism, which would make responding a less taxing process and perhaps make the scoring clearer, would be to reduce the number of response options from four to three by eliminating the "other" category and using only the three response options related to the three theories of distributive justice. The resulting patterns of answers might be more clear and consistent than they are in the version of IDEAS that includes the other category as a distractor.

Another approach to improving the response mode is to increase the number of dilemmas from 8 to 10 or 12 and ask the respondent to give only the "most fair" solution (e.g., only one answer) to each dilemma. With more dilemmas and only one solution to be chosen, there should be enough information about the respondents' patterns of selection without the interference of ranking second and third choices to which the respondent has little commitment.

These two revised versions of IDEAS using fewer response options, one version asking the respondents to choose only one "most fair" response and another version asking for a ranking of three rather than four items could be field-tested. Results from field-testing of these new versions could then be compared to data from the original version of IDEAS to see if either of the revised response modes produces more consistent results with less strain on the respondents.

Teachers' Decisions

Conclusion: Teachers make decisions about the distribution of the benefits of education and the accommodation of individual differences of students with disabilities, not based on the consistent application of the principles of fairness measured, but instead on their personal analysis of the situation on a case-by-case basis.

Recommendations: (a) To determine if teachers' decisions can be influenced by instruction and discussion, it is recommended that IDEAS be used in a qualitative research project in which a group of teachers responds to the instrument before and after a period of instruction. (b) To determine if the sample population of teachers is unique in responding to the IDEAS dilemmas on a situational basis rather than consistently using one of the principles in IDEAS, it is recommended that other populations be tested to see if their methods of responding are the same or different.

Teachers responding to IDEAS in the field testing conducted in this research were judged to respond to the IDEAS dilemmas on a situational basis rather than consistently using one of the principles in IDEAS to guide their decision-making. To explore this conclusion further, a study could be

conducted to determine if teachers' methods of responding to IDEAS could be influenced by a process of direct teaching concerning principles of distributive justice and how they might be applied in classroom situations. The study would involve giving a pretest with IDEAS to a group of teachers followed by an educational program consisting of a series of discussion periods in which the teachers have an opportunity to explore with their peers the different approaches to distributive justice (Kohlberg, 1987). After the discussion period, the teachers would respond to the IDEAS instrument again. Then the teachers would be interviewed to allow them to explain any changes which may have occurred in their methods of responding to the IDEAS instrument. Of interest would be any changes in the teachers' IDEAS subscale scores and the rationales the teachers give for the decision-making after the period of instruction.

Another avenue for further research using IDEAS is consideration of whether or not teachers as a group are unique in their approach to the IDEAS dilemmas. Even though IDEAS is intended for use with classroom teachers, it may be useful to learn how other populations respond to the instrument. Would, for example, clergy, politicians, lawyers, doctors, or the general public respond differently from teachers? Would other groups respond on the basis of the principles in IDEAS rather than on the basis of situational characteristics? At this point, it is difficult to speculate how other groups might respond, but patterns of decision-making on IDEAS may differ

among different population samples. Testing other populations could shed light both on the properties of IDEAS and on the original field-testing sample population of teachers.

Teachers' Beliefs

Conclusion: Individual teachers hold conflicting beliefs about what is fair in the distribution of educational benefits and about how to accommodate individual differences of students with disabilities.

Recommendation: To determine if opinions about the accommodation of individual differences of students with disabilities can be influenced, it is recommended that IDEAS be used as a vehicle for making teachers' views about distributive justice explicit and objects for discussion and reflection.

Notable in the information drawn from the field-testing of IDEAS is the conclusion that individual teachers hold conflicting values concerning fairness and the accommodation of individual differences of students with disabilities and that these values are largely unexamined. The interview data suggest that teachers have either not had an opportunity or have not taken the time to reflect upon just how they do make decisions about the distribution of benefits in the classroom. The framework, therefore, that

teachers use for decision-making goes unnoticed or unexamined. If asked why they grade in a certain way or attend to one student more than another, teachers do not have a ready answer (Strike, Haller, & Soltis, 1988). Recent scholarship and debate concerning professionalism in teaching (Bowman, 1989; Goodlad, 1988; Goodlad, Soder, & Sirotnik, 1990; Lieberman, 1988; Schon, 1983, 1987; Scriven, 1988; Sockett, 1989; Soder, 1986, 1988; Soltis, 1987; Strike & Soltis, 1984; Sykes, 1987; Tom, 1986; Zeichner & Liston, 1987) have noted this lack of reflection on the part of practicing teachers. Giroux (1988) has suggested that to be effective teachers ought to be more reflective; that is, they ought to become "transformative intellectuals" who actively examine their teaching practices and the underlying values which influence their behavior. Kohl (1983) has described this type of reflective intellectual in this way:

An intellectual is someone who knows about his or her field, has a wide breadth of knowledge about other aspects of the world, who uses experience to develop theory and questions theory on the basis of further experience. An intellectual is also someone who has the courage to question authority and who refuses to act counter to his or her own experience and judgement. (p. 29)

If teachers were called upon to examine their conflicting values concerning fair distribution of educational benefits and the accommodation of the individual differences of students with disabilities, this more conscious struggle over decision-making might make teachers more aware of the principles they could use. McGuire (1960a) has suggested that, when the

individual is called upon to examine a set of attitudes in close proximity of time, the individual notices the inconsistency and has a tendency to revise the attitude set in the direction of becoming more logically consistent. It is this very process of reconciling inconsistencies which Kohlberg utilized effectively in his attempts to influence moral development through the public discussion of moral dilemmas (Kohlberg, 1987).

Like Kohlberg's moral dilemmas, the IDEAS instrument utilizes a series of classroom dilemmas which raise moral and ethical questions for teachers. As such it is an appropriate vehicle for use in the public debate over fairness and the accommodation of individual differences in public schools. Reflection upon the IDEAS dilemmas and debate concerning their resolution can have the effect of refining teacher's sensibilities and transforming their thinking. In any case, the public debate of the issues which can be sparked by the use of the instrument has the potential for promoting more thoughtful and perhaps better informed classroom decisions.

Potential Uses for IDEAS

Conclusion: IDEAS has potential uses as (a) an evaluative instrument in qualitative research, (b) an instrument for self analysis, (b) a tool for enhancing preservice and inservice training concerning the core values of public education, and (c) a vehicle to encourage thinking about and discussion of the

accommodation of individual differences by various groups involved in public education.

Recommendation: To test the usefulness of IDEAS as an informal values clarification tool, it is recommended that IDEAS be field-tested as a vehicle for (a) qualitative research, (b) self analysis, (c) preservice training, (d) inservice training, (e) school-community analysis and discussion, and (f) classroom analysis and discussion.

The recommended version of IDEAS is now ready for use in variety of ways as an informal tool for values clarification. IDEAS can be utilized by researchers in qualitative research projects, by teachers for self-analysis, by teacher educators as a training exercise in preservice or inservice training, and by a variety of groups interested in distributive justice at the classroom level as vehicle for discussion and analysis.

Qualitative Research. IDEAS is well suited to qualitative research projects which explore teachers' beliefs about mainstreaming and the accommodation of individual differences of students with disabilities. The instrument can be used as a tool for structuring interviews with teachers who are approaching mainstreaming for the first time or who already have students with disabilities in their classrooms. Responding to IDEAS can be a safe way of raising sensitive issues since it allows

participants to explore "neutral" situations not directly related to their own classrooms. In the interview process, responses to IDEAS can be explored in greater depth without putting teachers on the defensive about their own school situations.

IDEAS also can be used in case studies in which detailed profiles are being developed of particular teachers or teacher-student relationships. Responses to IDEAS can serve as the basis for interviews that encourage the subjects of the case studies to reveal information about their decision-making processes and their beliefs and concerns about accommodating individual differences. IDEAS can supply additional data to assist in developing a composite portrait of a classroom or a school in which mainstreaming is taking place. Teachers, students, and other staff members can respond to the IDEAS instrument and then be interviewed concerning their responses in order to create an overall picture of the "climate" in the classroom or school concerning the accommodation of the individual differences of students with disabilities.

Self Analysis. IDEAS has strong potential as a tool for self analysis. The individual who responds to the scale can learn about how his or her responses relate to various principles of distributive justice. Respondents can use this information as a values clarification exercise to determine what underlying values may influence their behavior toward nondisabled and disabled students. Results from IDEAS can provide insight for respondents

into their own notions of fairness. With this knowledge, they can compare their set of values and their understanding of fairness with what is expected of them by school district policies, professional standards, special education law, local customs, and the standards of the community at large.

Awareness of their notions of fairness may be valuable to teachers for their own self-knowledge and for their understanding of themselves in relation to their profession and its role in society. In recent years, teachers have had to become increasingly mindful about whether their behavior in a particular situation might be considered unfair or discriminatory (Stevens & Wood, 1992). Since the 1950s, federal and state courts have taken a much more active role in guiding educational policy at all levels. There is virtually no aspect of a teacher's life today that has gone untouched by court decisions and legislation.

This increase in regulation is certainly true of the guidelines for teachers in their treatment of students with disabilities in the classroom (Osborne, 1992). Expectations of teachers have been spelled out in special education law, regulation, and professional best practices. By analyzing their own core values concerning the just treatment of disabled and nondisabled students, teachers can determine for themselves how much their personal values coincide with legal and professional expectations.

The importance of individual teachers' decisions makes their personal value systems all the more significant. In many ways, teachers are the final

arbiters of how rewards are distributed in society. It is according to the individual teacher's judgment how various minority groups, including students with disabilities, are treated within the classroom and to what degree individual students have access to educational opportunities. The distribution of educational benefits, in turn, determines to a large degree the distribution to individuals of the social and financial rewards in society at large (Stevens & Wood, 1992).

The use of IDEAS as a self analysis tool can assist teachers in understanding their own values and can provide them with insight into how their decisions about accommodating individual differences and providing equal educational opportunity may affect the well-being and potential social and financial status of all their students.

Preservice Training. IDEAS has potential for use with teachers-in-training, particularly as prospective teachers are studying the philosophical and social basis for the teaching profession (Kearney & Durand, 1992). IDEAS can be used as a tool for acquainting students with the concept of distributive justice and for explaining to students the kinds of teacher-made decisions which may have impact on the long-term welfare of students with disabilities and their classmates.

The educational system of the United States to which preservice students are being introduced is based upon a tradition of democracy and its attendant concern for justice. But no matter how much information teachers

receive about the traditions of the American system, beginning teachers still must sort out for themselves what democracy and justice mean in the classroom. In the American style of education, there are inherent tensions between elitism and democracy and between the pursuit of excellence and the provision of equal opportunities for all (Bricker, 1989). Without some preservice preparation for dealing with these tensions, many teachers are thrust into their decision-making role in the classroom with no idea of how to treat students fairly or on what basis to make decisions which are in line with the core values of the American educational system.

There is a need, therefore, for preservice teachers to have the opportunity to learn about the core values of the system and to study their own values as well. IDEAS is a tool which can help prospective teachers examine their values in relation to realistic dilemmas which occur routinely in typical classrooms. In discussion with peers and educational mentors, preservice teachers can learn what is expected of them in terms protecting the rights of minorities, including students with disabilities, and can match those expectations to their own sets of values (Bloom, 1981; Goodlad, 1991, pp. 48-49; Gordon, 1976; Oakes, 1985). Discussing these issues prior to student teaching can give prospective teachers an opportunity to think through issues which might otherwise be daunting for them once they are on their own in the classroom. Thinking about core values in relation to students with disabilities can provide prospective teachers with the opportunity to

clarify their ideas of fairness before they are confronted with difficult decisions and while there are still respected mentors available to them to provide guidance (Goodlad, 1991, pp. 250-256).

In the context of preservice training, IDEAS provides an excellent format for opening dialogue between prospective teachers and professors of teacher education. Through its series of eight dilemmas, IDEAS gives preservice students a chance to apply information about the philosophical foundations of education to practical situations which they are likely to face in the classroom. Responding to IDEAS and discussing the results with peers and mentors provides the education student with an opportunity to see the practical application of such broad concepts as justice, equality, merit, and accommodation of individual differences. Having such discussions can begin the habit of reflection which has been advocated by such educational reformers as Freire (1973), Giroux (1988), and Goodlad (1991), Goodlad, Soder, and Sirotnik (1990), and Su (1989).

Inservice Training. IDEAS has extensive potential as a staff development tool for members of staffs involved in the implementation of mainstreaming (e.g., part-time placement of disabled students in the regular classroom) or full inclusion (e.g., full-time placement of disabled students in the regular classroom) as educational practices. Gottlieb (1980) and others (Fenton, 1975; Glass & Meckler, 1972) have suggested there is value in using discussion as a vehicle for changing attitudes toward persons with disabilities

and inclusion or mainstreaming. The IDEAS instrument is a tool which can be used to spark discussion and provide structure for the outcomes of the discussion.

The dilemmas in the instrument cover topics which are related to mainstreaming and which are potentially difficult and divisive issues for the members of school staffs. When a significant social change like mainstreaming or full inclusion is being contemplated for a particular school, the members of the staff could respond to the IDEAS scale, and then discuss the answers to the dilemmas among themselves. Discussing the IDEAS dilemmas provides some distance from the local situation but also provides a vehicle for discussion of issues which do have local implications. From these discussions could emerge consensus on how to address such problems as fairness in grading, distribution of equipment, distribution of teacher attention and so forth (Giangreco, 1990).

Since all the members of the staff have had the same opportunity to consider the dilemmas as individuals, all start the general discussion with a similar knowledge base and similar set of experiences related to mainstreaming and accommodation of individual differences. In other words, the process of responding to IDEAS gives participants a common experience which provides substance for their subsequent discussion. In addition, the principles of distributive justice which form the underlying conceptual framework of the instrument can also be used to structure the discussion

based on IDEAS. Participants can learn about different concepts of justice and can decide for themselves which principle or principles ought to be applied in their local situations.

With IDEAS as a focal point, staff discussions can be used as a method for building consensus and developing a description of a set of values on which all staff members can agree. With consensus on core values, the implementation of mainstreaming or full inclusion practices can presumably be more smoothly done with less dissension and concern on the part of staff members (Giangreco et al., 1991; Jenkins & Leicester, 1992; Valesky & Hirth, 1992).

School/Community Analysis and Discussion. IDEAS can be used in similar way in community training as it can be used for staff training. Again, if a school district is contemplating more mainstreaming or full inclusion of students with disabilities in regular classrooms, it may be important to build consensus on how students with and without disabilities should be treated in the classroom. One way of building such consensus is to use IDEAS as a values clarification exercise for various school district and community constituencies (e.g., members of the teachers' union, support staff, PTA members, disability organization members, administrators). Each constituency can hold its own sessions to discuss the IDEAS dilemmas and build consensus on solutions. Then some effort can be made to bring the various groups together for a larger discussion and consensus-building

activity. Through this process of (a) testing with IDEAS in small groups, (b) holding small group discussions, (c) developing small group consensus, (d) holding larger group discussion, and (e) building large group consensus, a school district could build broad agreement on how mainstreaming or full inclusion should take place.

The evidence is that the success of the implementation of inclusion policies depends heavily on the preparation of the participants and the degree to which all segments of the school community feel that they have been "heard" and included in the decision-making (Anderson & Milliren, 1983; Benham Tye, 1987; Certo, Haring, & York, 1984; Gartner & Lipsky, 1987; Halvorsen, 1983; Murray-Seegert, 1989). Responding to IDEAS in smaller and then larger groups can help to build that larger consensus through common experiences and opportunities to discuss values and rationales for decisions.

Classroom Analysis and Discussion. IDEAS is an instrument which can be used by young people as well as adults. The instrument is ideal for use with students from grade 5 through high school (Kelker, 1992).

Students can be given the opportunity to respond to the instrument and then a chance to discuss with each other what the most fair course of action would be in each dilemma. These discussions provide students with an opportunity to hear others' notions of what is fair and to argue for their points of view. Students can think about how mainstreaming affects them

personally and about how it affects students who have traditionally not been afforded the same access and benefits as others. Though students are likely to have widely different levels of maturity in their approaches to distributive justice, they can benefit from the opportunity to hear the views of others who may be conceptualizing justice in a quite different ways (Kohlberg, 1984).

Older students can be introduced to the principles of justice which form the conceptual framework for IDEAS. They can learn how basic principles affect specific actions. Most importantly, they can decide for themselves which principles of justice make the most sense to them and which they would like to have applied to themselves and their friends.

Another advantage in students taking the IDEAS test and discussing the dilemmas afterwards is that this process provides students with some insight into their teachers' responsibilities as decision-makers. Students can see for themselves why it may be difficult for a teacher to be "perfectly fair" in his or her treatment of both disabled and nondisabled students. Students can also see how laws and regulations can impinge on decision-making on the local level, in particular in the typical classroom (Strike, 1982).

For students the opportunity to think about classroom dilemmas and then discuss fairness, equal educational opportunity, and accommodation of individual differences is a chance to apply abstract concepts of fairness in situations which are within their own experience. All of them know of

instances in which teachers seem to have acted unfairly by appearing to favor one student or one group over another. Responding to IDEAS and then discussing the dilemmas can help students see how difficult it is to decide what is fair and how other factors enter into decisions about fairness and equal educational opportunity (Benninga, 1988).

Summary

Teachers' attitudes are influential in the process of mainstreaming students with disabilities. They have the legal and professional responsibility for making and monitoring major instructional decisions for all their students, for providing instruction in the normal developmental curriculum, and for seeking using, and coordinating assistance for students who need more intense instruction. Though these responsibilities have always been a part of the teaching role, they have gained greater impetus since the passage of the Education for All Handicapped Children Act in 1975 (Osborne, 1992). Since that time, teachers have been required by both federal and state law to follow Individualized Education Programs (IEPs) of special education students and to make accommodations for their individual differences which may involve modifying assignments, tolerating extra equipment, grading students on a different scale, or using alternative discipline systems. Historically, attitudes of teachers toward mainstreaming and making accommodations for individual differences have been negative (Donaldson, 1980). Numerous attempts have

been made to influence teachers' attitudes in a positive direction with little solid success to report (Horne, 1985).

This research study began with an underlying question concerning why teachers have negative attitudes toward mainstreaming and why they are resistant to following the special education law. It was assumed that part of the resistance might be attributed to teachers' perceptions that their basic concepts of fairness were being violated by being required by the special education law to treat some students differently from others. What has emerged from the research is, however, a much larger question concerning whether or not teachers are being properly equipped to deal with the ethical issues surrounding the implementation of the special education law. John Goodlad and Jeannie Oakes (1988), nationally recognized leaders in teacher education, have suggested that the central question facing American education today is how to offer equal access to knowledge in light of the great variety of individual differences in students. Stanley Deno (1990), a respected leader in the field of special education, has reached a similar conclusion. Deno argues that accommodating individual differences is the central question in public education and that current teaching practices, however sophisticated they may be, still fail to do an acceptable job of meeting individual needs. Deno (1990) suggests that "it is likely that differences in clinical skills of teachers play a significant role in determining the success of individual students" (p. 172).

Teachers' skills in accommodating individual differences are recognized by scholars in both special and regular education as the key element in student success. Part of the teacher's job in accommodating individual needs is making the day-to-day decisions about how to distribute educational benefits in the classroom. Classroom teachers find themselves in the position of applying best practices in teaching and the principles of the special education law in an arena in which resources for all students are limited and in which there are multiple demands on teachers' time, energy, and good will. But teachers report little opportunity for reflection and little ability to prepare themselves for making decisions in this "rationed" environment (Kearney & Durand, 1992).

Zeichner and Liston (1987) in their extensive study of "teaching student teachers to reflect" have reported formidable obstacles to encouraging "reflective teaching" (p. 40). One of their central objectives in their work with student teachers was to build into the student teaching process opportunities for students to contemplate their values and reconcile ethical dilemmas as they occur in real world situations. Zeichner and Liston (1987) have reported some success in reaching their objectives, but they have suggested that a "variety of material and ideological constraints, both within and outside of the program . . . 'work against' the program's stated aspirations" (p. 40).

Making ethical decisions is an everyday demand on teachers' personal resources, yet the evidence from this research is that teachers are not

prepared to meet this demand. Teachers in this study have reported spending little time in reflection and having little basis for their decisions except the circumstances at the time the decision is being made. These findings suggest that an approach to improving teachers' ability to respond to the demands of the special education law and meet the individual needs of students with disabilities may be to build into teacher training both at the preservice and inservice levels opportunities for teachers to reflect upon their values and how those values influence their behavior in the classroom.

The Individual Differences and Equity Attitude Scale (IDEAS) is a new instrument with potential as a tool for assisting teachers with understanding and articulating their own values. IDEAS can be used to open dialogue, cause reflection, and structure self analysis. It is the type of values clarification activity which allows teachers to consider realistic classroom dilemmas and ponder solutions based on recognized principles of distributive justice. This tool could be an asset to preservice training when teachers are preparing to enter the classroom for the first time. It can also be used as a vehicle for opening up discussion between teachers and administrators, between regular and special educators, or among parents, teachers, school board members, and administrators. Any of these types of discussions could be used for airing concerns about mainstreaming, building consensus on local policies for accommodating individual differences, recognizing opposing views, and reconciling differences.

At this point, IDEAS requires further technical refinement. Next steps in refining the instrument should include independent tests of criterion-related validity. Also, important is further revision of the response options and retesting of the instrument's reliability. Until further technical refinement and testing with more populations has taken place, IDEAS should be used with caution in experimental or quantitative research projects. However, the instrument is ready for use in qualitative research and as a tool for self-analysis and for training situations in which there is a need to clarify values and encourage discussion of how values affect a teacher's decisions concerning equity in the classroom.

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APPENDICES

APPENDIX A
IDEAS SCORING PROGRAM

The scoring program for IDEAS was developed by Dr. Gary Conti of the College of Education, Health and Human Development at Montana State University, Bozeman, Montana, in July 1993. This program automatically calculates and sums position scores for each of the four subscales of the Individual Differences and Equity Attitude Scale. The program is available on disk in the DOS format.

```
data list file = 'data.asc'/
  id 1-3 month 4-5 day 6-7 year 8-9 gender 10 certify 11 taught 12
  exper 13 cnt 14-16 career 17-19 training 20-21 relative 22 courses 23
  intervie 24
  at1 to at30 25-54
  a1 b1 c1 d1 a2 b2 c2 d2 a3 b3 c3 d3
  a4 b4 c4 d4 a5 b5 c5 d5 a6 b6 c6 d6 a7 b7 c7 d7 a8 b8 c8 d8 55-86.
  recode a1 to d8 (sysmis = 0).
  missing value month to d8 (0).
  if (a1 = 1) o1a = 4.
  if (a1 = 2) c1a = 4.
  if (a1 = 3) l1a = 4.
  if (a1 = 4) h1a = 4.
  if (b1 = 1) o1b = 3.
  if (b1 = 2) c1b = 3.
  if (b1 = 3) l1b = 3.
  if (b1 = 4) h1b = 3.
  if (c1 = 1) o1c = 2.
  if (c1 = 2) c1c = 2.
  if (c1 = 3) l1c = 2.
  if (c1 = 4) h1c = 2.
  if (d1 = 1) o1d = 1.
  if (d1 = 2) c1d = 1.
  if (d1 = 3) l1d = 1.
  if (d1 = 4) h1d = 1.
  if (a2 = 1) l2a = 4.
  if (a2 = 2) h2a = 4.
  if (a2 = 3) o2a = 4.
  if (a2 = 4) c2a = 4.
  if (b2 = 1) l2b = 3.
  if (b2 = 2) h2b = 3.
  if (b2 = 3) o2b = 3.
  if (b2 = 4) c2b = 3.
  if (c2 = 1) l2c = 2.
  if (c2 = 2) h2c = 2.
  if (c2 = 3) o2c = 2.
  if (c2 = 4) c2c = 2.
  if (d2 = 1) l2d = 1.
```

if (d2 = 2) h2d = 1.
if (d2 = 3) o2d = 1.
if (d2 = 4) c2d = 1.
if (a3 = 1) o3a = 4.
if (a3 = 2) c3a = 4.
if (a3 = 3) l3a = 4.
if (a3 = 4) h3a = 4.
if (b3 = 1) o3b = 3.
if (b3 = 2) c3b = 3.
if (b3 = 3) l3b = 3.
if (b3 = 4) h3b = 3.
if (c3 = 1) o3c = 2.
if (c3 = 2) c3c = 2.
if (c3 = 3) l3c = 2.
if (c3 = 4) h3c = 2.
if (d3 = 1) o3d = 1.
if (d3 = 2) c3d = 1.
if (d3 = 3) l3d = 1.
if (d3 = 4) h3d = 1.
if (a4 = 1) h4a = 4.
if (a4 = 2) c4a = 4.
if (a4 = 3) l4a = 4.
if (a4 = 4) o4a = 4.
if (b4 = 1) h4b = 3.
if (b4 = 2) c4b = 3.
if (b4 = 3) l4b = 3.
if (b4 = 4) o4b = 3.
if (c4 = 1) h4c = 2.
if (c4 = 2) c4c = 2.
if (c4 = 3) l4c = 2.
if (c4 = 4) o4c = 2.
if (d4 = 1) h4d = 1.
if (d4 = 2) c4d = 1.
if (d4 = 3) l4d = 1.
if (d4 = 4) o4d = 1.
if (a5 = 1) o5a = 4.
if (a5 = 2) c5a = 4.
if (a5 = 3) h5a = 4.
if (a5 = 4) l5a = 4.
if (b5 = 1) o5b = 3.
if (b5 = 2) c5b = 3.
if (b5 = 3) h5b = 3.
if (b5 = 4) l5b = 3.
if (c5 = 1) o5c = 2.
if (c5 = 2) c5c = 2.

if (c5 = 3) h5c = 2.
if (c5 = 4) l5c = 2.
if (d5 = 1) o5d = 1.
if (d5 = 2) c5d = 1.
if (d5 = 3) h5d = 1.
if (d5 = 4) l5d = 1.
if (a6 = 1) o6a = 4.
if (a6 = 2) l6a = 4.
if (a6 = 3) c6a = 4.
if (a6 = 4) h6a = 4.
if (b6 = 1) o6b = 3.
if (b6 = 2) l6b = 3.
if (b6 = 3) c6b = 3.
if (b6 = 4) h6b = 3.
if (c6 = 1) o6c = 2.
if (c6 = 2) l6c = 2.
if (c6 = 3) c6c = 2.
if (c6 = 4) h6c = 2.
if (d6 = 1) o6d = 1.
if (d6 = 2) l6d = 1.
if (d6 = 3) c6d = 1.
if (d6 = 4) h6d = 1.
if (a7 = 1) o7a = 4.
if (a7 = 2) c7a = 4.
if (a7 = 3) l7a = 4.
if (a7 = 4) h7a = 4.
if (b7 = 1) o7b = 3.
if (b7 = 2) c7b = 3.
if (b7 = 3) l7b = 3.
if (b7 = 4) h7b = 3.
if (c7 = 1) o7c = 2.
if (c7 = 2) c7c = 2.
if (c7 = 3) l7c = 2.
if (c7 = 4) h7c = 2.
if (d7 = 1) o7d = 1.
if (d7 = 2) c7d = 1.
if (d7 = 3) l7d = 1.
if (d7 = 4) h7d = 1.
if (a8 = 1) c8a = 4.
if (a8 = 2) o8a = 4.
if (a8 = 3) h8a = 4.
if (a8 = 4) l8a = 4.
if (b8 = 1) c8b = 3.
if (b8 = 2) o8b = 3.
if (b8 = 3) h8b = 3.

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if (b8 = 4) l8b = 3.
if (c8 = 1) c8c = 2.
if (c8 = 2) o8c = 2.
if (c8 = 3) h8c = 2.
if (c8 = 4) l8c = 2.
if (d8 = 1) c8d = 1.
if (d8 = 2) o8d = 1.
if (d8 = 3) h8d = 1.
if (d8 = 4) l8d = 1.
recode o1a to l8d (sysmis = 0).
compute hier = value(h1a) + value(h1b) + value(h1c) + value(h1d)
               + value(h2a) + value(h2b) + value(h2c) + value(h2d)
               + value(h3a) + value(h3b) + value(h3c) + value(h3d)
               + value(h4a) + value(h4b) + value(h4c) + value(h4d)
               + value(h5a) + value(h5b) + value(h5c) + value(h5d)
               + value(h6a) + value(h6b) + value(h6c) + value(h6d)
               + value(h7a) + value(h7b) + value(h7c) + value(h7d)
               + value(h8a) + value(h8b) + value(h8c) + value(h8d).
compute coll = value(c1a) + value(c1b) + value(c1c) + value(c1d)
               + value(c2a) + value(c2b) + value(c2c) + value(c2d)
               + value(c3a) + value(c3b) + value(c3c) + value(c3d)
               + value(c4a) + value(c4b) + value(c4c) + value(c4d)
               + value(c5a) + value(c5b) + value(c5c) + value(c5d)
               + value(c6a) + value(c6b) + value(c6c) + value(c6d)
               + value(c7a) + value(c7b) + value(c7c) + value(c7d)
               + value(c8a) + value(c8b) + value(c8c) + value(c8d).
compute liberal = value(l1a) + value(l1b) + value(l1c) + value(l1d)
                  + value(l2a) + value(l2b) + value(l2c) + value(l2d)
                  + value(l3a) + value(l3b) + value(l3c) + value(l3d)
                  + value(l4a) + value(l4b) + value(l4c) + value(l4d)
                  + value(l5a) + value(l5b) + value(l5c) + value(l5d)
                  + value(l6a) + value(l6b) + value(l6c) + value(l6d)
                  + value(l7a) + value(l7b) + value(l7c) + value(l7d)
                  + value(l8a) + value(l8b) + value(l8c) + value(l8d).
compute other = value(o1a) + value(o1b) + value(o1c) + value(o1d)
                + value(o2a) + value(o2b) + value(o2c) + value(o2d)
                + value(o3a) + value(o3b) + value(o3c) + value(o3d)
                + value(o4a) + value(o4b) + value(o4c) + value(o4d)
                + value(o5a) + value(o5b) + value(o5c) + value(o5d)
                + value(o6a) + value(o6b) + value(o6c) + value(o6d)
                + value(o7a) + value(o7b) + value(o7c) + value(o7d)
                + value(o8a) + value(o8b) + value(o8c) + value(o8d).
recode at1 at2 at3 at4 at6 at7 at8 at10 at11 at13 at15 at16 at18 at20
       at21 at26 at27 at28 at30 (1=6)(2=5)(3=4)(4=3)(5=2)(6=1).

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compute atdp = at1 + at2 + at3 + at4 + at5 + at6 + at7 + at8 + at9 + at10 + at11
               + at12 + at13 + at14 + at15 + at16 + at17 + at18 + at19 + at20 + at21 + at22
               + at23 + at24 + at25 + at26 + at27 + at28 + at29 + at30.
compute ch1 = h1a + h1b + h1c + h1d.
compute ch2 = h2a + h2b + h2c + h2d.
compute ch3 = h3a + h3b + h3c + h3d.
compute ch4 = h4a + h4b + h4c + h4d.
compute ch5 = h5a + h5b + h5c + h5d.
compute ch6 = h6a + h6b + h6c + h6d.
compute ch7 = h7a + h7b + h7c + h7d.
compute ch8 = h8a + h8b + h8c + h8d.
compute cc1 = c1a + c1b + c1c + c1d.
compute cc2 = c2a + c2b + c2c + c2d.
compute cc3 = c3a + c3b + c3c + c3d.
compute cc4 = c4a + c4b + c4c + c4d.
compute cc5 = c5a + c5b + c5c + c5d.
compute cc6 = c6a + c6b + c6c + c6d.
compute cc7 = c7a + c7b + c7c + c7d.
compute cc8 = c8a + c8b + c8c + c8d.
compute cl1 = l1a + l1b + l1c + l1d.
compute cl2 = l2a + l2b + l2c + l2d.
compute cl3 = l3a + l3b + l3c + l3d.
compute cl4 = l4a + l4b + l4c + l4d.
compute cl5 = l5a + l5b + l5c + l5d.
compute cl6 = l6a + l6b + l6c + l6d.
compute cl7 = l7a + l7b + l7c + l7d.
compute cl8 = l8a + l8b + l8c + l8d.
compute co1 = o1a + o1b + o1c + o1d.
compute co2 = o2a + o2b + o2c + o2d.
compute co3 = o3a + o3b + o3c + o3d.
compute co4 = o4a + o4b + o4c + o4d.
compute co5 = o5a + o5b + o5c + o5d.
compute co6 = o6a + o6b + o6c + o6d.
compute co7 = o7a + o7b + o7c + o7d.
compute co8 = o8a + o8b + o8c + o8d.
save outfile = 'kathy.out'.
set listing = 'freq.out'.
freq year to intervie atdp hier coll liberal other
  /format = onepage/statistics.
corr hier with ch1 ch2 ch3 ch4 ch5 ch6 ch7 ch8/
  coll with cc1 cc2 cc3 cc4 cc5 cc6 cc7 cc8/
  liberal with cl1 cl2 cl3 cl4 cl5 cl6 cl7 cl8/
  other with co1 co2 co3 co4 co5 co6 co7 co8.
finish.

```

APPENDIX B
VERSIONS OF IDEAS, ANSWER KEY

INDIVIDUAL DIFFERENCES AND EQUITY ATTITUDE SCALE

DEFINITIONS AND ANSWER KEY

For each dilemma, four possible solutions are presented. No solution is considered to be the "right" answer. The scale is being used to determine which, if any, principle of distributive justice the respondent uses in making decisions. Each of the options is based upon a principle of distributive justice which may or may not match an individual's own set of values and beliefs. The principles used in developing the solutions have been designed to exhaust the logical possibilities; that is, all other possibilities are simply variations of these models. The principles are defined as follows:

Hierarchical: Hierarchical solutions assume that the most equitable distribution of benefits is on the basis of some absolute standard of merit or judgment. In other words, the same standard is applied to everyone, regardless of their individual differences. Those who earn the privilege will rise to the top of the hierarchy and receive the benefits that go with their position.

Liberal: Liberal solutions assume that individual differences should be accommodated. The Maximin Principle of the liberal theory of justice is applied; that is, social benefits are arranged so that the least advantaged individual receives the greatest benefit and all have access to the available privileges and opportunities. In the liberal solutions, the individual described as having a disability is assumed to be "disadvantaged" and therefore entitled to compensating greater benefits and access, along with all others, to all available opportunities.

Collaborative: Collaborative solutions involve working out a solution among all the parties in which each individual may be asked to compromise or participate in developing a solution which represents an overall advantage to the whole group. In these solutions, the individual with a disability may have to forego some privilege temporarily, as may other members of the group, in order to bring about an acceptable solution which benefits all. The collaborative model assumes a certain amount of altruism on the part of all group members.

Other: Solutions labeled "other" do not fit into the three categories hierarchical, liberal, or collaborative. They represent instead divergent solutions following no particular pattern. Some may be solutions which are contrary to law; some may suggest ideas which are contrary to practice, untried, or innovative.

CASE STUDY 1: HONOR ROLL

- 1.1 M.B. should be allowed on the honor roll only if she earns the honor by doing the same level of work as the other students who receive the honor.

Hierarchical: This solution implies that M.B. should be judged on an absolute standard, the same one used for all other students.

- 1.2 M.B. should be allowed on the honor roll this time, but the guidelines for the honor roll should be re-written so that it is clear that students receiving special help are not eligible for the honor roll, no matter what grades they earn.

Other: This is a divergent solution which arbitrarily denies the opportunity of being on the honor roll to anyone in special education. In effect, this solution sets up two standards, one for those in regular education and another for those in special education.

- 1.3 M.B. should be allowed on the honor roll because she has met the criteria set by the school for placement on the honor roll.

Liberal: This is the liberal solution because it provides access to the opportunity and it accommodates the individual by allowing her to qualify, even though some of the grades she has earned did not require the same level of accomplishment as her peers.

- 1.4 M.B. and her fellow students should not be compared for purposes of identifying students for the honor roll. There should be no honor roll because it is unfair to compare individuals with differing abilities on an absolute standard.

Collaborative: This is a collaborative solution because all individuals are allowed the benefit of being treated individually (not judged by the same absolute standard) and none is awarded placement on the honor roll.

CASE STUDY 2: GRADING

- 2.1 F.J. should receive letter grades like other students, but his grades should be circled to indicate that they were not achieved in a standard way.

Liberal: This is a liberal solution because F.J. is allowed access to the opportunity (e.g. to receive letter grades), but there is an accommodation, F.J. does not have to do the same work to earn the grades. The difference in accomplishment is indicated by circling the grades.

- 2.2 F.J. should not receive so much assistance; he should earn his grades in the regular classroom by doing the same work in the same way as everyone else.

Hierarchical: This is a hierarchical solution because F.J. would be held to the same standards for receiving grades as the others in his class.

- 2.3 F.J.'s grades should be determined individually on the basis of the level of his achievement in relation to his ability.

Other: This solution represents a divergent way of handling F.J.'s grades. It is similar to the liberal solution in that it represents accommodation, but it is different because it does not mark F.J.'s treatment as different (e.g. his grades would appear to be the same).

- 2.4 The grades for all the children in the fifth grade, including F.J., should be determined on the basis of their individual achievement in relation to their abilities.

Collaborative: This solution is collaborative because all of the students would receive the accommodation, all would be treated individually.

CASE STUDY 3: FIELD TRIP

- 3.1 The teacher should abandon the idea of going on a field trip to the recycling center because it is too difficult to accommodate K.M. The teacher should teach the same learning objectives in another way.

Other: This solution is divergent because it denies the opportunity of going to the recycling center to all the students. It allows the presence of K.M.'s disability to become a barrier for all the students.

This solution is contrary to practice.

- 3.2 K.M. should go with the class to the recycling center and visit those parts of the facility that are accessible. Other students in the class can describe the facility to K.M. and share the information they have learned.

Collaborative: This solution is collaborative because all of the students would be involved in trying to include K.M. on the trip. K.M. would sacrifice some involvement (e.g. she couldn't go to parts of the center), but the other students would sacrifice their time and energy to educate K.M. about the parts that she missed.

- 3.3 The teacher should choose another place to go for the field trip so that K.M. can participate fully.

Liberal: This solution is liberal because the choice of action is driven by a decision to accommodate K.M.'s individual needs, even though this action results in denying a particular opportunity to the rest of the students.

- 3.4 The class should go on the field trip to the recycling center and K.M. should stay at the school and do an alternate assignment on recycling.

Hierarchical: This solution is hierarchical because K.M. is denied an opportunity since she cannot meet the standards for attendance (e.g. she is not physically capable of accessing all of the recycling center). No accommodation is made for K.M.'s individual differences. Instead K.M. must make all of the accommodation herself.

CASE STUDY 4: TEACHER ATTENTION

- 4.1 L.F. should wait his turn for teacher attention just like the rest of the students in his classes. He should receive neither more, nor less, attention than other students.

Hierarchical: This solution is hierarchical because it requires that L.F. receive teacher attention on the same standard as other students. His individual differences are not accommodated.

- 4.2 Each day a different peer tutor should be assigned to redirect L.F.'s attention, so that the teachers are freer to meet the needs of other students who may require assistance that only the teachers can give.

Collaborative: This solution is collaborative because classmates are involved in helping L.F. pay attention and finish his assignments. Classmates must make certain sacrifices in order to help and L.F. sacrifices because he does not receive the exclusive access to teacher attention that he enjoyed previously.

- 4.3 L.F.'s teachers should continue to redirect his attention so that he completes his assignments.

Liberal: This solution is the liberal one because it provides special access to teacher attention for L.F. Since he is disadvantaged by his attention problems, he is compensated by receiving additional teacher assistance.

- 4.4 L.F. should not participate in regular classes until he can meet the standards in regular education for competing work. He should receive training in special education for paying attention and completing assignments.

Other: This solution represents a divergent solution. It is contrary to law because it denies L.F.'s entitlement to participate in the regular classroom with whatever supplementary aids and services may be necessary to help him function.

CASE STUDY 5: MAKE-UP WORK

- 5.1 When she is feeling well, P.R. should come in regularly before school starts and work ahead on her assignments.

Other: This solution requires P.R. to make all of the accommodation herself. She compensates for her disability. This is a divergent solution.

- 5.2 P.R.'s classmates should be assigned on a rotating basis to help her understand assignments she has missed.

Collaborative: This solution is collaborative because classmates are given the responsibility of helping P.R. to make up the work that she misses. Classmates sacrifice their time, and P.R. must rely on fellow students, rather than the teacher for help.

- 5.3 P.R. should be held accountable for the assignments she misses so that she has the opportunity to learn all the same material as the other children. If she cannot complete her work in one year's time, she may have to repeat sixth grade.

Hierarchical: In this solution, P.R. is being held accountable to the same standards as the others in her class.

- 5.4 P.R.'s classroom teacher should pare down P.R.'s assignments to the minimum and do frequent informal checks with P.R. to make sure that she is understanding her school work.

Liberal: This is the liberal solution because the teacher is providing accommodation for P.R.'s individual differences.

CASE STUDY 6: COMPUTER ACCESS

- 6.1 A computer should be purchased for R.V., but he should use it only in the resource room because his set-up is noisy and distracting for others and no one else in regular education has the use of a personal computer.

Other: This is the "other" solution because it is contrary to law. R.V. would be denied a necessary service because of its inconvenience.

- 6.2 A computer should be purchased for R.V. and he should be allowed to use his computer in all his classes.

Liberal: This is the liberal solution because R.V. would be provided an accommodation which enables him to operate in the regular classroom.

- 6.3 A computer should be purchased for R.V., and he and his aide should discuss with his classmates when and how to use his computer so that it is not annoying to others. R.V. should limit his computer use to times and places which are convenient for others.

Collaborative: This is the collaborative solution because R.V. and his classmates would develop a mutually agreed upon accommodation in which R.V. and his classmates would all have to sacrifice something. R.V. could not use his computer all of the time, but his classmates would have to tolerate the computer use some of the time. The classmates would also have to accept the fact that R.V. had the use of a computer and they did not.

- 6.4 A fund should be started by the school district for purchasing computers for the classroom. R.V. should wait like the other students for the time when there is enough money to purchase both a computer for R.V. and a computer for each classroom in the high school.

Hierarchical: This is the hierarchical solution because all involved would be treated in exactly the same way. R.V.'s need for special accommodation would not be recognized. All would have to wait until such time as all could receive the same benefit. This despite the fact that it could be argued that R.V. had greater need for computer use than other students.

CASE STUDY 7: ANXIETY ATTACKS

- 7.1 N.M. should be placed in special education in the afternoon because he cannot manage in the regular classroom unless he has an aide with him.
 Other: This solution is contrary to law because N.M. is entitled under special education law to whatever aids and services he may require in order to function in the regular classroom.
- 7.2 N.M.'s teacher and fellow students should be taught what to do when he gets upset. He should have a special time out space where he can go to calm down. N.M.'s outbursts should be ignored and class should go on as usual.
 Collaborative: This solution requires the cooperation and involvement of N.M.'s teacher and fellow students. To participate this intensively in N.M.'s program requires a degree of altruism on the part of all that are involved.
- 7.3 Regardless of the cost, N.M. should have an aide with him at all times when he is in the regular classroom.
 Liberal: This is a liberal solution because it is based on the concept that N.M. should have whatever aids and services he needs in order to function in the regular classroom.
- 7.4 N.M. should be removed from the classroom when he behaves inappropriately. He should not return until he has learned acceptable behavior.
 Hierarchical: This is a hierarchical solution because it holds N.M. accountable for an absolute standard of behavior.

CASE STUDY 8: DISCIPLINE

- 8.1 S.S. should be told by her teachers and her classmates when her behavior is annoying. She should be given options for helping herself to gain control.
 Collaborative: This is a collaborative solution because S.S.'s classmates and teachers are all to be involved in helping S.S. learn to control her behavior. This solution requires a degree of altruism on the part of the teacher and the classmates.
- 8.2 S. S. should attend special classes until she learns to treat her teachers with respect.
 Other: This solution is contrary to law in that it suggests that S.S. must earn the right to be in the regular classroom.
- 8.3 S.S. should be subject to the regular discipline system of the school and be suspended for her inappropriate behavior.
 Hierarchical: This solution is hierarchical because it suggests that S.S. be held to the same absolute standard that applies to all other students.

8.4 S.S. should be held responsible for a discipline program designed specifically for her.

Liberal: This is a liberal solution because S.S. is being provided an individualized program which accommodates for her disability.

INDIVIDUAL DIFFERENCES AND EQUITY ATTITUDE SCALE DILEMMA REVISIONS

Comments from the Construct and Content Juries and results from the first pilot testing indicated that three of the dilemmas in Version I of IDEAS were not appropriate for the instrument so these three dilemmas were eliminated from the instrument.

Dilemmas Eliminated after Pilot Test 1

CASE STUDY III: VALEDICTORIAN

C.T. and R.J. have achieved the highest grade point average in their senior class. They both qualify, in other words, to be valedictorian of their class. The state awards college scholarships to every valedictorian planning to attend a state college or university. C.T. is a special education student who has taken several subjects in which he has received special education assistance. The school board is reluctant to name C.T. valedictorian because naming him would take away from R.J.'s achievements in the regular program. C.T.'s parents argue that he has earned the same grade point average as R.J. so the two should serve as co-valedictorians.

Faculty and members of the senior class are divided on the issue which threatens to put a damper on the graduation ceremonies.

CASE STUDY IV: WRESTLING

S.W., who is a junior in high school, loves all sports, but wrestling is his specialty. Unfortunately, this wrestling season S.W. is not going to be able to participate. S.W. is already 19 years old and the Athletic Association Rules say that 19 year-old students cannot participate in varsity sports. This rule is to protect younger students from being outmatched by older, more physically mature students. The reason that S.W. is 19 and only a junior in high school is that he was held back twice in elementary school. He had a learning disability, but it was not detected until he was in the fifth grade. Now S.W. is receiving extra help in special education and is doing much better in his studies. S.W. is discouraged, though, because he cannot participate in his favorite sport. Sometimes he thinks about dropping out of school because it seems as though he has nothing to look forward to.

CASE STUDY VI: RESTAURANT

R.N., who is twenty-five, lives in an apartment and has a job as a clerical worker in a government office. R.N. was born without arms. She has learned to do many things for herself--including eating and typing-- by using her feet. For her birthday, some of R.N.'s friends decided to take her out to eat at a nice restaurant. When the food arrived, the waiter came over to R.N. and asked her to leave the restaurant because she was disturbing other diners by eating her meal with her feet.

The Valedictorian, Wrestling, and Restaurant Dilemmas were replaced in Version II (and all subsequent versions) of IDEAS with Computer Access, Anxiety Attacks, and Discipline.

New Dilemmas Appearing in Versions II, III, and IV of IDEAS

CASE STUDY 6: COMPUTER ACCESS

R.V., a tenth grader who is deaf/blind, attends regular classes at Stillwell High School and is assisted by a full time aide/interpreter. Because of his sensory impairments, his level of cognitive functioning has been difficult to determine. Lately, it has been discovered that R.V. can express himself using a computer with a voice synthesizer and braille output. The cost of the computer set-up R.V. needs is several thousand dollars. No other student in R.V.'s high school has access to a computer except in computer classes. Should R.V. be provided computer access?

CASE STUDY 7: ANXIETY ATTACKS

N.M. who is 9 and has autism attends a regular third grade class in his neighborhood school. N.M. has an aide who accompanies him to class in the morning, but she leaves after lunch and N.M. remains in the classroom in the afternoon without the assistance of an aide. Sometimes in the afternoons, N.M. has anxiety attacks and becomes quite upset. He shrieks loudly and flails his arms. Sometimes he knocks over other students or bites someone who may be in his way. N.M.'s classroom teacher has tried everything that she knows how to do to keep N.M. calm at all times. She is worried and nervous that N.M. will really hurt himself or others. Some days very little school work gets done in the third grade in the afternoon. How should N.M.'s anxiety attacks be handled?

CASE STUDY 8: DISCIPLINE

S.S., a ninth grader with a serious emotional illness, attends regular classes at her neighborhood high school. She has average intelligence and is able to do her class assignments without any particular assistance. She does, however, have difficulty dealing with authority figures. She talks back to teachers and sometimes uses inappropriate language. S.S. is frequently sent to the Dean's Office for defying her teachers, being tardy to class or refusing to do her work. She has been in in-school suspension three times. With her next offense, she will be suspended from school for three days. How should S.S.'s behavior be handled?

Version II which contained the three new dilemmas was used in Pilot Test II and in the field testing of IDEAS.

**INDIVIDUAL DIFFERENCES AND EQUITY
ATTITUDE SCALE
(IDEAS)**

VERSION I

by Katharin A. Kelker
Montana State University
Bozeman, Montana

255

Identification Number

Location

Total Score

Date

Note: This version of IDEAS was used in the first pilot testing.

INDIVIDUAL DIFFERENCES AND EQUITY ATTITUDE SCALE

Directions: On the following pages you will find eight case studies dealing with accommodation of individual differences. In each case you will be asked to determine what the fair solution might be to the dilemma presented. The cases describe the conflicting interests of individuals and members of a group. You will be asked to rank solutions to the dilemma from the most fair solution to the least fair solution. A fair solution is one that you think provides for the needs of the individual without jeopardizing the legitimate interests of the other members of the group.

Read the case studies carefully. After each case study, write the number of the statement which you consider to be the most fair solution in the box on your answer sheet marked A, the next most fair solution in the box marked B and so forth until you have placed the last statement in the box marked F. The statement you place in Box F should be the statement you think provides the "least fair" solution to the dilemma. Do not write on this booklet. Place all of your answers on your answer sheet.

Below is an example to try. Read the case study and the statements which follow. Place the number of the statement you consider to be the most fair solution to the dilemma in Box A, the next most fair solution in Box B and so forth until you place the least fair solution in Box F.

Example

The Johnson family is planning a summer vacation, but the members of the family cannot decide where to go. Dad wants to head for the mountains where he can fish in the trout streams. Mom wants to go to the beach so that she can lie in the sand. The six year old twins, Susan and Peter, want to go to an amusement park and ride on the ferris wheel everyday. Grandma Johnson wants to go where there will be peace and quiet.

MOST FAIR				LEAST FAIR	
A	B	C	D	E	F

1. The Johnsons should not go on a vacation because there is no place where all of the family members can do what they would like to do.
2. The Johnsons should choose several vacation locations and draw lots to decide where they will go this year.
3. The Johnsons should vote on where they would like to go on their vacation, and the majority should win.
4. The Johnsons should investigate a quiet vacation location that is within driving distance of streams, a beach and an amusement park.
5. Mr. and Mrs. Johnson should leave Grandma and the children at home and go on a vacation by themselves.
6. Mr. and Mrs. Johnson should leave leave the children at home and take Grandma with them to the seashore.

CASE STUDY I: HONOR ROLL

M. B. is a seventh grader who has mild mental retardation. She spends most of her school day in regular classes, but she goes to the resource room two periods a day for help with reading and math. Morton Middle School which M. B. attends posts an honor roll list each quarter. Students who have B+ averages can get on the honor roll. M. B. gets all A's and B's in her classes, but she is not allowed to be on the honor roll because two of her classes are in special education. The principal says it is not fair for Mary Beth to be on the honor roll because she does not do grade level work in her resource classes. M. B. is disappointed that she can never be on the honor roll and she wonders sometimes whether it is worth it to work hard for good grades if she will never be recognized.

1. There should be a separate, special honor roll for students like M. B. who do well in their special education programs.
2. Students in special education should never be allowed on the honor roll no matter what their grades may be.
3. M. B. should not be allowed on the honor roll unless she earns the honor by doing the same level of work as the other students who receive the honor.
4. M. B. should not be on the honor roll, but she should receive special recognition at the annual awards ceremony.
5. If special education students are allowed on the honor roll, the award loses its meaning so honor roll should be abolished.
6. M. B. should be allowed on the honor roll because she has met the criteria set by the school for placement on the honor roll.

CASE STUDY II: GRADING

F.J. is a fifth grader who has learning disabilities. F.J. gets some help with reading in the resource room, but most of the time he is in the regular classroom. Occasionally, his regular classroom teacher modifies assignments for him because he has trouble reading the directions. Sometimes F.J. uses taped books, and he takes most of his tests orally. For most of his written work, F.J. uses the computer. With the extra help he receives, F.J. is able to make excellent grades in school. Some of his classmates, however, resent the fact that F.J. gets so much help. They think it is unfair for him to get good grades, when they have to do harder work and they do not get any special help from the teacher. F.J.'s classmates think that he should receive no grade higher than a C if he has received special help.

7. **F.J. should receive letter grades like other students, but his grades should be circled to indicate that they were not achieved in the standard way.**
8. **F.J. should be graded the same way as other students, and he should not be given lower grades because he receives extra help.**
9. **F.J. should not receive letter grades like the other students in fifth grade; instead he should receive pass or fail grade because he gets extra help.**
10. **If grades cannot be awarded on exactly the same standard for everyone, then letter grades should not be used for anyone.**
11. **No student who receives extra help should get grades above a C.**
12. **F.J. should not receive so much extra help; he should earn his grades in the regular classroom like everyone else.**

CASE STUDY III: VALEDICTORIAN

C.T. and R.J. have achieved the highest grade point average in their senior class. They both qualify, in other words, to be valedictorian of their class. The state awards college scholarships to every valedictorian planning to attend a state college or university. C.T. is a special education student who has taken several subjects in which he has received special education assistance. The school board is reluctant to name C.T. valedictorian because naming him would take away from R.J.'s achievements in the regular program. C.T.'s parents argue that he has earned the same grade point average as R.J. so the two should serve as co-valedictorians. Faculty and members of the senior class are divided on the issue which threatens to put a damper on the graduation ceremonies.

13. Since C.T. has achieved the highest grade point average, he should share the honor of valedictorian with R.J., and both C.T. and R.J. should receive state scholarships.
14. If a special education student is a potential valedictorian, then the honor is meaningless and no student should be named valedictorian.
15. C.T. should not be valedictorian, but he should receive a special certificate for his academic accomplishment and should be recognized at the graduation ceremonies.
16. C.T. should be named the special education valedictorian at a separate ceremony for special education students.
17. C.T. should not be named valedictorian and should not receive special recognition because he has not earned a grades which are truly comparable to those achieved by students in the regular education program.
18. C.T. should share the honor of valedictorian, but as a special education student he should not be a recipient of a state scholarship for college.

CASE STUDY IV: WRESTLING

S.W., who is a junior in high school, loves all sports, but wrestling is his specialty. Unfortunately, this wrestling season S.W. is not going to be able to participate. S.W. is already 19 years old and the Athletic Association Rules say that 19 year-old students cannot participate in varsity sports. This rule is to protect younger students from being outmatched by older, more physically mature students. The reason that S.W. is 19 and only a junior in high school is that he was held back twice in elementary school. He had a learning disability, but it was not detected until he was in the fifth grade. Now S.W. is receiving extra help in special education and is doing much better in his studies. S.W. is discouraged, though, because he cannot participate in his favorite sport. Sometimes he thinks about dropping out of school because it seems as though he has nothing to look forward to.

19. **An exception should be made to the Athletic Association Rules for eligibility and S.W. should be allowed to wrestle the next year.**
20. **S.W. should not be allowed to wrestle, but an exception should be made so that he can work out with the team and go to all of its matches.**
21. **S.W. should not be allowed to participate in sports at all.**
22. **S.W. should have been banned from varsity sports, but he should be eligible for intramural sports.**
23. **S.W. should be treated no differently from other athletes. He should be able to participate in sports at school while he is eligible, but when he turns 19, he should not be allowed to wrestle.**
24. **Students like S.W. who have disabilities should not compete in sports at school; they should take up sports offered outside of school.**

CASE STUDY V: FIELD TRIP

The eighth grade science teacher wants to take her class to the city recycling plant for a field trip. However, the recycling center is not accessible to people with physical disabilities. K.M. is in the science class and he uses a wheelchair. The teacher does not want to deny the other students the opportunity to make the trip, but she is reluctant to tell K.M. that he cannot go.

25. K.M. should go on a field trip with another class to a place that is accessible to people with disabilities.
26. K.M. should go with the class to the recycling center, but visit only those parts of the facility which are accessible to him.
27. The teacher should choose another place to go for the field trip so that K.M. can participate.
28. The teacher should abandon the idea of going on a field trip because it is too much trouble to accommodate K.M. and still try to meet her educational objectives.
29. The class should go on the field trip to the recycling center and K.M. should stay at the school and do an alternate assignment on recycling.
30. K.M. can go on the field trip to the recycling center if he makes arrangements on his own to get there and get around inside the plant.

CASE STUDY VI: RESTAURANT

R.N., who is twenty-five, lives in an apartment and has a job as a clerical worker in a government office. R.N. was born without arms. She has learned to do many things for herself--including eating and typing-- by using her feet. For her birthday, some of R.N.'s friends decided to take her out to eat at a nice restaurant. When the food arrived, the waiter came over to R.N. and asked her to leave the restaurant because she was disturbing other diners by eating her meal with her feet.

- 31. Public restaurants should not admit people with obvious physical or mental disabilities.**
- 32. R.N. should speak to the manager about the mistreatment she has received from the waiter.**
- 33. R.N. and her friends should be moved to a back room in the restaurant where they can have their meal out of sight of the rest of the diners.**
- 34. R.N. and her friends should plan the birthday dinner for a restaurant that provides special accommodations for people with disabilities.**
- 35. R.N. should never go to a restaurant without first warning the manager that she is coming and making special arrangements so that she and her friends will not interfere with other diners.**
- 36. R.N.'s friends should help her to realize the effect that her eating behavior has on other diners. They should persuade her to have a private birthday party in someone's home.**

CASE STUDY VII: TEACHER ATTENTION

L.F. is an eighth grader who has difficulty paying attention. He has particular problems with attending to oral directions from the teacher, so it is of helpful to him when the teacher repeats the directions for him personally, either by writing them down or by saying them again orally and having L.F. repeat the directions back for clarification. L.F.'s teachers, however, find that repeating directions for him is time consuming and takes away time from other students who may need assistance. As a group, L.F.'s teachers have decided to stop the practice of repeating directions and instruct L.F. that he needs to learn to pay attention better on his own. L.F.'s parents have complained about the teachers' decision and have asked for a meeting at school to decide what to do.

37. L.F. should wait his turn for teacher attention just like the rest of the students in his classes.
38. L.F. should not participate in regular classes if he cannot meet the standards for paying attention when directions are being given.
39. L.F.'s teachers should return to the practice of repeating directions for him when assignments are given in class.
40. No student in the eighth grade should receive special help from the teacher.
41. L.F. should be provided the option of coming in after school to get extra help when he does not understand the directions.
42. L.F. should be placed in a special group within the classroom and be given easier assignments which he can do without teacher assistance.

CASE STUDY VIII: MAKE-UP WORK

P.R. has a chronic lung disease which causes her to be absent often from her sixth grade class. When she is able to attend class, P.R. must have pulmonary exercises two or three times a day in order to keep her lungs clear. The combination of frequent absences and time lost from class when doing her exercises results in P.R. always being behind in her school work. P.R. is a good student when she is able to do her work, but her illness often prevents her from performing at adequate levels. Assisting P.R. in making up her work is a constant, time-consuming job for the classroom teacher. Other students and some of the students' parents resent the fact that P.R. receives so much leeway in making up assignments. Some parents even request that their children not be placed in P.R.'s class because of the problems her presence presents.

43. P.R.'s teacher should recommend that P.R. not be placed in the regular sixth grade class because serving her takes too much time away from other students.
44. No special accommodations should be made for P.R.'s problems; she should be held accountable for the assignments she misses so that she has the opportunity to learn all the same material as the other children.
45. P.R.'s classroom teacher should pare down P.R.'s assignments to the minimum and do frequent informal checks with P.R. to make sure that she is understanding her schoolwork.
46. P.R. should come in regularly before school starts and work ahead on her assignments.
47. P.R. should be given easier work so that she can complete her assignments more quickly and not get behind.
48. No students in the sixth grade should be allowed to do makeup work. Missed assignments should receive zeros.

INDIVIDUAL DIFFERENCES AND EQUITY
ATTITUDE SCALE
(IDEAS)

VERSION IV

by Katharin A. Kelker
Montana State University
Bozeman, Montana

265

Identification Number

Location

Total Score

Date

Note: Version IV of IDEAS contains the replacement dilemmas (Computer Access, Anxiety Attack, and Discipline), revised response options (1:1, 1.4, 2.1, 2.3, and 3.1), and an additional revised response option (1.3). Version IV also has been edited by removing the sample question which appeared in Versions I, II, and III. Other minor technical changes have been made as well. Version IV is the recommended version of IDEAS.

INDIVIDUAL DIFFERENCES AND EQUITY ATTITUDE SCALE

Directions: On the following pages you will find eight case studies dealing with school situations in which teachers have been asked to help decide what the equitable solution might be to the dilemma presented. The cases describe the conflicting interests of individuals and members of a group. You will be asked to rank solutions to the dilemma from the most fair solution to the least fair solution. The most fair solution is one that in your own personal view provides fair treatment to the individuals involved in the situation.

Read the case studies carefully. After each case study, write the number of the statement which you consider to be the most fair solution in the box on your answer sheet marked A, the next most fair solution in the box marked B and so forth until you have placed the last statement in the box marked D. The statement you place in Box D should be the statement you think provides the "least fair" solution to the dilemma. Do not write on this booklet. Place all of your answers on your answer sheet.

CASE STUDY 1: HONOR ROLL

M.B. is a seventh grader who has mild mental retardation. She spends four periods of her school day in regular classes, and she goes to the resource room two periods a day for help with reading and math. Morton Middle School, which M.B. attends, posts an honor roll list each quarter. Students who have B+ averages are eligible for the honor roll and being on it is a much desired award in the school. M.B. has received all A's and B's in her classes this quarter. Should M.B. be allowed on the honor roll?

- 1.1 M.B. should be allowed on the regular honor roll only if she earns the honor by doing the same level of work as the other students who receive the honor. If M.B. receives special help, she should be allowed on a special honor roll for students in special education.**
- 1.2 M.B. should be allowed on the honor roll this time, but the guidelines for the honor roll should be re-written so that it is clear that students receiving special help are not eligible for the honor roll, no matter what grades they earn.**
- 1.3 M.B. should be allowed on the honor roll because she has achieved the grade point average which is met the criterion set by the school for placement on the honor roll.**
- 1.4 M.B. should be allowed on the honor roll but a star should be placed by her name, indicating to the other students that she earned the honor by meeting different standards.**

CASE STUDY 2: GRADING

F.J. is a fifth grader who has learning disabilities. F.J. gets some help with reading in the resource room, but most of the time he is in the regular classroom. Occasionally, his regular classroom teacher modifies assignments for him because he has trouble reading the directions. Sometimes F.J. uses taped books, and he takes most of his tests orally. For most of his written work, F.J. uses the computer. How should F.J.'s work in the regular classroom be graded?

- 2.1 F.J. should receive letter grades like other students, but his grades should be determined by taking into consideration both his in class and resource room performance. His regular and special education teachers should agree on one grade for reading.**
- 2.2 F.J. should not receive so much assistance; he should earn his grades in the regular classroom by doing the same work in the same way as everyone else.**
- 2.3 Since F.J. receives reading instruction in two settings, he should not be graded in reading because it is difficult to determine exactly his level of performance.**
- 2.4 The grades for all the children in the fifth grade, including F.J., should be determined on the basis of their individual achievement in relation to their abilities.**

CASE STUDY 3: FIELD TRIP

The eighth grade science teacher wants to take her class to the regional recycling plant for a field trip. However the recycling center is not fully accessible to people with physical disabilities. K.M. is in the science class and she uses a wheelchair. What should the science teacher do about the proposed trip?

- 3.1 Since it is difficult to accommodate K.M. on a field trip, the teacher should arrange to teach the same objectives using some other teaching technique.**
- 3.2 K.M. should go with the class to the recycling center and visit those parts of the facility that are accessible. Other students in the class can describe the facility to K.M. and share the information they have learned.**
- 3.3 The teacher should choose another place to go for the field trip so that K.M. can participate fully.**
- 3.4 The class should go on the field trip to the recycling center and K.M. should stay at the school and do an alternate assignment on recycling.**

CASE STUDY 4: TEACHER ATTENTION

L.F. is an eighth grader who has difficulty paying attention. He has particular problems with getting assignments done, so it is helpful to him when the teacher redirects his attention as he is doing his work. L.F.'s teachers, however, find that redirecting him is time consuming and takes away time from other students who may need assistance. What should be done about L.F.'s need for teacher attention?

- 4.1 L.F. should wait his turn for teacher attention just like rest of the students in his classes. He should receive neither more, nor less, attention than other students.**
- 4.2 Each day a different peer tutor should be assigned to redirect L.F.'s attention, so that the teachers are freer to meet the needs of other students who may require assistance that only the teachers can give.**
- 4.3 L.F.'s teachers should continue to redirect his attention so that he completes his assignments.**
- 4.4 L.F. should not participate in regular classes until he can meet the standards in regular education for completing work. He should receive training in special education for paying attention and completing assignments.**

CASE STUDY 5: MAKE-UP WORK

P.R. has a chronic lung disease which causes her to miss about 25% of the time in her sixth grade class. When she is able to attend class, P.R. must have pulmonary exercises two or three times a day in order to keep her lungs clear. The combination of frequent absences and time lost from class when doing her exercises results in P.R. always being behind in her school work. P.R. is a good student when she is able to do her work, but her illness often prevents her from performing at adequate levels. Assisting P.R. in making up her work is a constant, time-consuming job for the classroom teacher. How should P.R.'s make-up work be handled?

- 5.1 When she is feeling well, P.R. should come in regularly before school starts and work ahead on her assignments.**
- 5.2 P.R.'s classmates should be assigned on a rotating basis to help her understand assignments she has missed.**
- 5.3 P.R. should be held accountable for doing the assignments on her own that she misses so that she has the opportunity to learn all the same material as the other children. If she cannot complete her work in one year's time, she may have to repeat sixth grade.**
- 5.4 P.R.'s classroom teacher should pare down P.R.'s assignments to the minimum and do frequent informal checks with P.R. to make sure that she is understanding her schoolwork.**

CASE STUDY 6: COMPUTER ACCESS

R.V., a tenth grader who is deaf/blind, attends regular classes at Stillwell High School and is assisted by a full time aide/interpreter. Because of his sensory impairments, his level of cognitive functioning has been difficult to determine. Lately, it has been discovered that R.V. can express himself using a computer with a voice synthesizer and braille output. The cost of the computer set-up R.V. needs is several thousand dollars. No other student in R.V.'s high school has access to a computer except in computer classes. Should R.V. be provided computer access?

- 6.1 A computer should be purchased for R.V., but he should use it only in the resource room because his set-up is noisy and distracting for others and no one else in regular education has the use of a personal computer.**
- 6.2 A computer should be purchased for R.V. and he should be allowed to use his computer in all of this classes.**
- 6.3 A computer should be purchased for R.V., and he and his aide should discuss with his classmates when and how to use his computer so that it is not annoying to others. R.V. should limit his computer use to times and places which are convenient for others.**
- 6.4 A fund should be started by the school district for purchasing computers for the classrooms. R.V. should wait like the other students for the time when there is enough money to purchase both a computer for R.V. and a computer for each classroom in the high school.**

CASE STUDY 7: ANXIETY ATTACKS

N.M. who is 9 and has autism attends a regular third grade class in his neighborhood school. N.M. has an aide who accompanies him to class in the morning, but she leaves after lunch and N.M. remains in the classroom in the afternoon without the assistance of an aide. Sometimes in the afternoons, N.M. has anxiety attacks and becomes quite upset. He shrieks loudly and flails his arms. Sometimes he knocks over other students or bites someone who may be in his way. N.M.'s classroom teacher has tried everything that she knows how to do to keep N.M. calm at all times. She is worried and nervous that N.M. will really hurt himself or others. Some days very little school work gets done in the third grade in the afternoon. How should N.M.'s anxiety attacks be handled?

- 7.1 N.M. should be placed in special education in the afternoon because he cannot manage in the regular classroom unless he has an aide with him.**
- 7.2 N.M.'s teacher and fellow students should be taught what to do when he gets upset. He should have a special time out space where he can go to calm down. N.M.'s outbursts should be ignored and class should go on as usual.**
- 7.3 Regardless of the cost, N.M. should have an aide with him at all times when he is in the regular classroom.**
- 7.4 N.M. should be removed from the classroom when he behaves inappropriately. He should not return until he has learned more acceptable behavior.**

CASE STUDY 8: DISCIPLINE

S.S., a ninth grader with a serious emotional illness, attends regular classes at her neighborhood high school. She has average intelligence and is able to do her class assignments without any particular assistance. She does, however, have difficulty dealing with authority figures. She talks back to teachers and sometimes uses inappropriate language. S.S. is frequently sent to the Dean's Office for defying her teachers, being tardy to class or refusing to do her work. She has been in in-school suspension three times. With her next offense, she will be suspended from school for three days. How should S.S.'s behavior be handled?

- 8.1 S.S. should be told by her teachers and her classmates when her behavior is annoying. She should be given options for helping herself to gain control.**
- 8.2 S.S. should attend special classes until she learns to treat her teachers with respect.**
- 8.3 S.S. should be subject to the regular discipline system of the school and be suspended for her inappropriate behavior.**
- 8.4 S.S. should be held responsible for a discipline program designed specifically for her.**

INDIVIDUAL DIFFERENCES AND EQUITY ATTITUDE SCALE

VERSION III: ITEM REVISIONS

Both the pilot testing and the Content Jury Review indicated that some of the response options for IDEAS were weak. These weak items were revised and used in Version III and Version IV of IDEAS. Printed below are the dilemmas, the original response options and the revisions.

CASE STUDY 1: HONOR ROLL

M.B. is a seventh grader who has mild mental retardation. She spends four periods of her school day in regular classes, and she goes to the resource room two periods a day for help with reading and math. Morton Middle School, which M.B. attends, posts an honor roll list each quarter. Students who have B+ averages are eligible for the honor roll and being on it is a much desired award in the school. M.B. has received all A's and B's in her classes this quarter. Should M.B. be allowed on the honor roll?

- 1.1 M.B. should be allowed on the honor roll only if she earns the honor by doing the same level of work as the other students who receive the honor.**

1.1R--Hierarchical

M.B. should be allowed on the regular honor roll only if she earns the honor by doing the same level of work as the other students who receive the honor. If M.B. receives special help, she should be allowed on a special honor roll for students in special education.

- 1.2 M.B. should be allowed on the honor roll this time, but the guidelines for the honor roll should be re-written so that it is clear that students receiving special help are not eligible for the honor roll, no matter what grades they earn.

- 1.3 M.B. should be allowed on the honor roll because she has met the criteria set by the school for placement on the honor roll.

- 1.4 M.B. and her fellow students should not be compared for purposes of identifying students for the honor roll. There should be no honor roll because it is unfair to compare individuals with differing abilities against an absolute standard.

1.4R--Collaborative

M.B. should be allowed on the honor roll but a star should be placed by her name, indicating to the other students that she earned the honor by meeting different standards.

CASE STUDY 2: GRADING

F.J. is a fifth grader who has learning disabilities. F.J. gets some help with reading in the resource room, but most of the time he is in the regular classroom. Occasionally, his regular classroom teacher modifies assignments for him because he has trouble reading the directions. Sometimes F.J. uses taped books, and he takes most of his tests orally. For most of his written work, F.J. uses the computer. How should F.J.'s work in the regular classroom be graded?

2.1 F.J. should receive letter grades like other students, but his grades should be circled to indicate that they were not achieved in a standard way.

2.1R--Liberal

F.J. should receive letter grades like other students, but his grades should be determined by taking into consideration both his in class and resource room performance. His regular and special education teachers should agree on one grade for reading.

2.2 F.J. should not receive so much assistance; he should earn his grades in the regular classroom by doing the same work in the same way as everyone else.

2.3 F.J.'s grades should be determined individually on the basis of the level of his achievement in relation to his ability.

2.3R--Other

Since F.J. receives reading instruction in two settings, he should not be graded in reading because it is difficult to determine exactly his level of performance.

2.4 The grades for all the children in the fifth grade, including F.J., should be determined on the basis of their individual achievement in relation to their abilities.

CASE STUDY 3: FIELD TRIP

The eighth grade science teacher wants to take her class to the regional recycling plant for a field trip. However the recycling center is not fully accessible to people with physical disabilities. K.M. is in the science class and she uses a wheelchair. What should the science teacher do about the proposed trip?

3.1 The teacher should abandon the idea of going on a field trip to the recycling center because it is too difficult to accommodate K.M. The teacher should teach the same learning objectives in another way.

3.1R--Other

Since it is difficult to accommodate K.M. on a field trip, the teacher should arrange to teach the same objectives using some other teaching technique.

3.2 K.M. should go with the class to the recycling center and visit those parts of the facility that are accessible. Other students in the class can describe the facility to K.M. and share the information they have learned.

3.3 The teacher should choose another place to go for the field trip so that K.M. can participate fully.

3.4 The class should go on the field trip to the recycling center and K.M. should stay at the school and do an alternate assignment on recycling.

APPENDIX C

JUDGES, INTERVIEWER AND INTERVIEW QUESTIONS,
RATERS, DEFINITIONS

DEFINITIONS OF HIERARCHICAL, COLLABORATIVE, LIBERAL AND OTHER

For each case study, four possible solutions to the dilemma are presented. No solution is considered to be the "right" answer. The scale is being used to determine which, if any, standard the respondent uses consistently in making decisions. Each of the options is based upon a standard of equity which may or may not match an individual's own set of values and beliefs. The standards used in developing the solutions have been designed to exhaust the logical possibilities; that is, all other possibilities are simply variations of these models. The standards are defined as follows:

Hierarchical: Hierarchical solutions assume that the most equitable distribution of benefits is on the basis of some absolute standard of merit or judgment. In other words, the same standard is applied to everyone, regardless of their individual differences. Those who earn the privilege will rise to the top of the hierarchy and receive the benefits that go with their position.

Collaborative: Collaborative solutions involve working out a solution among all the parties in which each individual may be asked to compromise or participate in developing a solution which represents an overall advantage to the whole group. In these solutions, the individual with a disability may have to forego some privilege temporarily, as may other members of the group, in order to bring about an acceptable solution which benefits all. The collaborative model assumes a certain amount of altruism on the part of all group members.

Liberal: Liberal solutions assume that individual differences should be accommodated. The Maximin Principle of the liberal theory of justice is applied; that is, social benefits are arranged so that the least advantaged individual receives the greatest benefit and all have access to the available privileges and opportunities. In the liberal solutions, the individual described as having a disability is assumed to be "disadvantaged" and therefore entitled to compensating greater benefits and access, along with all others, to all available opportunities.

Other: Solutions labeled "other" do not fit into the three categories hierarchical, liberal, or collaborative. They represent instead divergent solutions following no particular pattern. Some may be solutions which are contrary to law; some may suggest ideas which are contrary to practice, untried, or innovative.

PARTICIPANT INTERVIEW QUESTIONS

Interviewer: Anita Harris
Graduate Student in Special Education
Eastern Montana College
2915 Rockrim
Billings, MT 59102

1. From your experience as a classroom teacher, do you think the situation described in this dilemma is a realistic one? Why or why not? In your opinion, do such situations actually occur in schools? Describe some examples from your experience.
2. In your experience, do teachers actually make decisions like the ones described in the four choice options for this dilemma?
3. Why did you select _____ as most fair?
4. Why did you select response _____ as least fair?
5. Is there another response you would like to have chosen which was different from the options provided?
6. How do you go about deciding what is fair in your classroom? What guiding principles do you (or would you) use?
7. What do you think "equal educational opportunity" means?
8. What uses, if any, do you think an assessment tool like IDEAS might have?

INTERVIEW RATERS AND DEFINITIONS

One of the procedures used in evaluating the IDEAS instrument was to interview 16 of the field-test participants. The interviewees were asked the same eight open-ended questions. Their answers were recorded and transcribed verbatim.

The verbatim transcripts were analyzed by three independent raters who were:

Dr. Mary Susan Fishbaugh
Assistant Professor of Special Education and Reading
Eastern Montana College

Dr. Susan Gregory
Assistant Professor of Education, Special Education, and Reading
Eastern Montana College

Dr. Linda Christensen
Associate Professor of Education, Special Education, and Reading
Eastern Montana College.

The raters were asked to determine whether the rationales presented by the interviewees for their choices on IDEAS fit into the categories of hierarchical, collaborative, liberal, or other. The definitions the raters used in their analysis of the transcripts were the following:

Hierarchical: Hierarchical solutions assume that the most equitable distribution of benefits is on the basis of some absolute standard of merit or judgment. In other words, the same standard is applied to everyone, regardless of their individual differences. Those who earn the privilege will rise to the top of the hierarchy and receive the benefits that go with their position.

Collaborative: Collaborative solutions involve working out a solution among all the parties in which each individual may be asked to compromise or participate in developing a solution which represents an overall advantage to the whole group. In these solutions, the individual with a disability may have to forego some privilege temporarily, as may other members of the group, in order to bring about an acceptable solution which benefits all. The collaborative model assumes a certain amount of altruism on the part of all group members.

Liberal: Liberal solutions assume that individual differences should be accommodated. The Maximin Principle of the liberal theory of justice is applied; that is, social benefits are arranged so that the least advantaged individual receives the greatest benefit and all have access to the available privileges and opportunities. In the liberal solutions, the individual described as having a disability is assumed to be "disadvantaged" and therefore entitled to compensating greater benefits and access, along with all others, to all available opportunities.

Other: Solutions labeled "other" do not fit into the three categories hierarchical, liberal, or collaborative. They represent instead divergent solutions following no particular pattern. Some may be solutions which are contrary to law; some may suggest ideas which are contrary to practice, untried, or innovative.

RESPONSE OPTION JUDGES

The response items used in the IDEAS instrument were developed in the following manner: Approximately 100 statements concerning the accommodation of individual differences were accumulated from the special education literature. A group of 20 judges were faculty members and graduate students in special and regular education and rehabilitation counseling were asked to sort the statements into three groupings: (a) statements pertaining to questions of fairness, equal educational opportunity, and accommodation of individual differences, (b) statements not germane to questions of fairness, equal educational opportunity, and accommodation of individual differences, or (c) unclear statements. This process produced 36 statements which were retained for further consideration.

Group 1: Response Option Judges

Professors

John M. Dodd
Professor of Education, Special Education and Reading
Eastern Montana College

Ronald T. Reitz
Associate Professor of Education, Special Education and Reading
Eastern Montana College

Michael Hagen
Director of Rehabilitation Programs
St. Vincent Hospital and Health Care Center
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Stephen Moore
Associate Professor of Special Education
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Linda Christensen
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Joseph Gratton
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Rehabilitation Counseling

Mary Kay Grmoljez
Billings, Montana
Rehabilitation Counseling

Virginia Halberg
Billings, Montana
Rehabilitation Counseling

Janeane Hansen
Lodge Grass, Montana
Special Education

Dale Lambert
Lewistown, Montana
Special Education

Barbara Larson
Thermopolis, Wyoming
General Education

Arlie Lohof
Billings, Montana
Special Education

After the first 36 statements were selected, descriptions of the three principles of fairness, hierarchical, liberal, and collaborative, were developed. The following descriptions were used:

Hierarchical solutions assume that the most equitable distribution of benefits is on the basis of some absolute standard of merit or judgment. In other words, the same standard is applied to everyone, regardless of their individual differences. Those who earn the privilege will rise to the top of the hierarchy and receive the benefits that go with their position.

Collaborative solutions involve working out a solution among all the parties in which each individual may be asked to compromise or participate in developing a solution which represents an overall advantage to the whole group. In these solutions, the individual with a disability may have to forego some privilege temporarily, as may other members of the group, in order to bring about an acceptable solution which benefits all. The collaborative model assumes a certain amount of altruism on the part of all group members.

Liberal solutions assume that individual differences should be accommodated. The Maximin Principle of the liberal theory of justice is applied; that is, social benefits are arranged so that the least advantaged individual receives the greatest benefit and all have access to the available privileges and opportunities. In the liberal solutions, the individual described as having a disability is assumed to be "disadvantaged" and therefore entitled to compensating greater benefits and access, along with all others, to all available opportunities.

A second group of 15 judges who were faculty members and graduate students in special and regular education and rehabilitation counseling were given an opportunity to study the descriptions of the categories and asked to sort the 36 potential response items into the 3 groups according to whether the response items reflected a hierarchical, liberal, or

collaborative principle of fairness. From this sort, 19 response items were found to be suitable for use in the IDEAS Instrument in that the judges consistently placed in the same categories.

Then another set of 20 response items was developed and the second group of judges was asked to sort these items into hierarchical, liberal, and collaborative groups. From this sort, five more response items were selected as fitting into hierarchical, liberal, or collaborative groups. From the group of 30 items which remained unselected after the first, second and third sorting processes, an additional 8 response items were selected to be used in the "other" category. These responses had consistently not been considered by the judges to fit into the categories of hierarchical, liberal, or collaborative principles of fairness.

Group 2: Response Option Judges

Professors

Harry Lee

Assistant to Dean

School of Education and Human Services

Eastern Montana College

Barbara Brehm

Assistant Professor of Education, Curriculum and Instruction

Eastern Montana College

Rockne C. Copple

Professor of the Institute of Health and Human Services

Eastern Montana College

Anton Hecimovic

Associate Professor of Educational Foundations/Leadership

Eastern Montana College

Lindalee Hickey

Education Specialist

Montana Center for Handicapped Children

Graduate Students

Trish Harder

Billings, Montana

Special Education

Rosemary Lonsdale

Billings, MT

Rehabilitation Counseling

Paula McDaniel

Upton, Wyoming

Special Education

Steve Norrod

Billings, Montana

Rehabilitation Counseling

Carrol Padilla

Billings, Montana

Rehabilitation Counseling

Cheryl Pulley

Cody, Wyoming

Special Education

Beth Tocci

Billings, Montana

Guidance Counseling

Ann Treece

Billings, Montana

Human Services

Linda Wanzenried

Lewistown, Montana

Special Education

Sally Williams

Billings, Montana

Educational Diagnostician

Bruce Youngquist

Manderson, Wyoming

Special Education Administration

APPENDIX D

FORMAT JURY MEMBERS AND INSTRUCTIONS

FORMAT JURY

George Camp, Ph.D.
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Division of Personnel Preparation
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Chair, Educational Foundations/Leadership
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University of Connecticut
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Mansfield Center
CT 06250

Robert Runkel, MS.
School Psychologist
Montana State Director of Special Education
Office of Public Instruction
1300 Eleventh Ave.
Helena, MT 59620

FORMAT JURY RESPONSE FORM

DIRECTIONS: Below you will find aspects of the Individual Differences and Equity Attitude Scale format for your consideration. For each aspect of the test, you are provided some questions to consider. Please feel free to comment on these questions or to include comments on other areas which are of interest to you.

LENGTH

Is the test too long, too short, about right in length? What would you estimate to be the range in time for respondents to complete the instrument as written? Is this amount of time about right? Too long? Is the number of cases about right? Too many? Too few? Is the number of response options for each case about right? Too many? Too few?

READABILITY

The instrument is written at a fourth grade reading level. Do you find the text to be readable? Clear? Understandable? Appropriate in vocabulary? Diction? Is the sentence structure simple, too simple, too complex?

PAGE ARRANGEMENT

Do you find the arrangement of the case studies and response options to be clear? Convenient? Easy to follow? What do you think of the horizontal arrangement?

DIRECTIONS

Are the directions for the test clear? Concise? Is the operational definition of "fairness" which is found in the directions adequate for the purpose? Does the example following the directions help to clarify? Is it clear how to mark the answers?

RESPONSE OPTIONS

The response options are arranged in random order. Three of the response options represent principles of distributive justice--hierarchical, collaborative, and liberal (See enclosed definitions). The fourth option is intended to be a "distractor" so that respondents do not see a particular pattern in the responses. Do you find the response options to be representative of the categories mentioned? Are the response options logically related to the dilemmas they follow? Are the response options logically distinct? Are there clear distinctions among the response options? What do you think of having the "other" category?

ANSWER SHEET

The answer sheet is a separate form which the respondent can move from page to page while completing the test. Is it clear where to mark answers on the answer sheet? Does the numbering system make sense? Would some other type of answer sheet or answering system be better? What type?

ADDITIONAL COMMENTS

APPENDIX E

CONSTRUCT JURY MEMBERS AND INSTRUCTIONS

CONSTRUCT JURY

Kenneth Card Ed.D.
 Professor Emeritus
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 Eastern Montana College
 P.O. Box 906
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Dean Corrigan, Ph.D.
 Director of Commitment to Education
 The Texas A and M University
 Blocker B 232X
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Johnny Cox, RN, Ph.D.
 Staff Ethicist
 Sacred Heart Medical Center
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Michael Giangreco, Ph.D.
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 Eastern Montana College
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 Billings, MT 59101-0298

Gregory Murphy
 Attorney
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 Human Services
 Eastern Montana College
 1500 N. 30th St.
 Billings, MT 59101-0298

CONSTRUCT JURY RESPONSE FORM

DIRECTIONS: Please comment on the following questions in any format that you consider desirable. You may wish to consider each dilemma individually or to make comments on the instrument as a whole or to do both.

1. Do you find that the eight dilemmas in the instrument are based to some degree on underlying concepts of fairness or equity? Accommodation of individual differences? Access to opportunities?
2. The response options are intended to represent to represent 3 theories of distributive justice--hierarchical, collaborative and liberal. A fourth option represents an "other" category which is being used as a distractor so that the respondent does not discern a pattern in the answers. For definitions of the theories of justice, see the enclosed key. Do you think the options represent the categories as they have been described to you? Why or why not?
3. Do you think the instrument reflects underlying constructs other than fairness or accommodation? In addition to fairness or accommodation?
4. Do you think the instrument lacks a discernible or a consistent basis in underlying constructs? Why or why not?
5. What recommendations would you make for logical or conceptual changes in the instrument?

DIRECTIONS:

For each dilemma and response option answer the questions below either yes or no.

Dilemma 1: HONOR ROLL

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

1.1H _____
 1.2O _____
 1.3L _____
 1.4C _____

Dilemma 2: GRADING

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

2.1L _____
 2.2H _____
 2.3O _____
 2.4C _____

Dilemma 3: FIELD TRIP

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

3.1O _____
 3.2C _____
 3.3L _____
 3.4H _____

Dilemma 4: TEACHER ATTENTION

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

4.1H _____
 4.2C _____
 4.3L _____
 4.4O _____

Dilemma 5: MAKE-UP WORK

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

5.1O _____
 5.2C _____
 5.3H _____
 5.4L _____

Dilemma 6: COMPUTER

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

6.1O _____
 6.2L _____
 6.3C _____
 6.4H _____

Dilemma 7: ANXIETY

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

7.1O _____
 7.2C _____
 7.3L _____
 7.4H _____

Dilemma 8: DISCIPLINE

Does this dilemma pose a question logically related to the construct of fairness?

Does this dilemma pose a question logically related to equal educational opportunity?

Does this dilemma pose a question logically related to the accommodation of individual differences?

Is this response an accurate representation of the principle of fairness indicated?

Is this response item clearly and logically distinct from the other response items?

8.1C _____
 8.2O _____
 8.3H _____
 8.4L _____

APPENDIX F
CONTENT JURY MEMBERS AND INSTRUCTIONS

CONTENT JURY

Alan Bergman
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United Cerebral Palsy Associations
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Professor of Education
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Martha Snell, Ph.D.
Professor of Special Education
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Jacqueline Thousand, Ph.D.
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Governor's Council on
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St. Paul, MN 55155

CONTENT JURY RESPONSE FORM

DIRECTIONS: Please comment on the following questions in any format that you consider desirable. You may wish to consider each dilemma individually or to make comments on the instrument as a whole or to do both.

1. Are the situations in the dilemmas congruent with situations described in the educational literature?
2. Do the situations in the dilemmas correspond with what you have observed through research and experience?
3. Do the response options for the dilemmas represent a range of responses which you find corresponds with behavior described in the literature? Behavior you have observed?
4. Have important response options been left out? Should some response options not be included because they do not correspond to behavior reported in the literature?
5. Do the dilemmas appropriately cover a range of concerns that are typically found in the literature? In the real world? Are there major equity concerns which have not been presented here but which should be?
6. What recommendations would you make for improving the content of the dilemmas or the response options?

DIRECTIONS:

For each dilemma and response option answer the questions below either yes or no.

Dilemma 1: HONOR ROLL

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option
reflect an action commonly
reported in the literature

Does this response option
describe an action within a
teacher's power to take?

Does this response option
describe an action which
is taken in the field?

- 1.1 _____
- 1.2 _____
- 1.3 _____
- 1.4 _____

Dilemma 2: GRADING

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option
reflect an action commonly
reported in the literature

Does this response option
describe an action within a
teacher's power to take?

Does this response option
describe an action which
is taken in the field?

- 2.1 _____
- 2.2 _____
- 2.3 _____
- 2.4 _____

Dilemma 3: VALEDICTORIAN

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option reflect an action commonly reported in the literature

Does this response option describe an action within a teacher's power to take?

Does this response option describe an action which is taken in the field?

- 3.1 _____
- 3.2 _____
- 3.3 _____
- 3.4 _____

Dilemma 4: WRESTLING

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option reflect an action commonly reported in the literature

Does this response option describe an action within a teacher's power to take?

Does this response option describe an action which is taken in the field?

- 4.1 _____
- 4.2 _____
- 4.3 _____
- 4.4 _____

Dilemma 5: FIELD TRIP

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option reflect an action commonly reported in the literature

Does this response option describe an action within a teacher's power to take?

Does this response option describe an action which is taken in the field?

- 5.1 _____
- 5.2 _____
- 5.3 _____
- 5.4 _____

Dilemma 6: RESTAURANT

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option reflect an action commonly reported in the literature

Does this response option describe an action within a teacher's power to take?

Does this response option describe an action which is taken in the field?

- 6.1 _____
- 6.2 _____
- 6.3 _____
- 6.4 _____

Dilemma 7: TEACHER ATTENTION

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option
reflect an action commonly
reported in the literature

Does this response option
describe an action within a
teacher's power to take?

Does this response option
describe an action which
is taken in the field?

- 7.1 _____
- 7.2 _____
- 7.3 _____
- 7.4 _____

Dilemma 8: MAKE-UP WORK

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option
reflect an action commonly
reported in the literature

Does this response option
describe an action within a
teacher's power to take?

Does this response option
describe an action which
is taken in the field?

- 8.1 _____
- 8.2 _____
- 8.3 _____
- 8.4 _____

Dilemma 9: COMPUTER

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option reflect an action commonly reported in the literature

Does this response option describe an action within a teacher's power to take?

Does this response option describe an action which is taken in the field?

- 9.1 _____
- 9.2 _____
- 9.3 _____
- 9.4 _____

Dilemma 10: ANXIETY

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option reflect an action commonly reported in the literature

Does this response option describe an action within a teacher's power to take?

Does this response option describe an action which is taken in the field?

- 10.1 _____
- 10.2 _____
- 10.3 _____
- 10.4 _____

Dilemma 11: DISCIPLINE

Does this dilemma reflect situations commonly reported in the literature?

Does this dilemma reflect situations commonly experienced in the field?

Does this dilemma reflect a significant ethical decision for teachers?

Does this dilemma involve applying principles of distributive justice?

Does this dilemma juxtapose the needs of the individual against the needs of others?

Does this dilemma describe a situation in which the teacher has the power to decide?

Does this response option
reflect an action commonly
reported in the literature

Does this response option
describe an action within a
teacher's power to take?

Does this response option
describe an action which
is taken in the field?

- 11.1 _____
- 11.2 _____
- 11.3 _____
- 11.4 _____

APPENDIX G

**DEMOGRAPHIC QUESTIONNAIRE, CONSENT FORM,
CONFIDENTIALITY STATEMENT**

INDIVIDUAL DIFFERENCES AND EQUITY ATTITUDE SCALE (IDEAS)

Participant Questionnaire

NAME _____

STUDENT ID NO. _____

ADDRESS _____

BIRTH DATE _____

CITY _____ STATE _____ ZIP _____

F _____ M _____

1. Do you hold a current teaching, specialist, or administrative certificate? YES ☐ NO ☐
2. Have you ever taught in public or private school? YES ☐ NO ☐
3. If you have taught or are currently teaching, indicate the number of years of teaching experience you have had. (Check one).
☐ 0 ☐ 1-5 years ☐ 6-10 years ☐ 11-20 years ☐ 21+ years
4. If you are currently teaching, indicate the grade level(s) you are teaching. (Check all that apply.)
☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12

Indicate grade levels you have taught at any time in your career. (Check all that apply.)

☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12

If you are a teacher-in-training, indicate the grade levels for which you are training to teach. (Check all that apply.)

☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12

4. Do you have a relative (spouse, parent, child, cousin, etc.) who is now, or has been in the past, in special education? YES ☐ NO ☐
5. Have you had any courses in special education? (Check one).
☐ no courses ☐ 1-2 courses ☐ 3 or more courses
6. Would you be willing to participate in a 15 minute personal interview concerning your reactions to this assessment instrument? YES ☐ NO ☐

**SUBJECT CONSENT FORM
FOR PARTICIPATION IN HUMAN RESEARCH
EASTERN MONTANA COLLEGE**

Project Title: Validation of the Individual Differences and Equity Attitude Scale
Principal Investigator: Katharin A. Kelker

You are being asked to participate in a study to evaluate the validity and reliability of a new attitude scale to be used to determine the standard(s) of fairness that teachers use in deciding how to distribute the benefits of education and the degree to which teachers see the application of the standard of accommodation of individual differences as equitable. The goal of the study is to determine if the proposed instrument has validity and reliability for the purposes for which it is intended. Once the qualities of the instrument have been tested and it has been revised to meet appropriate psychometric standards, it will have potential uses as an assessment tool for determining teachers' attitudes toward accommodation. Information gleaned from the instrument can be used to develop preservice and inservice training for teachers which is more closely tailored to their attitude sets.

Three groups of participants are needed for this study: (1) pilot study (30 subjects), (2) field testing (200 subjects), and (3) test-retest (25 subjects). You are being asked to participate in the following subject group:

As a participant in the study, you will be asked to do the following things:

- (1) Demographic Information. Fill out a form containing some demographic information: name, address, age, Student ID number, whether or not you have a teaching certificate, if you have taught, how many years you have taught, whether or not you have taken courses in special education, and whether or not you have a relative who is now or has been in special education,
- (2) Test Taking. Take two tests--the Individual Differences and Equity Attitude Scale (IDEAS) and the Attitude Toward Disabled Persons Scale (ATDP).

Participation in items (1) and (2) should take about 30 minutes of your time. Those individuals who are in the test-retest group will take only the IDEAS test. The time involved will be 20 minutes on each of two occasions. Selection for the groups is being done in a convenient manner from existing groups of teacher education students or practicing teachers.

In addition, some subjects will be asked if they would be willing to participate in structured interviews to assess their reactions to the IDEAS test instrument and their interpretations of the test items. The purpose of the interviews will be to determine if the test items are being interpreted by

participants in similar or different ways. The interviews will require about 15 minutes.

You are being asked to participate in this study because you are either preparing to become a teacher or you already have a teaching degree. The study will not be of any direct personal benefit to you. If you agree to participate in the study, any identifiable information gathered through the demographic questionnaire, the Attitude Toward Disabled Persons Scale, the Individual Differences and Equity Attitude Scale, or through structured interviews will be completely confidential and will not be distributed, discussed, or published during the study or in any subsequent periods. Results will be reported in terms of group comparisons and in nonidentifiable statistical analyses. All references to participants will in terms of nonidentifiable attributes. The researcher will be the only individual with access to personally identifiable information which will be kept in a fireproof, locked file cabinet and in a locked computer file with a confidential password.

If you have questions about the study, please feel free to contact the researcher and ask your questions before deciding whether or not to agree to be a participant. The researcher can be contacted at 657-2055 (days) or 252-7596 (evenings). You can meet with the researcher in person at her office, Eastern Montana College, SPED Building, corner of Normal and Poly Dr., Room 267, Monday through Friday from 8:00 to 5:00.

AUTHORIZATION: I have read the above and understand the nature of the project and my participation in it. I, _____

_____, agree to participate in the research. I understand that I may later refuse to participate or that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

Signed _____

Witness _____

Investigator _____

Date _____

CONFIDENTIALITY ASSURANCE

The following Confidentiality Assurance was read aloud and presented in writing to participants in the pilot testing, field testing, and interview processes of this research project:

Any identifiable information gathered through the demographic questionnaire, the Attitude Toward Disabled Persons Scale, the Individual Differences Attitude Scale, through oral or written comments, or through structured interviews will be completely confidential and will not be distributed, discussed, or published during the study or in any subsequent periods. Results will be reported in terms of group comparisons and in nonidentifiable statistical analyses for the purpose of examining the data collected concerning the validity, reliability, and usefulness of the IDEAS instrument. All references to participants will be in terms of nonidentifiable attributes.

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