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ABSTRACT

The National High School Project was initiated to provide policy makers at the federal, state, and local levels with the information needed to design and evaluate the quality of special education programs serving youth with mild to moderate disabilities. This project report describes the results of a series of five surveys which examined multiple perspectives on the desired attributes of high school special education programs and staffs. An introductory section reviews literature on projected societal trends, the general education initiative in secondary-level special education programs, postsecondary transitions, regular education reforms, and teacher training. The five surveys, which examined the values of directors of special education, superintendents of schools, and preservice teacher trainers, and their impacts on special education programs and teaching staff are then detailed in five separate sections. These surveys addressed: (1) identification of attributes of successful high school special education programs, activities of quality special education programs, special education teacher attributes, and preservice teacher training activities; (2) ranking of the 15 most important program and staff attributes by experts in the field of special education; (3) weighting of 10 program attributes and 10 teacher attributes; (4) determination of the utility of program activities' impact on special education program attributes; and (5) identification of preservice training activities that have the greatest utility for developing a defined set of desired teacher attributes. A final section of the report reviews issues and trends and describes goals for model high school special education programs and for teacher education. Appendixes contain the survey forms. (Contains 123 references.) (JDD)

National Study of High School Programs for Handicapped Youth

National High School Project
Vol 2
A Quantitative Description of Concepts and Practices for Students with Disabilities

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Preface

Completing this volume of the final report of the National Study of High School Programs for Handicapped Students in Transition marks more of a beginning than an end to the process of inquiry into secondary special education. What started out as a descriptive study of secondary special education ended up a complex series of studies that were extremely difficult to interpret and report. We wanted to describe the status of secondary special education in terms of current programming for students with mild to moderate disabilities and the characteristics or attributes which distinguished a good secondary program. We hoped to put that information into some overall context that fit with the project's other two major components: State Graduation Policies and Program Practices Related to High School Special Education Programs (Bodner, Clark, & Mellard, 1987) and National Study of High School Programs for Handicapped Youth in Transition, Vol. 1: Qualitative Component (Knowlton & Clark, 1989).

As you will understand when you move through this document, some of what we found in the study was disturbing. We had to ask ourselves some hard questions: In an era of outcomes education, how is it possible for administrators and pre-service teacher trainers who influence policy and practice in special education programs to value program and teacher attributes of legal compliance and traditional rhetoric more highly than outcomes in student/graduate behaviors or the substantive focus of teachers' knowledge and skills related to student outcomes? Is this the state of the art or did we pose our questions in such a manner that they permitted some bizarre distortion of reality?

Given our dilemma for interpreting the mass of data, we believed it was important to present a strong case for how and what we did so that readers can participate in that interpretative process. Each study is presented with a rationale for our procedures and how the results of each fit with what we understood about the field. This process resulted in a very comprehensive report. The final chapter provides a summary to each of the studies and raises implications for new beginnings for the field.

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D.F.M. and G.M.C.

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National High School Project:

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Introduction

Not providing [secondary education for handicapped students] is not simply a planned or unplanned neglect of those students. It is in large part the result of a lack of available secondary education programs, and even before that a gap in our knowledge about how to design those programs (OSERS, 1984).

The National High School Project was initiated to provide policy makers at the federal, state, and local levels with information to design and evaluate the quality of special education programs serving youth with mild to moderate handicaps. Three major research efforts were completed as part of the National High School Project. This report describes the results of a series of five surveys which examined multiple perspectives on the desired attributes of high school special education programs and staffs. Knowlton and Clark (1989) and Bodner, Clark, and Mellard (1987) described the other two research projects. Utilizing a qualitative research methodology, Knowlton and Clark (1989) reported four case studies of school districts which examined the goals, current practices and barriers to the delivery of special education programs at the secondary level. Bodner et al. (1987) reported the results of a nation-wide survey of state departments of education concerning graduation requirements, teacher certification requirements, minimal competency testing, and statewide trends in secondary level special education, e.g., awarding diplomas and transition plans. These combined reports provide integrated, multi-faceted perspectives on high schools' special education programs.

An issue which continually receives much attention but little substantive work concerns quality of education. Indeed, recent discussions have highlighted the perception that the discussion of quality is itself a shift in focus from two previous educational themes: efficiency, a dominant theme initiated in the 1920s, and equity, an emerging theme of the 1950s (Mitchell & Encarnation, 1984). In the context of the article, Mitchell and Encarnation argue that quality issues are emerging as the emphasis on accountability is directed towards the outcomes of students' formal educational experiences. Examination of secondary level special education programs for students with mild to moderate handicaps is briefly included in these discussions on the quality of education. However, as a subset of the general student population, the history of secondary level special education programs is relatively brief and the current state is only meagerly described. The National High School Project was designed to address issues in providing quality educational programs for students with mild to moderate handicaps.

Project goals. The goals of the National High School Project were fourfold: 1) to describe the desired qualities characterizing special education programs for high school students with

mild to moderate handicaps; 2) to offer recommendations for future directions in developing such programs; 3) to describe the desired qualities characterizing the teaching staff of special education programs for high school students with mild to moderate handicaps; and 4) to offer recommendations for pre-service teacher training programs. A variety of groups or stakeholders have interests and viewpoints in both maintaining and directing the future of both programs and staffs. In acknowledging this situation's realities, the research methodology was chosen to represent those alternative viewpoints as expressed by directors of special education, superintendents of schools, and pre-service teacher trainers. While they are only some of the decision makers involved in educational policy, administration, and instruction, they have major stakeholder roles.

Intended reader. A number of audiences will have an interest in this report. At a local level, school district administrators and, perhaps more especially, the directors of special education can examine this report as a basis for evaluating their own programs and planning future directions. Local school district patrons and practitioners may also be inclined to consider the information for evaluating how their districts' services fare in comparison to a broader set of programs nationally. Specific information is reported which permits a comparison of a local district's curricular activities with those activities identified nationally.

Among state and federal level policy makers the report will have value in examining broader issues such as legislative and regulatory policies and statutes. A sense of security has developed in the general public that recent reforms since the release of A Nation at Risk (USDE, 1983) have lessened the crisis stage. This report provides a reappraisal of whether the optimism is warranted.

Those members of national organizations who are actively involved in charting their organization's goals might be interested in reviewing these data. Specifically, groups such as the National Association of State Directors of Special Education, National Association of Secondary School Principals, and National Association of School Boards, quite likely, will discern some relevant and appropriate organizational goals.

College and university faculty involved in teacher training programs should have a special interest in examining the information regarding desired qualities of special education programs and teaching staffs. The Teacher Education Division - Council for Exceptional Children is the primary target audience, but collaborating organizations controlling teacher education policies include the American Association of Colleges of Teacher Education and National Council for Accreditation of Teacher Education.

Report overview. Grounded in the project's stated purpose, this report is organized to describe the background, methods, results, and conclusions of this part of the project. The next several paragraphs provide greater detail about the organization of the report's content. In this background section, titled "Future Scenarios," recent literature is reviewed with respect to a future perspective of American society. This perspective of future society is not intended as a comprehensive treatment, but to emphasize others' observations deemed relevant to this project. Such information is relevant as a context in which the project's data and others' recommendations for reform in both regular and special education can be considered.

Following the review of projected societal trends, the literature on secondary level special education programs and current reforms is presented. In special education programs, two topics dominate: post-secondary transition and the general education initiative. Both of these topics are reviewed. However, special education is only a small segment of the total high school education program. Given the broader curricular and administrative context within which special education exists, recent trends and reforms in regular education are reviewed. Current trends reflect both an established ritual of reform movements (Cornbleth, 1986) and recent

differences in the federal government's educational philosophy (Clark & Astuto, 1986; Reid, 1987; and Resnick & Resnick, 1985).

Special education's triumphs and ailments parallel those of regular education. Curricular programing and its revisions are also generally concurrent with or followed by calls for reform in teacher education. The parallels between teacher reform in special education and regular education are described in a later section of the report. The reader may consider this information as peripheral to describing the qualities of special education programs and teaching staff. However, without this contextual foundation, the surveys appear as little more than one-shot studies contributing little beyond the static results captured by a particular methodology. Since teachers have the primary instructional responsibility, issues of training teachers are very important.

A multi-attribute utility measurement (MAUM) methodology (Edwards, 1977) was adopted to capture the value systems of current policies and goals. MAUM begins with an assumption that alternative choices and decisions are based on balancing particular values. The values of three groups were examined in this project: directors of special education, superintendents of schools, and pre-service teacher trainers. The MAUM procedures were adopted to elicit these groups' values which are the basis for decisions and the desired outcomes. We believe that some of the confusion in education programs are attributable to differences of values and that to understand the decisions and activities in education, one must also understand the values which drive those decisions. Similarly, those values are likely to change, perhaps due to such forces as economics and changing demographics. The MAUM procedures provide an opportunity to describe current value systems and their impacts on special education programs and teaching staff. In this project, the values were identified as the particular attributes desired in special education programs and teaching staff. The choices or decisions corresponded to the activities which are part of high school special education programs and pre-service teacher training programs. The activities are the means to the end, i.e., the choices one makes to reach a specified goal. Thus, the final results of the project are specifications of the goals or desired attributes of special education programs and their teaching staff by three stakeholder groups and the activities which they believe have the greatest utility for maximizing those goals.

Each of the five surveys is reviewed. A brief introduction of the relevant published literature is provided as a context for each particular survey. The survey's procedures and results are provided. The findings are briefly discussed in the context of the literature which was cited and the other aspects of the project such as the relationship with the other surveys completed, the qualitative research case studies (Knowlton & Clark, 1989) and the Bodner et al. (1987) results.

The last section of this report combines the common threads from this part of the NHS project and the current literature. Issues and trends are reviewed and goals for a model for high school special education programs are described. Similarly, for pre-service teacher training, issues are reviewed and options for training models are proposed. As stated previously, the next section begins with a brief review of published literature concerning future scenarios of American society. This information will assist the reader in further evaluating appropriate attributes and curricular activities in special education programs.

Future Scenarios

Some high school students with handicaps receive the majority of their academic and vocational education through special education programs. Others receive the majority of theirs in regular, mainstream programs. In either situation, someone has the full responsibility of preparing each handicapped student to be a knowledgeable citizen and contributing member of society. The roles of an individual include at least a minimal degree of independent functioning,

of living in a community setting, of participating in community activities, and of working in a competitive setting. A review of possible future scenarios provides a standard of how both regular and special education might benefit students with disabilities. If one can glimpse the future, one potentially can prepare in advance. These glimpses of the future were prepared from three sources: a paper in 1985 by Harold Hodgkinson titled "All One System: Demographics of Education," a 1987 report from William Johnston and Arnold Packer at the Hudson Institute titled Workforce 2000, and an article in Education Week, "Reform at 5: The Unfinished Agenda" by M. Sandra Reeves (Reeves, 1988). These papers reviewed current economic, social, educational, and occupational issues and shifts that might be expected in the near future.

Halloran, Thomas, Snauwaert, and Destefano (1987) reported that occupational opportunities for persons with handicaps are minimal. They estimated that approximately 67 percent of those Americans with handicaps between the ages c. 16 and 64 are not working. Similar conclusions were drawn in separate studies by Hasazi, Gordon, and Roe (1985) and Mithaug, Horiuchi, and Fanning (1985). Optimism for improving on that figure hardly seems justified. Perhaps the best approach for reducing that figure would result from declaring that the handicapped population has reduced in size. Several futurists have suggested that quite dramatic shifts are expected in the occupational opportunities. These shifts are not likely to benefit the population with disabilities. For example, all new jobs are expected to require post-secondary training. Manufacturing jobs will decrease while service jobs will increase. The complexity of jobs will place increasing demands on an employee's preparation in reading, following directions, applied reasoning, and using mathematics. "When jobs are given numerical ratings according to the math, language, and reasoning skills they require, only twenty-seven percent of all new jobs fall into the lowest two skill categories, while 40 percent of current jobs require these limited skills" (Johnston & Packer, 1987, p. xxi). An expected consequence is that unemployment rates will increase among those persons with limited skills, while the rates will decrease among persons with advantaged skills.

Thus, a significant dilemma confronts the policy groups and practitioners who shape educational practices. On the one hand, improved academic skills are clearly needed for maintaining occupational options, and yet students with mild handicaps have a history of low academic achievement and generally poor performance in other broad indices of successful school behaviors, e.g., study skills, notetaking skills, test taking skills, listening comprehension, and so on. Coupled with these skill and content deficits, students with mild handicaps are not so likely to "feel good" about the prospects of not only more academic education, but a more rigorous academic education. Academic domains should not be the sole focus of students' educational programs, however. The task of providing an appropriate education must also address those other non-academic aspects of schooling that result in outcome behaviors related to adult living.

Reeves' (1988) review indicated that some visions of the future warn that focusing solely on academic skills is itself shortsighted. This shortsighted view is based on a premise that a comparatively small number of jobs are highly academic in skill content and requirements. Other curricular content is also needed. Reeves cited the work of others who have emphasized that interpersonal skills, and the ability to learn rapidly and continuously on the job are critical. Based on this perspective, schools are encouraged to adopt curricular approaches that foster collaborative techniques and working within groups. Mithaug, Martin and Agran (1987) reported that even currently the inability to maintain acceptable performance standards is often the cause of job terminations for students with disabilities. An additional curricular approach is providing students with the skills to learn on their own. This curriculum might be thought of as strategies which a student might use to solve new social, occupational, and daily living problems. Several learning strategies approaches have been developed (e.g., Dansereau, 1978; Deshler & Schumaker, 1986; Deshler, Schumaker, Alley, Warner & Clark, 1981; Ellis, 1986; Wong, 1985). These approaches might have greater utility as society diversifies.

In addition to occupational change, the social picture of society will change through changes in age, race, and family structure patterns. The median age is currently 30. In the next decade the median will rise to 35 and in three decades it will be 40. The population will be older, which has implications for who will be in the workforce and attending and supporting the educational programs. While the population is aging, its racial composition is also changing in that birthrates among whites are decreasing, but increasing for Hispanics and Blacks. The population will be more racially and ethnically diverse. Family child-rearing patterns are changing. (Hodgkinson, 1985). Hodgkinson estimates that every day 40 teenagers give birth to their third child. Divorce rates are increasing and even in two-parent families, increasing numbers of both parents are working outside the home. However, most pension, fringe benefits, and welfare plans were designed for different family patterns and roles, i.e., men working and women staying at home (Johnston & Packer, 1987). These observations and projections have a variety of implications for schools and other civic and social institutions.

Hodgkinson (1985) stated that by the year 2000, one of three people in the United States will be from a minority group. The increased racial and ethnic diversity and their increased proportional representation in the population have implications for all of education, but especially among students with disabilities. One would be naive to ignore the plethora of issues associated with the prevalence of disabilities among minority groups. The numbers have an obvious impact. A disproportionate number of minority group members report having disabilities (Bowe, 1985). Yet, another error would be in assuming that minority group issues are comparable across all minority groups. For example, the issues confronted by Spanish-speaking immigrants are different from those of Spanish-speaking non-immigrants. Other factors than language must be considered. Frequently, the common denominator may be poverty, but family attitudes, that is, the parents' own level of education, their valuing of education, educational aspirations, and assistance to their children differ, and thus require a differential response (Ogbu, 1988). Hence, educational responses to disabilities could be optimal, and nonetheless, the results would be unsuccessful. The total approach of institutions' assistance must include those affective factors which are potentially as devastating as is the classified disability itself.

This description of societal trends has been included to help focus the discussion about appropriate and meaningful reforms. With this brief description of only some of the complex societal influences on the near future, one might ask how special education programs, and more specifically, how students with mild to moderate handicaps will participate and contribute. These students might easily be perceived as a segment of a much larger group of students considered "at risk" (Reeves, 1988) due to economic, attitudinal, historical, and educational factors. Quite likely when students impacted by these other factors are considered, the students with disabilities comprise a proportionately small segment of all students experiencing low achievement. The issue then is one of resource allocation. What are the values for allocating limited educational resources? For example, how does one equitably distribute resources among those groups recognized as having greater needs? How are the values of "need," "equality," and "efficiency" considered or weighted in these decisions? How and to what extent is society "better" for assisting those individuals with presumed intrinsic disabilities versus assisting those with disabilities due to environmental factors and who are, arguably, "more remediable?"

From another angle, one of the apparent issues is that given the increased competition for a reduced number of suitable vocational opportunities, the students with identified disabilities will have even greater difficulties meeting job requirements. The label of "special education program participant" or "IEP student" might be considered even more disadvantageous than having a transcript indicating poor achievement in regular education. What are the utilities in special education placements? The answers to such serious, value-laden questions will be found by stakeholders involved in education at various levels, e.g., parents, teachers, administrators, school boards, regulatory agencies, and governing bodies such as the legislature and executive

branches. The decisions may or may not be made consciously or following public debates. That is, the discussions may not explicitly include the previous questions or values, but provide a narrow focus of values. Those values or underlying assumptions may be addressed indirectly or subtly in such activities as selecting textbooks and/or program objectives. As a recent example, Gene Glass (1987) reviewed the U.S. Department of Education's What Works: Research About Teaching and Learning (1986) and charged that the previous administration's recommendations for improving teaching and student achievement represented careful value judgments. These value positions discounted or even ignored opposing data, which represented alternative values. The issues of curricular options, service delivery models, and of linking values to decisions in such areas should be considered as the reader examines the following section in which reforms in secondary level special education programs are presented.

Secondary Level Special Education Programs

In the preceding section, information was presented regarding changing characteristics in basic trends of American society. In this section, issues of special education reform and recommended reforms are presented. Special education is not lacking in reforms or reformers. Neither is regular education. The reader is invited to consider these reforms not only from the perspective of current practices and the changes needed, but also, and perhaps more importantly, with the perspective of how the future scenarios previously described fit with the reforms: Are the reforms meaningful in light of the projected future issues confronting society? To what extent do the proposed reforms address current problems, but yet not respond to the next decades' issues? What assumptions are made about individual worth? What outcomes are valued?

Two themes dominate calls for reform in special education. The first concerns the increased integration of special and regular education, particularly for students considered as having mild handicaps. This reform has been referred to as the Regular or General Education Initiative. The second theme is the improvement of quality of special education services as students transition from high school to independent adult living. This reform has been called the transition movement. The perceived similarity or comparability between these two movements is a concern for better integration of the special education student into the mainstream of academic, social, and vocational activities. However, the two movements are not necessarily complementary to or conditional on the other. For example, improved transition services do not require increased integration of special and regular education. On the contrary, one might envision some scenarios in which increased integration impedes transition services. One can question the extent to which the general high school curriculum prepares individual students for successful independent living, particularly those students in the lower quartile of achievement. Background information is provided in the following paragraphs for understanding linkages with this project and these two reform areas.

Regular education initiative. Reynolds, Wang, and Walberg (1987) have challenged current educational practices in two areas: 1) the extent to which special education services are needed for many of the students receiving them and 2) the manner in which those services have been delivered. They believe that more than three-fourths of the students in special education, those students considered as exhibiting mild handicaps, should be integrated into regular education. Special education's current provision of educational and related services is seen as a problem rather than a solution. The authors do not deny the severity of the students' needs for assistance, but rather the delivery of those services is the concern. They view the categorical programs as producing disjointed services and excessive proceduralism.

An example of disjointed services is when students who fail to meet the special education eligibility requirements are not treated differently in the schools. For most students, differential treatment comes only through placement in special education programs. If the student

encountering academic or behavioral difficulties does not qualify for a special education category, no alternative services or considerations are made. From this perspective the student's failure to meet the requirements of a categorical model results in a denial of services or differential treatment. The problem is perceived as a student problem rather than a failure of any educational system component. In general, special education services have been portrayed as creating two systems of education or more poignantly, two types of students, the regular or general student and the special education student (Hagerty & Abramson, 1987). In regular education, students must fit the prevailing classroom management style which includes loosely defined behavioral and academic standards. If the student does not meet these classroom level standards, the preferred option is to initiate a referral for special education comprehensive evaluation. In fact the referral is commonly considered as the last act of formal responsibility identified with regular education. In this manner the regular classroom has been relieved of its responsibility for all students. Students move out of regular education into special education on parameters defined by regular education. Thus, special education has become the dumping ground for poorly performing students (Knowlton & Clark, 1989).

Following from this basis for special education, the reports that many of the students in special education are "mildly handicapped" should come as no surprise (Hagerty & Abramson, 1987; Sansone, 1987; Shephard, 1987; Ysseldyke, 1983; Ysseldyke, Algozinne, Shinn, & McCue, 1982). Their assessed handicap is that they do not meet the classroom norm and score in the lower normal range of individual differences. Low scores occur any time that a heterogeneous group, e.g., all children of a particular age, is organized for administrative convenience and assessed on a common measure. In this instance, the organization is in a classroom within a school. The administrative organization assumes and acts on the premise that little variance exists within the population.

The second challenge concerns the adequacy of the services, particularly for the mildly handicapped. Given the characteristics of these mildly handicapped students, Hagerty and Abramson (1987) and Shephard (1987) concluded that the efficacy of special education is not likely to be as good as hoped. Some research suggests that the methods are not distinctive, nor individually tailored. Stainback and Stainback (1984) offered a similar assessment of special education's efficacy and the need to reconsider the best alternatives of responding to student problems. Their proposal was a merger of special and general education back into the one system which was first initiated.

Reynolds et al. (1987) proposed a two-part initiative to redress these issues:

> The first part of the initiative involves the joining of demonstrably effective practices from special, compensatory, and general education to establish a general education system that is more inclusive and that better serves all students, particularly those who require greater-than-usual educational support. The second part of the initiative calls for the federal government to collaborate with a number of states and local school districts in encouraging and supporting experimental trials of integrated forms of education for students who are currently segregated for service in separate special, remedial, and compensatory education programs. (p. 394)

Reynolds et al. (1987) viewed this initiative as increasing accountability as well as ensuring that the categories of "new morbidities," are assisted. These categories include students whose academic difficulties stem from drug use, teenage pregnancy, poor academic motivation, and school absence. One consequence is that the plethora of categories may prompt some educators to consider individualizing instruction according to the needs of students in contrast to the organization of the curriculum (Putnam, 1987). The reader is reminded of the preceding section concerning the future demographics of society. The question might also be

asked if creating additional, different categories will result in special curricula or other treatment, which once again distinguishes the mainstream students from the special students.

Gartner (1987) offered similar observations as those of Reynolds et al. (1987) and Stainback and Stainback (1984) with the added dimension of consequences commonly associated with handicaps. One consequence is the development of a separate and segregated education system considered second class. He and others (Braaten & Braaten, 1988; Lilly, 1987; Pugach & Shevin-Sapon; 1987; Shephard, 1987) have noted that this separateness is in part evidenced by the reports recommending general education reform, but which ignore students in special education and other low achieving groups. However, an alternative explanation might be suitable. Isn't it reasonable that the omission reflected a lack of knowledge or experience with special education? Is it possible that given the relative small size of special education, the reformers judged it as insignificant in comparison to broader educational issues? The separateness of special education services may not be handicapping, but rather a distinguishing asset which results in greater individualization of assessment, planning, instruction, and tailored outcomes.

Another of Gartner's (1987) observations was noting the persistent public attitude that students with disabilities are unable to learn. This attitude has stronger implications for society's response than does the student's actual functional limitations. Thomas and Halloran (1987) described how these perceptions present educational as well as employment issues. A parallel situation can be made from differing viewpoints in test score interpretations and bias. As Flaugher (1978) noted, one's interpretive viewpoint influences one's consideration of bias. If students with disabilities are viewed as lacking the abilities or capacity to learn and that those capacities are relatively fixed, few resources are likely to be expended. In contrast, if the disabilities are viewed somewhat like low achievement, which can be improved with a variety of remediations, the chosen policy might be the one which is directed at fixing the disability. Thus, expenditures are considered as having a greater potential impact.

In summary, the reforms directed towards greater integration of regular education and special education have a basic premise that all students would be better served, that the categorical approach of special education lends itself to maintaining attitudes which handicap special education participants more than do the students' actual disabilities, and that the education system would thus have greater, more clearly defined accountability. These arguments for the regular education initiative have an intuitive appeal. However, those arguments also raise many fears. Quite simply, if the services for these students currently in special education are considered as having little impact, little hope is offered that regular education will improve the situation (DLD, 1986; Edgar, 1987; McCarthy, 1987; Sargent, 1989). The question asked is: To what degree can reintroduction of those students in a system which initially rejected them as being too different, likely be beneficial? Similarly, an overriding issue in any aspect of education is accountability. Thus, what mechanisms will be used in response to education's new responsibilities for students with mild handicaps when education has not been accountable with a more select grouping of the general student population?

Issues posed by the advocates of the regular education initiative have raised the level of discussion about the purposes of entitlement programs and the value of research in directing policy decisions. Recent issues of *Exceptional Children* (October, 1988), *Journal of Learning Disabilities* (January, 1988), and *Learning Disabilities Focus* (Fall, 1988) have published a variety of perspectives on the regular education initiative (Bryan, Bay, & Donahue, 1988; Kauffman, Gerber, & Semmel, 1988; Keogh, 1988a; 1988b; McKinney & Hocutt, 1988a; 1988b; Schumaker & Deshler, 1988) and on methodological issues of its research base (Bryan & Bryan, 1988; Fuchs & Fuchs, 1988; Hallahan, Keller, McKinney, Lloyd, & Bryan, 1988; Lloyd, Crowley, Kohler, & Strain, 1988). The result was a clearer delineation of the alternative perspectives. The scope of those issues is beyond the range which could be adequately integrated into this

paper, but the importance of the topic necessitates that the content be considered if the reader is to have an informed judgment of the regular education initiative.

The linkage between the regular education initiative and this research effort is quite straightforward. The research effort was designed to identify those attributes and activities useful for distinguishing the quality of special education programs and teaching staffs. The degree to which those perceived qualities match or are reflected in a regular education program is an index of its compatibility for educating students evidencing mild to moderate academic and behavioral differences. If regular education programs are to be responsive to these students' needs, the programs must address the perceived attributes needed in special education. Or, stated another way, this project identified those attributes and instructional activities on which one could judge the quality of special education services. Thus, these attributes and activities provide a framework for judging how well special education meets students' identified needs. The students' needs might be thought of as a constant, and the attributes and activities are also a constant. Whether these students' needs can be met with at least the same quality level in regular education as in special education is a key question for inquiry. Thus, while the regular education initiative might be considered as a philosophical argument, the implementation issues must also be considered. This research project has established conceptual categories for assessing the qualities of existing programs and judging the extent to which students' needs are accommodated.

Transition movement. For most students in special education programs, the completion of their high school program is the last of their formal school experience. If they receive additional training, that training is usually job related and is provided by the employer. Thus, high school is the last opportunity for most students to obtain formal instruction in content areas and skills which are not specific to a particular job. The thrust of the transition reforms has been to examine the efficacy of high school programs and to demonstrate alternative efficacious instructional curricula and models. Many alternatives have been provided. The April, 1987 issue of Exceptional Children was focused specifically on a review of general transition issues. In this report, the focus is less on transition delivery models and more on the curricular content or goals that make up the school-based component of such programs.

Edgar (1987) posed a serious dilemma for secondary level policy makers and practitioners. His review of secondary level programs concluded that the curriculum appears to have little, if any, impact on students' eventual adjustment to community life. The factors which did make a difference were the students' ability levels, family characteristics, or other non-school-related factors. He reviewed the dropout rates among students with mild to moderate handicaps and found that over 30 percent dropped out. Of those students who completed high school only 15 percent obtained employment with salaries above the minimum wage. These numerical values are interpreted as a crisis situation, one which requires a major change in secondary level special education programs. The radical change he advocates is for a curricular shift from academics to functional, vocational, and independent living skills. He views the academic emphasis in special education as the causative agent in the dropout rate and low employment status among students in special education.

This shift in curricular emphasis is the basis for the dilemma. The anticipated consequences of Edgar's (1987) desired curricular shift is to increase the separateness of the special education tracked students. Edgar agreed with Gartner (1987) that the special education students are already devalued and misperceived and that his recommended curricular shift will not improve those perceptions, but quite likely increase the misperceptions. Nonetheless, the alternative academic curriculum and increased academic standards, which are emphasized in regular education reforms, are certainly not responsive to students' adult living needs. Following Edgar's logic, these regular education reforms are only likely to increase the dropout rate and fail to improve the students' successful employment opportunities.

A few observations seem needed regarding Edgar's (1987) viewpoints. The factors which Edgar identified as making a difference for students' post-secondary success are also the same ones which might be hypothesized as making a difference for the majority of high school students, e.g., ability level, parental support, and peer associations. However, for the majority of students in the mainstream of education, the curriculum does appear to make a difference. The other factors cited by Edgar are likely important as well, but their relative contribution is weighted differently. Perhaps, the relative contribution or weighting of these factors is a distinguishing feature of successful special education and regular education programs.

From some sources the dropout rates in special education do not appear much different than from general education, though Sansone (1987) labeled it the single most important fact about students with handicaps in secondary settings. She reported studies in which 50 percent of identified learning disabled and mild mentally retarded students dropped out between when they entered ninth grade and their cohorts graduated from high school. In the same time frame 32 percent of a control group of nondisabled students dropped out. Edgar (1987) reported a dropout rate of 30 percent among the state of Washington's students with handicaps. The U.S. Department of Education's Tenth Annual Report to Congress estimated that a national 26 percent dropout rate was a conservative estimate. The generally perceived range for the dropout rate is between 14 and 25 percent (National Governors' Association, 1987). In terms of total numbers, the dropout in general education is significantly higher. Here again, additional information such as how these numbers and percentages are distributed by such factors as disability, age, sex, socio-economic status groupings, and the interaction of these factors is important for consideration in designing both remediation and prevention programs (Grant & Sleeter, 1986). Reeves (1988) reported that dropout rates in the nations' large urban school districts with disproportionate over-representation of poor and minority students can soar to 50 percent or more.

While the dropout rates may not indicate differential impacts between special and general education students, the percentage of special education students earning minimal wages is high relative to their peer group. That is, special education students tend to find themselves disproportionately over-represented in the minimum wage level (and below) grouping. In contrast, their nonhandicapped peers are more evenly distributed along the continuum of wages. Recent discussions regarding an increase in the minimum wage would have a significant impact on the special education population. As Edgar (1987) suggests, special education can hardly be considered successful given the income levels of its former participants. Albeit income level may not be the *sine qua non* of success, it will impact the likelihood of living independently, which is perhaps a broader index of success.

Other reviewers of high school special education programs besides Edgar (1987) have also generally supported the urgent need for refocusing the curricula. Benz and Halpern (Benz & Halpern, 1987; Halpern, 1979; Halpern & Benz, 1987), Clark (1974; 1979; 1980a; 1980b), and Brolin and Kokaska (Brolin & Thomas, 1971; Brolin & Kokaska, 1979; Kokaska & Brolin, 1983) have had a consistent theme regarding the balance of curricular content. They believe that the emphasis must shift to curricular domains in vocational, independent living, and personal-social content. The content of coursework is not the sole requisite to a successful transition program, but appropriate coursework is necessary. The authors clearly do not support a remedial approach to academic deficits for many students with mild educational handicaps and for most with moderate educational handicaps.

Similarly, Hardman and McDonnell (1987) stressed a reexamination of the curriculum in light of identified special education goals following Will's (1984) statements that high school programs should be directed at preparing students to live and work in the community. They emphasized the need for schools to take the lead in ensuring that the transition planning occurs. Johnson, Bruininks, and Thurlow (1987) elaborated on the management strategies, training, and

coordination considered necessary. In curricular areas, the authors suggested that students with severe learning needs be provided training experiences in a variety of vocational areas, supported work formats, personal management, and recreational/leisure environments.

Mithaug, Martin, and Agran (1987) shifted the focus of specific content domains to an examination of desired skills. Four skills were identified as crucial: (a) ability to acquire new skills, (b) ability to adapt to new situations, (c) ability to solve problems in different settings and (d) ability to maintain acceptable levels of work performance. They concluded that the traditional direct instructional model (Engelmann & Carnine, 1982; Gersten, Carnine, & Woodward, 1987) is not compatible with reaching those goals largely because responsibilities of choosing and evaluating one's efforts are assumed by the teacher. In contrast to the direct instruction model, Mithaug et al. proposed "adaptability instruction," which emphasizes the student's active involvement in instruction. They described four components of the model, which they judged were appropriate for students with mild to severe learning needs: (a) decision making, (b) independent performance, (c) self-evaluation, and (d) adjustment. Since these four components are viewed as an approach for any task, they are also appropriate to any content domain. The distinction they make between their adaptability model and a learning strategies curriculum (Deshler & Schumaker, 1986) is that their emphasis is on the critical concepts needed to improve post-secondary adjustment and performance. Apparently, they perceive Deshler et al.'s work as having an in-school focus exclusively, which is not entirely accurate (see for example Deshler & Schumaker, 1986).

If the question is raised, what constitutes the attributes of a good transition model, Stodden and Boone's (1987) research methodology identified a set of attributes for an interagency cooperative approach. Nine variables were identified as influencing the degree of success for a student's transition: a) occupational placement and maintenance, b) income level, c) continued education, d) community leisure activity participation, e) transportation options, f) residential arrangements, g) advocacy arrangements, h) medical/ health needs and their provisions, and i) level of personal and social adjustment. In many respects, these nine variables fit with the curricular domains cited by Benz and Halpern (1987) and Mithaug et al. (1987). Commitment and mechanisms for incorporating the factors into secondary level programs suitable for all special education students are critical to successful implementation.

Student perspectives of the importance and utilities of their curricula provide an interesting comparison to the professionals' perspective. Brown, Weed, and Evans (1987) reasoned that such information was important to individualizing educational programs and for students' evaluating their educational program. In general, the students with disabilities attached greater importance to those skills which were immediately useful, to specific skills in vocational and domestic domains, and to more specific courses of study than the more general courses. The skills which students used the most frequently were not necessarily the same ones that they considered most important. For example, "health care" was identified as an important topical area, but also that it was not one which was used frequently. Work study handicapped students in the public school included "cooking" and "driving" as important, but also that they did not use those skills frequently. From one perspective, the value of this study is that it illustrates the reference point of students, which might be quite narrow, and that expanding that perspective merits consideration as an important curricular objective for students. Poplin (1988a; 1988b) emphasized that assessing the students' perspectives of what is important and including such information are needed as curricular issues are examined.

Conclusions. The conclusion from this review of transition-related reforms is that a consensus exists for the need for curricular reforms in content areas, for how students are engaged in instructional tasks, and for how the high school's role of instruction is changed to include a role of initiator and coordinator of interagency cooperation and communication. These changes are not likely to be implemented easily. The resistance to such changes is likely multi-

faceted (Hagerty & Abramson, 1987; Johnson et al., 1987). However, the recommended directions seem compatible and supported by previously presented future scenarios of society (Hodgkinson, 1985) in addition to other research reviewed here.

The linkage between the topic of improved transition services and this research project hopefully is obvious. Transition services focus on those activities which will ensure that students are successful once they complete their secondary level education. This project was concerned with identifying the parameters on which a successful special education program might be identified: What are the attributes for judging the quality of a special education program and what are the activities that maximize achieving those goals? The data from this project should provide a point of comparison or evaluation of how well the concepts of transition, vocational curriculum, independent living, interagency cooperation, and so on are incorporated in current beliefs of special education's quality.

Regular education is the dominant force for affecting student outcomes. Accordingly, regular education must be considered as the major influence to which special education must respond or fit. Trends in regular education thus have their impact also on special education. In the following section, some of the reform topics in regular education are presented. The reader is encouraged to reflect on the impact of these reforms on special education, the regular education initiative, and transition services.

Reforms in Regular Education

As one examines the language of reform and reformers' expressed goals, a number of generalizations seem warranted. Among those generalizations is that the goals of the reforms focus on three broad domains: increased economic benefits to the United States, academic learning, and increased participation in the democracy (Staff, 1988). The second goal, which focuses on the integration of technology in daily activities, could likely be subsumed under the first benefit, since ultimately its consequences will be increased economic productivity and competition in the world's markets. Clearly though, the emphasis or value from reforms is cast as economic benefits. The next several paragraphs include more specific information about the reform literature and alternative views for reform. The value of this information is in providing a contrast or development to common themes previously presented and to the themes associated with reforms in teacher education.

Quite appropriately one of the values derived from the reports on reform and of the Reagan administration was the energy directed at answering basic questions such as: What are the roles of education? What characterizes a well educated adolescent at age 18? What is fair educational opportunity? How does one value equality, equity, and excellence? Who is the education system to benefit? How does society view itself, its future, and the role of education? As preparatory to reviewing the reports on reform, two topics are presented. First, a political context is presented from work by Glass (1987) and Clark and Astuto (1986) which helps frame the reports in the light of recent federal policy. Second, Walberg's (1984) findings are summarized. From one perspective, Walberg's work, recent shifts in federal policy, and the reform reports are very complementary and several parallels are evident. However, the important contrast is between the mechanisms which Walberg advocates to improve educational outcomes and those mechanisms advocated in the reports on educational reforms.

Reform movements within education might be thought of as furthering a political agenda (Glass, 1987). This thesis was central to Glass's critique of the U.S. Department of Education's (1986) document - *What Works: Research About Teaching and Learning*. In this instance, and in previous presidential administrations, Glass suggested that research results were cast to reflect political positions. Thus, context and paradigm are important for understanding research and recommended reforms. Clark and Astuto (1986) reviewed changes in the federal level's

education policy in the context of the Reagan first term and summarized those policies as representing the five D's: (1) diminution, (2) deregulation, (3) disestablishment, (4) decentralization, and (5) deemphasis. Substantively, these terms were implemented as perspectives on causes and cures for schools' problems. A partial listing of these perspectives includes: "Core problems in schools are discipline, drugs, standards, and teachers; Problems of education cannot be solved at the federal level; Localities should be in control of their own schools; Moral values, prayer, and character education need to be returned to the schools; A cabinet-level department of education is not needed; Teachers would be better if they earned salary increases by merit; Students would be better if they competed directly for awards and promotion; Most students do not work hard enough in school; and School curricula should concentrate on the basics and include more 'hard' subjects and fewer electives" (p.7). These perspectives are important in that they show a selective relationship between research, policy, and practice, which is also the point of Glass's (1987) critique.

Walberg (1984) examined what works in education based on educational research from the perspective of a production model. That is, education was conceptualized using the paradigm of an industry with a production process. In this paradigm particular components of the industry were analyzed for their efficiency and effectiveness on the product. Walberg considered students' affective, behavioral, and cognitive learning as the products of education. Three groups of factors were identified and evaluated for their relative influence on learning. These three groups were: **instruction**, **student aptitudes**, and **environmental**. Within each of the three groups, a number of factors were identified. For example, the two factors in the **instruction** group included (a) the amount of time students engage in learning and (b) the quality of the instructional experience, including psychological and curricular aspects. While other factors might also be considered important, the empirical evidence from numerous studies clearly favored these two factors. The factors in **student aptitudes** were (a) ability or prior achievement, (b) development, and (c) motivation or self-concept. The **environmental** grouping included four factors: (a) the home support, (b) the classroom social group, (c) the peer group outside the school, and (d) the use of out-of-school time, i.e., the amount of leisure-time television viewing.

Walberg's production model is encouraging and provides an alternative to the reform literature that is currently guiding curricular and matriculation changes. We believe that such factors as outlined by Walberg should be considered as a better basis for reforms in the schools. Rather than changing requirements, e.g., increasing the number of courses required for graduation, or blaming groups, e.g., students and teachers do not work hard enough, Walberg's model emphasizes improving the quality of students' outcomes based on factors which provide accountability standards. This perspective has obvious advantages over a plan which only exposes the student to more content, e.g., adding courses to graduation requirements, or has more severe consequences, e.g., requiring a test as a basis of graduation without a realistic provision for remediation. Several of the reports on reform are reviewed next to provide a comparison and contrast to the preceding statements about a political agenda and Walberg's approach.

A Nation At Risk: The Imperative for Educational Reform (National Commission on Excellence in Education, 1983) was one of the initial papers which brought a careful focus to issues, problems, and recommendations for improving the public schools. Its blunt and sober warning that "the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people" (p. 5) struck a responsive chord in both the general public and the leadership in education. A number of supportive reports and books (Adler, 1982; Boyer, 1983; Goodlad, 1984; Sizer, 1984) added momentum to the educational reforms that are evidenced now in increased credit hour requirements, increased emphasis on English, math, science, and foreign language, minimum

competency tests, and some states moving to differentiated graduation or exit documents (Bodner, Clark, & Mellard, 1987; Sansone, 1987).

While the various reports differ in style, tone, and even specific recommendations, a continuing theme is on achievement of excellence through increasing the rigor and amount of academic courses in high school programs. Only the Paideia proposal went so far as to recommend a one-track high school system. The current high school track might be characterized as general, non-specialized and non-vocational liberal arts. The academic emphasis was prominent in each document calling for reform. Career exploration and preparation for work was mentioned in only one of the reports cited in this review (Cf. Boyer, 1983) and was the only one among the first 11 major reports that did. The term "career education" was not used in any of the reports, although some occupational awareness concepts and activities were included in a few.

Interestingly, all of the proposals mentioned seek to narrow the offerings at the high school level. The proposals ignore any reference to the transition from school to the working world. The implicit assumption is that every high school graduate can or will move directly to college or further education. According to the school reform proposals, the post-secondary level provides the preparation for the world of work. The proposals' authors assume, evidently, that those who plan to enter the workforce immediately have all the skill and knowledge needed without any further training. This assumption is in contrast to Reeves' (1988) observations concerning businesses' and industries' perceived need for increased entry requirements and training.

The recommendations of the excellence in education movement call for educational practices that were the subject of the criticisms of education in the 1960s e.g., school alienation, drop outs, and low achievements of graduates. They are the chief reasons why the National Advisory Council on Vocational Education formed the concept of career education that was so ably articulated by Marland (1971). Most important, we concur with Phelps (1985), Toch (1984), and Yudof (1984) that these recommended reforms offer no alternatives to people who cannot perform well in an academic arena. If one fails to respond to the academic challenges, no compensatory avenues are open to that person. In a country that considers diversity one of its major strengths, the excellence in education proposals emerge as anachronisms that ignore the needs of non-college bound youth.

The possibility exists that special education is the standard for other segments of public education. The separateness of special education and the popular perceptions of its value - providing a range of quality educational and related services - to students whose special needs are not addressed within the regular curriculum may be its greatest asset. What is it that regular educators are advocating in reforms? The list of reforms seem to include: greater specificity in the curriculum, better response to individual learner needs, appropriate learning opportunities, better defined outcome goals, minimal academic standards, increased number of credits for graduation, and better preparation for students in a low achieving curriculum. If each of these reforms were considered separately, doesn't special education have an understanding of each of them? These reforms have been considered, quality measures have been used, and policy discussions have occurred within special education. This history would likely prove valuable to general education.

Special education perhaps should do a better job in each area because of the differential dollars provided. On the other hand, the needs of the students receiving the services are more severe in special education than in regular education. These students' characteristics work against achieving these goals. Another issue is that special education only includes 10% to 12% of the student population, and thus is dealing with a smaller segment of the population. Nonetheless, those students in special education are not the "best" learners or most motivated. On almost any dimension of student characteristics, the student group is skewed on

characteristics working against learning and achievement. In contrast, the regular education enrollment is more normally distributed and, if it is skewed, the skew likely runs the opposite direction of the special education distribution. Again, that distribution of students' knowledge, skills, and abilities should likely benefit outcome indices in regular education. The issues presented in these last few paragraphs are intended to suggest alternatives for consideration as local districts consider reforms. The intent was not to rank order the qualities of special and regular education segments in the public schools.

Sansone (1987) suggested that a logical relationship might exist between the secondary school reform movement and the dropout rate of both handicapped and non-handicapped students. That is, the increasing dropout rates can be explained by the increased academic demands in number of credits required and increased emphasis on more academic content in the required units for graduation. The question could be raised, however, "Is the special education programming adequate?" If the programming is not adequate, is the training or preparation of the teachers resulting in discouraging outcome data for both graduates and dropouts?

Secondary Level Pre-service Teacher Training

School reforms are not independent of the teacher training institutions which provide the schools' staffs. As such, recent evaluations and reforms directed at teacher training for general and special education are worthy of consideration. To highlight perspectives of both general and special education training programs each will be treated separately. In neither case, however, are the presentations extensive. A few significant elements are sufficient to characterize the teacher training issues within this report's context.

General education pre-service training. Clark (1988), Cornbleth (1986), and Futrell (1986) have suggested a parallel between reforms in regular education and those advocated in teacher training. The parallel is that in both arenas a technical "fix" and increased standards are proposed. Warren (1985) has carefully documented the historical development of the teaching profession and reported examples of these two dominant trends in classroom and teacher training reforms:

> First, from the early nineteenth century forward, market considerations have driven both the policies and the curricula in teacher education, as both have responded to shortages and surpluses of teachers. . . The teacher economy continues to function independently of professional judgment about teacher education, as it did in the nineteenth century, and independently of research findings, as it does in our time.
>
> Second, attempts to clarify responsibility for teacher education reflect a long history of controversy over the separateness of teacher preparation programs. . . Teacher education, like other higher education programs, has felt the effects of academic politics, that is, the faculty's competition for enrollments, budgets, and prestige.
>
> Third, from the outset, teacher education has been viewed as virtually synonymous with instructional preparation. . . To the extent that the emphasis on methodological practice has prevailed, teacher education ironically has grown increasingly remote from the conditions of teaching and the experience of teachers, neither of which have been confinable to classrooms. Offered in isolation, preparation for instruction has left teachers unprepared for their more difficult responsibilities, which are to conceptualize, innovate, and analyze disparate educational and policy phenomena. (p. 10-11)

Cornbleth (1986) and Futrell (1986) elaborated on Warren's (1985) observations, and argued that reforms generally are "band-aids" which ignore broader issues in education. Cornbleth and Futrell emphasized the need for basic questions of values, substance, and goals

being specifically answered prior to consideration of appropriate reforms. They believe that substantive discussions would suggest that the structure of schools is in need of restructuring. In these restructured schools, organizational and purpose issues would be addressed. Their recommendations would emphasize that teachers have greater responsibility for what happens in the schools and that reforms be generated from a bottom-up orientation. Classroom experiences would be emphasized in the restructuring. In contrast with their recommendations, Futrell observed that a "full 90 percent of the legislative acts that have been termed educational reforms have, in fact, been regulations -- regulations that severely restrict teachers' rights to use their own judgment, regulations that usurp the authority that appropriately belongs to teachers, parents, and local communities, and regulations that dwell on the quantitative, on what is countable, easily measured, and reducible to checklists." (p. 6) Such reforms only tangentially consider substantive issues.

The link between these views and recent research in teacher education can be made by examining work which concerns the teacher as a decision-maker. C. Clark (1988) and Shulman (1988) reviewed teacher training programs and raised the questions of teacher training exercises which assist a teacher in confronting the classroom setting. This setting was characterized by C. Clark as presenting a myriad of decisions, uncertainty, and dilemmas. In this setting the teacher relies on content knowledge and pedagogy, which have rarely been balanced in training programs. As Warren suggested, content knowledge has generally been emphasized over instructional methods, i.e., information was taught but not how to teach in the complexity of the classroom setting. Shulman (1986) offered a paradigm in which types of teaching knowledge, which includes but is not limited to content and process, can be studied and integrated. This integration would alter training programs by developing a stronger association with classroom practices and certification requirements by emphasizing the multiple domains of knowledge required in the teaching profession.

In summary, this section presented a critical examination of teaching, education reforms, and teacher education reforms. To alter education, the reforms need to consider the training programs, the providers of the instruction, and school structure. Reform directed from top-down processes are more likely quick fixes, with little impact, and maintain existing educational structures. Cornbleth (1986) and Futrell (1986) provide a framework for understanding the existing ritual of reform and alternative methods. Research on teaching and teacher training emphasizes that education is better conceptualized as a process directed by a classroom teacher, who is confronted with complexity, decisions, and dilemmas in the classroom. C. Clark (1988) and Shulman (1986) have indicated some of the complexities in these processes, and also have offered a paradigm from which aforementioned reforms could be developed. Altering educational outcomes would have greater likelihood by addressing the areas of school structure and teacher education.

Special education pre-service training. Since the mid-50s, the uniqueness of exceptional students has promulgated an assumption that separate, additional training is required for teachers teaching such students (Clark, 1984). In fact, as in many comparable situations, the homogeneity among the programs was greater in those early days than at any time since. Over time, training programs have emphasized various types of curricular content, assessment, management, and pedagogical knowledge tailored to particular categorical groupings, e.g., teachers of students with deafness, visual impairments, mental retardation, emotional problems, learning disabilities, and language delays. The resulting heterogeneity is not unlike pre-service teacher programs in regular education.

A number of causative factors have been implicated as agents for this diversity. These causative factors have been very specific to the training programs in some instances and in others quite general and external. In addition, these factors are not particularly unique to special education pre-service training programs, but influence pre-service training for non-

special education teachers as well. Factors adding to the training programs' diversity are the goals, philosophy, and other qualities of the teacher training programs themselves. Some of those qualities which influence training programs were identified as location, size, faculty interests, and student characteristics. McLaughlin, Valdivieso, Spence, and Fuller (1988) have described changing student characteristics as an issue which training programs have not considered recently. The training programs have continued adherence to activities and competencies geared to the full-time graduate student and not the part-time student with professional status and full-time employment who is interested in acquiring additional credits for advancement on the local school district's salary schedule, or a new credential or teaching area endorsement.

A second factor influencing training programs is states' certification requirements. Bursuck and Epstein (1986) reported that colleges and universities respond to standards set by state agencies. This view is supported also in the McLaughlin et al. (1988) report. McLaughlin et al. suggested that "special education teacher training is being driven by forces such as certification policies that are largely out of the control of the profession and needs of local school districts" (p. 215). Higher education faculty feel powerless to influence any decisions regarding certification standards and criteria. A third factor, which is also closely tied to state department of education issues is the service delivery models for which local districts receive reimbursement. The procedural requirements in federal level legislation (e.g., PL 94-142 and PL 99-457) have dictated procedures and types of services, both in instructional and related services, which districts provide as part of special education. These legal restrictions influence the higher education faculty's choices for content and training activities. A fourth factor, the proliferation of categorical programs, is also affiliated with legislative and regulatory activities at federal and state levels. The proliferation is noted in types of programs, settings in which services are delivered, and the age ranges of the students or clients served. A fifth factor is the lack of a centralized authority for long-range planning and control. Planning and control issues are argued among all of the principals involved. Though too, to conclude that centralizing the process is a good idea is much easier to arrive at than an agreement on how such a process would be implemented. Control is such a fundamental issue that political considerations would be major.

Other factors have also been identified. The initiatives to deinstitutionalize individuals with various disabilities, to increase community-based training programs, and to mainstream students in regular class settings have each separately impacted teacher training programs. Research has also influenced teacher training. Sansone (1987) summarized findings in four research areas which have had such impact: (a) development of learning strategies curricula for secondary level students, (b) usage of computer applications, (c) new programs for students with moderate and severe handicaps developed as a result of deinstitutionalization, and (d) a broadening of vocational educational assessment and training approaches. The shift in training emphasis as a result of these factors has not been trivial. In each instance, the perceived role of the teacher was altered, generally by the addition of responsibilities and increased competencies in more content and skill domains. As a consequence, added competencies and knowledge are needed by secondary level special education teachers.

In light of these factors impacting programs, a number of studies have recently reviewed current status and trends in both SEAs' certification requirements and higher education's training programs for special education teachers. Results of four such studies were chosen for inclusion here both because of their recency and diversity of results. Bursuck and Epstein's (1986) survey of teacher training programs provides a description of current trends. Their particular interest was in learning the extent to which programs prepared teachers for secondary settings. One characteristic for making such inferences concerned differential teaching certificates for elementary and secondary school levels. Fourteen states were identified as distinguishing elementary and secondary level certificates. In each of the 14, a practicum in

secondary setting was required, while only 34% of the other states had a comparable requirement. Teacher trainers were also asked to rank order nine competencies needed in teaching mildly handicapped adolescents. The 130 respondents provided the following ordering of most to least important skills: 1) design, implement, and evaluate instructional systems; 2) design, implement, and evaluate behavioral management strategies; 3) use norm-referenced, criterion-referenced, and informal measures for IEP development and implementation; 4) use existing resources effectively and efficiently in educational programs; 5) engage in professional behaviors which lead to effective communications and productive relationships; 6) establish positive working relationships with parents; 7) be knowledgeable of issues involved in educating adolescents; 8) be respected and accepted by pupils and colleagues; and 9) have literacy in computer skills for training students. The authors noted that these rankings were independent of state's certification rankings, perceived level of preparedness of program graduates, program size, or geographical region. While these rankings are quite robust, the authors were disheartened:

> It is difficult to believe that *qualified* (emphasis added) secondary teachers are being prepared when 35% of the programs do not offer specially designed courses on the handicapped adolescent, when 55% of the programs do not supplement their course offerings by required secondary-level courses in other departments, and most importantly, when 45% of the programs do *not* require a secondary school experience (p 7).

Chapey, Pyszkowski, and Trimarco (1985) surveyed *SEAs* for their trends and plans in certification and training requirements. Their questions and results are somewhat different from Bursuck and Epstein's (1986) findings, who had surveyed *training programs*. Chapey et al. reported that 35 states (70%) desired a noncategorical certification model. The need for secondary level designation also was questioned. Thirty-eight percent would prefer to have K - 12 teacher certification with a special education endorsement. The authors interpreted this finding as supporting the concept of the regular education teacher as having primary responsibility for all students and that the special education teacher was to serve in a supportive, consulting role. The desired trend in future training was for a noncategorical model (66%). The remaining 34% favored a categorical model. Interesting data not reported would be the percentages for those states for which this response was a shift from current practice. The authors concluded that their data were not indicative of a clear pattern in teacher certification, but that the future trend was for noncategorical certification and additional training in special education for regular education teachers. In the context of the reforms occurring within regular education, the authors advocated for states to give leadership and direction to the "standardization of special education teacher certification" through the following activities:

1. Sponsor task forces, involving all levels, state and local, to study certification and training requirements. Current research findings should be integrated into such deliberations.

2. Establish and disseminate more uniform standards and guidelines, from state to state, for special education teacher certification.

3. Initiate closer interstate relationships to assure that special education teachers in all parts of the nation achieve a high level of competency.

4. Serve as a catalyst for strengthening and fusing the intrastate connections among college training faculty, local educators, and state education officers.

5. Encourage essential research in developing or identifying models of teacher certification and teacher training so that teacher competencies will match the

requirements for quality services in a wide variety of handicaps, in a broad spectrum of organizational settings. (p. 208)

Bodner et al. (1987) surveyed the state directors of special education regarding program requirements and practices. One survey section included a rating procedure for directors to identify the importance and emphasis given to selected program practices. The program practices were selected because research suggested that those practices influenced the quality of special education programs. Twenty-one such influences on high school level special education practices were included in the survey. Teacher certification practices were referenced in three of the 21 items. The results were likely disheartening to teacher trainers. Among the five least important practices were the three teacher education influences: (a) certification according to instructional level, (b) instructional level certification, and (c) interdisciplinary certification. Apparently, teacher training is not considered as a major influence, a conclusion similarly made by Bursuck and Epstein (1986) and McLaughlin et al. (1988). Thirteen states (25%) reported that they have separate requirements for high school level special education certification procedures. Bursuck and Epstein reported that 14 states had separate certification requirements.

McLaughlin et al. (1988) described four studies of training needs and current practices. The four studies relied on different methods and respondents in obtaining the data and thus captured multiple perspectives. The data collected through surveys and interviews with SEA representatives and higher education teacher trainers were the focus of this review. A major finding which emerged concerned differing perceptions among SEA personnel and teacher trainers. This perceptual difference concerned competency in recent graduates. SEA personnel reported that new teachers lacked competencies in administrative areas such as "developing Individualized Educational Plans, participating in multidisciplinary team meetings, and 'understanding due process' " (p. 216). Two other frequently mentioned areas concerned teachers' collaborative skills with regular educators and the quality of generic or cross-categorical teachers. As one explanation for these criticisms, teacher trainers commented that their training priorities were in areas related to "assessment skills and developing 'lesson plans' and instructional programs." Consultation skills was rated 12th out of 13 training priorities emphasized in the programs. These data are indicative of perceived diverging values among SEAs and teacher trainers. Resolution of such differences is important and yet not a simple task.

McLaughlin et al.'s (1988) findings pose a variety of issues for training programs and SEAs. Both bureaucracies have established traditions and yet are vying for control of a profession and an institution with seemingly different values and policy directions. The authors suggest that "national quality indicators for special education personnel need to be developed and accepted" as a precursor for changes in the training programs. Quite forcefully they advocated that "working relationships, not paper committees and formalized rubber stamping, are required between consumers and producers to identify training needs and develop training programs that will maintain a supply of teachers for the handicapped and at the same time preserve the quality of their personnel" (p. 220).

Interestingly, Sutherland and Castleberry (1985) reviewed minimal standards for teacher-training programs and cited a number of other previous efforts with similar intentions: Clair, Hagerty, & Merchant (1979); Gosman (1985); Morey (1983); and Reynolds, Birch, Grohs, Howsam, Corrigan, Denemark & Nash (1976). Sutherland and Castleberry described their research and development of a self-evaluation instrument applicable to higher education's training programs. However, the issue remains that such research efforts lack the kind of validation needed and only possible when an agreed upon set of standards have been identified as the modal direction.

The four survey research reports (Bodner et al., 1987; Bursuck & Epstein, 1986; Chapey et al., 1985; McLaughlin et al., 1988) represent a defined orientation, though not necessarily compatible views, regarding the needs in teacher training and certification reform. Other authors have advocated for specific changes in these two areas as well. Pugach (1987) and the Holmes group (1988) advocated for restructuring based on tenets of the regular education initiative, which was outlined earlier in this report. Their efforts deemphasized a distinction between the training needs of special and regular educators. Pugach argued that the duality in views actually relieves regular educators from improving their instructional methods to accommodate the diversity of classroom students: "A fundamental question for educators who prepare teachers of mildly handicapped students is the extent to which they wish to justify their field's continued existence on the basis of problems in the content of the general teacher education curriculum" (p. 311).

Pugach (1987) cited the specialization in the schools as another problem. The claim of "distinctive disciplinary content" of specialists perpetuates an unfortunate hierarchy within the school systems, which is itself perpetuated by the separateness of training and certification requirements. Cobb, Hasazi, Collins, and Salembier (1988) presented a counter viewpoint. They advocated for yet another specialist position in the secondary schools, that of a school-based employment specialist. They validated this need based on results from studies of the low rate of successful transition which students encounter in their transition from high school programs to independent living and vocational responsibilities as adults. They also cited recent studies reporting the high dropout rates and low employment rates of special education students (Hasazi et al., 1985; Mithaug et al., 1985). Clark (1984) reviewed developments in secondary special education and addressed concerns about specialization. Like Cobb et al. (1988), he also argued that the distinctive roles of secondary special education personnel were real and needed to be reflected in certification and training requirements. He argued for interdisciplinary training and greater efforts by professional organizations e.g., the Council for Exceptional Children, to establish training standards.

Weisenstein's (1986) views were similar to Cobb et al. (1988) and Clark (1984) in that he emphasized the distinction between secondary and elementary special educators' roles. The issues posed by ensuring successful transition require additional specialization at the secondary level and recognition of these differences in states' certification requirements and training institutions' course and field work degree requirements. "A technology is being built around secondary special education that can only be taught through a combination of specialized course work and field experiences" (p. 5). Weisenstein's recommendations included eight areas of required coursework:

1. Understanding of, and ability to utilize, assessment in the areas of vocational, academic, and functional skills.

2 Teaching techniques and instructional materials related to each of Brolin's (1978) curriculum areas (personal-social skills, daily living skills, and occupational guidance and preparation skills), as well as academic areas.

3. Work adjustment strategies for developing effective work personalities and remediating work habit and attitude deficiencies.

4. Classroom management techniques appropriate for adolescent and adult students.

5. Identification and use of instructional resources, human service agencies, and community enterprises.

6. Techniques of interdisciplinary coordination, including a basic understanding of related, or allied, disciplines.

7. Counseling and guidance techniques which can assist the teacher in serving both parents and students.

8. Program planning and evaluation skills.

This discussion of special education teacher training has highlighted a diversity of perspectives which are represented by a voluminous literature. This material serves as a background against which the survey data obtained in this study can be compared. Our intent was to provide a comprehensive treatment of the range of perspectives and not a comprehensive review of the total literature. Our conclusion from these disparate viewpoints is that special education training and certification issues are not unique from similar issues in regular education. The lack of central planning and authority is cited as critical in both segments. The impact of the regular education and transition initiatives is also evident. As one evaluates the outcomes of special education, a case can be made for also reviewing the pre-service training and SEAs' certification requirements as causal agents in those outcomes. In that line of logic, the competencies and role distinctions among educators require careful consideration.

Conclusion

This introductory section provides a review of the research literature considered relevant to this project. We believe that one's appreciation of the complexities of special education programs increases from an understanding of other contextual events, initiatives, and situations. To understand secondary level special education, we have reviewed a number of factors believed relevant: changing demographic characteristics of society and thus the students, reform efforts within regular and special education programming, and reforms in the training programs for both regular and special education teachers. The impetus of these reforms reflects a conservative philosophy and desire to increase America's viability in the world markets. In regular education programs the recent reforms have emphasized increased excellence by promoting the importance of basic academic skills and increased requirements. In special education two dominant themes have been on (a) improving the successful transition of students from high school to becoming integrated, contributing members of society and (b) restructuring special education to ensure that regular educators do more to accommodate slow learning and low achieving students in the classroom. In teacher education programs for both special and regular educators, advocates of multiple, diverging viewpoints have been reported as well as proffered reforms. Our efforts were to provide a frame of reference for understanding the teacher education reforms as they affect both certification requirements and higher education. We believe that these perspectives are crucial to understanding this project. In the following sections, survey results are presented which reflect the perspectives of higher education teacher trainers, superintendents of schools, and directors of special education on the desired qualities of secondary level special education programs and teaching staffs, and those activities which lend themselves to developing those qualities.

Results of five surveys are reported in the following sections. Each section is devoted to an individual survey. In presenting the results a brief introduction is included to frame the issues and questions addressed by the particular survey. In addition to the findings, the procedural issues and limitations are reported. Last, the findings are described in the context of the initially presented research issues and questions.

Survey 1: Elicitation Survey to Directors of Special Education, School Superintendents, and Teacher Trainers

Overview

High school special education programs and pre-service teacher training programs are found across the country. These same education programs are shaped by a number of divergent elements and competing priorities (Bodner et al., 1987). Many of those elements were reviewed in the preceding introductory section. Society's demographic characteristics, reforms in regular education, the transition and regular education initiatives, and reforms in pre-service training for general and special education teachers were identified in that section. Our review contrasted the divergent views on such issues as: What challenges are presented by the changing demographics in American society for the social, economic, and educational institutions? What are the desired outcomes of general and special education programs? What should be the relationship between general education and special education in serving students? In general and special education what are the values for improving the transition of students from the educational setting to the work and community setting as independent functioning adults? What reforms are needed to ensure that teachers are adequately prepared for their multiple educational responsibilities?

Fundamentally, these questions concern the desired qualities or attributes of educational programs. Answers to these questions and descriptions of the influencing elements were described from material in the research literature. The materials were included to represent current issues and recommendations as described by a group of professionals. The coverage was not intended to be comprehensive, but rather serve as representative perspectives for improving the quality of education. Other perspectives are also worthy of consideration in (a) describing current perceptions of high school special education programs for students with mild to moderate handicaps, (b) offering recommendations for future directions in developing such programs; (c) describing the desired qualities characterizing the teaching staff of special education programs for students with mild and moderate handicaps; and (d) offering recommendations for pre-service teacher training programs. Three such groups' perspectives were chosen for this project's research efforts: directors of special education, superintendents of schools, and pre-service teacher trainers. This latter group encompasses those college faculty members who are engaged in teacher training for secondary level special education programs.

Methodological Considerations

This section includes a review of major decision points in the course of the project. As such a number of the alternative considerations are identified. A reader's review of this section will provide the rationale for those decisions which were considered as having a major influence for the project and thus provide a context within which the results should be viewed. The topics considered as having this major influence include: (a) the goals and format of this survey, (b) the choice of the sampling plan, and (c) the selection of the response groups.

Survey considerations. The elicitation survey, which is described in this section, was the first step in capturing current perceptions. The elicitation survey was designed to gather information on two dimensions of programs and staff. For the first dimension, our purpose was to elicit from the participants their considered judgments regarding the qualities or attributes which one should consider in evaluating a high school special education program or

its teaching staff. From another perspective, these attributes might be thought of as the domains of interest, those programmatic features which might distinguish among the many available programs. The attributes might be considered a basis for evaluating programs or staff by serving as standards. The second dimension had a very different focus. For the survey's second dimension, the respondents identified those activities which characterized the high school program and the pre-service training. These activities can be understood as the tasks or the means one might use to develop or to realize a particular attribute. For example, once a goal is specified, one's next decision is to specify the alternative means to reaching that goal. Eventually, the alternatives are considered, weighed, and some plan is devised. The goal of the second dimension of the survey was to identify those alternative options one might consider.

The unconstrained, open-ended survey construction was considered as appropriate to this task. The format permitted the widest range of possible answers and removed the time constraints which often accompany alternative data gathering methods, e.g., structured interviews. In addition, the format permitted the widest range of distribution because of its comparatively low costs, and the expected raw data, i.e., verbal descriptors, could be analyzed using a number of methods.

Sampling plan. The national perspective on special education programs and staffs was judged important and thus the decision was made to sample from individuals across many states. While individual states confront the peculiarities which differentiate one state from another (e.g., geography, population density, climate, financial resources, racial and ethnic mix, and administrative organization) the differences were judged more likely to reflect differences of degree rather than quality. For example, financial support influences programs and staff but for some states this element has greater importance than elsewhere. Since many of the reforms are directed from the federal level, the national focus would also be important to understand. The value of just completing an in-depth study of a few carefully chosen states was very strong, but was resolved by concluding that the more narrow focus would be appropriate as a subsequent proposal. The more global representation provided greater generalization and comprehensive snapshots of current priorities across the country, which in turn might have greater influence on federal initiatives in education.

Response groups. The research literature represents the views of a select group of education professionals. Those views were presented in the initial overview of the report. The project staff assumed that other perspectives were also worthy of consideration, e.g., students in special education programs, parents of those students, their teachers, and their administrators. The three groups chosen in the project (directors of special education, superintendents of schools, and pre-service teacher trainers) also represented unique views regarding the desired attributes of special education programs for students with mild or moderate handicaps and their teaching staff. Names of these individuals were obtained through reliable methods and thus resulted in a minimal effort to identify respondent samples. In contrast, the use of parents or students would have raised questions about confidentiality, representativeness of the samples, and ease of access. Teachers would have also been desirable respondents on the issues in question. However, additional selection issues would have been raised. A district level staff member would likely be needed to supply teacher names and addresses or route the surveys to them, which also would have raised representativeness questions. While teachers are the actual implementers of policies, the survey staff felt that the administrative groups chosen were more important to represent in this study since they are responsible for the policy development and evaluation itself. In addition, some thought was also given to the fact that the three chosen groups were actually a smaller, better defined population, and thus they could be more reliably sampled. They also could be considered as a probability sample, since the likelihood of being selected to participate could be defined. This point also has value in understanding the limits of generalizing the findings.

Sampling at the student, teacher, parent, and building administrator levels was judged especially important if one was to focus on an individual state. As indicated previously, project staff considered a national perspective more important to represent.

This concludes the overview material for the elicitation survey. In the following text, details of the methods, results, and conclusions are provided.

Method

Subjects

Three groups were sampled in this survey: (1) directors of special education (DOSE), (2) superintendents of schools (SOS), and (3) pre-service teacher trainers (PTT). A two stage sampling plan was followed in choosing the DOSE and SOS. The first stage was the selection of states from which to draw the samples and the second stage was the actual selection of the DOSE and SOS.

Directors of Education and Superintendents of Schools. Constraints within the project necessitated that a limited number of DOSE and SOS be sampled. Alternatively, to preserve the national focus of the research project, the sample was drawn from within selected states. To accomplish this goal, thirteen states were randomly chosen without replacement from the fifty states. The resulting randomly selected states were Delaware, Idaho, Indiana, Iowa, Kansas, Kentucky, Missouri, Nevada, New Hampshire, North Carolina, Oregon, Pennsylvania, and South Dakota. This permitted a sample representing 25% of the states and was deemed consistent with the project's goal of establishing a national perspective. Representatives in the states' department of education were contacted and requested to provide a current listing of DOSE and SOS. All states but one (Idaho) provided the listing. The representative in Idaho indicated that if the survey was forwarded to the state department, staff would insure that it was mailed to a random sample of DOSE and SOS.

The names of DOSE and SOS from the twelve states' lists were entered into separate databases. Proportional samples were drawn randomly from these lists without replacement. The probability of any one name being chosen was the same for each person from a given state. The proportional samples were chosen to maintain a balance across the states that were sampled. For example, superintendents from states with large numbers of superintendents would have a greater likelihood of being chosen than those from states with a fewer number.

To maintain the proportionality of each state's sample the following procedure was followed. First, a sample size of 250 for both DOSE and SOS was chosen by project staff as being an adequate size and in line with the budget and management constraints. Second, separate totals were determined for the population of DOSE (N = 872) and SOS (N = 1714) in the 13 previously selected states. Third, the proportion of each state's contribution to the total was calculated. For example, Delaware's proportional contribution to the total number of DOSE was 3%. That is, Delaware had 27 DOSE. Those 27 were three percent of the total number (N = 872) of DOSE in the thirteen states sampled. Three percent was multiplied by 250, (the desired sample size), which yielded 7.5. This value was rounded up to eight. Thus, eight DOSE were randomly chosen from the Delaware listing as potential survey respondents. The same sampling procedure was followed for the SOS.

Tables 1 and 2 include a listing of the DOSE and SOS population and sample sizes for each state. Note that in rounding off the values, the targeted sample size of 250 for each group was exceeded. The DOSE sample was 251 and the SOS sample size was 254. Surveys forms with accompanying cover letter and stamped return envelopes were mailed to the individual DOSE and SOS. For the state of Idaho, eight packets for superintendents and sixteen directors' packets were mailed to the state department of education for random dissemination.

Pre-service teacher trainers. Complete listings of teacher trainers were not available as they were for DOSE and SOS. Thus a different plan was needed for identifying this population. The goal was to identify pre-service teacher trainers in special education, i.e., those higher education faculty members who were interested in preparing teachers for special education programs for high school students with mild to moderate handicaps. The emphasis on teacher training for secondary level was believed important because of the nature of the information elicited from them. The Teacher Education Division of the Council for Exceptional Children recommended a directory published by the National Information Center for Children and Youth with Handicaps (NICCYH, 198_) as a resource for identifying teacher training institutions with special education programs.

Seven hundred sixteen teacher training institutions with programs for mild to moderately handicapped students were identified from the NICCYH directory. The chairperson at these institutions was contacted by letter (see Appendix A) and asked to identify specific faculty members with interests in secondary level education. The replies resulted in a list of 640 names. From this list 305 names were randomly selected without replacement, again using a proportional sampling procedure. A minimum criterion was chosen that at least one individual in each state must be included in the sample. The plan was to draw a national sample of 250 PTT. By rounding off the percentages and requiring that at least one PTT be selected from each state, the final count was 305. Unlike the DOSE and SOS samples, the PTT sample was not restricted to 10 states, but rather included all 50 states.

Table 1

Total and Proportional Numbers of Directors of Special Education (DOSE) for the Elicitation Survey

States	Directors of Special Education		
	n	% of total n	Proportional n
Delaware	27	3.1	8
Idaho	55	6.3	16
Indiana	79	9.1	23
Iowa	15	1.7	4
Kansas	71	8.1	20
Kentucky	78	8.9	22
Missouri	136	15.6	39
Nevada	10	1.1	3
New Hampshire	54	6.2	16
North Carolina	142	16.3	41
Oregon	149	17.1	43
Pennsylvania	29	3.3	8
South Dakota	27	3.1	8
TOTALS	872	100	251

Table 2

Total and Proportional Numbers of Superintendents of Schools (SOS) for the Elicitation Survey

States	Superintendents of Schools		
	n	% of total n	Proportional n
Delaware	18	1.05	3
Idaho	57	3.33	8
Indiana	147	8.58	22
Iowa	219	12.78	32
Kansas	152	8.87	23
Kentucky	187	10.91	27
Missouri	305	17.80	45
Nevada	17	0.99	3
New Hampshire	54	3.15	8
North Carolina	75	4.38	11
Oregon	138	8.05	20
Pennsylvania	253	14.76	39
South Dakota	92	5.37	13
TOTALS	1714	100	254

Materials

This first survey for all three groups was referred to as an elicitation survey. The survey was very similar for the three groups. The stimulus items focused on special education programs and staff. The goal of the survey was for DOSE and SOS to list (a) the attributes and (b) the activities characteristic of quality special education programs for high school students with mild to moderate handicaps and also of quality teaching staff in those programs. The goal of the PTT survey was that the respondents list (a) the attributes and (b) the activities characteristic of quality special education programs for high school students with mild to moderate handicaps and also to consider (c) the characteristics of a quality teacher and (d) the pre-service activities which would teach those characteristics.

The elicitation survey for the DOSE and SOS is provided in Appendix B. The same survey was mailed to both groups, although the forms were color coded. Surveys mailed to DOSE were printed on white bond paper, while surveys mailed to SOS were on goldenrod. Part I-A was designed for the respondents to list the attributes for evaluating the success of a high school special education program for the students with mild to moderate handicaps. Eight blank lines were provided for the responses. Part I-B was designed for listing the activities or components important to special education programs. As in Part I-A, eight blank lines were provided for the respondents to record their answers. Part II-A provided space for listing those attributes on which they would evaluate special education teaching staff for students with mild to moderate handicaps. Part II-B was designed to elicit a listing of those activities on which a teacher might be evaluated. The last page of the survey (Part III) included questions concerning the respondent's level of training, district setting, and enrollment size. The goal of Parts I and II was for the respondents to distinguish between the attributes or qualities of a high school special education program (Part I-A) and the activities in the program (Part I-B). Conceptually, one may describe those attributes, but those attributes occur within a context of particular activities. Similarly, one can describe the attributes of a quality teacher (Part II-A), but one should also specify the activities on which a teacher should be evaluated. For example, a teacher attribute might be that of "good disciplinarian." Some activities are better suited for evaluation of that attribute than others, e.g., large group instruction vs. attendance at a professional meeting.

The elicitation survey for the PTT was initially the same as the survey used for the DOSE and SOS. However, revisions were made to Part II-B based upon early DOSE and SOS responses. Parts I-A, I-B, and II-A were essentially the same as the form used with the DOSE and SOS. Part II-B which focused on teacher activities was changed. The focus switched to what pre-service activities were included or should be included to develop those specific teacher attributes believed important. Part III included questions about the respondent and his/her college or university. A copy of the survey for the PTT is in Appendix C.

Procedures

Pilot study. The survey instrument was distributed to nine directors of special education in Kansas and Missouri on April 16, 1986. Based on their written comments and phone interviews, the survey to the DOSE and SOS was revised. Their comments encouraged the use of additional examples, shortening the instrument, and altering word choices.

Survey procedures. Elicitation surveys to the 251 DOSE and 254 SOS were mailed May 14 through 16, 1986. Enclosed in the materials was a letter of explanation, the survey itself, and a postage-paid envelope for returning the survey. Follow-up postcards were mailed on May 29, 1986.

Elicitation surveys were mailed to 305 PTT on November 11, 1986. Enclosed in the materials was a letter of explanation, the survey itself, and a postage-paid return envelop. Follow-up postcards were mailed approximately one week later. The time lag between the mailings to the DOSE and SOS and the PTT was due to the extra efforts required in obtaining and preparing the mailing list for the PTT. A fortuitous event was the opportunity to receive the DOSE and SOS returns and alter the instructions for Part II-B due to apparent inadequate task instructions.

Survey returns. Table 3 provides a summary of the number of respondents and corresponding percentages. The response rates varied over 50% for the three groups sampled. The lowest response rate was from SOS with 37 (15%) of the 254 surveys returned. Of the 37 returned, 19 were usable. Fifteen of those 37 returned were received later than the timeline allowed for use in the analyses. Three of the 37 surveys were completed by someone other than the superintendent and were judged inappropriate for analyses. For the DOSE 79 or 32% of the 251 mailed surveys were returned and 73 were usable. Two of the surveys mailed to DOSE were completed by someone other than the director and were judged inappropriate for including in the analyses. The general rule for excluding surveys on the basis of the respondent was whether the staff judged the respondent to likely represent the particular viewpoints of the desired group. For example, an assistant superintendent was judged likely to represent the views of the central administration and was thus included. Alternatively, responses from teachers and school principals were judged as likely reflecting a different set of values for either group and were omitted. The PTT returned 200 surveys (66%) of the 305 mailed of which 173 were usable in the analyses. The remainder were received later than the established cutoff date.

Returned surveys for the three groups were coded to indicate the respondent's group, were given identification codes for tracking purposes, and were checked for ambiguities. Subsequently, other than those surveys omitted due to the respondent, the surveys were coded for data entry. Responses were entered into a data base for categorizing and nominal coding. The data base identified each respondent's group membership, identification code, and responses to Parts I, II, and III of the survey.

Table 3

Mailing Targets and Respondents for the Elicitation Survey

	Number of surveys		
	DOSE	SOS	PTT
Mailed	251	254	305
Total returns	79	37	200
Returns usable	73	19	173
Returns unusable	6	18	27

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-Service Teacher Trainer.

Data categorizing. Four steps were followed in the content analysis of the survey responses. The staff's initial task was to review jointly a sample of the survey responses and identify conceptual categories in which the responses could be grouped. After several iterations on this task, specific categorical groupings were identified with accompanying exemplars. These categorical groupings were the basis for coding the responses from all the respondents. A listing of the final categories used for data coding is provided in Table 4 (Attributes of Successful Special Education Programs), Table 5 (Activities of Special Education Programs), Table 6 (Attributes for Evaluating Teaching Staff) and Table 7 (Activities of Pre-service Training Programs). These attributes and activities are not arranged in any particular order and, therefore, ordinal position does not have intrepretative meaning. To summarize, 40 categories were identified for Part I-A of the survey, 28 for Part I-B, 23 for Part II-A, and 18 for Part II-B.

Table 4

Unranked Attributes of Successful High School Special Education Programs for Students with Mild to Moderate Handicaps, Identified from Responses of DOSE, SOS, and PTT

Program attributes	
1. Individualized, appropriate	20. Case management system
2. Multi-disciplinary approach	21. Compliance standards
3. Regular education support and integration	22. Cost-effective
	23. Student-teacher ratio
4. Counseling and guidance	24. Effective staff
5. Vocational assessment	25. Monitoring and assessment system
6. Curriculum scope and sequence	
7. Basic academic skills curriculum	26. Promotes professional growth
	27. Program support from staff, parents, business, and community
8. Life skills curriculum	
9. Post-secondary transition curriculum	28. Adequate physical plant
	29. Adequate community resources
10. Current research implementation	30. Adequate supplies, materials, and equipment
11. Community-based program	
12. Vocational-career orientation	31. Humanistic approach
13. High school completion	32. Competency based approach
14. Successful academic achievement	33. Defined philosophy
	34. Personal, social skills curriculum
15. Employment success	35. Age-appropriate curriculum
16. Successful personal and social adjustment	36. Administrative leadership and support
17. Successful independent living	37. Study skills; learning strategies
18. Student satisfaction	38. Functional academics
19. IEP goals met	39. Comprehensive program
40. Validated instructional methods	

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

Table 5

Unranked Activities of Quality Special Education Programs for High School Students with Mild to Moderate Handicaps, Identified from Responses of DOSE, SOS and PTT

Program activities	
1. Basic skills instruction	15. Peer tutoring and peer counseling
2. Physical education instruction	16. Functional academics instruction
3. Independent living skills instruction; Home Economics; Industrial Arts	17. Vocational assessment
4. Driver's education instruction	18. Community based instruction
5. Regular and adapted vocational education	19. Transition planning
6. Prevocational career education	20. Speech and communication instruction
7. Work-study program	21. Computer assisted instruction and training
8. Social skills instruction	22. Hands-on materials and activities
9. Guidance and counseling services	23. Fine arts instruction
10. Learning strategies instruction	24. Work adjustment and work activities
11. Academic assistance for mainstream classes	25. Job placement program
12. Inclusion in regular school activities	26. Behavior modification plans
13. Inclusion in mainstreaming classes	27. Parent/employer involvement
14. Individualized instruction	28. Assessment plan

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

Table 6

Unranked Attributes on which to Evaluate Teachers of Special Education Programs for High School Students with Mild to Moderate Handicaps, Identified from Responses of DOSE, SOS, and PTT

Teacher attributes	
1. Curriculum and instructional planning skills	13. Pursues professional development
2. Instructional skills	14. Personal characteristics
3. Innovative instruction skills	15. Assessment skills for planning and instruction
4. Knowledge of transition	16. Counseling skills
5. Classroom organization skills	17. Philosophical position
6. Time management skills	18. Teaches study skills; learning strategies
7. Behavior management skills	19. Teaches basic skills
8. Works cooperatively with and administration	20. Skill in assessing outcomes
9. Works well with people	21. Teaches survival skills
10. Consultation skills	22. Incorporates vocational/career education
11. Background training and experience	23. Teaches personal-social skills

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

Table 7

Unranked Pre-Service Training Activities for Teachers of Quality Special Education Programs for High School Students with Mild to Moderate Handicaps, as Identified from Responses of PTT

Pre-service teacher training activities	
1. Student teaching activities	10. Modeling and demonstration
2. Lecture coursework	11. Large and small group discussions
3. Curriculum development	12. On-going assessment
4. Formal and informal seminars	13. Individual advisement or conferences
5. Simulations	14. Computer assisted instruction
6. Videotape and media usage	15. In-service activities
7. Clinical teaching	16. Group experiences
8. Observational activities	17. Research experience
9. Oral presentations by students	18. Case study presentations

Note. PTT = Pre-service Teacher Trainer.

Some responses to Parts I and II were altered from the actual responses when they were added to the database listing. These alterations were either through use of abbreviations (e.g., "sped stu" for "special education students") or elimination of redundant or unessential verbiage. Responses which were repetitions of the responses provided in the survey's example were also eliminated. These terms most frequently occurred in Part I-A. Such terms as *reliable, valid, objective,* and *efficient* were used in the example which introduced the task. Project staff chose to drop such responses from further analyses since they seemingly had little relationship to the material desired in the survey or appeared to be merely repetitions from the examples.

The second task was for two staff to assign independently a numerical code corresponding to a particular category for each of the responses. Thus, the responses to Part I-A concerning the attributes of a successful special education program were classified as belonging to one or more of the 40 nominal categories identified for this part of the survey. For

example, survey responses which concerned an individualized educational program for the student was coded as a "1." This coding process was followed for Parts I and II of the survey.

Third, the two staff members' codings of the data were compared and discrepancies in coding were marked. As a last step, the two staff members met and reconciled the differences in the coding so that they agreed. Three possible decisions were made: 1) a response was grouped into a specific category, 2) the response was classified as belonging to more than one category, or 3) the response was eliminated because of a lack of information for categorizing the response, i.e., irrelevant or insufficient information. Responses could be included in more than one particular category for each respondent. Also, a respondent may have included several responses which were grouped in the same category. For example, a respondent could have listed several attributes which were each categorized as belonging to one category, e.g., from Part I-A, #1: Individualized, appropriate education.

The classification procedure also proved problematic for the DOSE and SOS responses to Part II-B. This part asked DOSE and SOS to list "those activities on which a special education teaching staff might be evaluated." Some respondents did not distinguish the intent in Part II-A concerning attributes on which staff might be evaluated from activities desired in Part II-B. These items were thus eliminated for the DOSE and SOS, and Part II-B of the survey was rewritten prior to distribution to the PTT. As indicated, the rewritten directions asked PTT to identify those training activities or experiences judged important for teaching the desired teacher attributes.

However, some PTT data from Part II-B also posed a problem. A frequent response to the task was not the listing of an "activity." Rather, the respondents named content or a course title, e.g., sex education, motivation, behavior modification, philosophy of education, community-based instruction, interpersonal skills with teachers and parents, curriculum adaptation, professionalism. learning strategies instruction, movie and story telling, reading instruction, language development training, and daily living. This content was different from the desired response. Again the desired response would have indicated not content per se, e.g., "coursework in reading instruction," but rather what activities are used to teach the content in pre-service programs, e.g., reading instruction. The activities listed on Part II-B are in Table 6 and contrast with the content material named above. To accommodate this disparate data, responses were included under category #2: Lecture coursework, if the respondent linked the content to a lecture presentation by the instructor.

Inter-rater agreement. As a check on the congruity between the two staff members' categorizations of the responses, a sample of responses were independently categorized by each person. In December, 1987, six months after the first data were categorized, the two staff were given a list of 95 responses from Part I-A for categorization. Part I-A had the greatest number of categories in which responses might be categorized. Each staff member independently categorized the 95 survey responses and provided the listing to a third staff member who then compared the responses for agreement. An agreement was indicated by each staff member using the same numerical index for classifying a response. Some of the responses were categorized as belonging to two or more categories. Agreements were reflected in the sameness of the response's categorization.

Data analysis. Analyses of the categorized responses involved calculating frequencies and crosstabulations of the categorical groupings by respondent group (i.e., DOSE, SOS, and PTT). Responses were also crosstabulated by school district setting (rural, urban, and suburban) and enrollment size. Initial analyses of the PTT survey responses were ungrouped and then crosstabulated according to whether the college/university offered (1) a separate methods course and (2) a practicum for teachers hoping to work in a high school setting.

Results

Results are presented in two sections. The first brief section describes the extent of agreement between the two staff who categorized and coded the survey responses. The second section presents the frequencies with which particular categories were cited by the respondents. The attributes elicited regarding the program attributes and activities and staff attributes and activities are presented. The frequency with which a category is represented might be interpreted as an indicator of its saliency to the respondents.

Inter-rater Agreement

Of the 95 responses which the two staff members categorized, the two members categorized 79 responses or 83% into the same category. The level of agreement reflected differences in which categories were considered emphasized by the responses. For example, an agreement was indicated if a response, (e.g., individualized educational programs for students), was categorized into the same nominal grouping by both staff members, (e.g., individual, appropriate).

Program Attributes

From the 40 program attributes, Table 8 lists the ten most frequently cited attributes by DOSE, SOS, and PTT. The results were pared to only ten attributes and activities to provide a parameter which focuses the discussion on a limited subset and to permit clearer comparisons across the participants' groups than what would be possible if all of the attributes and activities had been considered. In addition, the reader should find this presentation clearer than having to follow a discussion of significantly more concepts. In Table 8, the attributes are listed in the left column. The remaining columns include the rank position and the percentage of respondents for each group who included the corresponding attribute. The rank position was determined according to the percentage of respondents who included that attribute. The higher the percentage of inclusion, the smaller the numerical value of the rank, i.e., the most frequently cited attribute was assigned the rank of "1."

Given the focus of the research, the DOSE were chosen as the reference group and thus their responses were coded in the first column followed by the rank of the attribute and the percent of DOSE who cited a given attribute. The rank order and percentage of SOS and PTT who cited the attributes are given in the adjoining columns. None of the ten most frequently cited program attributes were cited by 50% or more of any group's respondents reflecting a diversity of viewpoints.

DOSE. Our comments will first address the ten attributes most frequently cited by the DOSE. The most frequently cited program attributes are those which focused on program descriptors, e.g., individualized, appropriate programming, regular education support and integration, broad range of program support, an effective staff, a monitoring system of student performance and a multi-disciplinary approach. In addition, two of the high frequency attributes focused on potential outcomes of the programs: (a) high school completion and (b) employment success. The two remaining attributes were curricular areas or content: (a) vocational/career orientation and (b) life skills curriculum. One should note that from these responses, the first four most frequently cited attributes were "process" descriptors and not "product" or outcome descriptors. Also the outcome goals were not totally consistent with the curricular content cited.

Table 8

Attributes of Quality Special Education Programs for High School Students with Mild to Moderate Handicaps, Ranked by Percent of Cites from Elicitation Survey of DOSE (n = 73), SOS (n = 19), and PTT (n = 173)

Program attribute	DOSE		SOS		PTT	
	Rank	(%)	Rank	(%)	Rank	(%)
Individualized, appropriate	1	(41.1)	2	(36.8)	2	(32.4)
Regular education support & integration	2	(38.4)	1	(42.1)	4	(29.5)
Vocational/career orientation	3	(37.0)	3*	(31.6)	1	(37.6)
Program support from staff, parents, business, and community	4	(34.2)	3*	(31.6)	6	(22.0)
High school completion	5	(23.3)	5*	(26.3)	12	(14.5)
Effective staff	6	(20.5)	24*	(0.0)	18*	(11.6)
Monitoring assessment system	7*	(19.2)	12*	(10.5)	3	(31.8)
Multi-disciplinary approach	7*	(19.2)	5*	(26.3)	9	(19.1)
Employment success	9*	(17.8)	19*	(5.3)	7	(21.4)
Life skills curriculum	9*	(17.8)	12*	(10.5)	5	(27.2)

Note. * indicates a tie. Other top-ten attributes: for SOS - Successful academic achievement 5* (26.3), Student satisfaction and Successful personal and social adjustment 8* (21.1), and Case management system and Successful independent living 10* (15.8); and for PTT - Personal social skills curriculum 8 (19.7) and Community based program 10 (17.9).

SOS. The 19 SOS were very similar and also very dissimilar from the DOSE in their descriptions of program attributes. The similarity was evidenced in that six of their ten were cited by the DOSE. The top five most frequently cited attributes were the same five most frequently cited by the DOSE. However, marked differences were also noted. Dissimilarities were observed in that no SOS included "effective staff" as an attribute and that only one included "employment success."

Among the SOS's top 10, five attributes can be described as program descriptors (i.e., regular education support and integration, individualized, appropriate programing, broad range of program support, a multi-disciplinary approach, and a case management system). In contrast to the DOSE, who listed only two outcomes, the SOS included four attributes referring to program outcomes, (i.e., high school completion, successful academic achievement, student satisfaction, and successful independent living). However, again note that "employment success" was cited by only one respondent. The one other attribute among the ten high frequency attributes concerned curriculum content, vocational, career orientation, which was an attribute also included by the DOSE. Some readers may also prefer to consider the attributes "successful independent living" as a curricular area, but within the context of the responses the staff distinguished such statements as a goal rather than content unless it specifically referenced one or the other. By analogy, one might question whether mastery in a content area, e.g. reading or writing instruction, is a goal in itself or rather a tool for acquiring, integrating, and using other information, e.g., completing an application or order form.

PTT. The PTT's ten most frequently cited program attributes were more like those listed by the DOSE than the SOS. Eight of their ten attributes were the same as those cited by the DOSE. Like the DOSE, most of the PTT's attributes fit the program descriptor category, i.e., individualized, appropriate programming, monitoring assessment system, regular education support and integration, broad range of program support, a multi-disciplinary approach, and a community based program. Three curricular content areas were cited: vocational, career orientation, life skills curriculum, and personal, social skills curriculum. Clearly, the PTT were much more interested in curricular issues than outcome descriptors and even more so than either the DOSE, who included only two curricular areas, vocational, career orientation and life skills curriculum, and the SOS, who included only one, vocational, career orientation. Both curricular areas cited by the DOSE were included in the PTT's listings.

Program Activities

The responses described from this section of the survey were activities or content components which one would want to evaluate in a special education program for students with mild to moderate handicaps. Therefore, the program activities focus on process or content which is offered through the program. In Table 9 the same format is followed in presenting these data as was followed above in presenting the program attributes. Responses from the DOSE, SOS, and PTT are presented respectively. A total of twenty-eight different program activities were identified from the participants' responses.

Table 9

Activities of Quality Special Education Programs for High School Students with Mild to Moderate Handicaps, Ranked by Percent of Cites from Elicitation Survey of DOSE (n = 73), SOS (n = 19), and PTT (n = 173)

Program activities	DOSE		SOS		PTT	
	Rank	(%)	Rank	(%)	Rank	(%)
Regular & adapted vocational education	1	(58.9)	4*	(21.1)	4	(38.2)
Work study program	2	(49.3)	3	(26.3)	6	(35.3)
Independent living skills instruction	3	(46.6)	2	(36.8)	1	(59.0)
Basic skills instruction	4*	(41.1)	1	(42.1)	5	(36.4)
Career education	4*	(41.1)	8*	(10.5)	3	(45.1)
Academic assistance for mainstream classes	6	(31.5)	8*	(10.5)	10	(14.5)
Individualized instruction	7*	(21.9)	8*	(10.5)	11	(12.7)
Learning strategies instruction	7*	(21.9)	13*	(5.3)	8	(26.0)
Social skills instruction	9	(19.2)	8*	(10.5)	2	(48.6)
Computer assisted instruction & training	10*	(15.1)	19*	(0.0)	24	(2.9)
Inclusion in regular school activities	10*	(15.1)	6*	(15.8)	12	(11.0)

Note. * indicates a tie. Other top-ten activities: for SOS - Inclusion in mainstream classes 4* (21.1), Hands-on materials and activities 6* (15.8) and Speech communication instruction 8* (10.5); and for PTT - Functional academic instruction 7 (29.5) and Community based instruction 9 (20.8).

DOSE. The "top ten" includes eleven activities because of a tie in the percentage of cites for the tenth activity. Among these 11 DOSE responses seven were curricular areas, i.e., regular and adapted vocational education, independent living skills instruction, basic skills instruction, career education, learning strategies instruction, social skills instruction, and computer assisted instruction and training. One attribute, regular and adapted vocational education, was cited by over 50% (58%) of the DOSE. The remaining four of 11 activities were program descriptors: work study program, academic assistance for mainstream classes, individualized instruction, and inclusion in regular school activities.

Among these activities the percent of DOSE citing them ranged from 58.9% (43 of 73) to 15.1% (11 of the 73). Interestingly, the activities included a variety of themes. That is, the curricular content areas were heterogeneous. Basic skills instruction is not inherently mutually exclusive of independent living skills instruction, but different goals traditionally are sought for each curriculum. Similarly, inclusion of career education and of both regular and adapted vocational education reflect different values and goals for education. In the section under program attributes, DOSE also included similar concepts: individualized appropriate educational planning, vocational, career orientation, and life skills curriculum. The repetition of these concepts across different sections of the survey suggests that these concepts are very salient in the respondents' thinking.

SOS. The SOS included similar rankings as the DOSE. The SOS cited eight of the same eleven included by the DOSE. Even more specifically, the groups cited the same top four activities. Also, a four way tie for the eighth most frequently cited activity resulted in eleven activities being included. Six of the 11 included curricular content areas: regular and adapted vocational education, independent living skills instruction, basic skills instruction, career education, social skills instruction, and speech communication instruction. This last content area was not in the DOSE's top eleven. Conversely, the DOSE included computer assisted instruction and training, but no SOS cited it. The remaining elicited activities were program descriptors: work study program, academic assistance for mainstream classes, individualized instruction, inclusion in regular school activities, and inclusion in mainstream classes.

The most frequently cited activity category was basic skills instruction with 42.2% of the SOS including an activity grouped in this category. The percentages for the top ten ranged from 42.1% (8 of 19) to five activities which were tied with 10.5% (2 of 19). The low response rate from this group poses several interpretation problems concerning stability and generalization of these results.

PTT. The PTT included nine of the same eleven program activities as did the DOSE in the most frequently cited activities. The PTT's seventh and ninth activities were not included in the DOSE's listing. Their top eleven included seven curricular content areas: regular and adapted vocational education, independent living skills instruction, basic skills instruction, career education, learning strategies instruction, social skills instruction, and functional academic instruction. The remaining four activities were program descriptors: work study program, academic assistance for mainstream classes, individualized instruction, inclusion in regular school activities, and community based instruction.

As with the other response groups, opinions diverged on the appropriate curricular content. Indeed, the five most frequently cited activities were different curricular content areas. Independent living skills was the most frequently cited activity with 59% (102 of 173) of the PTT alluding to it. Similar to the SOS, the PTT infrequently cited computer assisted instruction and training as a program activity (2.9%). The range of percentages among the top eleven activities was from 59% to 12.7% (22 of 173).

Staff Attributes

A variety of teacher characteristics have been identified as important. The results of the Elicitation Survey include those attributes which were identified by DOSE, SOS, and PTT. Each groups' ten most frequently cited characteristics will be reported respectively. Recall that a total of 23 staff attributes were identified from the survey responses. The ten most frequently cited attributes are listed in Table 10. The attributes are listed in the left column. The remaining columns include, respectively, the rank position and the percentage of respondents for each group who included the corresponding attribute. The rank position was determined according to the percentage of respondents who included that attribute. The higher the percentage of inclusion, the smaller the numerical value of the rank, i.e., the most frequently cited attribute was assigned the rank of "1."

DOSE. The DOSE's ten most frequently cited attributes fit into two broad categories. The first group included attributes which might be considered personality characteristics, and thus less amenable to the influence of a teacher training program. In the second group were characteristics which concern instruction or training. The range in percentages was 78.1 to 24.7. Three of the four most frequently cited characteristics suit the category of personality characteristics. Those attributes and corresponding percentage of citations are as follows: personality characteristics (78.1), works well with people (53.4) and works cooperatively with staff and administration (47.9). "Personality characteristics" was a category in which a number of diverse teacher traits were grouped: honesty, good judgment, dependable, loyal, and so on. The remaining seven concern skills or training: background training and experience (58.9), classroom organization skills (46.6), instructional skills (46.6), curriculum and instructional planning skills (42.5), assessment skills for planning and instruction (27.4), consultation skills (27.4), and behavior management skills (24.7). If the respondent included knowledge or content information regarding particular subject areas, e.g., social skills, transition, learning strategies, basic skills, and so on, the response was categorized into background training and experience. This attribute thus included a diverse set of information.

SOS. Although the rankings differed, the ten teacher attributes most frequently cited by the SOS included the same ten included by the DOSE. In addition, both groups identified personal characteristics as the most important attribute. The SOS included another attribute due to a tie in the number ten rank: Innovative instructional skills (10.5). The range of percentages was from 57.9% for personal characteristics and for instructional skills to 10.5% for consultation skills and for innovative instructional skills.

PTT. The PTT included the same top nine attributes as the DOSE in their top nine most frequently cited attributes, although not in the same order. Classroom organization skills which was included by both DOSE and SOS as their fifth most cited attribute was at the twelfth rank for the PTT. Philosophical position was their tenth attribute. The range of percentages was narrowest among the three groups for the PTT. This range was from 55.5% for instructional skills, which had the same rank for the SOS, to 23.1% for philosophical position in the tenth rank.

Table 10

Attributes of Quality Special Education Teachers for High School Students with Mild to Moderate Handicaps, Ranked by Percent of Cites from Elicitation Survey of DOSE (n = 73), SOS (n = 19), and PTT (n = 173)

Staff attributes	DOSE		SOS		PTT	
	Rank	(%)	Rank	(%)	Rank	(%)
Personal characteristics	1	(78.1)	1*	(57.9)	2	(50.3)
Background training and experience	2	(58.9)	3	(52.6)	3*	(46.8)
Works well with people	3	(53.4)	4	(42.1)	3*	(46.8)
Works cooperatively with staff and administration	4	(47.9)	7	(31.6)	8	(32.9)
Classroom organization skills	5*	(46.6)	5*	(36.8)	12	(16.2)
Instructional skills	5*	(46.6)	1*	(57.9)	1	(55.5)
Curriculum and instructional planning skills	7	(42.5)	5*	(36.8)	7	(35.3)
Assessment skills for planning & instruction	8*	(27.4)	8	(26.3)	5	(38.7)
Consultation skills	8*	(27.4)	10*	(10.5)	9	(27.7)
Behavior management skills	10	(24.7)	9	(21.2)	6	(35.8)

Note. * indicates a tie. Other top-ten attributes: for SOS - Innovative instructional skills 10* (10.5); and for PTT - Philosophical position 10 (23.1).

Staff Activities

As described previously in the procedures section, teacher training activities are limited to those activities reported by the PTT. Table 11 lists the preservice training activities for quality special education staff by percent of cites from PTT respondents. The top two activities, student teaching (53.2%) and lecture course work (34.7%) were more frequently included than any of the other activities. Recall that specific content courses were categorized separately but rather were included under the grouping of lecture course work. The list includes a disparate range of training activities suggesting that multiple settings and media are appropriate to pre-service instruction. However, if the percentage of citations is considered as an indicator of the frequency of usage or of familiarity, the response patterns suggest that the variations in training activities are reduced and few of these alternatives actually are used.

Table 11

Pre-Service Teacher-Training Activities for Quality Special Education Programs for High School Students with Mild to Moderate Handicaps, Listed by Percent of Cites from Elicitation Survey of PTT

Teacher-training activities	Rank	(% Cites)
Student teaching	1	(53.2)
Lecture coursework	2	(34.7)
Observation activities	3	(20.2)
Curriculum development experiences	4	(19.7)
Simulations	5	(13.9)
Research experiences	6	(10.4)
Videotape/media uses	7	(7.5)
Clinical teaching	8*	(5.8)
Modeling/demonstrations	8*	(5.8)
Computer assisted instruction & training	10	(4.0)

Note * indicates a tie. PTT = Pre-service Teacher Trainer.

Discussion

The National High School Project was initiated to provide policy makers at the federal, state, and local levels with information to design and evaluate the quality of special education programs serving youth with mild to moderate handicaps. Three major research efforts were completed as part of the National High School Project. This report describes the results of a series of five surveys which examined multiple perspectives on the desired attributes of high school special education programs and staffs. This first survey was designed to elicit desired attributes of special education programs and teaching staff for students with mild to moderate handicaps.

Many perspectives could be appropriately included in a project with this goal. The three respondent groups (directors of special education, superintendents of schools, and pre-service teacher trainers) were selected because of their close relationship with the policies and practices in special education, to complement the work completed in the project's two other research efforts (which are reported in Bodner et al, 1987 and Knowlton and Clark, 1989), and lastly, because they could be chosen through a probability sampling procedure.

The results of this first survey present a study of contrasts. The contrasts are represented among the respondent groups and the varied responses within each group. Obviously, the diversity of responses elicited through the open-ended format indicates that the programs serve a variety of needs through heterogeneous formats of instructional delivery.

Program Attributes. As one might expect, the responding groups' perspectives of quality programs were characterized by characteristics of the programs, not outcomes. For example, in reviewing the ten most frequently cited attributes, the DOSE included eight regarding the characteristics and two regarding outcomes ("High school completion" and "Employment success'). For SOS, six attributes concerned program characteristics and four were on outcome content ("Successful academic achievement," "Successful personal and social adjustment," "High school completion," and "Student satisfaction"). The PTT included nine program characteristics and one outcome ("Employment success"). Perhaps the administrative orientation of the responding groups prompted this pattern of attributes. The perspective may be that if the process of education is a good one, the outcomes will also be good. However, the question not addressed is that processes may be very good, i.e., the programs may be in legal compliance, have good discipline, and be well structured, but fail to deliver a valued outcome. The point is that accountability or quality needs to be assessed against agreed upon standards. Attributes which characterize programs must shift to standards emphasizing the knowledge, skills, and abilities which the students have upon completion rather than immediate concerns with pedagogy or intermediate goals of the program, e.g., mainstreaming students or merger or integration of regular and special education faculties. Only after those desired outcomes are specified can one come to understand the role of various program characteristics, the process variables which influence those outcomes. An alternative should also be considered. The frequency of program characteristics' inclusion may signal two different issues. Perhaps, those desired outcomes are clearly perceived in our respondents and the survey's format did not elicit that information. Subsequent procedures in this research lend themselves to closer evaluation of that perspective.

Program Activities. Activities most frequently cited by DOSE, SOS and PTT as characteristic of quality special education programs anticipated the mild to moderately handicapped high school student's transition to adult participation in the community (viz., "Regular and adapted vocational education," "Work study program," and "independent living skills instruction"). Less transition-oriented activities (e.g., "Inclusion in regular

school activities," "Computer assisted instruction & training," "Social skills instruction") were among the lowest of the top ten rankings. This recognition among the three respondent groups of the importance of the transition from high school to adult living among special education students has wide ranging implications for special education programs and staff.

Staff Attributes. Some parallel observations are relevant between the staff and program attributes. The vast majority of teacher attributes were those concerned with delivering instruction and management. Only six of the 23 teacher attributes described content areas (knowledge of transition, study skills; learning strategies, basic skills survival skills, vocational/career education, and personal-social skills). Interestingly enough, none of the ten most frequently cited characteristics by any of the groups included one of these six content areas. As with program characteristics, these frequency listings indicate the difficulty with selecting suitable goals or a focus for the special education programs. The more agreed upon characteristics are process or pedagogical. The respondents articulated how they would like the programs and staff to "look," but were less agreed upon the long range goals or content for the programs. Certainly content is an area to which neither federal nor state agencies have added direction beyond the position that each student should have access to an individualized, appropriate education.

Pre-service Training Activities. The pre-service training activities were limited in number. Of the four areas surveyed, this survey elicited the fewest categories of responses. This narrow grouping may be due to only pre-service teacher trainers completing the survey. Since this area is their expertise, their knowledge and experience may have limited the possible considerations of alternative activities. Perhaps, the non-experts, e.g., SOS and DOSE, would have other recommendations that they believe are valuable in teacher training. Given the rankings of the desired staff attributes, we are curious how those desired attributes can be developed through the training activities.

Limitations. Initial plans were to examine the DOSE' and SOS' responses on such indices as the setting in which the respondent works, e.g., rural isolate, rural, urban, or suburban, and the enrollment size of the school district or cooperative. However, with so few responses from the SOS, such analyses were judged inappropriate. Indeed, the larger issue concerns the representativeness of the SOS's sample. If the assumption is valid that the SOS received the survey, was the low response rate due to a perceived lack of importance, a lack of information on which to base a response, or some combination of these two and other factors? The low response rate also poses the interpretation problem in that each SOS represented 5.3% of the total. In this case the level of confidence that a reader might have in knowing that 50% of the SOS responded in a particular manner should be significantly less than the level of confidence attached to DOSE responses. The sample sizes warrant these shifts in confidence levels.

A second issue concerns the respondents' interpretations of the survey. Despite a successful pilot test, the directions to the respondents apparently were not understood. Generally this issue was with the second part of the two sections. For many respondents, the concept of an activity was not adequately conveyed. That is, they did not distinguish the goals or desired *attributes* of a special education program or teaching staff from the *activities* in which one might engage to realize those attributes. In some instances the outcomes or attributes were confused with the activities.

As a consequence of both of these issues, the data from this first survey should be treated as very tentative. On the other hand, the authors feel comfortable that the identified attributes and activities are quite exhaustive of their respective domains. Our caution is in interpreting these data as representative or a consensus of the responding groups.

Appendix A

Initial Letter to Chair of Special Education Department at Institutions of Higher Education

National Study of High School Programs for Handicapped Youth

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September 17, 1986

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«college»
«address»
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Dear «greet»:

The National High School Project is a joint effort of the Office of Special Education Programs and the University of Kansas to examine factors influencing the transition of high school students in special education to independent adult functioning. The Teacher Education Division of CEC is a "silent" co-sponsor of this project, having gone on record to support it and encourage participation by all personnel preparation programs.

We recognize that many reforms are occurring in regular education and special education. Such reforms will have influences in many areas such as curriculum development, instructional goals, competency testing, teacher pre-service education, and graduation requirements. We are particularly interested in learning about your pre-service program for training secondary level teachers of mild to moderately handicapped students. In a subsequent mailing, we will include a survey to learn more about your program.

Our present request is that you complete the enclosed postcard. We would like you to send us the names of faculty members who are interested in your secondary level teacher preparation programs for students with mild to moderate handicaps. Thus, we can send our survey directly to them. If you would also like to receive the survey, add your name to the list. If no one on your faculty has an interest in this area, please so indicate on the postcard.

We appreciate your thoughtful attention and speedy reply to our query.

Sincerely,

Gary M. Clark Daryl F. Mellard Don Dorsey

Enc.

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Appendix B

Sample Elicitation Survey for Directors of Special Education and Superintendents of Schools

ATTRIBUTES AND COMPONENTS OF SPECIAL EDUCATION

The uniqueness of special education students and school districts' availability and allocation of resources have resulted in a diversity of high school level special education programs. We are interested in learning your thoughts about evaluation of special education (I) programs and (II) staff. The survey has two parts. In Part I we ask you to identify (a) attributes and (b) activities of special education programs. In Part II we ask for similar information concerning special education teaching staff. The following analogy, concerning a family's decision to buy a car, is offered to clarify our intent.

In this example there are three family members who have a stake in the kind of car that is bought. As you might expect, each family member has her or his car preferences based on desired features or attributes. Mom wants a car that is (a) roomy, (b) easy to drive on snow packed streets, and (c) easy for loading and unloading. Dad's concerns are with the car's (a) maintenance record, (b) initial cost, (c) miles per gallon and (d) riding comfort. Their teenager is interested in the car's (a) 0 to 55 acceleration rate, (b) "sporty" look and (c) rated horsepower.

These three family members have different attributes or characteristics on which they will evaluate different car models, e.g., Dodge's Caravan, Mazda's RX-7, Oldsmobile's 98, Chevrolet's Camaro, and Chyrsler's Newport. For the family to decide on which car to buy, the members might order their preferred attributes in importance and then compare each car model on each of them. The car model with the highest rating across the attributes would be the rational choice.

For our task, we are interested in the attributes you believe important for evaluating activities or components of secondary level special education programs (Part I) and characteristics and skills of teaching staffs (Part II).

Part IA: Attributes of High School Special Education Programs

We offer a second analogy to further illustrate this task. In this example, assume that one is to evaluate a school district's comprehensive student assessment procedures. Those evaluations might be assessed on the following attributes: (a) multi-sourced, (b) reliable, (c) objective, (d) cost-effective, (e) valid, (f) multi-disciplinary, and (g) efficient.

In this part your task is to write those attributes for evaluating the success of a high school special education program for the mildly to moderately handicapped students such as yours.

Please write the attributes on the lines below.

A)_____

B)_____

C)_____

D)_____

E)_____

F)_____

G)_____

H)_____

Additional comments:

(OVER PLEASE)

Part IB: Activities of High School Special Education Programs

A variety of activities, options or components are included in secondary level special education programs for students with mild to moderate handicaps. We are interested in what components or activities you would consider important to evaluate in your special education program. This list would be the content or what's offered in your programs. We recognize that this includes a wide range of activities e.g., work-study programs, reading instruction, and independent living skills. Include on this list those alternatives that are available to students. By way of example, consider the components or activities which might be included in a driver's education program: (a) actual driving practice; (b) use of automobile simulators, (c) textbook usage, (d) safety films, and (e) written tests. These options could be evaluated against a set of attributes (e.g., safety record, success at passing driver's test, influence on number of ticket violations) to determine which activities have the greatest impact on the attributes of interest.

On the following lines, please write the <u>activities</u> or <u>components</u> that are part of your special education programs for mildly and moderately handicapped students.

A)_____

B)_____

C)_____

D)_____

E)_____

F)_____

G)_____

H)_____

Additional comments:

Part IIA: Attributes of High School Special Education Teachers

We are likewise interested in learning those attributes on which special education staff might be evaluated. On the lines provided, please write those attributes on which you would evaluate special education teaching staff of mildly to moderately handicapped students.

A) _____

B) _____

C) _____

D) _____

E) _____

F) _____

G) _____

H) _____

Additional comments:

(OVER PLEASE)

Part IIB: Activities of High School Special Education Teaching Staff

Teaching staff complete a number of instructional and noninstructional activities on which they might be evaluated. On the following lines, please write those activities on which you might evaluate your teaching staff. Please focus on only activities of teachers of mildly and moderately handicapped students and not ancillary or related service personnel.

A) _____

B) _____

C) _____

D) _____

E) _____

F) _____

G) _____

H) _____

Additional comments:

Part III: Some news about you

Please check ONE:

I am a ___ school superintendent.

___ director of special education.

___ other.(Tell us.)_____

The region in which I work might be best characterized as:

___ rural, isolated geographically and sparsely populated

___ rural, small town

___ suburban

___ urban

Please complete ONE of the following statements:

i. What is the total enrollment in your school district? _____

ii. If your service area includes a number of school districts, such as in a special education cooperative or interlocal, what is the total enrollment of those school districts?

_____

In what state is your office? _____

In what county or parish is your office? _____

Please return this survey to us by May 23rd.

Thank you.

5/08/86

Appendix C

Sample Elicitation Survey for Pre-service Teacher Trainers

November 11, 1986

&NAME&
&TITLE/O&
&ADDRESS1/O&
&ADDRESS2/O&
&CITY&, &STATE& &ZIP&

Dear &GREET&:

Dramatic changes are occurring in special education programs and teacher pre-service training. Impetus for these reforms is based in part on the need to provide secondary students with better transition from school to independent adult functioning. To understand the trends in special education programs, we need to likewise examine the trends in teacher preparation programs. We are soliciting your assistance in understanding and evaluating high school level special education programs and teacher preparation programs.

Our task, a survey, will likely require between 20 and 30 minutes of your time because we have designed it for brief, open-ended answers. This allows you to identify the important characteristics of exemplary programs in secondary special education and staff training, and incorporate the uniqueness of your institution's philosophy and objectives. Your answers to these open-ended questions will be used to develop categories for a nation-wide survey of secondary special education teacher training and program practices. Because you are part of a carefully chosen sample, your responses are important.

Efficiency experts claim that an excellent time management skill is to handle a piece of mail only once. From our perspective, we know that if it is set aside, you are less likely to complete it, even though your intentions are good. Will you complete our survey right now?

We look forward to receiving your opinions and thank you for your prompt and careful attention to our survey. In addition, we would be glad to answer your questions concerning the survey or the project if you would call or write us. We have enclosed an abstract of our research project for your further information, and a small token of our appreciation for your response.

Sincerely,

Daryl F. Mellard Gary M. Clark Don Dorsey

Enc.

IHE tchrlet 11-04-87

ATTRIBUTES AND COMPONENTS OF SPECIAL EDUCATION

High school special education programs are highly diverse. We are interested in learning your thoughts about evaluating this diverse group of special education (I) programs and (II) staff, from your vantage point. Our survey has two parts. In Part I we ask you to identify (a) attributes and (b) activities of special education programs. In Part II we ask for similar information concerning special education teaching staff. The following analogy, concerning a family's decision to buy a car, is offered to clarify our intent.

In this example, three family members are deciding which model of car to buy: (a) Dodge's Caravan, (b) Mazda's RX-7, and (c) Oldsmobile's 98. The chosen model will be the one which most closely matches the family members' attributes or desired features. Thus, it is important that those attributes be clearly understood. Mom wants a car that is (a) roomy, (b) easy to drive, and (c) easy to load and unload. Dad's concerns are with the car's (a) maintenance record, (b) initial cost, and (c) miles per gallon. Their teenager is interested in the car's (a) 0 to 55 acceleration rate, (b) "sporty" look, and (c) horsepower rating. Thus, these attributes will play an important role in evaluating the different car models.

We are interested in the attributes <u>you</u> believe important for evaluating high school special education programs (Part I) and characteristics and skills of teaching staffs (Part II).

Part IA: Attributes of High School Special Education Programs

We offer a second analogy to further illustrate your task. In this example, assume that one is to evaluate a school district's comprehensive student assessment procedures. Those evaluations might be assessed on the following attributes: (a) multi-sourced, (b) reliable, (c) objective, (d) cost-effective, (e) valid, (f) multi-disciplinary, and (g) efficient.

In this part, your task is to write those attributes for evaluating the success of a high school special education program for mildly to moderately handicapped students.

Please write the attributes on the lines below. Write as many or as few as you judge important.

A)_____

B)_____

C)_____

D)_____

E)_____

F)_____

G)_____

H)_____

Additional comments:

(OVER PLEASE)

Part IB: Activities of High School Special Education Programs

A variety of activities, or content components are included in secondary level special education programs for students with mild to moderate handicaps. We are interested in what components or activities you would consider important to evaluate in a high school special education program. We recognize that this includes a wide range of content and activities e.g., work-study programs, reading instruction, and independent living skills. Include on this list the content and activities which you believe important for students. By way of example, consider the components or activities that might be included in a driver's education program: (a) actual driving practice; (b) use of automobile simulators, (c) information on car maintenance, (d) information on driving safety, and (e) written tests.

On the following lines, please write the activities or content components important to special education programs for mildly and moderately handicapped students. Write as few or as many as you judge important.

A)_____

B)_____

C)_____

D)_____

E)_____

F)_____

G)_____

H)_____

Additional comments:

Part IIA: Attributes of High School Special Education Teachers

We are likewise interested in learning those attributes on which special education staff might be evaluated. On the lines provided, please write those attributes on which you would evaluate high school special education teaching staff of mildly to moderately handicapped students. Write as many or as few as you judge important.

A) _____

B) _____

C) _____

D) _____

E) _____

F) _____

G) _____

H) _____

Additional comments:

(OVER PLEASE)

Part IIB: Activities of Training Programs

In the previous section, you listed characteristics of a teaching staff. In this part, we are interested in the pre-service activities designed to develop or teach those characteristics.

Please write those activities which are included or you believe should be included in your training program to develop or teach those characteristics. Write as many or as few as you judge important.

A)_____

B)_____

C)_____

D)_____

E)_____

F)_____

G)_____

H)_____

Additional comments:

Part III. Some Information About You and Your Program

III. A. Program Questions

1. Does your program require a separate methods course for teaching secondary level mild to moderately handicapped students?

_____ Yes _____ No

If Yes, check all the categorical areas in which you provide separate methods courses.

_____ Mildly mentally handicapped (EMR, EMH)

_____ Behavior disordered _____ Learning disabled

_____ Other (Specify.) _____

2. As a prerequisite to secondary level certification, does your program require student teaching or practica in a high school setting?

_____ Yes _____ No

3. Through which program do most students acquire their certification in special education?

_____ Bachelors _____ Post Baccalaureate (non-degree)

_____ Masters _____ Specialist _____ Doctorate

III. B. Background Questions

7. What was your area of emphasis in the training program for your terminal degree? (MR, LD, BD, Voc Ed, etc.)

_____

8. How did your interest develop in secondary special education? Rank in order of influence: 1 = most influential; 2 = second-most influential, and so on. 0 = no influence

_____ Experience _____ Training program

_____ Personal interest _____ Research & Development Project

_____ Other (Specify) _____

9. What was the grade level emphasis in your graduate program for your terminal degree?

_____ Elementary _____ Secondary

_____ Both (Percent in elementary _____%) _____ Neither

10. What is your terminal degree? Circle one.

MA MS Ed.S. Ed.D. Ph.D. Other _____

11. At what college or university are you currently employed?

_____

12. In which state are you located? _____

13. What model(s) of personal computer (e.g., Apple IIe, Macintosh, IBM-PC, IBM-XT) do you use regularly for word processing?

_____

Survey 2: Ranking Survey

Overview

High school special education programs provide the formal educational experiences for those students with disabilities who are unable to benefit from instruction in general education's instructional programs. These educational experiences include a disparate variety of instructional goals and activities, some of which are very idiosyncratic due to the learner's unique needs and goals. To date, these goals and activities have not been examined nationally or even integrated into a database for analysis. The National High School Project involved three research efforts, Bodner, Clark, and Mellard (1987) and Knowlton and Clark (1989) as well as the research described here. These efforts provide integrated, multiple perspectives on high schools' efforts to ensure the successful transition of students with mild to moderate handicaps to independent functioning within the community. The project's intent was to provide educators, researchers, and federal, state, and local level policy makers with a framework for evaluating and modeling special education programs.

In this research effort of the NHS project, five surveys were completed. Each survey represented one step in a sequential process of a multi-attribute utility measurement. Through the surveys the respondents identified the desired attributes and activities of high school special education programs. Simultaneously, they identified the desired characteristics of a quality teaching staff with the types of training activities which would likely facilitate the acquisition of those attributes. These attributes and activities provide a common framework. This framework might be used by numerous groups for such activities as planning, evaluating, or further researching high school special education programs, their instructional staff, and pre-service teacher training programs.

The results of the second survey, referred to as the ranking survey, are described here. This ranking survey followed an initial survey which was completed by directors of special education (DOSE), superintendents of schools (SOS), and pre-service teacher trainers (PTT). The initial survey, referred to as the elicitation survey, requested respondents to list (a) the attributes and (b) the activities which characterized quality special education programs for high school students with mild to moderate handicaps and also of quality teaching staff in those programs. The DOSE and SOS were asked to indicate the activities of teaching staff on which the staff should be evaluated. This task was altered for the PTT. On the PTT survey, respondents were asked to indicate the pre-service training activities which would develop those desired attributes.

The first survey's responses from the 265 respondents were grouped into conceptually distinct categories by the project's staff. As a result of this categorization, 40 program attributes were identified. Similarly, 28 program activities, 23 teacher attributes, and 18 teacher training activities were identified. Details of the methods and results are described in the previous section titled "Survey 1: Elicitation Survey to Directors of Special Education, School Superintendents, and Teacher Trainers."

In proceeding with the initial plan to use the multi-attribute utility measurement (MAUM) methodology (Edwards, 1977), several decisions were required. One value of the MAUM is that the procedures yield two very important results. First, the procedures yield a ratio-leveled ranking of each attribute set. This ratio scaling permits very clear statements regarding the respondents' expressed values. For example, one can discern the ratio between any two attributes and conclude whether one attribute is valued 2, 3, 4, or even more times than

another attribute. Such information is not available from Likert-type scaling or ranks. This information has importance for understanding implications. The second feature of the MAUM procedure comes through the utility measurement. The utility measurement itself identifies those activities which are maximized using the defined attributes. That is, one knows which activity has the greatest value for maximizing a set of attributes. In proceeding with the MAUM methodology, several decisions were needed. Each of these decision points are described in the following section.

Methodological Considerations

The results of the first survey, the elicitation survey, were rather different than expected. The diversity of responses, the low response rate, and the large number of conceptual categories posed several interesting challenges to completing the project as planned.

As Edwards (1977) outlined the sequence of steps in the MAUM procedures, the group of chosen attributes should number no more than ten for the type of procedures available to this project. From the first survey 40 program attributes and 23 teacher attributes were identified by staff. Given the nature of this project, that a mail survey was used as instrumentation, and the number of activities that the respondents needed to evaluate, a group of ten attributes was judged as the maximum number of attributes to use in a survey. (If meetings could have been scheduled with groups of respondents, probably all of the attributes could have been used and refined with the participant's assistance.) Two questions were identified: Who should make the decision about which attributes should be included in the two top ten groupings and secondly, how should the lists of attributes be reduced to approximately ten in each listing? Ten attributes were needed for representing the desired program attributes and a second set of ten attributes was needed to characterize desired teacher qualities.

One option was to use, respectively, the ten attributes which were most frequently cited in the first survey for programs and teachers. This option was rejected for several reasons. First, the low response rate led the staff to question the representativeness or reliability of the responses. Second, the characteristics of the survey may have prompted the responses and low response rate to be different than expected. The task was a listing task and as a generation or production task, more effort was required than on a recognition or sorting task. Thus, the task might have had an unintentional limiting impact. Third, the frequency counts, and the categorical groupings for that matter, were very dependent on the categorizations given to the responses by the project's staff. Some unknown bias may have incorrectly influenced the formation of the categories and hence the frequency counts.

Another option would have been for staff to select the "best" attributes. However, for numerous reasons, external raters were considered as a more valuable group of respondents. Most importantly, external raters were considered as independent of the project and as representing significant perspectives on special education and teacher training. Thus, the staff judged that the desired respondents to the second survey should be those professionals whose work provided them with an experience base and knowledge to be able to respond thoughtfully to the task. The staff identified the six members of the Advisory Board and ten other professionals to serve as respondents to this survey.

The second decision concerned an appropriate format within which the respondents should make their selections. Several options were again considered, e.g., Q sort technique, Likert-type scale, and ranking along several dimensions. The issue was to ensure that this task would yield reliable results and minimize the effect of the particular method chosen. From those perspectives the simple ranking task was judged as best. A consideration regarding the reliability of this technique was that the individual rank was irrelevant. The important result was whether a given attribute was within the top ten of all attributes rated

since only ten attributes would be used. The staff judged that soliciting a listing of the top *fifteen* attributes would help focus the respondents' selection and increase the reliability of the selections. Thus, the 16 respondents were asked to identify the 15 most important program and staff attributes respectively. Again, the rationale for adding this survey was an expressed concern about the reliability of the first survey's results. The low response rate among directors of special education and in particular, superintendents of schools, led the staff to question their representativeness. With this survey a difference in methodology and respondents was considered as important for verifying the identified attributes.

In the following sections, specific details of the methods, results, and findings are provided.

Method

Opinions from 16 professionals — professors, clinicians, school administrators and special education practitioners — with expertise in the field of special education were solicited in the Ranking Survey. The professionals were asked to rank order a list of attributes of exemplary special education programs and staff (see Appendix D for initial letter). The attributes were those identified from the responses to Parts I-A and II-A of the Elicitation Survey. The top 10 categories as ranked by the professionals were used in the subsequent Weighting and Implementation Surveys (surveys three through five) of the study.

Subjects

At a staff meeting on January 13, 1987, nominations were made for participants in the Ranking Survey. The staff decided that in addition to the six Advisory Board members, ten other professionals would be invited to complete the ranking survey. Staff members nominated those professionals with expertise in the field of special education whose research and publications were of such quality that there was a consensus that the nominee would contribute positively to the study. Accordingly, 16 were nominated for the ranking survey (see list in Appendix E).

Materials

The materials are described in terms of the two mailings sent out early in 1987 to the 16 professionals.

Advance letter. The initial correspondence consisted of an explanatory letter eliciting support and a stamped postcard. The professional was requested to return the postcard if s/he decided not to participate. This letter appears in Appendix D.

Survey description. In the second mailing, which included the survey itself, the professionals were sent a cover letter, the survey with directions to rank the two sets of attributes (categorized from responses to the Elicitation Survey), a glossary of terms, and a postage-paid return envelope. The materials have been collated in Appendix F.

The letter reiterated the rationale for the study and gave general directions, including a deadline for replies. The survey included specific instructions as well as a description of the process that led to the listing of 40 attributes of high school special education programs for students with mild to moderate handicaps and 23 attributes of high school special education staff. A blank space to the left of each attribute was provided, on which the respondent was to

write a numerical value for that attribute, utilizing a range of 1 through 15. The value "1" designated the most important attribute, and "15" designated the least important. The professionals were requested to refrain from ranking two or more attributes equally, i.e., to avoid a tie. In this manner, the 15 most important attributes for each set were identifiable. The glossary consisted of examples for each attribute category. These examples were chosen from responses to the Elicitation Survey. The glossary was provided as a set of descriptors to aid the respondents in understanding the particular category's content.

Survey Procedure

This section relates the chronology of the survey, beginning with the survey document, its dissemination, the returns from respondents, and the data analyses performed on the resulting database.

Survey mailing. Early in February, 1987, a letter was sent to the 16 nominated professionals, asking if their time constraints would permit their participation in the survey. A stamped, addressed postcard was enclosed. The respondent was asked to mail the postcard if s/he was unable or unwilling to do the survey. Non-return of the postcard meant that the individual would participate.

The Ranking Survey packets were mailed on February 27, 1987. A thank you letter followed within two weeks. This thank-you letter also served as a reminder to those who had not yet completed their survey.

Survey returns. All 16 of the ranking surveys mailed to professionals in the field were completed and returned in the mail.

Data coding. The professionals ranked the 15 most important attributes. Their numerical rankings were entered in a spreadsheet. Those attributes that the professionals did not rank (where the space provided was left blank) were given a value of "16." The professionals were requested to avoid giving the same rank to two or more attributes, and no ties occurred in individual responses.

Data analysis. Two spreadsheets were created using AppleWorks software (1983), one for program attributes and another for staff attributes. Attributes were identified across the column headings, while the professionals' names made up the row labels. The professionals' responses (attribute rankings) were entered in the cells. Rankings were summed by column. The mean, standard deviation, and standard error of the mean were also calculated for each attribute category. Based on these sums and the means, the attributes were ranked. The attribute with the lowest total (137 for program attributes and 79 for staff attributes) was ranked first, since "1" was the value assigned to the "most important attribute" and "15" was assigned to "the least important." The remaining attributes followed in sequence based on their rank sums.

When a tie occurred in the sums of ratings, the two attributes were awarded the same rank. However, the next number in sequence was skipped in assigning the rank of the next attribute. For example, among the program attributes, "Program support from staff, parents, business, and community" and "Regular education support and integration" had equal sums of rankings (175) and therefore tied for seventh rank. The next attribute, "Successful independent living" with a rating-sum of 176, was ranked ninth.

Column rankings were summed and the 10 attributes with the lowest totals (since "1" was the value for the most important attribute) were identified for use in the next stage of the research project, the Weighting and Implementation Surveys.

Results

The spreadsheets generated with AppleWorks were edited into tabular form for ease of interpretation. These tables are presented and described in the following section of this survey report.

Descriptive statistics — frequencies, means, and standard deviations — provide a useful view of the rankings of successful special education program attributes and special education teacher attributes, based on the 16 professionals' responses.

Program Attributes

Table 12 shows the sum of ratings, highest assigned rank, mean of ratings, standard deviation, and standard error of the mean for the staff attributes as ranked by the professionals.

Twelve of the 40 program attributes (33%) were given the highest ranking ("1") by at least one of the 16 respondents. These attributes, followed by the number (in parentheses) of professionals giving them the highest ranking were: "Individualized, appropriate "(1), "Community-based program" (1), "Vocational/career orientation" (1), "High school completion" (1), "Successful academic achievement" (1), "Employment success" (1), "Successful personal and social adjustment; self-concept/self-esteem" (1), "Successful independent living" (1), "Effective staff" (4), "Defined philosophy" (1), "Administrative leadership and support" (1), and "Comprehensive program" (2). Interestingly, each of these 12 attributes received rankings ranging from "1" (most important) through "16" (unranked or least important). Moreover, all 40 attributes were excluded from a ranking in the top 15 attributes by at least one professional.

The greatest agreements were in those attributes receiving the lowest ratings, i.e., those attributes judged least important. Two of the 40 program attributes received the lowest rating, "16," from 15 of the 16 professionals. These two attributes, which were not included in the top 15 by all but one of the professionals, were "Compliance standards," for which the one other rating was "15," and "Adequate community resources," for which the other rating was "10." Four attributes received rankings of "16" from 14 of the professionals: "Vocational assessment," for which the two other rankings were "8" and "9"; "IEP goals met "("4" and "13"), "Adequate physical plant" ("4" and "11"), and "Humanistic approach" ("11" and "13").

The mean values of the program attributes' ranks, as shown in Table 12, ranged from 8.56 ("Effective staff," the highest-ranked) to 15.94 ("Compliance standards," the lowest-ranked). The difference between the means of the first- and second-ranked attributes as well as the second- and third-ranked attributes was almost one integer; however, the difference between the third- and fourth-ranked attributes dropped to 0.06.

Table 12

Rank Ordering of High School Special Education Program Attributes for Students with Mild to Moderate Handicaps

Rank	Program attribute	Sum of ratings	Highest assigned rank	Mean	SD	SE of the Mean
1	Effective staff	137	1	8.56	6.73	1.68
2	Vocational/career orientation	152	1	9.50	5.32	1.33
3	Individualized, appropriate	164	1	10.25	5.47	1.37
4	Employment success	165	1	10.31	5.40	1.35
5	Administrative leadership & support	170	1	10.63	5.93	1.48
6	Post-secondary transition curriculum	174	3	10.88	5.35	1.34
7*	Program support from staff, parents, business, and community	175	2	10.94	5.89	1.47
7*	Regular education support & integration	175	2	10.94	4.88	1.22
9	Successful independent living	176	1	11.00	5.63	1.41
10	Successful personal/social adjustment	179	1	11.19	6.03	1.51
11	Monitoring and assessment system	184	4	11.50	4.65	1.16
12	Comprehensive program	186	1	11.63	6.32	1.58
13	Life skills curriculum	197	2	12.31	5.50	1.38

(table continues)

Table 12 continued

Rank	Program attribute	Sum of ratings	Highest assigned rank	Mean	SD	SE of the Mean
14	Defined philosophy	199	1	12.44	5.62	1.41
15	Age-appropriate curriculum	200	2	12.50	5.03	1.26
16*	Community-based program	202	1	12.63	5.11	1.28
16*	Successful academic achievement	202	1	12.63	5.60	1.40
18	Personal, social skills curriculum	204	2	12.75	4.99	1.25
19*	High school completion	215	1	13.44	4.49	1.12
19*	Validated instructional methods	215	3	13.44	4.18	1.05
21	Promotes professional growth	216	3	13.50	4.20	1.05
22	Student satisfaction	217	2	13.56	4.76	1.19
23*	Competency-based approach	219	6	13.69	3.61	0.90
23*	Functional academics	219	4	13.69	3.72	0.93
25	Case management system	221	7	13.81	3.51	0.88
26	Student-teacher ratio	222	4	13.88	3.98	1.00
27	Multi-disciplinary approach	226	5	14.13	3.59	0.90
28	Counseling and guidance	227	5	14.19	3.56	0.89
29	Study skills/learning strategies	228	5	14.25	2.93	0.73

(table continues)

Table 12 continued

Rank	Program attribute	Sum of ratings	Highest assigned rank	Mean	SD	SE of the Mean
30	Curriculum scope and sequence	230	7	14.38	3.18	0.80
31	Current research implementation	236	5	14.75	2.89	0.72
32	Basic academic skills curriculum	237	4	14.81	3.25	0.81
33	Adequate supplies, materials, & equipment	238	7	14.88	2.45	0.61
34*	Adequate physical plant	239	4	14.94	3.17	0.79
34*	Cost-effective	239	6	14.94	2.82	0.70
36*	IEP goals met	241	4	15.06	3.04	0.76
36*	Vocational assessment	241	8	15.06	2.57	0.64
38	Humanistic approach	248	11	15.50	1.41	0.35
39	Adequate community resources	250	10	15.63	1.50	0.38
40	Compliance standards	255	15	15.94	0.25	0.06

Note. * indicates a tie.

While the sums of ratings and their means grew progressively larger, from 137 and 8.56 ("Effective staff") to 255 and 15.94 ("Compliance standards"), indicating the sequence with which the professionals ranked the attributes, the standard deviations and the standard errors of the mean followed an opposite progression, from 6.73 and 1.68 ("Effective staff") to 0.25 and 0.06 ("Compliance standards"). This pattern indicated that the attributes with higher rankings had greater variances in their rankings. That is, less consensus was evidenced among the attributes judged most important. As mentioned above, if the professionals had a consensus, it would appear to be in ranking "Compliance standards" as the least important special education program attribute, where 15 of the 16 respondents gave it the lowest rank ("16"), and one respondent ranked it "15." This high agreement accounts for the attribute's almost-zero standard error of the mean.

Of the top 10 program attributes, three attributes may be classified as program descriptors — "Effective staff;" "Individualized, appropriate programming;" and "Program support from staff, parents, business, and community." Two of the attributes had a curricular focus — "Vocational/career orientation" and "Post-secondary transition curriculum;" two refer to administration — "Administrative leadership and support" and "Regular education support and integration;" and three were outcome-oriented — "Employment success," "Successful independent living," and "Successful personal/social adjustment." Of the lowest 10 program attributes, four attributes were program descriptors — "Current research implementation;" "Adequate supplies, materials, & equipment;" "Adequate physical plant;" and "Adequate community resources." Three had a curricular focus — "Basic academic skills curriculum," "Vocational assessment," and "humanistic approach." Two centered on the administrative aspect — "Cost-effective" and "Compliance standards;" and one centered on outcome — "IEP goals met."

Staff Attributes

Table 13 shows the sum of ratings, highest assigned rank, mean of ratings, standard deviation, and standard error of the mean for the staff attributes as ranked by the professionals.

Among the 23 staff attributes, 11 (48%) received the highest ranking ("1") from the respondents. These attributes, with the number (in parentheses) of professionals giving them a ranking of "1" were: "Instructional skills "(6), "Innovative instruction skills" (1), "Classroom organization skills" (1) "Works well with people" (2), "Background training and experience" (1), "Practices professional ethics" (1), "Philosophical position" (1), "Teaches basic skills" (1), "Skill in assessing outcomes" (1), "Teaches survival skills" (1), and "Teaches personal-social skills" (1). However, these 11 staff attributes also received the lowest ranking ("16") from other respondents. Moreover, all 23 staff attributes were excluded from the top 15 attributes by at least one of the respondents.

The staff attribute with a ranking most consistently low was "Personal characteristics," which was ranked sixteenth by 13 professionals. However, the ratings assigned to this attribute by the three other professionals were "2," "4," and "6." Eleven professionals gave "Teaches basic skills" a ranking of "16"; however, five other professionals gave this attribute ratings ranging from "1" through "11."

The mean values of ratings for the attributes of quality special education teachers ranged from 4.94 ("Instructional skills") to 13.75 ("Personal characteristics"); however, the means of the two highest-ranked attributes ("Instructional skills" and "Assessment skills for planning and instruction") had a difference of more than three integers (4.94 and 8.06). The difference between the means of the second- and third-ranked attributes dropped to 0.07.

Table 13

Attributes of Quality Special Education Teachers for High School Students with Mild to Moderate Handicaps, as Ranked by Professionals

Rank	Staff attribute	Sum of ratings	Highest assigned rank	Mean	SD	SE of the Mean
1	Instructional skills	79	1	4.94	5.53	1.38
2	Assessment skills for planning & instruction	129	2	8.06	4.96	1.24
3	Curriculum and instructional planning skills	130	2	8.13	5.69	1.42
4	Knowledge of transition	137	2	8.56	4.93	1.23
5*	Behavior management skills	141	2	8.81	4.58	1.15
5*	Works well with people	141	1	8.81	5.31	1.33
7	Classroom organization skills	149	1	9.31	5.38	1.34
8	Works cooperatively with staff & administration	161	2	10.06	4.92	1.23
9	Skill in assessing outcomes	168	1	10.50	5.55	1.39
10	Incorporates voc/career education	170	6	10.63	3.59	0.90
11	Background training and experience	174	1	10.88	5.91	1.48

(table continues)

Table 13 continued

Rank	Staff attribute	Sum of ratings	Highest assigned rank	Mean	SD	SE of the Mean
12	Teaches personal-social skills	177	1	11.06	4.45	1.11
13	Consultation skills	184	4	11.50	4.58	1.14
14	Innovative instruction skills	188	1	11.75	5.11	1.28
15*	Counseling skills	197	5	12.31	3.83	0.96
15*	Teaches study skills; Learning strategies	197	3	12.31	4.03	1.01
17	Pursues professional development	198	3	12.38	4.27	1.07
18	Teaches survival skills	200	1	12.50	4.40	1.10
19	Philosophical position	201	1	12.56	4.79	1.20
20*	Practices professional ethics	206	1	12.88	5.08	1.27
20*	Teaches basic skills	206	1	12.88	5.21	1.30
22	Time management skills	207	4	12.94	4.45	1.11
23	Personal characteristics	220	2	13.75	4.89	1.22

Note. * indicates a tie.

As with the program attributes, the standard deviations and standard errors of the mean followed an opposite progression when compared to the attribute ratings' sums and means. While the latter grew progressively larger (133 and 4.94 for "Instructional Skills" to 220 and 13.75 for "Personal characteristics"), the former progressively decreased (5.53 and 1.38 for "Instructional skills" to 4.89 and 1.22 for "Personal characteristics"). As the rankings diminished, the variance similarly lessened. Thirteen of the 16 respondents agreed that "Personal characteristics" was the least important of the teacher attributes. Interestingly, one of the professionals ranked this attribute as second in importance.

Of the top 10 teacher attributes, four attributes had an instructional delivery focus — "Instructional skills," "Curriculum and instructional planning skills," "Behavior management skills," and "Classroom organization skills." Two of the attributes referred to assessment — "Assessment skills for planning and instruction," and "Skill in assessing outcomes;" two centered on content areas — "Knowledge of transition" and "Incorporates vocational/career education;" and two focused on the personal/social aspect — "Works well with people" and "Works cooperatively with staff and administration."

Discussion

In the sequential process of conducting the multi-attribute utility measurements, this Ranking Survey was the second step. The first step was the Elicitation Survey, in which desirable attributes of special education programs and special education teachers were identified, along with special education program activities and pre-service teacher training activities. The next requirement in the multiattribute utility measurement methodology was to identify a subset of the program and staff attributes from the responses provided in the first survey. This subset was determined by experts in the field by means of Survey 2, the Ranking Survey, described in this section of the research report.

This section of the report briefly reviews the current reform movement in regular as well as in special education; enumerates the survey limitations in sample size, return rate, and instrumentation; compares the findings of the Ranking Survey with the findings of the Elicitation Survey; and summarizes findings and conceptualizes implications for future research.

Issues in Regular and Special Education Reform

Until the recent past, education in the USA was fundamentally aimed at the "average" child, with those above and below average largely left to fend for themselves. Attention was focused on the majority members of the student population in a laudable striving for an egalitarian and democratic educational system. Benign neglect of minority members at either end of the achievement scale was neither inevitable nor premeditated; it was an inadvertent result. When PL 94-142 (1975) enabled "handicapped individuals" to pursue a "free and appropriate education," virtually every school district had to undergo renovations in facilities as well as curricula to provide for the influx of "special students."

However, comparative studies conducted in the last two decades have found consistently negative results for American students at every sector of the achievement curve. Whether comparing scores on the upper end, or the middle section, or the bottom end, American pupils scored significantly lower than those of other industrialized countries. The publication of "A

Nation at Risk" by the National Commission on Excellence in Education (1983) breached the dam of rhetoric that focused on the need for more effective teaching and learning.

The decade of the eighties has seen a reform movement in the nation's schools. However, the movement, in calling for excellence, has focused on the right half of the curve, the average and above average population. To this end, Stainback and Stainback (1984) argue for the merger of special and regular education, especially with regard to students with mild to moderate handicaps. The results of the Ranking Survey provide an alternative perspective of important attributes of special education. Among the experts' top ten rankings are goals which are generally valued in the regular education program: "Employment success," "Successful independent living," and "Successful personal and social adjustment." While regular and special education may share common goals, the content of special education programs has a different emphasis. These goals in special education are likely to be specific rather than general for many of its students. In addition, special education is more likely to include two other goal areas — "Vocational and career orientation" and "Post-secondary transition curriculum." Neither of these curricular areas fit with the excellence movement, which has emphasized achievement of basic academic skills. However, both the goals and the curricular areas are compatible with perspectives on the important characteristics of the future society. Johnston and Packer (1987), Mithaug et al. (1987), and Reeves (1988) have presented a picture of future society in which on-the-job training will be increasingly prevalent, basic functional academic skills are needed for job entry, and social skills, particularly those skills common to employment settings, will be critical for success. Mastery of such domains are particularly important when one considers that the proportion of the jobs at the basic level will decrease, thus increasing the competition for such jobs among a growing segment of the low achievement population.

The other five program attributes in the top ten are procedural or facilitative rather than content-oriented but are compatible with the five just described and the issues confronting youth in the job market and in independent living: "Effective staff," "Individualized, appropriate instruction," "Program support from staff, parents, business, and community," "Administrative leadership and support," and "Regular education support and integration." Collectively, the program attributes provide an ideal model of special education programming.

The introduction section of this phase of the project outlined two reform issues in special education: the regular education initiative (Reynolds et al., 1987; Stainback & Stainback, 1984) and the transition movement (Will, 1984). Of the two reform issues, the descriptions of program attributes would seemingly be closer aligned to transition movement. The favored outcomes and curricular areas are not closely linked to regular education's priorities. In these two areas, then, the respondents' points of view provide interesting perspectives. Also of interest in light of the transition movement issues is that other curricular areas were not ranked higher by the respondents, e.g., "Life skills curriculum" (ranked 13), "Community-based program" (16), "Personal social skills curriculum" (18), "Competency based approach," and "Functional academics" (23). Given the respondents' identified goals for special education programs, these program attributes would likely have relevance.

The respondents' rankings also are at odds with the dominant issues in the regular education reforms. While the regular education reforms have an assumption that post-secondary education is desirable and should be a goal, the goals highlighted in this survey were not compatible. These differences in goals and content emphasis must be understood in the context of implications for the handicapped population -- their access to quality education and post-secondary employment and educational opportunities. Such differences are important as reforms, curricula, and evaluations are examined.

Secondary Level Pre-service Training

The respondents also provided perspectives on the desired qualities of the teaching staff. In this section, the respondents' priorities will be compared and contrasted with those priorities evidenced and described in the literature. The clear consensus is that teachers should first of all demonstrate good instructional skills. The first three attribute rankings focus on the teacher as an instructor: "Instructional skills," "Assessment skills for planning and instruction ," "Curriculum and instructional planning skills." Such a ranking may not be too surprising, given the other attributes or the traditional concepts of teaching. However, the ranking is disparate with the emphasis in special education teacher training programs (C. Clark, 1988; Schulman, 1986; Warren, 1985). The training programs, with their traditional ties to the college or university environment, have emphasized delivering content knowledge over the procedural and strategic knowledge which guides teachers' classroom decision making.

Certainly, the content knowledge has been easier to deliver for a number of reasons and fits with the other liberal arts and sciences' degree programs in the same settings. Similarly, the changing characteristics of the "special education teacher in training" (McLaughlin et al., 1988) would also fit more easily with the training program that emphasizes content knowledge rather than pedagogical knowledge. Those important characteristics are that the student is also a professional teacher with current employment who might be assumed to already have the necessary pedagogical skills in instruction, curriculum and instructional planning, behavior management, and classroom organization.

In the context of examining the robustness of the Ranking Survey's results, two studies seem particularly relevant: Bursuck and Epstein (1986), and Weisenstein (1986). The frequency with which similar priorities are listed provides interesting comparisons. Figure 1 lists the findings from this study and those three studies cited above. A common denominator across the studies is the emphasis on instructional, classroom management, assessment, and people skills — skills for working successfully with students, parents, and professional colleagues. Seemingly, the majority of the knowledge areas are trainable, that is, the pre-service programs could provide instructional experiences. However, the social interaction skills seem to emphasize skills which are trait characteristics. As such, these traits seem less likely impacted by a college course or program. Noticeably absent in the list were specific content knowledge areas. The closest Bursuck and Epstein offer for content knowledge is literacy in computer skills, though their list includes reference to a specific pedagogy for educating adolescents. Weisenstein's listing recommends coursework in teaching techniques and instructional materials in personal-social skills, daily living skills, occupational guidance as well as academic areas. These domains are framed in a context that addresses the need for transition planning.

Comparisons of these data with teacher certification requirements would likely provide other notable contrasts. As McLaughlin et al. (1988) illustrated, a gap exists in the states' requirements for teachers and the emphasis desired by pre-service trainers and district level administrators. Given these differences, the state departments' observed lack of quality among new teacher candidates might be expected; a shared consensus on quality is lacking. Interestingly enough, the survey data gathered here does show high agreement with the recent researchers' findings.

Figure 1. Recommended teacher attributes from three studies.

Ranking Survey	Bursuck & Epstein (1986)	Weisenstein (1986)
Instructional skills	Design, implement, and evaluate instructional systems	Understanding and ability to utilize assessments in the areas of vocational, academic, and functional skills
Assessment skills for planning and instruction	Use norm-referenced, criterion referenced, and informal measures for IEP development and implementation	Program planning and evaluation skills
Curriculum and instructional planning skills and classroom organizational skills	Use existing resources effectively and efficiently in educational programs	Teaching techniques and instructional materials related to each of Brolin's (1978) curriculum areas
Knowledge of transition	Be knowledgeable of issues involved in educating adolescents	
Behavior management skills	Design, implement, and evaluate behavioral management strategies	Classroom management techniques appropriate for adolescent and adult students
Works well with people	Establishes positive working relationships with parents	Counseling and guidance techniques which can assist the teacher in serving both parents and students
Works cooperatively with staff and administration	Be respected and accepted by pupils and colleagues	Techniques of interdisciplinary coordination, including a basic understanding of related, or allied disciplines
	Engage in professional behaviors which lead to effective communications and productive relationships	
Skill in assessing outcomes		Program planning and evaluation skills
Incorporates voc/career education		Work adjustment strategies for developing effective work personalities and remediating work habit and attitude deficiencies
	Have literacy in computer skills for training students	

While some educational leaders have advocated for closer integration among special education and regular education, the curricular emphasis from this survey suggests otherwise. While Pugach (1987) and the Holmes group (1988) have argued in favor of a closer alignment in training programs, the results from this survey suggest such a restructuring would be ill advised. These data do emphasize a view that high school special education students have different needs than regular education mainstream students — differences in both curricular emphasis and instructional techniques. The logic of impacting the education system through teacher training programs is quite good, but such a change is not supported through the observations from this survey.

Comparison with Survey 1 (Elicitation Survey) Findings

The Elicitation Survey, discussed in the preceding section of this report, was a prerequisite to the Ranking Survey, the second phase of the research project. While the Elicitation Survey's results were nominally categorized into special education program and staff attributes, as well as activities included in special education programs and pre-service teacher training, the identified attributes and activities were not ranked on a scale. Thus, the second survey was chosen as a means of identifying the more important program and teacher attributes. Of interest in this discussion is a comparison of the Ranking Survey's results with the frequency counts in the DOSE, SOS, and PTTs' responses in "Survey 1: Elicitation Survey to Directors of Special Education, School Superintendents, and Teacher Trainers."

Program attributes. In ranking the program attributes, the professionals who responded to this survey when compared with the DOSE, SOS, and PTT who responded to the first survey agreed more than they disagreed. Six of the top 10 program attributes, as ranked by the DOSE and SOS, also were identified among the top ten rankings of this second survey's respondents. Table 14 gives a comparative listing of the top ten program attributes as ranked by this survey's respondents, and as enumerated by the DOSE, SOS, and PTT. The professionals were chosen as the reference group, since Survey 2 focuses on the professionals' responses. Therefore, the professionals' rankings are given first, followed by columns for the DOSE, SOS, and PTT. The reader may want to compare Table 14 with Table 8 in the Elicitation Survey.

The six attributes that were similarly ranked among the first 10 by the DOSE as well as by the professionals (see Table 14) were "Effective staff;" "Vocational/career orientation;" "Individualized, appropriate instruction;" "Employment success;" "Program support from staff, parents, business, and community;" and "Regular education support and integration." The four attributes ranked highly by the professionals but **not** by the DOSE were "Administrative leadership and support," "Post-secondary transition curriculum," "Successful independent living," and "Successful personal/social adjustment."

With the SOS, the professionals similarly ranked the following six program attributes among the most important 10: "Vocational/career orientation;" "Individualized, appropriate instruction;" "Program support from staff, parents, business, and community;" "Regular education support and integration;" "Successful independent living;" and "Successful personal/social adjustment." The four attributes ranked highly by the professionals but **not** by the SOS were "Effective staff," "Employment success," "Administrative leadership and support," and "Post-secondary transition curriculum."

Table 14

Attributes of High School Special Education Programs for Students with Mild to Moderate Handicaps as Ranked by Professionals, DOSE, SOS, and PTT

Program attribute	Ranking by			
	Professionals	DOSE	SOS	PTT
Effective staff	1	6	24*	18*
Vocational/career orientation	2	3	3*	1
Individualized, appropriate	3	1	2	2
Employment success	4	9*	19*	7
Administrative leadership & support	5	30*	24*	29*
Post-secondary transition curriculum	6	13*	24*	11
Program support from staff, parents, business, and community	7*	4	3*	6
Regular education support & integration	7*	2	1	4
Successful independent living	9	13*	10*	14*
Successful personal/social adjustment	10	11*	8*	18*

Note. * indicates a tie. DOSE = Directors of Special Education.

SOS = Superintendents of Schools. PTT = Pre-service Teacher Trainers.

The PTT and the professionals agreed on half (five) of the 10 program attributes that they ranked most highly. These attributes were "Vocational/career orientation;" "Individualized, appropriate instruction;" "Employment success;" "Program support from staff, parents, business, and community;" "and Regular education support and integration." The other five program attributes ranked highly by the professionals but **not** by the PTT were "Effective staff," "Administrative leadership and support," "Post-secondary transition curriculum," "Successful independent living," and "Successful personal/social adjustment."

Staff attributes. Table 15 conveys a similar perspective for the top-ten staff attributes as Table 14 does for the top-ten special education program attributes. The reader may want to compare Table 15 with Table 10 in the Elicitation Survey. Among the staff attributes (see Table 15), an increase in rate of agreement occurred among the group respondents. Seven of the staff attributes ranked among the top 10 by the professionals also appeared among the top-ten rankings of the DOSE, as compared to six among the program attributes. These staff attributes were "Instructional skills," "Assessment skills for planning and instruction," "Curriculum and instructional planning skills," "Behavior management skills," "Works well with people," "Classroom organization skills," and "Works cooperatively with staff and administration."

Likewise, the SOS and the professionals had a higher rate of agreement in ranking the staff attributes than in ranking the program attributes. Seven of the staff attributes ranked highly by the professionals were also ranked among the top 10 by the SOS: "Instructional skills," "Assessment skills for planning and instruction," "Curriculum and instructional planning skills," "Behavior management skills," "Works well with people," "Classroom organization skills," and "Works cooperatively with staff and administration." Staff attributes ranked highly by the professionals but **not** by the SOS were "Knowledge of transition," "Skill in assessing outcomes," and "Incorporates vocational/career education."

Finally, the PTT and the professionals also had a higher rate of agreement in ranking the staff attributes than in ranking the program attributes. Six of the staff attributes ranked highly by the professionals were also ranked among the top 10 by the PTT: "Instructional skills," "Assessment skills for planning and instruction," "Curriculum and instructional planning skills," "Behavior management skills," "Works well with people," and "Works cooperatively with staff and administration." As with the program attributes, a remarkable level of consistency is noted among different respondents and at different intervals. However, two other points are quite problematic and, depending on one's philosophy, quite divergent. One difficult point includes determining the relative emphasis given the desired attributes. Which of the attributes are more important to a quality program? This point is resolved at the state level with the teacher certification requirements. The second issue then becomes one of how to best deliver a training program which would maximize the proficiency level of the teachers and determine the responsibilities that should be shared among local, state, college or university, and federal levels. Subsequent activities in this project help to address these issues.

Table 15

Attributes of Quality Special Education Teachers for High School Students with Mild to Moderate Handicaps, as Ranked by Professionals, DOSE, SOS, and PTT

Staff attribute	Ranking by			
	Professionals	DOSE	SOS	PTT
Instructional skills	1	5*	1*	1
Assessment skills for planning & instruction	2	8*	8	5
Curriculum and instructional planning skills	3	7	5*	7
Knowledge of transition	4	16	14*	17*
Behavior management skills	5*	10	9	6
Works well with people	5*	3	4	3*
Classroom organization skills	7	5*	5*	12
Works cooperatively with staff & administration	8	4	7	8
Skill in assessing outcomes	9	17*	14*	17*
Incorporates voc/career education	10	17*	14*	11

Note. * indicates a tie. DOSE = Directors of Special Education.

SOS = Superintendents of Schools. PTT = Pre-service Teacher Trainers.

Limitations of the Study

The survey instrument employed in the Ranking Survey was drafted and edited by the principal investigators of this research project, after due review of relevant literature. The instrument was pilot tested among the research staff members associated with the grant. Although all of the requested respondents provided usable data, the sample size would impede researchers from inferring generalizations beyond their intended scope in this project. The comparisons to the frequency counts of the nominal categories from the first survey, the Elicitation Survey, do suggest congruence in judgments and thus bolster confidence in use of the data. However, in a retrospective consideration, perhaps the second survey could have been considered as a cross validation activity. From that perspective the ten most frequently occurring program and staff attributes would have been used in subsequent project activities and this second survey's results would have been considered as data supporting such a choice. On the other hand, the very low response rate from the first survey was what prompted the change in the proposal plan resulting in the inclusion of this Ranking Survey.

Summary and Conclusions

Opinions of 16 professionals — professors, clinicians, school administrators and special education practitioners — with expertise in the field of special education were solicited in this phase of the research project, the Ranking Survey. These professionals were asked to rank order attributes of exemplary special education programs and staff. The attributes were those attributes identified from the responses to Parts I-A and II-A of the Elicitation Survey.

After responses to the Ranking Survey were tabulated, statistical analyses disclosed that the attributes of special education programs for high school students with mild to moderate handicaps (see Table 12) which received the 10 highest rankings were: "Effective staff;" "Vocational/career orientation;" "Individualized, appropriate program;" "Employment success;" "Administrative leadership and support;" "Post-secondary transition curriculum;" "Program support from staff, parents, business, and community;" "Regular education support and integration," "Successful independent living;" and "Successful personal/social adjustment."

The special education staff attributes (see Table 13) that received the 10 highest rankings were: "Instructional skills;" "Assessment skills for planning and instruction;" "Curriculum and instructional planning skills;" "Knowledge of transition;" "Behavior management skills;" "Works well with people;" "Classroom organization skills;" "Works cooperatively with staff and administration;" "Skill in assessing outcomes;" and "Incorporates vocational/career education."

The results of the rankings were reviewed in light of recent recommendations for reform in teacher education programs and recommended priorities. The survey results were interpreted as not supporting the greater integration of regular and special education as advocated in the regular education initiative (Reynolds, Wang, & Walberg, 1987; Pugach, 1987). In addition, the robustness of the findings were evaluated through comparisons with responses from the first survey. Overall, the four groups thus far involved in the survey agreed more than they disagreed regarding the attributes of quality special education programs and staff members for high school students with mild to moderate handicaps. The results in Table 14, for example, indicate that the professionals, the DOSE, the SOS, and the PTT agreed on at least half (5) of the top 10 attributes of quality high school special education programs. The professionals, the DOSE, and the SOS agreed on more than half (6) of the top ten program attributes.

Regarding the staff attributes, the four groups again agreed more than they disagreed. As indicated in Table 15, the professionals and the PTT agreed on more than half (6) of the top 10 attributes of successful special education teachers for high school students with mild to moderate handicaps. Among the professionals, the DOSE, and the SOS, the rate of agreement was even higher -- 7 out of 10.

The degree of concordance suggests that all groups were using similar criteria in forming their judgments and that the results of the Ranking Survey have stability and generalization across these groups who are so closely involved in special education programs. The subsequent project activities were designed to establish priorities among these program and staff attributes and determine the activities which would maximize these attributes as outcomes of a high school special education program or a teacher training program. These steps of the project are described in surveys three through five.

Appendix D

Letter to Experts

National Study of High School Programs for Handicapped Youth

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February 20, 1987

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Dear &GREET&:

As you are possibly aware, we are involved in a variety of research projects, one of which is the National Study of High School Programs for Handicapped Youth. For those of you unfamiliar with our project, we have enclosed a copy of the abstract to give you some ideas about the project's work scope. Our purpose in writing is to request your assistance with one phase of the project, ranking two sets of attributes.

More specifically, the two sets of attributes we are asking you to rank concern secondary level special education programs. The first set of attributes describes exemplary high school special education programs. The second set describes attributes of exemplary special education staff. Some of you may feel unfamiliar with this subject area, i.e., secondary level special education programs and staff; however, we believe that your views are important to consider.

Some of you may wonder how we came to select you. Quite simply, we considered the professionals who we know personally or whose work we value, and narrowed the list to 17 names. You are one of the 17 "lucky" folks who we believe can meaningfully contribute to our data. Remember you are not part of a random sample!

If you are willing to assist us, we ask you to do two things right now. First, reserve about fifteen minutes of your time for completing this task between the 3rd and the 5th of March. The second thing is to accept the postcard as a colorful reminder of your friends at the University of Kansas, and of our forthcoming survey. We also enclosed the postcard just in case someone is unable to respond to the survey within our timeframe or chooses instead to feel riddled with guilt for the next twenty years. If you choose not to participate, mail us our postcard. If we don't receive your postcard, you can anticipate receiving our survey.

Thank you for assisting us, and we will be happy to return the favor.

Sincerely,

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Appendix E

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Appendix F

Sample Survey to Selected Experts

SURVEY TO SELECTED EXPERTS

Background

We asked directors of special education, school superintendents, and special education teacher trainers to list

(a) the important attributes of high school level special education programs for students with mild to moderate handicaps and

(b) the desired attributes for special education teachers in high school level programs for students with mild to moderate handicaps.

The respondents to our initial survey provided us with an extensive list of program descriptors. This listing was analyzed and categorized into the 40 program attributes from which you will be asked to rank the top 15. Likewise, the desired qualities of a teaching staff were analyzed and categorized into 23 staff attributes from which you will also be asked to rank the top 15. Based on your rankings of the most important attributes, we will subsequently evaluate the extent to which the activities of HS special education programs or teacher preservice programs contribute to these attributes.

The rankings you assign to the attributes might be thought of as addressing the question: What are the fifteen areas which one should evaluate to judge the efficacy of high school level special education programs for students with mild to moderate handicaps? Likewise, for teachers one might ask: What are the fifteen attributes on which to judge special education teachers?

Prior to giving you the specific directions to complete the rankings, please review four points.

1) The survey directions are the same for each grouping of attributes.

2) We have provided a glossary which includes descriptors for many of the attributes. You can become familiar with our meaning of the attributes by studying the descriptors. The attributes are arranged in the glossary according to the number in parentheses which follows the attribute.

3) Please return the survey by March 5, 1987.

4) Call us collect if you have any questions.

Directions

The following list of attributes is arranged in a randomized order. These attributes concern high school level special education programs. In the space to the left of the attribute, record a numerical value in a range from 1 through 15. The value 1 designates the most important attribute. The value 15 designates the least important attribute. We would prefer that you avoid using the same ranking value twice, i.e., avoid tie ranks.

Part I-A Program Attributes

_____ Successful personal and social adjustment (16)
_____ Functional academics (38)
_____ Student-teacher ratio (23)
_____ Comprehensive program (39)
_____ Counseling and guidance (4)
_____ Vocational/career orientation (12)
_____ Successful independent living (17)
_____ Cost effective (22)
_____ Age-appropriate curriculum (35)
_____ Study skills/Learning strategies (37)
_____ Competency based approach (32)
_____ Effective staff (24)
_____ Personal, social skills curriculum (34)
_____ Program support from staff, parents, business, and community (27)
_____ High school completion (13)
_____ Basic academic skills curriculum (7)
_____ Adequate supplies, materials, and equipment (30)
_____ Life skills curriculum (8)
_____ Defined philosophy (33)
_____ Multi-disciplinary approach (2)
_____ Studentsatisfaction (18)
_____ Curriculum scope and sequence (6)
_____ Administrative leadership and support (36)
_____ Employment success (15)
_____ Vocational assessment (5)
_____ IEP goals met (19)
_____ Individualized, appropriate (1)
_____ Humanistic approach (31)
_____ Current research implementation (10)
_____ Monitoring and assessment system (25)
_____ Regular education support and integration (3)
_____ Case management system (20)
_____ Post-secondary transition curriculum (9)
_____ Adequate community resources (29)
_____ Adequate physical plant (28)
_____ Successful academic achievement (14)
_____ Validated instructional methods (40)
_____ Community-based program (11)
_____ Compliance standards (21)
_____ Promotes professional growth (26)

Directions

The following list of attributes is in a randomized order. These attributes concern high school level special education teachers. In the space to the left of the attribute, record a numerical value in a range from 1 through 15. The value 1 designates the most important attribute. The value 15 designates the least important attribute. We would prefer that you avoid using the same ranking value twice, i.e., avoid tie ranks.

Part II-A Staff Attributes

_____ Pursues professional development (13)
_____ Behavior management skills (7)
_____ Works cooperatively with staff and administration (8)
_____ Instructional skills (2)
_____ Teaches study skills; Learning strategies (18)
_____ Time management skills (6)
_____ Knowledge of transition (4)
_____ Assessment skills for planning & instruction (15)
_____ Classroom organization skills (5)
_____ Teaches basic skills (19)
_____ Incorporates vocational/career education (22)
_____ Curriculum and instructional planning skills (1)
_____ Consultation skills (10)
_____ Innovative instruction skills (3)
_____ Skill in assessing outcomes (20)
_____ Counseling skills (16)
_____ Works well with people (9)
_____ Practices professional ethics (12)
_____ Personal characteristics (14)
_____ Background training and experience (11)
_____ Philosophical position (17)
_____ Teaches survival skills (21)
_____ Teaches personal-social skills (23)

GLOSSARY

Attributes List with Examples

Part I-A. Program Attributes

1. Individualized, appropriate
   personalized
   focus on individual needs
   multimodal instruction
   flexibility
2. Multi-disciplinary approach
   multi-sourced
   trans-disciplinary
   use of multi-disciplinary team
3. Regular education support and integration
   EMH/TMH are integrated as possible
   variety of mainstreaming opportunities
   involved in total school
   socially integrating
   least restrictive environment
   regular classroom teachers' involvement
4. Counseling and guidance
   beginning career counseling
   counseling services provide support & guidance
5. Vocational assessment
   9th graders take DAT
   vocational evaluation thru local agencies
6. Curriculum scope and sequence
   curriculum content
   Is curriculum sequenced and broad?
   curriculum development, flexibility
7. Basic academic skills curriculum
   basic skills of reading, math, writing, speaking
   basic skill development
   provides academic growth
8. Life skills curriculum
   provide social & independent living skills
   life centered for practical experience
   reflective of life needs
   daily living skills
9. Post-secondary transition curriculum
   transitional activities
   preparation of student for future/transition prog
   planning for post-HS
   prepares student to take advantage of available public agencies
   vocational/transition planning
10. Current research implementation
    generalization/ maintenance training
    up-to-date techniques & materials
    innovative
11. Community-based program
    community oriented
    put students in community for job training
    community-based as well as school-based
12. Vocational/career orientation
    vocational/transition planning
    voc ed has 3-year rotation program for EMH
    work study
    appropriate work study/ vocational programs
13. High school completion
    holding power, i.e., drop out proportion
    graduation
    meet requirements for HS diploma
    percentage of students who graduate
    continue in school
    geared toward graduation

14. Successful academic achievement
- high percentage passing state competency test
- test scores upon graduation
- student achievement
- quality of student growth & program monitoring system
- students making gains on test scores
- pre/post score comparisons
- success in high school

15. Employment success
- students in job situation after school
- successful placement of students after HS
- are students productive citizens (employment)?
- successful employment
- vocational placements

16. Successful personal and social adjustment
- student self-esteem
- classroom behavior
- student conduct
- better self-images

17. Successful independent living
- students able to locate employment or advanced training
- student success after graduation
- success in terms of post-secondary experiences of graduate
- functioning in society

18. Student satisfaction
- student part of decision-making process
- positive student attitude toward services received
- high attendance
- feedback - comments from parents/students/staff

19 IEP goals met
- student progress/performance (IEP)
- pupil progress/completion of appropriate goals
- number of students who meet goals/objectives

20. Case management system
- defined goals & objectives
- clear, concise yearly & long-range goals
- follow up completers
- well defined policies & procedures for placement
- efficient/not excessive paperwork
- records of success of students who have completed program

21. Compliance standards
- confidentiality of student files
- non-biased/nondiscriminatory
- appropriate percentage of minority enrollment
- Does it meet compliance requirements?
- native language

22. Cost-effective

23. Student-teacher ratio
- size of classes
- 1:15 or less teacher/pupil ratio

24. Effective staff
- teacher selection
- staff trained adequately
- teacher performance
- teachers have knowledge

25. Monitoring and assessment system
- appropriate, timely diagnosis & assessment
- provides continuous assessment
- reliable testing of students in program
- diagnosis/screening
- group & individual test scores
- all 10th graders take competency test
- data based
- follow-up of graduates

26. Promotes professional growth
- staff development component for teachers & staff
- on-going in-service training for staff & parents

27. Program support from staff, parents, business, and community
staff empathy
community awareness
input by parents
regular ed staff feels SPED program working
open communication with staff & parents

28. Adequate physical plant
facilities to meet students' needs
appropriateness of site
acceptable physical environment
environmental equivalency to regular education
funded appropriately

29. Adequate community resources
adequate resources

30. Adequate supplies, materials, and equipment
abundance of materials and supplies
funded appropriately
materials
materials & equipment available which motivate

31. Humanistic approach

32. Competency based approach
based on measurable objectives
measurable

33. Defined philosophy
provides a philosophy

34. Personal, social skills curriculum
help students become socially acceptable
elevation of self-concept
encourage development of positive self-concept
ability to make students feel good about themselves
provides for affective development
promote feeling of self worth
develop appropriate social skills
emotionally supporting

35. Age-appropriate curriculum
high interest materials
curriculum meeting needs of pupils
course offerings meet needs & interests
tasks & activities age-appropriate

36. Administrative leadership & support
administrative involvement
administrative support & leadership
building administrative support
accepted by administration

37. Study skills: learning strategies
students learning & mastering learning strategies

38. Functional academics
program supports functional literacy & math skills
provide enough math skills for money management
functional program activities
attaining functional reading/writing/math

39. Comprehensive program
serves most handicapping conditions

40. Validated instructional methods
effective

1. Curriculum and instructional planning skills
   - structure of IEP/usefulness
   - planning
   - curriculum understanding
   - ability to write & implement IEP
2. Instructional skills
   - able to utilize classroom aides
   - variety of teaching techniques
   - individualization of instruction
   - instructional/effective teaching practices
   - lesson presentation
   - ability to manage instruction
3. Innovative instruction skills
   - creativity/innovativeness
   - innovation
   - motivation techniques used
   - able to identify with right-brained learning style
   - creativity
   - ability to motivate reluctant students
4. Knowledge of transition
   - knowledge of transition & provision of goals
5. Classroom organization skills
   - able to create & maintain structure
   - good record keeping skills
   - demonstrates ablity to organize for instruction
   - systematic/organized
   - organizational skills
6. Time management skills
   - good time management skills
   - time on task
   - efficient
   - punctual with paper work assignments
7. Behavior management skills
   - behaviorally oriented
   - type of discipline, classroom control used
   - behavioral management skills
   - individual & group behavior management
   - classroom management skills
   - assertive discipline
8. Works cooperatively with staff and administration
   - cooperates with faculty, parents, administration, & specialists
   - works effectively with other teachers
   - ability to relate to other school personnel
   - interaction & approach used in working with administration
   - follow policies/guidelines federal, state & local agencies
9. Works well with people
   - ability to get parental involvement
   - ability to interact with teenage SPED students
   - ability to work with community agencies
   - ability to maintain interaction with parents
   - rapport
10. Consultation skills
    - communication with student &/or parent
    - effective advocacy for program with regular teachers
    - good communication skills with students & staff
    - communication skills
11. Background training and experience
    - knowledge of content areas taught
    - trained in secondary SPED specifically
    - knowledge of special education process
    - knowledge regarding SPED rules/regulations/methods/techniques

12. Practices professional ethics
    professional responsibilities
    professionalism
    teacher demonstrates ethical behavior
    professional ethics at staffing & parent conferences
    loyalty to school
    maintains professional attitudes
13. Pursues professional development
    current
    use of new/current instructional techniques
    interest in professional growth
    professionalism
    professional growth
    keeps abreast of subject matter
    teachers stay up on latest trends
14. Personal characteristics
    flexible
    compassionate
    high level of tolerance
    interest in being mentally healthy
    self-disciplined
    dedicated
    ability to identify priorities
15. Assessment skills for planning and instruction
    diagnostic & prescriptive skills
    assessment & ability to translate funding & objectives
    evaluation based on evaluation instrument
    ability to make educational & career assessments
    data-based planning
16. Counseling skills
    ability to counsel students
    caring interpersonal relationship skills
    provide support needed to acquire healthy self-esteem
    provide counseling to parents & students
17. Philosophical position
    student centered
    learning theory
    development
    community based
    student advocate
18. Teaches study skills; learning strategies
    listening skills
19. Teaches basic skills
    reading instruction;
20. Skill in assessing outcomes
21. Teaches survival skills
22. Incorporates vocational/career education
23. Teaches personal-social skills

Survey 3: Weighting Survey to Directors of Special Education, School Superintendents, and Teacher Trainers

Overview

High school special education programs provide the formal educational experiences for those students with disabilities who at least temporarily are unable to benefit from instruction in regular education's instructional programs. These special educational experiences include a diversity of instructional goals and activities. Based on the uniqueness inherent in the special education students, some of the educational goals and activities are very idiosyncratic as one might expect. To date these goals and activities have not been examined nationally or even integrated into a database for analysis. This description, examination, and integration were the goals of the National High School (NHS) Project. The NHS project involved three integrated research efforts - Bodner, Clark, and Mellard (1987), Knowlton and Clark (1989), and the research described here. These three efforts provide integrated, multiple perspectives on high schools' efforts to ensure the successful transition of students with mild to moderate handicaps to independent functioning within the community. The project's intended outcome is to provide educators, researchers, and federal, state, and local level policy makers with a framework for evaluating and modeling special education programs.

In this research effort of the NHS project, five surveys were completed. Each survey represented one step in a sequential process of a multi-attribute utility measurement (Edwards, 1977). Through the completion of the multi-attribute utility measurement procedures, the survey's respondents identified desired attributes and activities of high school special education programs. Simultaneously, they identified the desired characteristics of training activities for teaching staff which would likely facilitate the acquisition of those attributes. The attributes and activities provide a common conceptual framework. This framework might be used by numerous groups for such activities as planning, evaluating, or further researching high school special education programs, their instructional staff, and pre-service teacher training programs.

The first of the surveys incorporated an open-ended format and was completed by directors of special education (DOSE), superintendents of schools (SOS), and pre-service teacher trainers (PTT). The initial survey, referred to as the elicitation survey, requested respondents to list (a) the attributes and (b) the activities which characterized quality special education programs for high school students with mild to moderate handicaps and also of quality teaching staff in those programs. The DOSE and SOS were asked to indicate the activities of teaching staff on which the staff should be evaluated. This task was altered for the PTT. The PTT were asked to indicate the pre-service training activities which would develop those desired attributes.

The first survey's responses from the 265 respondents were grouped into conceptually distinct categories by the project's staff. As a result of this categorization, 40 program attributes were identified. Similarly, 28 program activities, 23 teacher attributes, and 18 teacher training activities were identified. Details of the methods and results are described in the section titled "Survey 1: Elicitation Survey to Directors of Special Education, School Superintendents, and Teacher Trainers," oftentimes referred to in this report as the Elicitation Survey.

The second survey was referred to as the Ranking Survey. In this survey a group of sixteen professionals was selected as respondents. These professionals work in various

educational settings and were judged knowledgeable about secondary special education issues. Their tasks were to review the two lists of attributes from the Elicitation Survey (Survey 1), select 15 as the most important from each set, and rank order the chosen 15 in order of importance. As a result, two lists of attributes were generated. The exact rankings were irrelevant for this project's purposes, but those attributes in the top 10 were retained for subsequent use in the succeeding surveys.

The results of the third survey, the Weighting Survey, are presented in this report. The tasks in this third survey were for respondents, (directors of special education, school superintendents, and pre-service teacher trainers) to rank and weight two sets of attributes --- the ten program attributes and ten teacher attributes. The weights provided a ratio-leveled ranking of each attribute set. This ratio scaling permits very clear statements regarding the respondents' expressed values. For example, one can discern the ratio between any two attributes and conclude whether one attribute is valued two, three, four times, or even more as compared to another attribute. Such information is not available from Likert-type scaling or ranks. These weighted ranks provide a baseline for judging the importance attached to delimited attributes, attributes characterizing quality high school special education programs and teaching staff.

In the planning for this third survey, several issues and alternative courses of action were evaluated. Each of these decision points are described in the following section of methodological considerations.

Methodological Considerations

In MAUM methodology, alternative courses of action or decisions are evaluated against defined sets of values. As a consequence of those evaluations, decisions or courses of action which most satisfy the expressed values are acted upon. In this research effort, several decisions connected to the program and teacher attributes were needed. First, the issue was whether the two lists of ten attributes should be differentially weighted. That is, should the list of ten attributes be considered as equally important? Given the apparent conflicts in the lists of attributes, the attributes were not likely to be considered as equally viable values and thus, the decision was to have the different lists of attributes weighted to reflect the uniquenesses. Two issues presented themselves: a) the format of a survey instrument to obtain the rankings and weights and b) the selection of the responding groups.

Survey instrument. In designing the attribute weighting procedures, several alternatives were considered. The alternative choices seemed to focus on two variables, the amount of time required for the task and the ease with which the weighting could be accomplished. The task of assigning weights to attributes is accomplished easiest by having previously established a hierarchical ordering, i.e., a rank ordering among the attributes on an importance dimension. Not having a pre-established ranking presents an added task and consequently, added time requirements. In the long run, these added "costs" were considered worthwhile. Thus, in designing the survey, sequential steps were added so that the respondents would initially separately rank the two sets of ten attributes and then in a second step assign importance weights to the attributes. Since the attributes were ranked, this second step was considered simplified.

Ideally, the respondents could have completed the final step in the MAUM procedures. The final step of the MAUM procedures is for each of the program activities and teacher training activities to be evaluated in terms of its respective set of attributes. Operationally, this step requires the respondent to quantify a judgment on the degree to which a particular activity facilitates or enhances each attribute. However, this added task was considered as requiring more time than respondents were likely to commit and thus the two steps, weighting the

attributes and evaluating the utility of each activity in light of each attribute, were separated. Each step was judged appropriate for separate surveys. The weights assigned by the respondents in this survey were used with the results of the latter surveys in calculating the utility measurements. The rationale was that respondents to this survey would have comparable values as the values of respondents from the same groups in the latter surveys.

Response groups. The perceptions of directors of special education, school superintendents, and pre-service teacher trainers were considered as relevant reference groups as in the previous surveys and thus these same groups were included in this survey as well. Inclusion of these groups was also a matter of convenience. The staff had information such as names and addresses and previous experience with these groups. To have changed respondents for such a national study would have been both expensive and inefficient. More importantly, these reference groups were seen as the best response population for value-driven policies and decision-making in program implementation for high school youths with handicaps.

A related issue in planning the survey was the differential response rates among the groups on the previous surveys. School superintendents had consistently been the least likely to respond to the survey. On the other hand, the pre-service teacher trainers had shown the greatest likelihood of responding. The staff assumed that a similar pattern would be evidenced in this survey. Knowing previous response rates, the staff chose to increase the sample sizes among the school superintendents and the directors of special education. The initially proposed sample size of respondents was 125 for each of the groups. The size was increased considerably to obtain more actual responses.

This introductory portion of the report is meant to provide a context within which the activities might be understood and to describe the major issues confronting project staff in completing this survey. In the following sections, details of the methodology and results are presented.

Method

Subjects

Three groups were sampled through the surveys completed in this project: (1) superintendents of schools (SOS), (2) directors of special education (DOSE), and (3) pre-service teacher trainers (PTT). Three hundred superintendents of schools, 250 directors of special education, and 225 pre-service teacher trainers were randomly selected from the respective lists of names generated in an earlier phase of the project (see "Subjects" section of the Elicitation Survey). These numbers were selected with a goal of having at least 125 returns from each group to ensure a small standard error of measurement, i.e., to ensure stability of the data. Table 16 displays the total and proportional numbers of DOSE from each state included in the study. The total number (817) is less than the total in the first survey (872) since non-respondents from the Elicitation Survey were culled from the list.

Table 16

Total and Proportional Numbers of DOSE for the Weighting Survey

	Number of Directors of Special Education		
State	N	% of Total N	Proportional N
Delaware	27	3.31	22
Iowa	15	1.84	12
Indiana	79	9.67	63
Kansas	71	8.69	57
Kentucky	78	9.55	62
Missouri	136	16.65	108
Nevada	10	1.22	8
New Hampshire	54	6.61	43
North Carolina	142	17.38	113
Oregon	149	18.24	119
Pennsylvania	29	3.55	23
South Dakota	27	3.31	22
TOTALS	817	100	652

Likewise, Table 17 displays the total and proportional numbers of SOS from each state included in the study. The total number (1657) is less than the total in the first survey (1714) since non-respondents from the Elicitation Survey were culled from the list.

Table 17

Total and Proportional Numbers of SOS for the Weighting Survey

	Number of Superintendents of Schools		
State	N	% of Total N	Proportional N
Delaware	18	1.1	10
Iowa	219	13.2	119
Indiana	147	8.9	80
Kansas	152	9.2	83
Kentucky	187	11.3	102
Missouri	305	18.4	166
Nevada	17	1.0	9
New Hampshire	54	3.3	30
North Carolina	75	4.5	41
Oregon	138	8.3	75
Pennsylvania	253	15.3	138
South Dakota	92	5.6	50
TOTALS	1657	100	903

Materials

This third survey consisted of an advance mailing to determine interest in participation and the mailing of the survey itself. The advance mailing consisted of a letter explaining the project and a stamped postcard to be returned only if the recipient chose not to participate in the project. A total of 2100 advance letters and postcards were mailed: 900 to SOS, 650 to DOSE, 550 to PTT. In the process of seeking proportional figures, the actual numbers of letters mailed were 903 to SOS (see Table 17) and 652 to DOSE (see Table 16). For the PTT, a list of 550 names from the database were randomly selected without replacement. To ensure a national sample, the criterion of requiring that each state be represented by at least one PTT was established. One hundred seventy-one postcards were returned, each postcard indicating that the

respondent did not wish to participate in the study. Those persons were deleted from the list of names to sample for the survey mailing itself.

The survey itself was referred to as a Weighting Survey. Identical Weighting Surveys were mailed to superintendents, directors and teacher trainers with the exception of the survey's last page which solicited different information from the teacher trainers than from the directors and superintendents.

The survey consisted of two parts and instructions were for the respondents to first rank and then weight special education program attributes and special education teacher attributes. The respective program and teacher attributes included in this Weighting Survey were based on the results of the Ranking Survey. The two sets of attributes included in the Weighting Survey were the ten attributes which had received the highest ratings from the Ranking Survey. The surveys' two parts were counterbalanced; that is, on half of the surveys, respondents were instructed to rank and weight *program attributes* first and on the other half respondents were asked to rank and weight *teacher attributes* first. The respondents' rankings established the relative importance of each attribute and numerical weights indicated how much more or less important each attribute was in relation to the other attributes. The goal of this survey was for the respondents to establish an absolute (or ratio) scale among the attributes describing (a) special education programs and (b) teaching staff. Appendix H holds two copies of the survey intended for DOSE and SOS, one with program attributes listed first, and the other with teacher attributes listed first. Similarly, Appendix I holds two copies of the survey intended for PTT. The advance mailing letter appears in Appendix G.

Survey Procedures

Following the advance mailing on April 17, 1987 weighting surveys were mailed on May 1, 1987 to 250 DOSE, 300 SOS, and 225 PTT. The mailed materials included a letter of explanation, the survey itself, a postage paid return envelope and a pencil. A second set of these same materials was mailed the week of May 11, 1987 to those participants who had not yet responded to the first mailing.

Survey Returns

A summary of the number of surveys mailed and the number of respondents is provided in Table 18. The return rates for each group are expressed as percentages below the "Total returns" figure. Superintendents had the lowest return rate with 81 (27.0%) of the 300 surveys returned. Eight of the surveys returned by SOS were unusable (see discussion in "Data coding" below) and thus not included in the data analysis. The teacher trainer return rate was 52.9% (119 out of 225). Five surveys returned by PTT were unusable. The highest return rate was among directors of special education with 161 (64.4%) of 250 surveys returned. Fourteen of the surveys from DOSE were not used in the data analysis.

Table 18

Mailing Targets and Respondents for the Weighting Survey

Number of surveys	DOSE	SOS	PTT
Mailed	250	300	225
Returned usable	147	73	114
Returned unusable	14	8	5
Total returns	161	81	119
(Percent)	(64.4%)	(27.0%)	(52.9%)

Data Coding

Returned surveys were given an identification number for tracking purposes and were inspected to determine usability. Surveys were judged unusable if they were (a) mainly incomplete or (b) completed by someone other than the intended respondent's group. A rule was adopted for judging whether a respondent other than the person to whom the survey was mailed was acceptable. The rule focused on whether the respondent was likely to reflect the values of that group's respondents. For example, if the survey was sent to a superintendent and returned completed by a building level administrator then the survey was judged unusable because the building administrator was thought to reflect a different set of values or priorities. If, however, the survey was sent to a superintendent and was returned completed by the assistant superintendent, then the survey was ruled usable. Additionally, surveys returned too late for inclusion in the data analysis are reported in the unusable figure. Those surveys judged usable were coded for data entry and were entered into a computerized data base file.

Data Analysis

Analyses of data involved procedures for describing the group's responses with descriptive statistics and tests for the degree of similarity among the three groups. The degree of similarity was evaluated with multivariate procedures, appropriate post hoc comparisons and correlational procedures. Three overall tests of the group's centroids are reported; they are Pillais, Hotellings, and Wilks. The three yield comparable values but also have somewhat different assumptions. The use of the three measures provided a better test of the robustness of the findings. Inspection of the data suggests that while the respondents differentiated among the attributes, similarities were also noted among the ranks. These analyses were chosen to elucidate both the commonalities and divergence among the three participating groups and the two sets of attributes - staff and program attributes.

The first step in the data analysis was to establish absolute, or normalized, weights for each respondent (after Edwards, 1977). Absolute weights were obtained by completing the following three steps for program and teacher attributes, respectively. The three steps were

completed for each respondent: (1) The weights assigned to each attribute were summed. (2) The weight of an individual attribute was divided by the sum of all attribute weights for that respondent. (3) The resulting figure was multiplied by 100. These three steps were completed twice for each survey, once for the respondent's weights for the program attributes and once for weights assigned to the teacher attributes.

For example, assume that the following weightings were assigned to the program attributes by a respondent:

Attribute	Weighting
Effective staff	130
Individualized, appropriate instruction	110
Vocational/career orientation	30
Administrative leadership and support	100
Regular education support and integration	80
Program support from staff, parents, business, and community	70
Employment success	30
Post-secondary transition curriculum	10
Successful independent living	40
Successful personal and social adjustment	60
Sum	660

Following the three steps outlined above, one may obtain absolute, or normalized weights, for these attributes. 1) Sum the weightings assigned to each attribute. In this example, that figure is 660. 2) Divide each weighting by the sum of all the weights and 3) multiply by 100. Thus, for the "Effective staff" attribute: (130/660) X 100 = 19.7.

The following absolute weights result:

Attribute	Absolute Weight
Effective staff	19.7
Individualized, appropriate instruction	16.7
Vocational/career orientation	4.5
Administrative leadership and support	15.2
Regular education support and integration	12.1
Program support from staff, parents, business, and community	10.6
Employment success	4.5
Post-secondary transition curriculum	1.5
Successful independent living	6.1
Successful personal and social adjustment	9.1

The same procedure was followed to obtain absolute weights for teacher attributes.

Results

Program Attributes

This section presents the results of analyses involving the weightings assigned by the DOSE, SOS, and PTT to the ten program attributes.

Descriptive statistics. Table 19 provides the mean weight, standard deviation and 95% confidence interval for each of the three respondent groups for each quality special education program attribute. For example, the 142 DOSE in the study gave a mean weight of 16.8 to the program attribute "Effective staff." The mean weight had a standard deviation of 5.5, and the 95% confidence interval was 15.9 to 17.7. In comparison, the 67 SOS assigned a mean weight of 15.6 to "Effective staff." For superintendents the standard deviation was 6.6 and the 95% confidence interval was 13.9 to 17.2. Similarly, one may compare directors, superintendents and pre-service teacher trainers on each program attribute.

Another way to consider the data presented in Table 19 is to examine the range of weightings given by each group. For DOSE, the weights assigned to program attributes ranged from a low of 4.9 to a high of 16.8. The range for SOS was 5.6 to 15.6. PTT had a range of 6.2 to 15.5. For each group the lowest weight was assigned to the attribute "Post-secondary transition curriculum," and the highest weight was given to the attribute "Effective staff."

Table 19

Attributes of Quality Special Education Programs as Weighted by Survey Respondents

	DOSE (N = 142)			SOS (N = 67)			PTT (N = 112)		
	Mean	SD	95% conf. int.	Mean	SD	95% conf. int.	Mean	SD	95% conf. int.
Effective staff	16.8	5.5	15.9 to 17.7	15.6	6.6	13.9 to 17.2	15.5	5.6	14.4 to 16.5
Individualized, appropriate instruction	13.3	4.3	12.5 to 14.0	13.2	4.5	12.1 to 14.3	12.9	6.4	11.7 to 14.1
Administrative leadership and support	11.4	4.7	10.7 to 12.2	10.5	4.3	9.4 to 11.5	12.2	6.3	11.0 to 13.4
Successful personal and social adjustment	9.5	4.8	8.7 to 10.3	11.3	4.5	10.2 to 12.4	10.5	5.7	9.5 to 11.6
Program support from staff, parents, business, and community	10.3	3.8	9.6 to 10.9	10.2	3.5	9.4 to 11.1	9.4	3.7	8.7 to 10.1
Regular education support and integration	10.4*	4.2	9.7 to 11.1	9.7	3.5	8.8 to 10.6	8.8*	4.9	7.9 to 9.7
Successful independent living	8.1*	5.0	7.3 to 8.9	10.1*	4.9	8.9 to 11.3	8.4	5.2	7.4 to 9.4
Vocational/career orientation	8.0†	3.7	7.4 to 8.6	6.4*†	3.2	5.6 to 7.2	8.6*	4.4	7.7 to 9.4
Employment success	7.3	4.4	6.6 to 8.1	7.8	4.5	6.7 to 8.9	7.7	4.7	6.8 to 8.6
Post-secondary transition curriculum	4.9*	3.5	4.3 to 5.5	5.6	3.7	4.7 to 6.5	6.2*	4.0	5.4 to 6.9

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

* † indicates $p < .05$ on Scheffé comparison of group mean values.

Multivariate tests of significance. Table 20 includes three multivariate tests of significance for program attributes. These tests simultaneously considered the mean weights of all ten program attributes (the centroid) for all three groups and determined whether any statistically significant differences existed. The criterion value is calculated by considering the number of groups being compared, the number of dependent variables, and the sample size. Commonly, an alpha value of .05 or less is considered significant. As Table 20 indicates, each multivariate test yielded a significant difference among the superintendents', directors' and pre-service teacher trainers' weightings of the program attributes. This outcome is interpreted as meaning that the weighting by at least one group was reliably different from another group's weighting of the attribute.

Table 20

Multivariate Tests of Significance for Program Attributes (S = 2, M = 3 1/2, N = 153 1/2)

Test Name	Value	Approx. *F*	Hypoth. DF	Error DF	*p*
Pillais	.15538	2.61121	20.00	620.00	.000
Hotellings	.16865	2.59727	20.00	616.00	.000
Wilks*	.85058	2.60424	20.00	618.00	.000

*Note that the *F* statistic for Wilk's Lambda is exact.

Univariate F-tests. The univariate F-test was selected as a post hoc test, that is, the F-test was performed if the multivariate tests indicated a significant *p* value. The F-test statistic examined the equality of group means on each attribute. The univariate F-test considered each attribute separately and thus provided more detailed information than the multivariate test. Table 21 displays the univariate F-tests for program attributes. A *p* value of .05 or less indicates that at least one group (DOSE, SOS or PTT) assigned a significantly different weighting to that attribute than one or both of the other two groups. As indicated in Table 21, the program attribute "Vocational/career orientation" had a *p* value of .001. This indicates that one or more of the three groups assigned a significantly different weight to this attribute. This test, however, does not identify which of the groups differed from the other group(s). Likewise, the attributes "Regular education support and integration," "Post-secondary transition curriculum," "Successful independent living," and "Successful personal and social adjustment" also had significant *p* values indicating a difference in mean weighting among the groups.

Table 21

Univariate F-tests for Program Attributes with (2,318) D.F.

Attribute	Hypoth. *MS*	Error *MS*	*F*	*p*
Effective staff	70.59483	33.24015	2.12378	.121
Individualized, appropriate instruction	4.75535	26.63601	.17853	.837
Vocational/career orientation	104.38785	15.19178	6.87134	.001
Administrative leadership and support	66.40688	27.55791	2.40972	.091
Regular education support & integration	83.87742	19.07401	4.39747	.013
Program support from staff, parents, business, and community	24.86085	13.83931	1.79639	.168
Employment success	7.01189	20.37472	.34415	.709
Post-secondary transition curriculum	52.88685	13.69941	3.86052	.022
Successful independent living	95.58055	25.73322	3.71429	.025
Successful personal & social adjustment	84.92266	25.64664	3.31126	.038

Scheffé procedure. The Scheffé analysis presented in Table 22 was completed only for those variables which yielded a significant p value in the univariate F-tests. This post hoc procedure indicates among which groups the difference in mean weights exists. Thus, this analysis provides more complete information about differences in mean weights than does the univariate F-test. Note that Table 22 displays only four program attributes while the univariate F-test (Table 21) indicates that the groups assigned significantly different mean weights to five attributes. The Scheffé procedure is a conservative test meaning that it includes an adjustment in the criterion value for statistical significance depending on the number of group means compared. For these tests the adjustment maintained a constant alpha level ($\partial = .05$) and thus controlled the likelihood of Type I errors (Glasnapp & Poggio, 1985; Hayes, 1981). As a consequence, the program attribute "Successful personal and social adjustment," which was identified as having significantly different group means on the F-test in Table 21, was not identified as such by the more conservative Scheffé procedure.

Table 22

Results of Scheffé Procedures (a = .05) for Special Education Program Attributes

Attribute	Comparison Groups: SOS vs DOSE	SOS vs PTT	DOSE vs PTT
Vocational/career orientation	6.4 vs 8.0	6.4 vs 8.6	NS
Regular education support and integration	NS	NS	10.4 vs 8.8
Post-secondary transition curriculum	NS	NS	4.9 vs 6.2
Successful independent living	10.1 vs 8.1	NS	NS

Note. The tabled values are the respective group mean weights. The larger the weight, the greater importance ascribed to the attribute.

NS = not significant; DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

Table 22 displays the program attributes which had statistically significant differences in the mean weights of DOSE, SOS, and PTT. For example, the attribute "Vocational/career orientation" was assigned significantly different weights by SOS and DOSE and by SOS and PTT. That is, the mean weight of SOS for this attribute was 6.4 which was found to be significantly different from the DOSE weight of 8.0 and the PTT weight of 8.6. There was no significant difference indicated between the mean weights of DOSE and PTT for this attribute.

Univariate homogeneity of variance tests. An underlying assumption of the F-test (Table 21) is that the comparison groups'(i.e., directors of special education, superintendents of schools, and pre-service teacher trainers) scores have equal variances. That is, that each group's distribution of scores has similar variability. The F-test, however, is not seriously affected by violations of its underlying assumptions. Even significant differences in the variances of comparison groups do not invalidate the test (Keppel, 1973). Nevertheless, for the purpose of completeness and for the information of the reader, univariate homogeneity of variance tests for the program attributes are presented in Table 23. Recall that an alpha value of .05 or less is considered statistically significant. Five attributes in Table 23 have p values of .05 or less, meaning that for these attributes the variances of DOSE, SOS and PTT are significantly different. These differences, however, should not be interpreted as invalidating the F-test.

Table 23

Univariate Homogeneity of Variance Tests for Program Attributes

Attribute	Bartlett-Box F (2, 182264)	p
Effective staff	1.89051	.151
Individualized, appropriate instruction	10.75866	.000
Vocational/career orientation	4.24662	.014
Administrative leadership and support	8.44136	.000
Regular education support and integration	4.42036	.012
Program support from staff, parents, business, and community	.45633	.634
Employment success	.31149	.732
Post-secondary transition curriculum	1.04686	.351
Successful independent living	.20852	.812
Successful personal and social adjustment	3.16188	.043

Rank order of attributes. Table 24 displays the program attributes in rank order by mean weights. Due to the issues addressed in the research and our own interests, DOSE were chosen as the reference group. Of the three groups, the DOSE have the most direct responsibility for daily programming decisions and overall policies. Therefore, the attributes are listed in order of the DOSE ranking, and the SOS and PTT rankings may be compared to that of DOSE. Kendall's coefficient of concordance for the three groups' rankings of the program attributes was .94. In other words, the three groups ranked the attributes very similarly. For instance, note that each group ranked the same attributes first, second, fifth and tenth. Another interpretation of Kendall's coefficient of concordance is the degree to which the groups used the same criteria in evaluating the choices. The high value reflected here suggests very similar criteria were shared by the respondents.

Table 24

Special Education Program Attributes in Rank Order as Weighted by Survey Respondents

Program attribute	DOSE N=142		SOS N=67		PTT N=112	
	Rank	(Mean wt.)	Rank	(Mean wt.)	Rank	(Mean wt.)
Effective staff	1	(16.8)	1	(15.6)	1	(15.5)
Individualized, appropriate instruction	2	(13.3)	2	(13.2)	2	(12.9)
Administrative leadership and support	3	(11.4)	4	(10.5)	3	(12.2)
Regular education support and integration	4	(10.4)	7	(9.7)	6	(8.8)
Program support from staff, parents, business, and community	5	(10.3)	5	(10.2)	5	(9.4)
Successful personal and social adjustment	6	(9.5)	3	(11.3)	4	(10.5)
Successful independent living	7	(8.1)	6	(10.1)	8	(8.4)
Vocational/career orientation	8	(8.0)	9	(6.4)	7	(8.6)
Employment success	9	(7.3)	8	(7.8)	9	(7.7)
Post-secondary transition curriculum	10	(4.9)	10	(5.6)	10	(6.2)

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools;

PTT = Pre-service Teacher Trainer.

Identical rankings, however, do not imply an equal weighting. For example, assume that two respondents ranked "Effective staff" first (most important) and "Individualized, appropriate instruction" second. Assume further that one respondent weighted "Effective staff" as three times as important as "Individualized, appropriate instruction" while the other respondent weighted "Effective staff" as only twice as important. Although both respondents assigned equal rankings to the attributes, the weightings differed. These differences may be critical for decisions and setting priorities in the groups' respective program planning and implementation.

Teacher Attributes

In addition to the program attributes, the respondents were also asked to weight the attributes of quality teachers. On the basis of these attributes one might identify important qualities of special education teachers in a secondary setting. The results of the three groups' weightings were analyzed following the same procedures used with the program attributes and those findings are reported here.

Descriptive statistics. Table 25 presents the mean weights, standard deviations and 95% confidence intervals for each group's weightings of teacher attributes. For example, the 141 DOSE assigned a mean weight of 15.3 to the teacher attribute "Instructional skills." The mean weight had a standard deviation of 5.1, and the 95% confidence was 14.5 to 16.2. In comparison, for the same attribute, SOS assigned a mean weight of 14.1. The standard deviation was 4.8, and the 95% confidence interval was 12.9 to 15.3. Likewise, one may compare the DOSE figures to those of SOS and PTT for the other attributes. The range of values for mean weights assigned by DOSE was 4.9 for to 15.3. For SOS, the range was 4.6 to 14.1, and for PTT the range was 5.6 to 15.1. For each group, the lowest mean weight was assigned to the teacher attribute "Knowledge of transition" while the highest mean weight was given to "Instructional skills."

Table 25

Attributes of Special Education Teachers as Weighted by Survey Respondents

	DOSE (N = 141)			SOS (N = 65)			PTT (N = 105)		
	Mean	SD	95% conf. int.	Mean	SD	95% conf. int.	Mean	SD	95% conf. int.
Instructional skills	15.3	5.1	14.5 to 16.2	14.1	4.8	12.9 to 15.3	15.1	4.2	14.2 to 15.9
Working well with people	12.9	6.0	11.9 to 13.9	13.8*	5.3	12.5 to 15.1	11.3*	6.8	10.0 to 12.6
Curriculum and instructional planning skills	11.8	4.5	11.0 to 12.5	10.3*	3.8	9.4 to 11.3	12.7*	4.7	11.8 to 13.6
Assessment skills for planning and instruction	11.0	3.9	10.3 to 11.6	10.5	4.2	9.5 to 11.6	11.6	4.4	10.7 to 12.4
Behavior management skills	10.8	4.3	10.1 to 11.5	11.7	3.2	10.9 to 12.5	10.7	5.2	9.7 to 11.7
Classroom organization skills	11.0	3.5	10.4 to 11.5	12.4*	4.7	11.2 to 13.6	9.9*	4.6	9.0 to 10.8
Working cooperatively with staff and administration	9.8	4.9	8.9 to 10.6	9.1	3.8	8.2 to 10.1	8.8	4.5	7.9 to 9.6
Incorporating vocational/ career education	6.3	4.1	5.6 to 7.0	5.2*	4.0	4.3 to 6.2	7.1*	4.1	6.3 to 7.9
Skill in assessing outcomes	6.5*	3.6	5.9 to 7.1	8.1*	4.2	7.1 to 9.2	7.6	4.1	6.8 to 8.4
Knowledge of transition	4.9	3.7	4.3 to 5.6	4.6	2.8	3.9 to 5.3	5.6	3.8	4.8 to 6.3

Note. DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

* indicates $p < .05$ on Scheffé comparison of group mean values.

Multivariate tests of significance. Multivariate tests of significance for teacher attributes are displayed in Table 26. These tests simultaneously tested for differences among the mean weights of all ten teacher attributes (the centroid) for all three groups. The purpose of this procedure was to determine whether any statistically significant differences existed among the centroids of the groups. An alpha value of .05 or less was considered to indicate a statistically significant difference. Note that all three multivariate tests yielded a statistically significant difference in the weightings of DOSE, SOS, and PTT.

Table 26

Multivariate Tests of Significance for Teacher Attributes (S = 2, M = 3 1/2, N = 148 1/2)

Test Name	Value	Approx. *F*	Hypoth. DF	Error DF	*p*
Pillais	.14730	2.38513	20.00	600.00	.001
Hotellings	.16222	2.41706	20.00	596.00	.001
Wilks*	.85685	2.40117	20.00	598.00	.001

*Note that the *F* statistic for Wilk's Lambda is exact.

Univariate F-tests. The univariate F-test was chosen as a post-hoc analysis. The F-test examined the equality of group means for each attribute. Additionally, the F-test examined each attribute separately and so provided more detailed information than the multivariate tests. Table 27 displays the univariate F-tests for teacher attributes. Five teacher attributes had a p-value of .05 or less. This indicates that for these five attributes at least one group (DOSE, SOS, PTT) assigned a significantly different weighting than one or both of the other groups. For example, as indicated in Table 27, the teacher attribute "Curriculum & instructional planning skills" had a p-value of .004. Thus, one or more of the three groups assigned a significantly different weight to this attribute. However, this test does not identify which of the groups differed from the other group(s). In addition to "Curriculum and instructional planning skills" the attributes "Working well with people," "Classroom organization skills," "Skill in assessing outcome," and "Incorporating vocational/career education" also had significant p-values indicating a difference in mean weighting among the groups.

Table 27

Univariate F-tests for Teacher Attributes with (2,308) D.F.

Attribute	Hypoth. *MS*	Error *MS*	*F*	*p*
Instructional skills	31.10188	22.71974	1.36894	.256
Assessment skills for planning and instruction	23.76496	17.11513	1.38854	.251
Curriculum and instructional planning skills	109.37741	19.64769	5.56693	.004
Working well with people	138.90771	37.70831	3.68374	.026
Knowledge of transition	23.61794	12.99271	1.81778	.164
Classroom organization skills	123.92559	17.43914	7.10618	.001
Behavior management skills	20.46485	19.91405	1.02766	.359
Working cooperatively with staff and administration	31.57592	20.65058	1.52906	.218
Skill in assessing outcomes	71.02986	15.34131	4.62997	.010
Incorporating vocational/career education	67.91117	16.57378	4.09751	.018

Scheffé procedure. The Scheffé procedure was chosen as a second post hoc analysis and was completed only for those teacher attributes which yielded a significant p-value in the univariate F-tests. The Scheffé procedure identifies among which groups the difference in mean weights exists. Table 28 displays the Scheffé analysis on teacher attributes. As shown in the table, the attribute "Curriculum and instructional planning skills" was assigned significantly different weightings by SOS and PTT. The mean weight assigned by SOS was 10.3, while the mean weight given by PTT was 12.7. This difference in mean weights was significant at the .05 level. Note that for this attribute no significant difference was evidenced between the weightings assigned by SOS and DOSE or by DOSE and PTT.

Table 28

Results of Scheffé Procedures (a = .05) for Special Education Teacher Attributes

Attribute	Comparison Groups: SOS vs DOSE	SOS vs PTT	DOSE vs PTT
Curriculum and instructional planning skills	NS	10.3 vs 12.7	NS
Working well with people	NS	13.8 vs 11.3	NS
Classroom organization skills	NS	12.4 vs 9.9	NS
Skill in assessing outcomes	8.1 vs 6.5	NS	NS
Incorporating vocational/career education	NS	5.2 vs 7.1	NS

Note: The tabled values are the respective group mean weights. The larger the weight, the greater importance ascribed to the attribute.

NS = not significant; DOSE = Director of Special Education; SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

Univariate homogeneity of variance tests. As mentioned in the program attribute discussion, an underlying assumption of the F-test, presented in Table 27, is that the comparison groups have equal variance. However, the F-test is not seriously affected by violations of its underlying assumptions (Keppel, 1973). Nevertheless, in the interest of completeness and for the information of the reader, univariate homogeneity of variance tests for the teacher attributes are presented in Table 29. Three attributes have alpha values of .05 or less indicating that for these attributes the variances of DOSE, SOS and PTT are significantly different. These differences, however, should not be interpreted as invalidating the F-test.

Table 29

Univariate Homogeneity of Variance Tests for Teacher Attributes

Attribute	Bartlett-Box F (2, 182264)	*p*
Instructional skills	2.13363	.119
Assessment skills for planning and instruction	.97208	.378
Curriculum and instructional planning skills	1.56529	.209
Working well with people	2.43694	.088
Knowledge of transition	3.94003	.020
Classroom organization skills	6.06451	.002
Behavior management skills	8.03950	.000
Working cooperatively with staff and administration	2.42278	.089
Skills in assessing outcomes	1.38367	.251
Incorporating vocational/career education	.06484	1.000

Rank order of attributes. Table 30 exhibits the teacher attributes in rank order by mean weights. As noted previously, DOSE serves as the reference group and thus the attributes are listed in order of the DOSE ranking. The SOS and PTT rankings may be compared to that of DOSE. Kendall's coefficient of concordance was calculated as .93. That is, the three groups ranked the attributes very similarly. For example, each group ranked "Instructional skills" first. Additionally, the groups ranked the same attributes seventh, eighth, ninth and tenth. Another way to interpret Kendall's coefficient of concordance is as a reflection of the degree to

which the groups used the same criteria in evaluating the choices. A coefficient of .93 suggests that very similar criteria were shared by the respondents.

Table 30

Special Education Teacher Attributes in Rank Order as Weighted by Survey Respondents

Program attribute	DOSE N = 141		SOS N = 65		PTT N=105	
	Rank	(Mean wt.)	Rank	(Mean wt.)	Rank	(Mean wt.)
Instructional skills	1	(15.3)	1	(14.1)	1	(15.1)
Working well with people	2	(12.9)	2	(13.8)	4	(11.3)
Curriculum and instructional planning skills	3	(11.8)	6	(10.3)	2	(12.7)
Assessment skills for planning and instruction	4*	(11.0)	5	(10.5)	3	(11.6)
Classroom organization skills	4*	(11.0)	3	(12.4)	6	(9.9)
Behavior management skills	6	(10.8)	4	(11.7)	5	(10.7)
Working cooperatively with staff and administration	7	(9.8)	7	(9.1)	7	(8.8)
Skill in assessing outcomes	8	(6.5)	8	(8.1)	8	(7.6)
Incorporating vocational/ career education	9	(6.3)	9	(5.2)	9	(7.1)
Knowledge of transition	10	(4.9)	10	(4.6)	10	(5.6)

Note: * indicates a tie. DOSE = Director of Special Education;

SOS = Superintendent of Schools; PTT = Pre-service Teacher Trainer.

Discussion

This research effort in the National High School Project had two goals. The first goal was to identify three professional groups' perceptions of the desired qualities of special education programs for students with mild to moderate handicaps in high school settings. The second goal was to identify the same three groups' perceptions of the desired qualities of instructional staff for students with mild to moderate handicaps in high school settings. A description of desired program attributes and quality teaching staff attributes was identified as critical in understanding and directing policy and practice. The three groups whose perceptions were chosen to include were national samplings of directors of special education, school superintendents, and pre-service teacher trainers. To accomplish the goals, information on two factors were considered important: (a) identifying the desired attributes of the programs and instructional staffs and (b) identifying the relationship of the particular program activities to the identified attributes.

In two previous surveys the desired attributes of programs and staff were elicited and reduced to two sets of ten attributes, one set relevant to special education programs and one set relevant to instructional staff. Similarly sets of program activities and pre-service activities were identified. In this third survey, the weighting survey, respondents ranked and weighted the desired attributes to establish the attributes' numerical weighting of importance, comparing one attribute to the others in the set. The results of this weighting survey were given in the preceding section. In this section those results are interpreted in light of current reforms in regular and special education and future needs in American society. In addition, since internal validity of the project is important to consider, this survey's results are compared with the results from the earlier surveys in this project. Last, an ideal model for program and staff characteristics is described from the respondents' perspectives.

Reforms in Regular and Special Education

Mitchell and Encarnation (1984) have argued that three themes have dominated reform movements in this century: efficiency, equity, and most recently, quality. The concerns with increased quality or excellence are grounded in the perception that the public school experience is less beneficial than expected and that the consequences are very negative. Two dominant avenues have been followed to increase the quality of the educational experience. The major thrust to improve quality has been to increase accountability. That is, if school administrators, teachers, and students are held more accountable, the indicators of quality will reflect improvements: test scores will increase, dropouts will decrease, teachers and parents will be more satisfied, economic productivity will increase, and so on. These indicators reflect the current value systems emphasized in decisions about the nation's schools. The second avenue has been an increase in academic standards, to set higher standards for students to attain. The emphasis is on improving reading, writing, mathematics, and content knowledge of the sciences. Little if any mention is given to vocational or career coursework, which is presumed developed in *post-secondary settings*. The increased standards have been implemented as additional requirements: added hours in school, added days of school, added required courses, and added assessments. For obvious reasons, this approach might be thought of as an "additive model" of school reform. What this approach fails to consider is the interaction among student characteristics, teacher skills, administrative policies, and their relationship to defined outcome criteria or goals for education. Additional requirements or even money are insufficient to ensure that the product or outcomes of education will be of higher quality.

While the direction of regular education has been to increase educational quality, special education's emphasis has taken a different tack. While special education's reforms

are focused on improving the quality of the special education programs, the approach emphasizes a better integration of the special education student into the high school's mainstream of academic, social, and vocational curricular activities. These scenarios are competing over the role of regular education. Regular education's drive for excellence is not compatible with ensuring greater opportunities for students who previously had failed.

Within special education two topics have dominated the reforms: (a) the regular education initiative and (b) the transition of special education students from high school to other environments. The regular education initiative (REI) (Reynolds et al., 1987) was initiated by a group of special educators concerned with the misidentification of students as handicapped, the growing numbers of students identified as handicapped, and the perceived failure of special education interventions to improve achievement. The proponents pictured the education system as being responsible for all students, but that special education had become a separate or disjointed educational system with unnecessary proceduralism. In turn, an outcome was that the structure of special education had removed regular education from reasonable responsibilities for accommodating students. The goals of the REI were to remove the barriers and procedures perceived as perpetuating the two systems and to maintain low achieving students in the regular classroom setting.

The transition movement has emphasized the need for preparing students with handicaps to assume greater independent functioning and social responsibility in the community once they leave the high school setting (Clark & Knowlton, 1987). Several studies have documented the difficulties individuals with handicaps have in adjusting to independent living in the community (Edgar, 1987; Halpern & Benz, 1987; Hasazi et al., 1985; Mithaug et al., 1985; Viadero, 1989). The transition movement has directed attention to the curricular goals for students and the instructional methods for meeting those goals. The emphasis has been to increase functional skill levels and educational experiences closely aligned with community living demands.

Teacher training reforms have been promoted along with other reforms in education (Clark, 1988; Cornbleth, 1986; Futrell, 1986; Schulman, 1986; Warren, 1985). These reforms generally have been directed at increasing the entry level requirements for teachers, e.g., added academic preparation, satisfactory performance on a teacher competency exam, and a probationary period. As in other segments of reform the goals have not been clearly defined. Improvements are sought, but the model or criterion has not been specified for how best to accommodate the heterogeneity of the student population and the desired outcomes of the K-12 educational experience.

In the following text, the results from the weighting survey are discussed by referencing the efforts in regular and special education reforms and teacher training. An appropriate frame of reference is that this activity is not a referendum on a particular movement or theme in education. Rather, the ranks and weights provide a description of how three professional groups in education evaluated the merits of a defined set of attributes for high school level special education and pre-service programs. Within that closed set, ranks and weights permit comparisons among the attributes and among the responding groups.

Regular and special education reforms and weighting survey results. The weights assigned by the three respondent groups (directors of special education, superintendents of schools, and pre-service teacher trainers) for the ten program attributes were highly correlated (r = .94). The inference was that the three groups were operating from a comparable frame of reference. This frame of reference was a shared model of desired program characteristics.

The ten program attributes were not particularly a close match for the attributes which are described as important in the regular education reform. However, the need for "Effective

staff," "Program support from staff, parents, business, and community", and a desire for students' "Employment success" are frequently mentioned as important in the reform literature. "Effective staff" was the most important characteristic from each group's perspective and was weighted comparably by the groups. Thus, from these groups' view the emphasis was placed on the staff's qualities for ensuring the success of the special education programs. Interestingly, a recent opinion poll of regular education teachers reported that teachers have low morale, feel unappreciated, and believe that the greatest problem in education is the lack of parental support (Elam, 1989). A paradox is evident. While an effective staff is considered the most important characteristic by these three groups, the largest segment of today's teaching staff is very dissatisfied and blames almost everyone but themselves for recognized school problems. From the teaching profession's perspective, the lack of support is the greatest problem to be confronted. If support was broader, their effectiveness would be increased. At the same time, the reader should recall that the three responding groups were not criticizing the staff's quality, but recognizing that the staff was the most important attribute of a successful educational program.

Futrell (1986) described the current reforms in education as largely teacher reforms, and thus would disagree with the "additive model" described above. From her perspective, the needed reforms are not with teachers but rather with school structure such that generated reforms are classroom-based or bottom-up changes, rather than administrative or top-down changes. In addition, she recommends that issues of teacher competencies be judged by the teaching profession itself rather than by administrative, policy, or trainer agenda. These views illustrate some of the diversity confronting those interested in improving the quality of programs.

For each of the respondent groups, program support was assigned the fifth position, while employment success had the ninth position for the directors of special education and pre-service teacher trainers and the eighth position for school superintendents. We suggest that a distinction exists made between the goals of special education as prioritized by the respondents and regular education reforms. The observation has been made by others (e.g. Sapon-Shevin, 1987) that the reform reports have all but ignored references to special education. The omission might be interpreted as a conceptual distinction in educational programs and goals, that the uniqueness of special education deserves distinct treatment.

Two themes were identified as dominating reforms in special education: the regular education initiative and the transition movement. The rankings include varying levels of support for increased integration between special education and regular education. Interestingly enough, the attribute, "Regular education support and integration," was one attribute on which a reliable difference was noted between the groups. The directors of special education assigned a significantly higher weight to this attribute (mean = 10.4, s.d. = 4.2) than the pre-service teacher trainers did (mean = 8.8, s.d. = 4.9). The directors of special education and pre-service teacher trainers are two groups which one might expect to have a close level of agreement. Since the trainers have responsibility for filling personnel needs of district programs, they would be expected to have a careful understanding of those needs. These two group's respective ranks were four and six. The rank position suggests that the construct has some importance to the groups, but obviously the link between special and regular education is not the most important aspect of their programs' success.

The discussion around the transition movement has had little impact on these three groups' decisions regarding desirable program attributes for special education. For each group, the attribute "Post-secondary transition curriculum" was ranked as least important. The low ranking, however, was not indicative of even a more important difference. That difference was evidenced in the weighting. "Post-secondary transition curriculum' was also weighted differently by the directors of special education and pre-service teacher trainers.

The respective mean weights were 4.9 and 6.2 and the difference was statistically significant. Both groups ranked it last, but the directors of special education viewed it as even less important than did the pre-service teacher trainers. The inference might be that the discussions around the transition concept have not had an impact on their thinking about the goals of special education. Alternatively, awareness of transition issues actually may not be critical to their programs' success.

Ideal model of program and staff

The survey data provide a glimpse of these three groups' emphasis for a model special education program and teaching staff. Perhaps of greatest interest is the shared consensus among these three responding groups. This shared consensus was evidenced in two data: the high intercorrelations among the groups' rankings, (.94 and .93 for the *program* and *teacher* attributes respectively) and second, the comparability of the attributes assigned weights. The ranks assigned to the two attribute sets were very similar and thus is reflected in the high intercorrelations. Comparability of the weights was evidenced in that few comparisons among the weights were statistically different. Even in those instances of different weights, all three groups did not differ among themselves. Only two groups differed between themselves and the differences were not always between the same two groups. Thus, we infer from these data that the three groups do exhibit similar values for programs and staff. Each group particularly values an effective staff and ensuring that the student's instruction is individualized and appropriate. Also of interest is that curricular outcomes ("Successful personal and social adjustment," "Successful independent living" and "Employment success") for students were generally secondary in importance. The focus of a quality program is viewed from its organizational approach and structures rather than from the program's outcomes. One might speculate that from the administrative perspectives of these respondents, the outcomes will be satisfactory if other program features are functional. Hence, the actual content is less important to emphasize. Ironically, the groups' values on effective staff and organizational approach as the assumed best "means to an end" could be interpreted by some as possible "constraints to an end." That is, good organizational structures and effective teaching that are content- and outcome-free may lose inadvertently their sensitivity and focus on students' needs. We are concerned that the apparent qualities of a program have such little emphasis on the students' performance or outcomes of the educational experience.

The other obvious point from the data is the close agreements shared by the pre-service teacher trainers with the district level administrators. While several reform reports have been critical of training programs, these data suggest a strong basis of shared beliefs. Interestingly, the responses across both the Elicitation Survey and this survey indicate a shared perspective. This finding might lead to closer discussions of potential differences. If the pre-service teacher trainers are considered as the innovators for education and principals in the reform movement, then a greater distinction would have been expected. The trainers appear to be attuned to the same perspectives as local administrators. A good example is that "Post-secondary transition curriculum," which is a reform effort in special education, was consistently weighted least by the trainers (as well as by the other two responding groups). At least in this instance, a reform effort has not been translated into an important quality for special education. Similarly, in the survey data regarding valued teacher attributes, "Knowledge of transition" was considered least important.

Recommendations

We want to address the issue of recommendations regarding models of program and staff attributes. As others (D. Clark & Astuto, 1986; Mitchell & Encarnation, 1984; Resnick & Resnick, 1985;) have indicated, the national policy in education has emphasized the political involvement of various levels of government. This political involvement has changed depending on the governmental level, e.g., federal, state, or local. At the federal level, the most recent themes have been to de-emphasize the role of the federal government, reduce the level of monetary support, decentralize the federal role, deregulate the previous requirements, and disestablish education as a cabinet level position (Clark & Astuto, 1986). These themes have been central, and simultaneously initiated with calls for reform to solve the perceived crises in education, primarily by emphasizing a call for excellence. Thus, the federal level response has been to declare that education is in need of far-reaching reform, but concurrently relieving itself of any participation to address the stated crises. Apparently, the perception is that states should take the leadership role in responding to the needs for educational reforms which in turn promote excellence. The federal agenda addresses educational issues of administration and funding, but does little to prescribe content except to encourage the outcomes considered as excellent. Interestingly, the one federal initiative that has specified a clear outcome and content criterion is that of transition from school to work. Somehow that initiative has not had a generalized effect on superintendents of schools, directors of special education, and special education teacher trainers.

States have recognized the challenges in educational reforms and have attempted to respond. The states' efforts have been to alter the administrative mechanisms which on first blush appear to impact education, e.g., length of school day, the number of days in a school year, teacher certification requirements, use of minimal competency testing, increased graduation requirements, and distinctions among completion certificates and diplomas. Within these contexts of federal and state activities we offer three recommendations. Certainly, additional recommendations could be offered, and yet the limitation of three items maintains a focus on those aspects which appear most problematic from our national study. We recommend that:.

1) **Both federal and state governments develop an educational agenda which addresses the conflicting values and desired outcomes in education for a wide range of abilities and an increasingly culturally and socially diverse population.** These conflicts involve such areas as desired curricular content and skills expected of all students, responding to the unique learners' needs for specified instructional methods, and providing options within the curriculum which diversify the post-secondary instructional opportunities.

2) **Within the service delivery to students in special education, defined goals be identified.** These goals must address not only the expected performance of students, but also the instructional processes and options available for realizing those goals. The quality of high school special education programs appears confounded by a multitude of goals which in turn minimizes accountability.

3) **Training of high school special education staff become a priority concern in federal and state efforts related to personnel preparation.** Our third recommendation parallels the concerns stated and the recommendations made by Bursuck & Epstein (1986), Clark (1984), Mclaughlin, Valdivieso, Spence & Fuller (1988), and Weisenstein (1986). While staff quality was reported in our data as fundamental to a valuable special education program, those specific characteristics of the teaching staff cited place a priority on classroom management and de-emphasize aspects of the particular curriculum. For example, while attributes of classroom environment and teacher

skills can be readily identified, the choice of content is less clearly defined. This situation suggests that the expectations of the educational experience in terms of outcomes are less well defined.

The educational reforms at the local level are not dependent on state and federal initiatives. The local district as the actual delivery service exercises direct control on educational planning and implementation. This responsibility is significant and yet not emphasized sufficiently. Our recommendations for the local districts are thus very directed at a grass roots level perspective of how a district might initiate reforms. We recommend that:

1) The local districts should address these issues and establish their own agenda of self-improvement. Halpern (1987) provided one methodology which districts might adopt to evaluate the importance of defined program standards and the need for improvement in those areas. This survey's data suggest a striking uniformity between directors of special education and school superintendents. That shared perspective should thus assist them as they move to respond to the numerous issues raised regarding the relationship between special education and regular education (e.g., Sapon-Shevin, 1988; Reynolds, Wang, & Walberg,1987) and the provision of a transition curriculum (e.g., Edgar, 1987).

2) LEA's must move beyond the perspective that an effective staff is the determinant of a program's quality. The emphasis on a quality program includes clearly defined desired outcomes and then procedures for monitoring progress toward those outcomes. With these directions, LEA staff can expect curricular as well as organizational changes if these recommendations seriously were implemented. These changes would influence such factors as desired staff characteristics, service delivery methods, exit documents, and parental participation opportunities.

Pre-service teacher trainers provide an integral role with the preparation of instructional staff and, quite likely, the staff's continued development through such activities as in-service training. Recall from the three responding groups' perspectives that the effectiveness of the instructional staff was the most important attribute of a quality special education program. Within this context, our recommendations regarding training are also purposefully focused.

1) Adopt standards which explicitly formalize the relationship between (a) state and district level goals and (b) pedagogy and training experiences. We believe that a more cooperative arrangement among districts and training institutions is desirable. Mclaughlin et al. (1988) detailed the consternation between SEA and pre-service trainers regarding the lack of a shared perspective on the desired qualities of instructional staff. These differences were not noted in our data. Recall the very high intercorrelation among the three responding groups' rankings of the desired teacher attributes. Perhaps the real difference is not conceptual, but rather is in terms of specific skills. Conceptually, the groups agree, but in practice the discrepancy is readily apparent. For example, while all three groups value a teacher's "Instructional skills," the exact skills valued might differ. We believe that resolution would come through a shared discussion of goals, appropriate pedagogy, and training activities.

2) Provide training activities which are focused on specific content and skills, provide frequent measurements, and then provide feedback. Content is valued in the context of providing a foundation for assessing problems, identifying and examining alternative plans, and implementing plans From this perspective, we believe a better integration of training activities is needed, not necessarily more training.

3) **Assume greater responsibility for informing superintendents, principals, directors of special education, as well as teachers, of the trends and issues that have emerged and are emerging out of the conflicting notions between excellence/ reform and accountability for adult adjustment outcomes for handicapped adolescents.** Teacher trainers need to initiate efforts to inform administrators, particularly, of the alarming post-school outcomes of handicapped students and of current alternatives in programming to address students' needs.

Limitations

In reviewing the outcomes of this survey, the outcomes were also understood in the context of several limitations. Central to those limiting factors was the low response rate, especially among superintendents of schools. Whether they did not respond due to a lack of perceived importance or of limited knowledge is unknown. However, if the issue is limited knowledge, special education support is likewise affected negatively. A superintendent, like almost anyone else, would have difficulty advocating a program which is not understood. We are reminded of the school superintendent who was encouraging patrons to support a bond issue for a larger school building. He was explaining several reasons for the bond issue to be supported, including that itinerant special education personnel working in a small pantry was violating the federal law to educate students in the "least restrictive environment!" This district's top administrator apparently had a mistaken notion of public law 94-142. Such misinformation does not bode well for a district's plans of establishing a defined mission and structure for special education in the high school setting.

Summary

The Weighting Survey was completed by a sample of directors of special education, school superintendents, and pre-service teacher trainers. The survey elicited respondents' ranks and weights of ten attributes characteristic of a quality special education program and ten attributes of a quality special education staff. The three responding groups demonstrated very high agreements both in the assigned ranks and weights of the two sets of attributes. These consistencies were interpreted as indicating that the respondents had a similar model or frame of reference. The assigned weights suggested that special education programs were viewed with a pragmatic orientation. This orientation was characterized by emphasizing the importance of the teaching staff who should be familiar with individualizing instruction and skilled in planning and providing instruction. The outcomes of that instruction were viewed as contingent on the quality of the staff and as primarily staff directed rather than from district level or state level policies. In fact, special education programs and staff are not a single component, but rather each can reflect the diversity in the philosophy, goals, methods, activities, and content which characterizes current high school special education programs and secondary special education teacher training programs.

Appendix G

Advance Mailing Letter

National Study of High School Programs for Handicapped Youth

Gary M. Clark
Principal Investigator
(913) 864-4954

Don Dorsey
Research Coordinator
(913) 864-4780
(913) 864-4954

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Research Associate
(913) 864-4954

Daryl F. Mellard
Research Associate
(913) 864-4780

Joanne R. Bodner
Research Assistant
(913) 864-4954

April 17, 1987

Dear Colleague

Our project is one of many federally sponsored evaluation projects currently under way. Unlike other projects, however, our focus is national and on secondary level special education programs for mild to moderately handicapped students. More specifically, we are examining the characteristics of quality special education programs and teaching staff. Our point in writing you is to invite you to participate in this unique and important research project. Your view as well as the views of others in similar positions provide a national portrait of secondary level special education. Based on those collective judgments, reforms in special education might be more carefully targeted and resources more wisely expended.

Within the next two weeks, we will initiate our data collection effort. We recognize that this letter is hardly personal and would prefer to gather our information through interviews. We also believe that you would be more inclined to allow us even 30 minutes for an interview than spend 12 minutes on a survey. However, an interview is impractical for several reasons and instead we chose a survey procedure which you can complete in less than twelve minutes, and according to your time schedule. Your responses will be confidential.

If for some reason you are unable to participate, return the enclosed postcard and we will remove your name from our mailing list. Of course, we would rather that you kept the postcard as a reminder of our project and hope that we don't hear from you until you have received our mailing and responded to our questions. A summary of our findings will be made available to you. If you have other questions, feel free to call us collect.

Sincerely,

Daryl F. Mellard

Gary M. Clark

Enc.

The University of Kansas
Department of
Special Education
377 Haworth Hall
Lawrence, KS 66045-2330
(913) 864-4954

Appendix H

Sample Weighting Surveys for Directors of Special Education and Superintendents of Schools

May 1, 1987

National Study of High School Programs for Handicapped Youth

Gary M. Clark
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(913) 864-4954

Don Dorsey
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Daryl F. Mellard
Research Associate
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Joanne R. Bodner
Research Assistant
(913) 864-4954

Dear Colleague,

We wrote you two weeks ago and described our national evaluation project. As you may recall, our project is focusing on secondary level special education programs for students with mild to moderate handicaps. We are beginning our data collection and inviting you to participate in this unique and important project. We believe that the results will be valuable for improving special education programs and teaching staff at the local, state, and national levels. For example, you might use the results as a yardstick for how your program compares with other programs.

One point which we would like to emphasize in our directions is that your responses reflect your special education program for students with mild to moderate handicaps rather than some image of an ideal program. Even though our request isn't very personal, we were thinking of you when we designed the task. For example, our task is likely easier and quicker than interviewing you. We believe that you can complete it within twelve minutes. We've enclosed a return envelope and pencil to expedite your responding.

We are hesitant to mention this, but if for some reason you are not able to complete our task, we still want to know about you. If nothing else, please complete and return the last section describing your professional background and program. Such information will help us to understand the limitations in our results, and to whom our results might apply. Feel assured that your responses will be confidential and reported only in group results.

We want to close with two other points. If you have further questions, please call us collect. We will be happy to answer them. Last, how about completing our task now? Considering the temptation to doing this later, we believe that it is likely easier, more efficient, and less time consuming for you to complete it now.

Thank you for your efforts.

Sincerely,

Daryl F. Mellard Gary M. Clark

Enc.

The University of Kansas
Department of
Special Education
377 Haworth Hall
Lawrence, KS 66045-2330
(913) 864-4954

Weighting High School Special Education Program and Teacher Attributes

Background

We are asking you to rank and weight two sets of attributes. These attributes were selected by a panel of experts as most important when evaluating high school special education programs and teachers of students with mild to moderate handicaps. Based on your weighting, we'll know which of these attributes are most important. We have provided an illustrative example.

Example

When a family was buying a car, there were five attributes on which they evaluated different cars: (a) miles per gallon, (b) purchase price, (c) maintenance record, (d) color and (e) comfort of ride. The family members ranked and weighted these five attributes as follows:

Ranking	Attribute	Weighting
4	Miles per gallon	20
1	Purchase price	120
2	Maintenance record	45
3	Color	20
5	Comfort of ride	10

The ranking listed in the left hand column established the relative importance of each attribute for deciding which car to purchase. Purchase price, ranked #1, was the most important.

The weighting values listed in the right hand column established how much more or less important each attribute was than the others. The attribute with the lowest rank is always weighted 10. Hence in this example, "comfort" was weighted 10.

"Miles per gallon" was twice as important as "comfort," and thus was weighted 20 (2 X 10). While "color" was ranked as more important than "miles per gallon," both were weighted equally -- 20. Hence, both were twice as important as "comfort." Equal weights are permitted.

"Maintenance record" was weighted 45, meaning it is 2.25 times as important as "color" and "miles per gallon" (2.25 X 20) and 4.5 times as important as "comfort" (4.5 X 10). "Purchase price" was 12 times as important as "comfort" (12 X 10), six times "color" and "miles per gallon" (6 X 20), and 2.67 times "maintenance record" (2.67 X 45).

In this example, the family knew which attributes to consider when evaluating different cars and the attributes' importance in making the final selection.

Weighting Program Attributes

Step 1: Directions for Ranking

Assign "1" to the most important attribute, "2" to the second most important attribute and so on through "10" in the column labeled "Ranking."

Ranking	Program Attributes	Weighting
_____	Effective staff	
_____	Individualized, appropriate instruction	_____
_____	Vocational/career orientation	_____
_____	Administrative leadership and support	_____
_____	Regular education support and integration	_____
_____	Program support from staff, parents, business, and community	_____
_____	Employment success	
_____	Post-secondary transition curriculum	_____
_____	Successful independent living	_____
_____	Successful personal and social adjustment	_____

Step 2: Directions for Weighting

Beside the attribute which you ranked as 10th, write a "10" in the column labeled "weighting." The numerical weights you choose for the other attributes should be greater than or equal to ten depending on your view of their importance. The weights can be as large as you like, and equal weights are permitted.

Weighting Teacher Attributes

Directions

In this task, please rank and weight the following ten attributes by completing the same two steps as you did above.

Ranking	Teacher Attributes	Weighting
_____	Instructional skills	
_____	Assessment skills for planning and instruction	_____
_____	Curriculum and instructional planning skills	_____
_____	Working well with people	
_____	Knowledge of transition	_____
_____	Classroom organization skills	_____
_____	Behavior management skills	_____
_____	Working cooperatively with staff and administration	_____
_____	Skill in assessing outcomes	
_____	Incorporating vocational/career education	_____

School Superintendents and Directors of Special Education
Information

1. Please check one:

I am a ___ school superintendent.

___ director of special education.

___ other. (Tell us.) _____

2. The region in which I work might be best characterized as:

___ rural, isolated geographically and sparsely populated

___ rural, small town

___ suburban

___ urban

3. Please complete one of the following statements (a or b):

a. What is the total enrollment in your school district? _____

b. If your service area includes a number of school districts, such as in a special education cooperative or interlocal, what is the total enrollment of those school districts?

_____

4. What was the last degree you earned? (Please check.)

___B.A./B.S. ___M.A./M.S. ___Ed. Spec. ___ Ph.D./Ed.D.

5. How many years have you been at the current district? _____

6. Please correct any incorrect information on the attached mailing label:

Please use the enclosed envelope and mail this survey to us by May 15, 1987 (Friday). Thank you.

If you would like a summary of our results, please write your name and address on the back of the return envelope.

Weighting High School Special Education Program and Teacher Attributes

Background

We are asking you to rank and weight two sets of attributes. These attributes were selected by a panel of experts as most important when evaluating high school special education programs and teachers of students with mild to moderate handicaps. Based on your weighting, we'll know which of these attributes are most important. We have provided an illustrative example.

Example

When a family was buying a car, there were five attributes on which they evaluated different cars: (a) miles per gallon, (b) purchase price, (c) maintenance record, (d) color and (e) comfort of ride. The family members ranked and weighted these five attributes as follows:

Ranking	Attribute	Weighting
4	Miles per gallon	20
1	Purchase price	120
2	Maintenance record	45
3	Color	20
5	Comfort of ride	10

The ranking listed in the left hand column established the relative importance of each attribute for deciding which car to purchase. Purchase price, ranked #1, was the most important.

The weighting values listed in the right hand column established how much more or less important each attribute was than the others. The attribute with the lowest rank is always weighted 10. Hence in this example, "comfort" was weighted 10.

"Miles per gallon" was twice as important as "comfort," and thus was weighted 20 (2 X 10). While "color" was ranked as more important than "miles per gallon," both were weighted equally -- 20. Hence, both were twice as important as "comfort." Equal weights are permitted.

"Maintenance record" was weighted 45, meaning it is 2.25 times as important as "color" and "miles per gallon" (2.25 X 20) and 4.5 times as important as "comfort" (4.5 X 10). "Purchase price" was 12 times as important as "comfort" (12 X 10), six times "color" and "miles per gallon" (6 X 20), and 2.67 times "maintenance record" (2.67 X 45).

In this example, the family knew which attributes to consider when evaluating different cars and the attributes' importance in making the final selection.

Weighting Teacher Attributes

Step 1: Directions for Ranking

Assign "1" to the most important attribute, "2" to the second most important attribute and so on through "10" in the column labeled "Ranking."

Ranking	Teacher Attributes	Weighting
_____	Instructional skills	_____
_____	Assessment skills for planning and instruction	_____
_____	Curriculum and instructional planning skills	_____
_____	Working well with people	_____
_____	Knowledge of transition	_____
_____	Classroom organization skills	_____
_____	Behavior management skills	_____
_____	Working cooperatively with staff and administration	_____
_____	Skill in assessing outcomes	_____
_____	Incorporating vocational/career education	_____

Step 2: Directions for Weighting

Beside the attribute which you ranked as 10th, write a "10" in the column labeled "weighting." The numerical weights you choose for the other attributes should be greater than or equal to ten depending on your view of their importance. The weights can be as large as you like, and equal weights are premitted.

Weighting Program Attributes

Directions

In this task, please rank and weight the following ten attributes by completing the same two steps as you did above.

Ranking	Program Attributes	Weighting
_____	Effective staff	_____
_____	Individualized, appropriate instruction	_____
_____	Vocational/career orientation	_____
_____	Administrative leadership and support	_____
_____	Regular education support and integration	_____
_____	Program support from staff, parents, business, and community	_____
_____	Employment success	_____
_____	Post-secondary transition curriculum	_____
_____	Successful independent living	_____
_____	Successful personal and social adjustment	_____

School Superintendents and Directors of Special Education Information

1. Please check one:

   I am a ___ school superintendent.

   ___ director of special education.

   ___ other. (Tell us.) _____

2. The region in which I work might be best characterized as:

   ___ rural, isolated geographically and sparsely populated

   ___ rural, small town

   ___ suburban

   ___ urban

3. Please complete one of the following statements (a or b):

   a. What is the total enrollment in your school district? _____

   b. If your service area includes a number of school districts, such as in a special education cooperative or interlocal, what is the total enrollment of those school districts?

      _____

4. What was the last degree you earned? (Please check.)

   ___B.A./B.S. ___M.A./M.S. ___Ed. Spec. ___ Ph.D./Ed.D.

5. How many years have you been at the current district? _____

6. Please correct any incorrect information on the attached mailing label:

   |¯ ¯|

Please use the enclosed envelope and mail this survey to us by May 15, 1987 (Friday). Thank you.

If you would like a summary of our results, please write your name and address on the back of the return envelope.

Appendix I

Sample Weighting Surveys for Pre-service Teacher Trainers

Weighting High School Special Education Program and Teacher Attributes

Background

We are asking you to rank and weight two sets of attributes. These attributes were selected by a panel of experts as most important when evaluating high school special education programs and teachers of students with mild to moderate handicaps. Based on your weighting, we'll know which of these attributes are most important. We have provided an illustrative example.

Example

When a family was buying a car, there were five attributes on which they evaluated different cars: (a) miles per gallon, (b) purchase price, (c) maintenance record, (d) color and (e) comfort of ride. The family members ranked and weighted these five attributes as follows:

Ranking	Attribute	Weighting
4	Miles per gallon	20
1	Purchase price	120
2	Maintenance record	45
3	Color	20
5	Comfort of ride	10

The ranking listed in the left hand column established the relative importance of each attribute for deciding which car to purchase. Purchase price, ranked #1, was the most important.

The weighting values listed in the right hand column established how much more or less important each attribute was than the others. The attribute with the lowest rank is always weighted 10. Hence in this example, "comfort" was weighted 10.

"Miles per gallon" was twice as important as "comfort," and thus was weighted 20 (2 X 10). While "color" was ranked as more important than "miles per gallon," both were weighted equally -- 20. Hence, both were twice as important as "comfort." Equal weights are permitted.

"Maintenance record" was weighted 45, meaning it is 2.25 times as important as "color" and "miles per gallon" (2.25 X 20) and 4.5 times as important as "comfort" (4.5 X 10). "Purchase price" was 12 times as important as "comfort" (12 X 10), six times "color" and "miles per gallon" (6 X 20), and 2.67 times "maintenance record" (2.67 X 45).

In this example, the family knew which attributes to consider when evaluating different cars and the attributes' importance in making the final selection.

Weighting Program Attributes

Step 1: Directions for Ranking

Assign "1" to the most important attribute, "2" to the second most important attribute and so on through "10" in the column labeled "Ranking."

Ranking	Program Attributes	Weighting
_____	Effective staff	
_____	Individualized, appropriate instruction	_____
_____	Vocational/career orientation	_____
_____	Administrative leadership and support	_____
_____	Regular education support and integration	_____
_____	Program support from staff, parents, business, and community	_____
_____	Employment success	
_____	Post-secondary transition curriculum	_____
_____	Successful independent living	_____
_____	Successful personal and social adjustment	_____

Step 2: Directions for Weighting

Beside the attribute which you ranked as 10th, write a "10" in the column labeled "weighting." The numerical weights you choose for the other attributes should be greater than or equal to ten depending on your view of their importance. The weights can be as large as you like, and equal weights are permitted.

Weighting Teacher Attributes

Directions

In this task, please rank and weight the following ten attributes by completing the same two steps as you did above.

Ranking	Teacher Attributes	Weighting
_____	Instructional skills	
_____	Assessment skills for planning and instruction	_____
_____	Curriculum and instructional planning skills	_____
_____	Working well with people	
_____	Knowledge of transition	_____
_____	Classroom organization skills	_____
_____	Behavior management skills	_____
_____	Working cooperatively with staff and administration	_____
_____	Skill in assessing outcomes	
_____	Incorporating vocational/career education	_____

Teacher Trainers' Information

Please fill in or check items as appropriate.

A. Respondent characteristics

1. What was the last degree you earned? (Please check.)

___B.A./B.S. ___M.A./M.S. ___Ed. Spec. ___Ph.D./Ed.D.

2. What is/are your area(s) of specialization in special education?

A. ___M.R. F. ___H.I./Deaf K. ___Early Child. Hand.

B. ___L.D. G. ___V.I./Blind L. ___Diag./Assess.

C. ___B.D./E.D. H. ___Lang./Comm.Dis. M. ___Career/Voc. Ed.

D. ___SpEd. Ad. I. ___Phys. Hand. N. ___Generic/Cross Categ.

E. ___Gifted J. ___ Multiple Hand. O. ___Other: _____

3. If you checked more than one item above, write the letter that represents your primary area of specialization:

_____

4. What is the age level of your specialization emphasis? (Please check one.)

___Early childhood ___Elementary ___Secondary ___Post-sec.

5. What is your academic rank? (Please check.)

___Instructor ___Assist. Professor ___Associate Professor

___Full Professor ___Other (Describe) _____

6. How many years have you been at the current college/university?

_____

7. Please record the percentages of time you give to each area. (Total equals 100%.)

___teaching ___administration ___research

___service ___other (Describe) _____

B. Program characteristics

8. Number of students in the college/university:

___2,500 or less ___10,001 - 15,000 ___25,001 - 30,000

___2,501 - 5,000 ___15,001 - 20,000 ___30,001 - 35,000

___5,001 - 10,000 ___20,001 - 25,000 ___35,001 or more

9. Does your state have certification requirements for the secondary level which are separate from the elementary level (i.e., K - 6) for teachers of students with mild to moderate handicaps?

___Yes ___No

10. In the requirements at the secondary level for teachers of the mild to moderately handicapped, does <u>your</u> <u>training</u> <u>program</u> require student teaching or practica in a high school setting?

___Yes ___No

11. Age level(s) for which you train special education teachers:

___EarlyChildhood ___Elementary ___Secondary ___Post-secondary

12. Including yourself, how many faculty members (those with a rank of at least assistant professor) teach preservice courses specifically targeted for secondary level teachers of students with mild to moderate handicaps?

_____

13. Are you interested in participating in a special interest group of the CEC-TED focusing on secondary and post-secondary teacher trainers?

___Yes ___No

14. Please correct any incorrect information on the attached mailing label:

|¯ ¯|

Please use the enclosed envelope and return this survey to us by May 15, 1987 (Friday). Thank you.

If you would like a summary of our results, please write your name and address on the back of the return envelope.

Weighting High School Special Education Program and Teacher Attributes

Background

We are asking you to rank and weight two sets of attributes. These attributes were selected by a panel of experts as most important when evaluating high school special education programs and teachers of students with mild to moderate handicaps. Based on your weighting, we'll know which of these attributes are most important. We have provided an illustrative example.

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5	Comfort of ride	10

The ranking listed in the left hand column established the relative importance of each attribute for deciding which car to purchase. Purchase price, ranked #1, was the most important.

The weighting values listed in the right hand column established how much more or less important each attribute was than the others. The attribute with the lowest rank is always weighted 10. Hence in this example, "comfort" was weighted 10.

"Miles per gallon" was twice as important as "comfort," and thus was weighted 20 (2 X 10). While "color" was ranked as more important than "miles per gallon," both were weighted equally -- 20. Hence, both were twice as important as "comfort." Equal weights are permitted.

"Maintenance record" was weighted 45, meaning it is 2.25 times as important as "color" and "miles per gallon" (2.25 X 20) and 4.5 times as important as "comfort" (4.5 X 10). "Purchase price" was 12 times as important as "comfort" (12 X 10), six times "color" and "miles per gallon" (6 X 20), and 2.67 times "maintenance record" (2.67 X 45).

In this example, the family knew which attributes to consider when evaluating different cars and the attributes' importance in making the final selection.

Weighting Teacher Attributes

Step 1: Directions for Ranking

Assign "1" to the most important attribute, "2" to the second most important attribute and so on through "10" in the column labeled "Ranking."

Ranking	Teacher Attributes	Weighting
_____	Instructional skills	_____
_____	Assessment skills for planning and instruction	_____
_____	Curriculum and instructional planning skills	_____
_____	Working well with people	_____
_____	Knowledge of transition	_____
_____	Classroom organization skills	_____
_____	Behavior management skills	_____
_____	Working cooperatively with staff and administration	_____
_____	Skill in assessing outcomes	_____
_____	Incorporating vocational/career education	_____

Step 2: Directions for Weighting

Beside the attribute which you ranked as 10th, write a "10" in the column labeled "weighting." The numerical weights you choose for the other attributes should be greater than or equal to ten depending on your view of their importance. The weights can be as large as you like, and equal weights are permitted.

Weighting Program Attributes

Directions

In this task, please rank and weight the following ten attributes by completing the same two steps as you did above.

Ranking	Program Attributes	Weighting
_____	Effective staff	_____
_____	Individualized, appropriate instruction	_____
_____	Vocational/career orientation	_____
_____	Administrative leadership and support	_____
_____	Regular education support and integration	_____
_____	Program support from staff, parents, business, and community	_____
_____	Employment success	_____
_____	Post-secondary transition curriculum	_____
_____	Successful independent living	_____
_____	Successful personal and social adjustment	_____

Teacher Trainers' Information

Please fill in or check items as appropriate.

A. Respondent characteristics

1. What was the last degree you earned? (Please check.)

___B.A./B.S. ___M.A./M.S. ___Ed. Spec. ___Ph.D./Ed.D.

2. What is/are your area(s) of specialization in special education?

A. ___M.R.	F. ___H.I./Deaf	K. ___Early Child. Hand.
B. ___L.D.	G. ___V.I./Blind	L. ___Diag./Assess.
C. ___B.D./E.D.	H. ___Lang./Comm.Dis.	M. ___Career/Voc. Ed.
D. ___SpEd. Ad.	I. ___Phys. Hand.	N. ___Generic/Cross Categ.
E. ___Gifted	J. ___Multiple Hand.	O. ___Other: _____

3. If you checked more than one item above, write the letter that represents your primary area of specialization:

_____

4. What is the age level of your specialization emphasis? (Please check one.)

___Early childhood ___Elementary ___Secondary ___Post-sec.

5. What is your academic rank? (Please check.)

___Instructor ___Assist. Professor ___Associate Professor

___Full Professor ___Other (Describe) _____

6. How many years have you been at the current college/university?

_____

7. Please record the percentages of time you give to each area. (Total equals 100%.)

___teaching ___administration ___research

___service ___other (Describe) _____

B. Program characteristics

8. Number of students in the college/university:

___2,500 or less ___10,001 - 15,000 ___25,001 - 30,000

___2,501 - 5,000 ___15,001 - 20,000 ___30,001 - 35,000

___5,001 - 10,000 ___20,001 - 25,000 ___35,001 or more

9. Does your state have certification requirements for the secondary level which are separate from the elementary level (i.e., K - 6) for teachers of students with mild to moderate handicaps?

___Yes ___No

10. In the requirements at the secondary level for teachers of the mild to moderately handicapped, does <u>your training program</u> require student teaching or practica in a high school setting?

___Yes ___No

11. Age level(s) for which you train special education teachers:

___EarlyChildhood ___Elementary ___Secondary ___Post-secondary

12. Including yourself, how many faculty members (those with a rank of at least assistant professor) teach preservice courses specifically targeted for secondary level teachers of students with mild to moderate handicaps?

_____

13. Are you interested in participating in a special interest group of the CEC-TED focusing on secondary and post-secondary teacher trainers?

___Yes ___No

14. Please correct any incorrect information on the attached mailing label:

|‾ ‾|

Please use the enclosed envelope and return this survey to us by May 15, 1987 (Friday). Thank you.

If you would like a summary of our results, please write your name and address on the back of the return envelope.

Survey 4: Implementation Survey of High School Special Education Program Activities

Overview

For most students with mild to moderate handicaps, the high school experience culminates their formal educational program. Thus, these educational experiences are very important to the students' futures and to their participation in the larger society as knowledgeable citizens, wage earners, and members and transmitters of the American culture. Given these important functions, an understanding of the goals of special educational programs and those of the larger educational setting, the high school, provides a framework in which students' cumulative experiences might be understood. We know several facts about these cumulative school experiences. For instance, we know that the regular high school program exists to qualify students to satisfy the various societal functions outlined above. Second, we know that the special education programs for mild to moderate students exist to respond to a variety of perceived student needs. Students participating in these programs have qualified for this participation through their documented learning and achievement differences from the mainstream of the high school population. We also recognize that these educational programs are developed and directed by a number of divergent elements and competing priorities (Bodner et al., 1987). Some influencing elements include the divergence of the population's characteristics, the reforms in regular education, the emphasis on transition services, the desired integration of regular and special education, and the training programs for instructional staff.

This diversity of priorities and influences helped to focus the objective of this research. The objective for this research project arose from the need among high school special education students with mild to moderate handicaps for a coordinated transition from the structured environment of school to the independent world of adulthood and employment. To achieve this coordinated transition, the research staff chose to examine high school special education programs and pre-service special education teacher training programs as currently implemented. Neither the goals of these programs nor their included activities have been documented in a national database. The National High School Project involved three research efforts, Bodner et al. (1987), Knowlton and Clark (1989), as well as the research described here. These efforts provide integrated, multiple perspectives on high schools' efforts to ensure the successful transition of students with mild to moderate handicaps to independent functioning in the community.

In this NHS research project, five surveys of directors of special education, superintendents of schools and pre-service teacher trainers were completed. Each survey was a step in completing the multi-attribute utility measurement procedure (MAUM) (Edwards, 1977). MAUM procedures provide a means for identifying goals and examining how well a set of options satisfy those goals. In this effort, the goals were conceptualized as desired attributes of special education programs and teaching staffs. The options were considered as the activities which take place in high school special education programs for students with mild to moderate handicaps or the pre-service training programs for teachers in those programs. The question addressed through these procedures was "Which of the activities are most likely to contribute to the goals?" As stated previously, and evidenced in responses to the Elicitation Survey, the goals represented a heterogeneous variety. Yet, these divergent goals represent the exact situation confronted by policy makers, administrators, and practitioners in the course of day-to-day educational planning and instruction. That is, these individuals must seek to

balance and meet a multifaceted set of educational goals advocated by a diverse public. Concurrently, they must complete this task through defined educational activities. An example of an apparent conflict is that students in special education programs are required to have an *individual* educational program, a course of studies specifically based on their unique strengths and weaknesses. The conflict becomes apparent when the district uses a standardized measure of achievement to assess the student's progress, to evaluate the effectiveness of the special education program, or to evaluate the district against a set of externally defined goals. In those cases, the assessment is unlikely to have included material which was specifically targeted for these students in special education programs. In such instances the accountability or effectiveness question is not adequately addressed, because the test's content was not based upon the student's curriculum or the teacher's instruction.

Just as responses to the Elicitation Survey noted a variety of goals, the responses also indicated that activities included in current high school special education programs vary widely, from basic skills instruction and driver education instruction to work study programs and vocational assessment. From this plethora of program activities, twenty-eight were categorized from responses on the Elicitation Survey. As the goals of the special education program were examined through two subsequent surveys, the Ranking Survey and the Weighting Survey, the data would seem to indicate that the respondents were much more comfortable in identifying quality programs in terms which described or characterized the programs themselves than what might be indicated by students' performance in a defined school curriculum or in their post-school adjustment as citizens, workers, or cultural members.

Given that quality programs are characterized primarily by a mixture of program descriptors as well as students' outcomes, the question remains, which activities foster these goals? That is, which of the various instructional activities are judged by directors of special education, superintendents of schools, and pre-service teacher trainers as best enhancing the divergent goals? A necessary assumption to this research project was that the activities included in high school special education programs were included to develop, enhance, or otherwise influence the attributes or goals of the programs. However, the remaining question was determining the extent to which the program's activities contributed to attributes of successful special education programs. Survey 4, the Implementation Survey, was intended to provide information establishing that link. In this manner, the researchers hoped that the findings would be useful in the selection and implementation of activities for special education programs designed for secondary school students with mild to moderate handicaps. That is, given an agreed upon set of goals, the activities which best fostered those goals could be identified and recommended for implementation.

Methodological Considerations

The major methodological problem confronted in Survey 4 concerned the need for reliable and accurate judgments from the respondents. The MAUM methodology required respondents to indicate the extent to which a particular activity, e.g., "Individualized instruction," supported or contributed to a desired goal of the program, e.g., "Regular education support and integration." The complicating factor was that on the first survey, the Elicitation Survey, over 28 activities had been identified. Thus, if each respondent were to evaluate the 28 activities for each of the ten program goals derived from Survey 2, the respondent would make 280 ratings (28 activities x 10 goals = 280 utility measurements). This number of ratings was not considered reasonable, particularly in light of the low response rates by superintendents of schools in previous surveys. Project staff considered the number as likely to contribute to a very low response rate. In addition, the number would fatigue even the most diligent respondents who chose to participate.

As an alternative to 280 measurements for each respondent, the decision was made to use a matrix sampling procedure. In this matrix sampling procedure, each respondent received a unique survey which contained all ten of the program attributes and a subset of seven activities from the 28 activities for each attribute. This item sampling plan allowed each respondent to examine program activities in light of each of the top ten program attributes. Further discussion of the sampling procedure and the instrumentation is provided in the procedures section of this report.

The second methodological issue concerned possible order effects in the respondents' answers. In theory, the answers from one item to the next item were independent. As one means to ensure this goal, the survey items were randomly ordered for each survey. This randomization procedure produced, in effect, a unique form for each survey. Thus, if an order effect was likely, each survey's content was altered such that the activities and attributes were presented in varied ordinal positions.

The surveys completed in this effort of the National High Sch. l project were designed to establish a database of special education directors', school superintendents', and pre-service teacher trainers' perspectives on the qualities of special education programs and their teaching staffs for students with mild to moderate handicaps. In this fourth survey, the purpose was to examine the relationship between existing special education programs' desired attributes and the activities which occur within those programs. That is, from the respondents' perspectives, how well do the program activities facilitate the accomplishment of identified priorities? The following section describes the methodology to address this question.

Method

The results of the previous surveys (Survey 1, the Elicitation Survey; Survey 2, the Ranking Survey; and Survey 3, the Weighting Survey) were prerequisites for the Implementation Survey. The Elicitation Survey (Survey 1) was designed for Directors of Special Education (DOSE), Superintendents of Schools (SOS), and Pre-service Teacher Trainers (PTT) at institutions of higher education to identify the attributes and activities of successful special education programs for students with mild to moderate handicaps. (Concurrently, they identified the desired attributes of special education instructional staffs in high school settings and the training activities which enhanced those attributes. The relationship between the staff attributes and the pre-service training activities is presented in Survey 5.) On the Ranking Survey (Survey 2), the top ten attributes of special education programs and staff were chosen by sixteen professionals in the education field. Next, DOSE, SOS, and PTT responses on the Weighting Survey (Survey 3) established mean normative weights for the top ten attributes of special education programs and the top ten attributes of special education teachers. These mean values were entered in a database for subsequent analyses on the results from this survey, the Implementation Survey.

The Implementation Surveys (Surveys 4 and 5) involved multi-attribute utility measurement (Edwards, 1977) procedures, the fourth major phase of this research project. Formally, this step in utility measurement is referred to as a location measure. "Location" refers to the degree to which a particular activity contributes to a specific program attribute. Location conveys the meaning that the different activities likely would have degrees of contribution to make and thus would be located differently from one attribute to another attribute on a rating or comparison continuum. This section details the Implementation Survey sent to DOSE and SOS regarding the various activities in high school special education

programs for students with mild to moderate handicaps. The survey procedures were designed to address the question: Which of the high school activities contributed most to the defined program attributes?

Subjects

The advance letter sent in the week of April 17, 1987 for Survey 3 (Weighting Survey) also determined the subjects for the Implementation Surveys. The advance letter (see Appendix G of Survey 3) , along with a post-paid card to be returned in case the subject could not participate in the survey, was sent to 800 DOSE and 900 SOS. One hundred seventy-one postcards were returned and those subjects were subsequently deleted from the database.

From the remaining database records, 650 DOSE and 750 SOS were randomly selected for both the Weighting and the Implementation Surveys. During the week of May 1, 1987, 450 SOS and 400 DOSE were sent the Implementation Survey on activities implemented in special education programs.

Materials

The materials are described in terms of a general description of the Implementation Survey, which had two versions, and a description of the two sections which made up each survey version: (1) the background information section and the (2) multi-attribute utility measurement procedure section.

General description of survey. Two versions of the Implementation Survey were developed, one for the (1) DOSE and SOS groups and another for the (2) PTT group. The DOSE and SOS version was employed in the utility measurements of high school special education program activities, discussed in this section of the report. The PTT Implementation Survey sent to pre-service teacher trainers at institutions of higher education is discussed separately as Survey 5: Implementation Survey of Pre-service Special Education Teacher Training Activities.

The Implementation Survey consisted of two sections. The principal document of the survey consisted of ten items, the ten program attributes, for the multi-attribute utility measurements procedure. The second part consisted of pages eliciting background information about the participant.

Construction of MAUM section. A Pascal computer program (see Appendix J) was used for generating the surveys so that both program attributes and program activities could be randomly ordered in all the survey forms.

The main body of the survey document (see Appendix K) sent to DOSE (n = 400) and SOS (n = 450) was composed of ten attribute items. Each item corresponded to a separate program attribute ranked among the top ten by professionals who participated in the Ranking Survey (Survey 2). A sample item is presented in Figure 2. In this example, two program attributes are presented; for each attribute, seven activities are listed. The respondent was asked to mark one of the choices (NA, 1, 2, 3, 4, 5, or 6) to the right of the activity listed, according to the respondent's perception of how effectively the given activity developed, cultivated or influenced the attribute designated by each item. If the activity was not part of the respondent's particular special education program, then s/he assigned a value of "NA" (not applicable), to the activity.

The ten highest-ranked attributes of successful special education programs identified in Survey 2, the Ranking Survey, were randomly ordered for each Implementation Survey form.

For each of the ten attributes, seven program activities were randomly selected from the set of 28 that were categorized in Survey 1, the Elicitation Survey. These seven program activities were randomly selected without replacement and randomly ordered for each survey prepared. Hence, each survey was a unique form due to the process of random selection (of program activities) and random ordering (of program attributes and program activities) in generating the survey items. Consideration was given to how many of the 28 activities should be presented with each of the ten attributes. Two values were considered. The first value was the likelihood of a survey being completed and returned. The second value was the number of responses deemed necessary to ensure a stable measurement of the variable. In balancing these two values, seven was chosen as an appropriate number of activities to include with each attribute. Thus, the respondent was asked to make seventy judgments (7 activities X 10 attributes). For the total sample, approximately 30 responses were expected for each of the program activities as paired with the program attributes. Hence, through the matrix sampling plan, unique individual surveys were constructed to provide a reliable measure of the respondent's view on the relationship of the ten program attributes and randomly selected program activities.

Respondents were asked to assign a value ranging from one (low) through six (high) to seven special education program activities listed with each program attribute. The respondents were asked to choose a value based on the degree to which the program activity contributed, developed, or otherwise influenced the particular attribute. If the activity was not part of the respondent's particular high school special education program, then the respondent assigned a value of seven, meaning "not applicable" to the program activity.

Construction of background information section. The first page of the Implementation Survey for the DOSE and SOS was designed to elicit background information regarding the survey participants. Respondents were asked to signify their employment position, their school district setting and enrollment size, their most recent degree earned, and their years at the current district. Both DOSE and SOS received identical background-information forms.

Figure 2. Sample items from Implementation Survey in the Multi-attribute Utility Measurement Procedures for DOSE and SOS.

1. To what extent does each of the following program activities develop successful independent living skills? (17)

Program Activities		Low					High	
a)	Career education	NA	1	2	3	4	5	6	(6)
b)	Fine arts instruction	NA	1	2	3	4	5	6	(23)
c)	Peer tutoring and peer counseling	NA	1	2	3	4	5	6	(15)
d)	Transition planning	NA	1	2	3	4	5	6	(19)
e)	Computer assisted instruction & training	NA	1	2	3	4	5	6	(21)
f)	Behavior modification plans	NA	1	2	3	4	5	6	(26)
g)	Driver's education instruction	NA	1	2	3	4	5	6	(4)

2. To what extent does each of the following program activities incorporate a vocational and career orientation? (12)

Program Activities		Low					High	
a)	Physical education instruction	NA	1	2	3	4	5	6	(2)
b)	Transition planning	NA	1	2	3	4	5	6	(19)
c)	Social skills instruction	NA	1	2	3	4	5	6	(8)
d)	Assessment plan	NA	1	2	3	4	5	6	(28)
e)	Guidance and counseling services	NA	1	2	3	4	5	6	(9)
f)	Inclusion in mainstreaming classes	NA	1	2	3	4	5	6	(13)
g)	Learning strategies instruction	NA	1	2	3	4	5	6	(10)

Survey Procedure

This section describes the process that generated the survey document, then the survey process, from mailing, to the returns, to the coding of responses, and through the data analyses on the participants' responses.

Pilot test. Prior to disseminating the surveys, two pilot studies were conducted. In the first pilot study, six graduate students at the Institute for Research in Learning Disabilities at the University of Kansas participated. On February 18, 1987, six doctoral students in special education completed a draft edition of the Implementation Survey.

The second pilot study was conducted in a graduate level research design class at the University of Kansas. In February, 1987, class members were asked to participate in a multi-attribute utility measurement procedure by designating a value between one through six to the impact of special education program activities on successful special education programs. Following the students' completion of the task, a discussion followed which focused on the instrument and procedures. Recommendations and clarifications resulting from the pilot studies were incorporated into the final version used in Survey 4.

Survey mailing. Two weeks after the April 17, 1987 advance mailing, the Implementation Survey forms were mailed, on the week of May 1, 1987; 450 were mailed to SOS and 400 to DOSE. The mailing included a letter of explanation, the survey itself, a postage-paid return envelope, and a pencil to facilitate the respondent's reply.

Survey returns. Table 31 shows the mailing targets for the Implementation Survey as well as the number and percentage of survey forms returned by the respondents for the DOSE and SOS.

Table 31

Mailing Targets and Respondents for the Implementation Survey for DOSE and SOS

Number of surveys	Directors	Superintendents
Mailed	400	450
Returned usable	155	108
Returned unusable	21	43
Total returned	176	151
(Percent)	(44%)	(34%)

Data coding. As the surveys were returned in the mail, each survey was given an identification number for tracking purposes. Sixty-four returned surveys were found unusable for reasons varying from that a person other than the targeted administrator responded to the items, to returns so delayed that the data analyses were completed before their arrival. Efforts were exerted to include survey responses whenever possible. For example, when someone other than the targeted administrator responded to the survey, if the respondent's position corresponded to the intended respondent (e.g., an assistant superintendent for a SOS or a SPED coordinator for a DOSE), then the return was deemed usable. Those surveys that were returned and found usable were coded for data entry and entered into a database for analyses.

In the analyses, the data of interest were the utility measurements assigned to the program activities. The utility measurement is a numerical value which combines the numerical weighting of a given attribute with the numerical value of the location measure. In this project, each of the ten top program attributes were weighted by groups of DOSE and SOS. These weights were the results reported in the Weighting Survey (Survey 3). The location measures were the values between one (low) and six (high) which were obtained in this survey for DOSE and SOS. The location measure represents the extent to which a particular program activity contributed, developed, or influenced a program attribute. A low value indicated that the activity made little contribution, while a high value indicated that the activity made a major contribution to a program attribute. Thus, the utility measurement reflected the importance that the respondents attached to particular program activities as a means of realizing program attributes. The program activity with the highest numerical value can be considered as the activity which has the greatest utility or value in meeting the desired program attributes.

In computing the utility measurements for the program attributes, a database was made which might be conceptualized as a matrix of rows and columns. A matrix was developed for each respondent. The matrix's columns represented each of the program attributes with its calculated mean weight (obtained from Survey 3, the Weighting Survey, respondents). These weights were calculated for the two groups separately. Thus, in calculating the utility measurements, the weighting assigned to the program attributes depended on each respondent's group membership, either DOSE or SOS. The matrix's rows represented the program activities. The individual cells included the product of multiplying a program attribute's weight by the location measure assigned by the respondent, a value from one to six. The utilities were summed across all of the attributes (columns) to determine the overall utility of a given activity.

Once these computations were completed for each respondent, the results were summed across all the respondents within the group, DOSE and SOS. These sums were the utilities for each of the program activities. However, since the magnitude of the sum depended in part on the number of respondents, statistical analyses were required before further interpretations could be completed.

Data analyses. Statistical indices were calculated on the utility measurements of the program activities. In other words, the dependent variables were the 28 program activities and the independent variable was the responding group, either DOSE or SOS. These statistics included descriptive statistics for the two responding groups – means, standard deviations, and confidence intervals – and inferential statistics for comparing the two groups – multivariate tests of significance, univariate F-tests, and univariate homogeneity of variance tests. The outcomes of these calculations are described in the Results section.

Results

Completed, usable surveys were coded and included in the statistical analyses. The results of the statistical procedures are described in this section. Initially, descriptive statistics were computed which were then followed by comparisons between the responding groups using multivariate analysis of variance techniques.

Descriptive Statistics

Table 32 shows the mean, standard deviation, and 95% confidence interval for each special education program activity for the DOSE and SOS. The program activities are listed with their mean values, from highest ("Inclusion in regular school activities," 125.2) to lowest ("Fine arts instruction," 56.3). These mean scores may be interpreted as the numerical values of DOSE's and SOS's responses to the query: Which special education program activities best foster, contribute, or develop the ten highest-ranked special education program attributes? Recall that the ten program attributes were selected from a larger set which had been rank ordered and weighted to reflect their importance for a quality special education program (see Surveys 2 and 3).

Doubling and then adding and subtracting the standard error of the mean offers the upper and lower limits at which the mean will be found 95 percent of the time. Thus, the 95% confidence interval for "Inclusion in regular school activities" was from 113.9 through 136.5. As with this project's previous surveys, the directors of special education were the primary reference group and their calculated values are listed in Table 32's first column.

The means and the standard deviations tended to correspond in that as the mean values decreased, the standard deviations also lessened so that "Fine arts instruction," which had the lowest mean utility value for the DOSE (56.3) also had the smallest deviation (50.62). Thus, the respondents had the greatest agreement among the activities which had the least utility. The program activity with the highest mean (Inclusion in regular school activities, with a mean of 125.2 and standard deviation of 71.2) did not have the most variance. "Individualized instruction," ranked second in mean value (125.1), had the largest standard deviation (77.7). However, the general pattern of variance estimates to mean values generally held. The higher the mean, the greater the dispersion of scores and the lower the mean value, the less dispersion evidenced among the scores.

Another index of the degree of overlap between the two groups' judgments was reflected by calculating the Spearman *rho* correlation among the rankings of the assigned mean values. The calculated correlation was .896. This value indicates a very high positive correlation among the DOSE's and SOS's ratings of the program activities.

Table 32

Cell Means and Standard Deviations of Special Education Program Activities as Ranked by Survey Respondents

Program activity	DOSE (n = 155)				SOS (n = 108)			
	Rank	Mean	SD	95 % Conf. int.	Rank	Mean	SD	95 % Conf. int.
Inclusion in regular school activities	1	125.2	71.2	113.9 - 136.5	7	116.4	76.9	101.7 - 131.0
Individualized instruction	2	125.1	77.7	112.8 - 137.4	4	122.6	77.7	107.7 - 137.4
Regular and adapted vocational education	3	121.2	71.6	109.8 - 132.6	10	110.6	79.4	95.4 - 125.7
Basic skills instruction	4	120.0	69.4	109.0 - 131.1	1	131.2	69.8	117.9 - 144.5
Functional academics instruction	5	119.5	65.7	109.1 - 130.0	5	122.5	72.8	108.6 - 136.4
Inclusion in mainstream classes	6	111.4	59.2	102.0 - 120.7	2	128.2	69.1	115.0 - 141.4
Guidance and counseling services	7	109.6	71.8	98.2 - 121.0	6	120.7	68.5	107.6 - 133.7
Academic assistance for mainstream classes	8	107.0	66.3	96.5 - 117.5	3	122.8	77.7	107.9 - 137.6

(table continues)

Table 32 continued

Program activity	DOSE (n = 155)				SOS (n = 108)			
	Rank	Mean	SD	95 % conf. int.	Rank	Mean	SD	95 % conf. int.
Social skills instruction	9	106.7	67.2	96.0 - 117.3	8	115.2	65.5	102.7 - 127.7
Work study program	10	105.5	72.1	94.0 - 116.9	15	102.8	73.9	88.7 - 116.9
Pre-vocational and career education	11	104.7	67.7	93.9 - 115.4	9	114.6	69.1	101.4 - 127.8
Independent living skills instruction	12	103.3	63.3	93.3 - 113.4	12	105.3	63.9	93.1 - 117.5
Learning strategies instruction	13	101.5	56.0	91.1 - 112.0	11	105.7	69.4	92.5 - 118.9
Hands-on materials and activities	14	94.8	73.2	83.2 - 106.4	14	104.3	58.1	93.2 - 115.4
Work adjustment and work activities	15	93.6	65.7	83.2 - 104.0	16	98.4	62.5	86.5 - 110.3
Driver's ed. instruction	16	92.5	61.0	82.8 - 102.2	17	93.4	64.7	81.0 - 105.7
Parent and employer involvement	17	86.9	70.3	75.8 - 98.1	23	83.2	60.0	71.7 - 94.6

(table continues)

Table 32 continued

Program activity	DOSE (n = 155)				SOS (n = 108)			
	Rank	Mean	SD	95 % conf. int.	Rank	Mean	SD	95 % conf. int.
Vocational assessment	18	86.4	65.4	76.0 - 96.8	19	89.0	58.5	77.9 - 100.2
Physical ed. instruction	19	86.3	54.2	77.7 - 94.9	13	105.2	53.9	94.9 - 115.5
Peer tutoring and peer counseling	20	85.6	62.5	75.7 - 95.6	24	81.0	59.4	69.7 - 92.4
Job placement program	21	83.0	69.9	71.9 - 94.1	27	70.5	58.1	59.4 - 81.6
Transition planning	22	80.6	60.9	70.9 - 90.2	22	83.4	57.7	72.4 - 94.4
Behavior modification plans	23	76.7	52.8	68.3 - 85.0	20	88.5	63.5	76.4 - 100.6
Assessment plan	24	74.3	58.3	65.0 - 83.5	21	84.4	59.8	72.9 - 95.8
Speech & communications instruction	25	67.5	52.3	59.2 - 75.8	18	90.4	56.3	79.7 - 101.2
Community-based instruction	26	66.5	53.0	58.1 - 74.9	28	58.6	52.2	48.6 - 68.5
Computer assisted instruction & training	27	62.6	50.9	54.5 - 70.7	25	74.0	55.1	63.5 - 84.5
Fine arts instruction	28	56.3	50.2	48.3 - 64.2	26	73.9	56.8	63.1 - 84.7

Multivariate Tests of Significance

Results of the Pillais, Hotellings, and Wilks multivariate tests of significance are shown in Table 33. These tests simultaneously tested the utility value means of the twenty-eight program activities of the DOSE and the SOS for statistically significant differences. A probability value of .05 or less was considered significant. Each test indicated an overall significant difference among the directors' and superintendents' utility measures of the program activities.

Table 33

Multivariate Tests of Significance for Special Education Program Activities (S = 1, M = 13, n = 116)

Test Name	Value	Exact F	Hypoth. DF	Error DF	*p* value
Pillais	.20467	2.15061	28.00	234.00	.001
Hotellings	.25734	2.15061	28.00	234.00	.001
Wilks	.79533	2.15061	28.00	234.00	.001

Univariate F-tests

Univariate F-tests were completed as post hoc measures and performed after the multivariate tests indicated significant *p* values for the overall test of group means. The univariate F-tests examined the equality of group means for each activity separately. A *p* value of .05 or less signified that the DOSE and SOS assigned significantly different utility measurements to that particular program activity. As shown on Table 34, four program activities ("Physical education instruction," "Inclusion in mainstream classes," "Speech and communications instruction," and "Fine Arts instruction") as well as the Total for the twenty-eight activities had significantly different mean values for the DOSE and the SOS. In each instance the SOS assigned greater utility than did the DOSE to these four activities, which is reflected in the larger mean values. From the SOS perspective then, these activities have greater value in realizing for their district the ten attributes identified with successful high school special education programs. The interpretation of these values is that the districts' superintendents of schools believed that these four activities contributed more to the special education programs' achievement of the desired attributes than did the local directors of special education. An interesting aspect about this list of four activities was that "Inclusion in mainstream classes" was the only activity which had a specific link to the special education program. That is, "mainstreaming" is a term associated with special education and reflects a particular philosophical perspective about service delivery. The other three activities are not unique to special education.

Table 34

Univariate F-tests with (1 and 261) Degrees of Freedom

Program activity	Hypoth. MS	Error MS	F	*p* value
Basic skills instruction	7899.00	4837.77	1.63	.202
Physical education instruction	22622.37	2926.21	7.73	.006*
Independent living skills instruction	243.32	4033.40	.06	.806
Driver education instruction	52.13	3914.11	.01	.908
Regular & adapted vocational education	7174.24	5603.26	1.28	.259
Pre-vocational & career education	6252.89	4663.61	1.34	.248
Work study program	448.11	5301.99	.08	.771
Social skills instruction	4600.15	4423.32	1.04	.309
Guidance & counseling services	7803.22	4962.84	1.57	.211
Learning strategies instruction	1114.21	4539.74	.25	.621
Academic assistance for mainstream classes	15872.58	5067.68	3.13	.078
Inclusion in regular school activities	4918.90	5421.09	.91	.342
Inclusion in mainstream classes	18035.60	4023.93	4.48	.035*
Individualized instruction	413.13	6037.99	.07	.794
Peer tutoring & peer counseling	1349.46	3753.84	.35	.549
Functional academics instruction	551.36	4721.04	.11	.733

(table continues)

Table 34 continued

Program activity	Hypoth. MS	Error MS	F	*p* value
Vocational assessment	456.67	3929.98	.11	.733
Community-based instruction	3992.44	2774.24	1.44	.231
Transition planning	515.59	3550.58	.15	.703
Speech & communications instruction	33305.17	2916.09	11.42	.001*
Computer assisted instruct & training	8277.27	2774.88	2.98	.085
Hands-on materials & activities	5747.75	4546.05	1.26	.262
Fine arts instruction	19754.58	2808.81	7.03	.008*
Work adjustment & work activities	1484.62	4147.11	.36	.550
Job placement program	9955.61	4266.61	2.33	.128
Behavior modification plans	8874.23	3294.33	2.69	.102
Parent & employer involvement	893.88	4395.42	.20	.652
Assessment plan	6488.58	3474.35	1.87	.173
Total Activities	7110.61	4182.50	1.70	.012*

Note. *p value = ≤ .05

Univariate Homogeneity of Variance Tests

As shown in Table 35, three program activities have calculated p values of .05 or less in the univariate homogeneity of variance tests. These significant values indicate that for the "Hands-on materials and activities," "Job placement program," and "Behavior modification plans," the calculated variances between the DOSE and SOS were reliably different. One of the assumptions of the univariate tests is that the variances are equal between the compared populations. The results of these homogeneity tests imply that three of the activities had variances which were not comparable. Despite these violations of one assumption, statisticians have demonstrated and accepted such findings as robust.

Table 35

Univariate Homogeneity of Variance Tests for Special Education Program Activities

Program activity	Bartlett-Box F(1,187254)	*p* value
Basic skills instruction	.00617	1.000
Physical education instruction	.00293	1.000
Independent living skills instruction	.01229	1.000
Driver's education instruction	.43982	.507
Regular & adapted vocational education	1.36571	.243
Pre-vocational & career education	.05501	1.000
Work study program	.07640	1.000
Social skills instruction	.07743	1.000
Guidance & counseling services	.28283	.595
Learning strategies instruction	.31684	.574
Academic assistance for mainstream classes	3.23885	.072
Inclusion in regular school activities	.75201	.386
Inclusion in mainstream classes	3.08992	.079
Individualized instruction	.00000	1.000
Peer tutoring & peer counseling	.33676	.562
Functional academic instruction	1.32450	.250
Vocational assessment	1.54396	.214
Community-based instruction	.02656	1.000
Transition planning	.36353	.547
Speech & communications instruction	.69450	.405

(table continues)

Table 35 continued

Program activity	Bartlett-Box F (1,187254)	*p* value
Computer assisted instruction & training	.80790	.369
Hands-on materials and activities	6.45756	.011*
Fine arts instruction	1.99005	.158
Work adjustment & work activities	.30113	.583
Job placement program	4.23394	.040*
Behavior modification plans	4.35664	.037*
Parent and employer involvement	3.06917	.080
Assessment Plan	.08225	1.000

Note. *p value = ≤ .05

Discussion

The fourth phase of the research project focused on DOSE and SOS implementation perspectives on the utility of program activities' impact on special education program attributes. This section of the report briefly reviews the survey procedure; enumerates the project's limitations of sample size, return rate, and instrumentation; summarizes the findings and infers conclusions; and indicates directions for further study.

The three previous surveys (Elicitation, Ranking, and Weighting) dealt with the identification and ranking in importance of the desirable attributes of special education programs. The Elicitation Survey (Survey 1) resulted in categorizations of 40 special education program attributes, 28 special education program activities, 23 special education teacher attributes, and 18 pre-service teacher training activities; however, the listings were not ranked. The Ranking Survey (Survey 2) involved 16 professionals who ranked the 40 special education program attributes and 23 special education teacher attributes. The two sets of ten highest-ranked attributes from the Ranking Survey were listed in the Weighting Survey (Survey 3), in which DOSE, SOS and PTT weighted the program attributes and teacher attributes.

As the final step in the establishment of utility measures for special education program activities, the Implementation Survey for DOSE and SOS made it possible to list a ranking of

activities as they enhance or somehow influence the desirable attributes of special education programs. Hence, the results of this fourth survey could not be compared with those of the previous surveys, since the focus shifted, from identifying and ranking the attributes of quality special education programs, to the degree of influence that special education program activities have upon the program attributes. The importance of this implementation survey is to develop an understanding of how the respondents, DOSE and SOS, evaluate the variety of activities that are included in high school special education programs for students with mild to moderate handicaps. For example, if a district's preeminent goal was to improve the students' reading scores, any activities which were not reading related would have little utility for accomplishing this goal. In the framework of this project, the goal, "improving students reading" might be thought of as an attribute of a quality high school special education program. The question addressed in this fourth survey was to establish the DOSE's and SOS's ratings on how well a variety of special education program activities contributed to ten highly ranked attributes of quality special education programs.

In this survey, the DOSE and SOS were told the ten goals or attributes of the high school special education program for students with mild to moderate handicaps. They were then asked to judge the extent to which a variety of educational activities included in **their programs** contributed to realizing those goals or enhancing those attributes. Remarkable congruence was evidenced across the ratings of the DOSE and SOS. The groups had comparable perceptions on the contributions that the different activities made to the set of desired attributes. This congruence was reflected in that only four of the twenty-eight activities had statistically significant different mean utility values, and in the high correlation between the groups' rank ordering of the activities' utilities' values, $r = .896$. These findings suggest that the two groups share a very similar perspective about the value of particular high school special education programs' activities. This shared perspective should provide an important basis on which reforms in special education can be discussed as well as for defining the relationship between special and regular education.

An important implication of these data is that from the perspective of a school's district level administration an integrated model of regular and special education services might be better understood. This integrated model provides the valued attributes of special education which in turn can be compared to the attributes of regular education and the programmatic activities of each curriculum. The results from Survey 3, the Weighting Survey, which indicated a shared perspective on the important attributes of high school special education programs, when integrated with the results of this survey provide another level on which high school special education programs can be planned, directed, and evaluated. The previous surveys (1 through 3) established the conceptual framework of desired attributes and program activities. With Survey 4 those attributes and activities were identified and linked in a quantitative relationship through the utility measurements. The activities have been rank ordered for their utility to foster the achievement of the identified program attributes. This data set provides that perspective at a national level across multiple states. However, also for local educational agencies and even state agencies a paradigm exists for directing special education reforms which could better integrate the programatic directions of regular and special education. The uniqueness of special education programs could be better defined in terms of both goals and instructional and curricular activities. This uniqueness of the respective programs would be evidenced through a comparison of goals and instructional and curricular activities provided in each. While this distinction between program goals and instructional activities might help explain or justify the differential in resource allocations, on the very practical level of developing students' Individual Educational Plans, this survey provides additional valuable information. Those individuals responsible for such decisions now have a frame of reference for judging the differences between alternative curricular offerings in regular and special education and the relationship of specific program activities to achieving those curricular goals.

At least one other value of these data which was alluded to previously is that of using the data as a baseline for the current relationship between desired goals of high school special education programs for students with mild to moderate handicaps and the program's activities. These data might be interpreted from the perspective of a needs assessment in which this current baseline is used to direct changes in the relative emphasis attached to particular goals or to the activities for realizing those goals. For example, the DOSE cited "Inclusion in regular school activities" as the activity which had the greatest utility for the identified attributes. A possible follow-up question which might be examined is "What are those regular school activities which are valued and in what other ways might the students participate and also benefit?" An additional question might be to ask "What characterizes those regular school activities which foster participation of students with mild to moderate handicaps?" The depth and methods of addressing such questions could also be quite variable and accommodate the diversity of schools' and districts' characteristics. The outcome of such an inquiry is that a broader and more comprehensive perspective might be obtained on the value and limitations of various aspects of the student's educational experience. More directly, such information would add to understanding our schools' influence on such functions as students' participation in the larger society as knowledgeable citizens, wage earners, and members and transmitters of the American culture.

An interesting contrast between the DOSE and SOS responses is the difference between the two program activities which the respective groups rated as having the greatest utility. As mentioned above, the DOSE gave their highest ratings to "Inclusion in regular school activities." The SOS rated this activity as seventh. The activity having the greatest utility for the SOS was "Instruction in basic skills," which in turn was rated fourth by the DOSE. While overall the correlation between the two group's ratings was high, such differences also point out a difference of fundamental perspectives about these students with mild to moderate handicaps. This difference of perspectives deserves further exploration.

Limitations

Although the Implementation Survey for DOSE and SOS involved 400 DOSE and 450 SOS randomly chosen from an original database of 800 DOSE and 900 SOS from 12 states, the usual constraints apply regarding inferring conclusions with knowledge of the population, the sample, the return rate, and the survey instrument itself. The survey participants were randomly chosen without replacement from the states of Delaware, Iowa, Indiana, Kansas, Kentucky, Missouri, Nevada, New Hampshire, North Carolina, Oregon, Pennsylvania, and South Dakota to represent school administrators in the nation. The return rate was 44% for the DOSE and 34% for the SOS; of 400 surveys sent to DOSE, 176 were returned, and of 450 surveys sent to SOS, 151 were returned. The return rate was less than desirable and suggests that a different methodology for data collection may be warranted in follow-up studies, e.g., phone interviews and focus groups.

Implications for Future Research

As a consequence of this survey's data, two questions appear particularly relevant: (1) What is the relationship of the program activities to individual program attributes? and (2) On what parameters such as content, instructional grouping, pace, instructional objectives, and instructional delivery should the varied program activities be meaningfully and usefully defined? The former question focuses on choosing one of the ten program attributes of interest and determining which of the activities have the greatest utility for realizing that attribute. Such a question is not inconsistent with the information in the data set and has a ready utility by increasing specificity. One might then know which of the many activities are judged as most relevant for achieving a particular goal. For example, in planning reforms, this

approach may have greater value because one can individually examine the program attributes and which of the activities were judged as particularly important to that attribute.

The second question concerning parameters of the program activities has direct implications for implementation. While the program activities were considered as mutually exclusive for the purposes of this project, similarities remain. Thus, an important issue is determining the parameters or dimensions on which the particular activities might be considered as distinctive. Examples of such parameters include content emphasis, grouping patterns, instructional objectives, criteria for judging performance, instructional setting, and integration across domains. Methods for developing such relationships are included in concept mapping. We believe that for the program activities to be meaningfully considered in light of defined goals, the activities must have shared meaning and uniqueness. As a first step this shared meaning is accomplished through clear conceptual and, ultimately, operational definitions. With that foundation, a district, state, or other group could proceed with more substantive discussions of planning and implementation of appropriate transition curricula across grade levels and settings.

Recommendations

We recognize the potential for a variety of recommendations given the richness of this survey's data. However, we have adopted a strategy of emphasizing a relatively few, narrowly defined recommendations. These recommendations have been organized to direct activities at both the local education agency level and at the state education agency. Again, we do not pretend that these recommendations are sufficient to adequately represent the findings.

Local education agency recommendations. The similarity between DOSE's and SOS's utility measurements was a (pleasant) surprise. As a consequence, we concluded that this shared similarity implies shared responsibilities and perceptions. With that foundation we recommend:

1) **That district level administration initiate a review or evaluation of the linkages and barriers between special education's service delivery and the regular high school program.** This evaluation must include two critical attributes: (a) that the emphasis be given to the secondary level of education rather than the primary and intermediate levels; and (b) that the reference of the evaluation should be in terms of the desired student outcomes. With these two criteria as foundation stones, other aspects of the review, such as inclusion of parents, students, graduates, business and community leaders, high school faculty, and administration and the methods of data gathering and analyses can be addressed.

2) **That programmatic goals be hierarchically arranged and compared to curricular content and activities.** Our perception of the responses suggests that a shared relationship of the course content and the program's goals is implicit. However, we believe that the quality of students' programs could be improved if these relationships of goals and content were made explicit. Such descriptions would aid in planning a student's program, as well as from the larger perspective, point out gaps in the program curriculum and goals. A third dimension of this relationship should also be explored, namely, the application range

State educational agency recommendations. State education agencies (SEAs) play the pivotal role with legislative and interagency issues. No other group within the state has that capacity. From that perspective, we envision that SEAs can build a shared vision of how high school students, who are so soon to become adults, can successfully make the transition from

high school settings to their future participation in a larger society. As such, this role leads us to offer the following recommendations:

1) That SEAs actively construct a sense of partnership among relevant agencies to ensure students' successful transition. Individual districts can and should continue to direct their efforts at working with local community resources for providing avenues to independence for their students. However, such efforts do not need to be in isolation of activities developed by other districts or agencies. In this area the SEA can serve as a clearing house for collecting and disseminating districts' current practices. In addition, the SEA can help intervene for local districts with interagency administrative structures and barriers, such as those experienced with vocational rehabilitation, vocational and technical education agencies, and other post-secondary educational programs. The SEA activities could provide an umbrella or, to use an opposite analogy, a foundation framework in which local efforts could be planned and implemented. State agencies have different missions for which structures are developed and resources allocated. The SEA could work to highlight how those structures and resources, which might be used in the local district, might ensure students' successful transition.

We believe that such a recommendation requires minimal new resources, but rather emphasizes a redirection of current resources. We advocate such a reallocation with an assumption that if students do not make successful transitions, the risks are significantly increased that they will be making greater demands for a longer period of time on other agencies' resources as clients. With a restructuring of complementary agencies and greater partnership among LEAs and agencies, we believe that students' transitions could be more successful.

2) That SEAs recognize a stronger role for accountability measures in their provision of resources to local districts. We believe that an important function of SEAs concerns setting and monitoring standards of quality. On the other hand, local districts frequently feel controlled by their state departments of education and perceive SEAs as lacking sensitivity to the local situations. To the extent that such feelings are accurate, calls for increased accountability are not deemed useful. However, we believe that such accountability measures need not be punishing and that increased accountability need not impose other, external standards of quality. The local standards might be accepted as appropriate. However, the initial first step is to ensure that the local standards of quality are identified and that local outcomes are examined in light of those standards as an index of performance. Quite simply, our recommendation is that local districts ensure that standards of quality have been identified and that they are held accountable to those standards. The SEA can assist with both factors.

Our rationale for this recommendation is a belief that most local education agencies (LEAs) are unlikely to establish clear operational statements of expectations for their programs, and even less likely to evaluate their programs. We believe that such an evaluation component provides feedback which in turn results in a sharper focus and improved services, i.e., an improved match between the goals and the activities within special education programs. Resources are linked to this evaluation component in a nominal manner so that those LEAs which have the procedures for such an evaluation are rewarded with discretionary funds from the SEA. The greater burden for this recommendation is with SEAs, which must shift its balance from monitoring and compliance with state and federal directed standards to recognizing the value of local standards as well.

Summary and Conclusions

A matrix was created in which the mean weights of the program attributes, obtained from the Weighting Survey, made up the columns. The program activities represented the matrix's rows. Individual cells held the product of the program attribute's weight by the location measure ((viz., the ranking given by the DOSE or SOS, ranging from 1 (low) to 6 (high)) assigned by the respondent. The products were summed across the columns to determine the utility measurement of a given activity. The results were summed across all the respondents within the group, DOSE and SOS, to generate the utilities for each of the program activities.

The Implementation Survey for DOSE and SOS generated a numerical value for the degree to which a special education program activity influenced an attribute of successful special education programs. Previous surveys, specifically, the Elicitation Survey, the Ranking Survey, and the Weighting Survey, were essential to this Implementation Survey.

The ten program activities with the highest utility measurements, as rated by the DOSE (see Table 32) were: "Inclusion in regular school activities," "Individualized instruction," "Regular and adapted vocational education," "Basic skills instruction," "Functional academics instruction," "Inclusion in mainstream classes," "Guidance and counseling services," "Academic assistance for mainstream classes," "Social skills instruction," and "Work study program."

The SOS agreed with the DOSE in nine of the ten highest-ranked activities (see Table 32). Nine of the ten activities ranked highly by the DOSE were also in the top-ten ranking of the SOS: "Basic skills instruction," "Inclusion in mainstream classes," "Academic assistance for mainstream classes," "Individualized instruction," "Functional academics instruction," "Guidance and counseling services," "Inclusion in regular school activities," "Social skills instruction," and "Regular and adapted vocational education." "Work study program," ranked 10th by the DOSE, was ranked 15th by the SOS, while "Pre-vocational and career education", ranked 9th by the SOS, was ranked 11th by the DOSE.

The five program activities with the lowest utility measurements, as ranked by the DOSE, were: "Fine arts instruction," "Computer assisted instruction and training," "Community-based instruction," "Speech and communications instruction," and "Assessment plan."

Similarly the SOS agreed with the DOSE on three of the five lowest-ranked activities: "Community-based instruction," "Fine arts instruction," and "Computer-assisted instruction and training." "Assessment plan" and "Speech and communications instruction," ranked 24th and 25th by the DOSE, were ranked 21st and 18th, respectively, by the SOS. On the other hand, "Peer tutoring and peer counseling," and "Job placement program," ranked 24th and 27th by the SOS, were ranked 20th and 21st, respectively, by the DOSE.

This Implementation Survey to directors of special education and superintendents of schools was used to establish the relationship between the influence of current special education program activities on attributes considered important to special education programs for students with mild to moderate handicaps. A surprisingly high agreement was noted between the groups' responses. The directors and superintendents perceived that secondary level special education program activities in general have similar value for the set of attributes. From our perspective, we want to emphasize the important relationships between a program's attributes and the activities which might foster the development of those attributes.

Appendix J

Pascal Program for Generating MAUM Survey

for Directors of Special Education and Superintendents of Schools

```
 2  program nhssurvey1;

 4  { April, 1987
 5    National High School Special Ed Program Survey
 6     Questionnaire-Generating Program
 7    File name: /NHSS/PASC1

 9   This program generates questionnaires for the National High School
10   Special Education Program Survey.  It uses an external Fortran function
11   (random number generator) to determine the order of 10 questions and
12   to select 7 activities per question.

14   The questionnaire consists of 4 pages, each of which contains 3 questions
15   except for the last page.  The default for the number of questionnaires
16   generated at a time is 50.  The default can be changed by modifying the
17   statement

19         for id := fnum to (fnum + 49) do

21   in the main program.  A distinct ID number is printed at the top of
22   each page.  The starting ID number is obtained from an external file
23   ("/NHSS/FNUMFILE") which contains a single integer.  The integer in
24   the external file is then incremented by 50, which will become the
25   new starting ID number.

27   The output from the Pascal program contains Roff commands.  It needs
28   to be formated with Roff before being IPRINTed (or XPRINTed).

30   The commands for generating questionnaires--including XPRINT--are
31   contained in the CRUN file "/NHSS/QRUN".)


34  type
35       ten = array[1..10] of integer;

37  var
38      dim: ten;      {questions--1 to 10}
39      fnum,      {starting IDNUM}
40      id,seed,index: integer;

42  function rcm(var s: integer) : real;
43  extern fortran;
44          {Random number generator--external}

46  function iseed(var s: integer) : integer;
47  extern fortran;

49  {*************************************************************************}

51  procedure getfnum(var fnum: integer);
52           {get the starting IDNUM from the file /NHSS/FNUMFILE}

54  var
```

```
 55       fnumfile: text;
 56       num: integer;
 57   begin
 58      openf(fnumfile,'1gixnhsproj/nhss/fnumfile','r');
 59      readln(fnumfile,fnum);
 60      num := fnum + 50;      (The starting ID is set to new IDNUM after 50 QR's are generated)
 61      openf(fnumfile,'1gixnhsproj/nhss/fnumfile','w');
 62      writeln(fnumfile,num:1);
 63      closef(fnumfile)
 64   end;    {getfnum}

 66   {*****************************************************************************}

 68   procedure initialize(var numlist: ten);
 69             {initialize questions and activities spaces to zero}

 71   var
 72       i: integer;
 73   begin
 74      for i := 1 to 10 do
 75         numlist[i] := 0
 76   end;  {initialize}

 78   {*****************************************************************************}

 80   procedure idprint(num: integer);
 81   begin
 82      if num < 1000
 83         then
 84            begin
 85               write('0');
 86               if num < 100
 87                  then
 88                     begin
 89                        write('0');
 90                        if num < 10
 91                           then
 92                              write('0')
 93                     end
 94            end;
 95      write(num:1)
 96   end;  {idprint}

 98   {*****************************************************************************}

100   procedure titleprint(num: integer);

102   var
103       i: integer;
104   {*********************************}
105   procedure underline;

107     var
108         col: integer;
```

```
109     begin
110        for col := 1 to 84 do      {underline 84 columns}
111           write('_');
112        writeln
113     end;  {underline}
114   {************************************}
115   begin  {titleprint}
116      writeln('.pl 60');
117      writeln('.ll 96');
118      writeln('.po 6');
119      writeln('.m1 0');
120      writeln('.m2 0');
121      writeln('.m3 0');
122      writeln('.m4 0');
123      writeln('.nf');
124      writeln('.tr $ ');
125      writeln('.fi');
126      writeln('.nj');
127      writeln('.ti +27');
128      writeln('National High School Project$$$$$$$$$$$$$$$$$$$$');
129      writeln('ID:$');
130      idprint(num);
131      writeln;
132      writeln('.br');
133      writeln('.ti +16');
134      writeln('Evaluation of High School Level Special Education');
135      writeln('.br');
136      writeln('.ti +19');
137      writeln('for Students with Mild to Moderate Handicaps');
138      writeln('.br');
139      writeln('.nf');
140      underline
141   end;  {titleprint}

143   {*************************************************************************************}

145   procedure dimselect(var seed: integer; var newlist: ten);
146              {determine the order of questions}

148   var
149       list: ten;
150       ind,num: integer;
151   {************************************}
152   procedure selectnum(ind: integer; var seed,num: integer);
153                      {randomly select 10 numbers}

155     var
156         i: integer;
157     begin
158         i := 11 - ind;
159         num := trunc( rcm(seed) * 100.0) mod i + 1
160     end;  {selectnum}
161   {************************************}
162   {************************************}
```

```
163  procedure getlist(ind,num: integer; var list,newlist: ten);
164                  {store the numbers in the order they are selected}

166    var
167        i,j: integer;
168    begin
169       newlist[ind] := list[num];
170       i := 10 - ind;
171       for j := num to i do
172          list[j] := list[j + 1]
173    end;  {getlist}
174  {*********************************}
175  begin  {dimselect}
176     for ind := 1 to 10 do
177        list[ind] := ind;
178     for ind := 1 to 10 do
179        begin
180           selectnum(ind,seed,num);
181           getlist(ind,num,list,newlist)
182        end
183  end;  {dimselect}

185  {*****************************************************************************}

187  procedure qprocess(index,quest: integer; var seed: integer);

189  var
190      actv: ten;
191  {*********************************}
192  procedure qprint(index,quest: integer);     {print question}

194  {*********************}
195  procedure qline1(q: integer);     {print line 1 of question}
196      begin
197         if (q = 10)
198            then
199               begin
200                  writeln('.fi');
201                  writeln('.nj')
202               end;
203         write(index:2,'. ');     {Nth question--1 to 10}
204         write('To what extent does each of the following program activities ');
205         case q of
206            1,3,8 : writeln('contribute to');
207            2 : writeln('successfully');
208            4 : writeln('incorporate');
209            5,6 : writeln('influence');
210            7,10 : writeln('develop');
211            9 : writeln('elicit')
212         end;
213         if (q = 10)
214            then
215               begin
216                  writeln('.ul');
```

```
217                     writeln('successful');
218                     writeln('.br')
219                 end
220         end;  {qline1}
221     {********************}
222     {********************}
223     procedure qline2(q: integer);     {print line 2 of question}

225         var  i,sp,dimn: integer;

227         begin
228             if (q = 2)
229                 then
230                     writeln('involve');
231             writeln('.ul');
232             case q of
233                 1 : write('individualized, appropriate instruction');
234                 2 : write('regular education support and integration');
235                 3 : write('a post-secondary transition curriculum');
236                 4 : write('a vocational and career orientation');
237                 5 : write('employment success');
238                 6 : write('successful personal and social adjustment');
239                 7 : write('successful independent living skills');
240                 8 : write('your high school special education teachers'' success with students');
241                 9 : write('support from staff, parents, business and the community');
242                 10 : write('leadership and support from your high school administration')
243             end;
244             write('?');
245             case q of      {determine number of blanks inserted up to question number}
246                 1 : sp := 34;
247                 2 : sp := 24;
248                 3 : sp := 35;
249                 4 : sp := 38;
250                 5 : sp := 55;
251                 6 : sp := 32;
252                 7 : sp := 37;
253                 8 : sp := 7;
254                 9 : sp := 18;
255                 10 : sp := 14
256             end;
257             for i := 1 to sp do
258                 write('$');
259             writeln;
260             case q of      {determine question number--obtained from earlier survey}
261                 1 : dimn := 1;
262                 2 : dimn := 3;
263                 3 : dimn := 9;
264                 4 : dimn := 12;
265                 5 : dimn := 15;
266                 6 : dimn := 16;
267                 7 : dimn := 17;
268                 8 : dimn := 24;
269                 9 : dimn := 27;
270                 10 : dimn := 36
```

```
271           end;
272           writeln('(',dimn:1,')')
273         end;  (qline2)
274   (********************)
275     begin  (qprint)
276       writeln;
277       qline1(guest);
278       writeln('.fi');
279       writeln('.nj');
280       writeln('.ti +5');
281       qline2(guest);
282       writeln('.br');
283       writeln;
284       writeln('.ti +8');
285       writeln('.ul');
286       writeln('Program Activities$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$Low          High');
287       writeln('.br');
288       writeln('.nf')
289     end;  (qprint)
290   (**********************************)

292   (**********************************)
293   procedure actvselect(var seed: integer; var actv: ten);
294             (select activities)
295   (********************)
296   procedure select(var seed: integer; var a: ten);

298       var
299           i,j,num: integer;
300           samenum: boolean;
301       begin
302           for i := 1 to 7 do      (select 7 activities out of 28)
303             begin
304               samenum := false;
305               num := trunc( rcm(seed) * 100.0) mod 28 + 1;
306               if i > 1
307                 then
308                   begin
309                     j := 1;
310                     while j <= (i - 1) do
311                       begin
312                         samenum := (num = a[j]);
313                         if samenum
314                           then
315                             begin
316                               num := trunc( rcm(seed) * 100.0) mod 28 + 1;
317                               j := 1
318                             end
319                           else
320                             j := j + 1
321                       end
322                   end;
323               a[i] := num
324             end
```

```
325         end;  {select}
326     {********************}
327       begin  {actvselect}
328           initialize(actv);
329           select(seed,actv)
330       end;   {actvselect}
331     {************************************}

333     {************************************}
334     procedure actvprint(actv: ten);     {print activities}

336       var
337           i,j: integer;
338           ch: char;
339     {********************}
340     procedure aprint(a: integer);

342         var  i,sp : integer;
343         begin
344            case a of
345                1 : write('Basic skills instruction');
346                2 : write('Physical education instruction');
347                3 : write('Independent living skills instruction');
348                4 : write('Driver''s education instruction');
349                5 : write('Regular and adapted vocational education');
350                6 : write('Career education');
351                7 : write('Work-study program');
352                8 : write('Social skills instruction');
353                9 : write('Guidance and counseling services');
354               10 : write('Learning strategies instruction');
355               11 : write('Academic assistance for mainstreamed classes');
356               12 : write('Inclusion in regular education school activities');
357               13 : write('Inclusion in mainstreaming classes');
358               14 : write('Individualized instruction');
359               15 : write('Peer tutoring and peer counseling');
360               16 : write('Functional academics instruction');
361               17 : write('Vocational assessment');
362               18 : write('Community-based instruction');
363               19 : write('Transition planning');
364               20 : write('Speech and communications instruction');
365               21 : write('Computer-assisted instruction and training');
366               22 : write('Hands-on materials and activities');
367               23 : write('Fine arts instruction');
368               24 : write('Work adjustment and work activities');
369               25 : write('Job placement program');
370               26 : write('Behavior modification plans');
371               27 : write('Parent or employer involvement');
372               28 : write('Assessment plan')
373            end;
374            case a of      {determine number of blanks up to the activity number}
375               1 : sp := 24;
376               2 : sp := 19;
377               3 : sp := 11;
378               4 : sp := 18;
```

```
379             5 : so := 8;
380             6 : sp := 32;
381             7 : so := 30;
382             8 : so := 23;
383             9 : sp := 16;
384             10 : sp := 17;
385             11 : sp := 4;
386             12 : sp := 0;
387             13 : sp := 14;
388             14 : sp := 22;
389             15 : sp := 15;
390             16 : sp := 16;
391             17 : sp := 27;
392             18 : sp := 21;
393             19 : sp := 20;
394             20 : sp := 11;
395             21 : sp := 6;
396             22 : sp := 15;
397             23 : sp := 27;
398             24 : sp := 13;
399             25 : sp := 27;
400             26 : sp := 21;
401             27 : sp := 18;
402             28 : sp := 33
403           end;
404           for i := 1 to sp do
405             write('$')
406       end;  {aprint}
407   {*********************}
408     begin   {actvprint}
409       for i := 1 to 7 do
410         begin
411           ch := chr(i + 96);
412           write('   (',ch,') ');      {Nth activity--(a) to (g)}
413           aprint(actv[i]);
414           write('  NA  1  2  3  4  5  6');
415           for j := 1 to 2 do
416             write('$');
417           writeln(' (',actv[i]:1,')');
418           if not (i = 7)
419             then
420               writeln
421         end
422     end;  {actvprint}
423   {*********************************}
424   begin  {qprocess}
425     qprint(indexquest);
426     actvselect(seed,actv);
427     actvprint(actv)
428   end;  {qprocess}

430   {*****************************************************************************}

432   procedure botprint(ind: integer);
```

```
433                 {print page number at bottom of page}

435   var
436       pnum: integer;
437   begin
438      writeln('.fn');
439      writeln('.ti +35');
440      case ind of      {determine page number}
441         3 : pnum := 2;
442         6 : pnum := 3;
443         9 : pnum := 4;
444         10 : pnum := 5
445      end;
446      writeln('page ',pnum:1,' of 6');
447      writeln('.en');
448      writeln('.bp')
449   end;  {botprint}

451   {*****************************************************************************}

453   procedure topprint(num: integer);
454             {print IDNUM at top of page but 1}

456   var
457       page: integer;
458   begin
459      writeln('.fi');
460      writeln('.nj');
461      writeln('.ti +75');
462      writeln('ID:');
463      idprint(num);
464      writeln;
465      writeln('.br');
466      writeln('.nf')
467   end;  {topprint}

469   {*****************************************************************************}

471   begin  {main}
472      seed := iseed(seed);
473      getfnum(fnum);
474      for id := fnum to (fnum + 2) do      {This repeats 3 times}
475         begin
476            initialize(dim);
477            titleprint(id);
478            dimselect(seed,dim);
479            for index := 1 to 10 do
480               begin
481                  qprocess(index,dim[index],seed);
482                  if (index = 3) or (index = 6) or (index = 9) or (index = 10)
483                     then       {end page after questions 3,6,9,10}
484                        begin
485                           botprint(index);
486                           if (index = 3) or (index = 6) or (index = 9)
```

```
                              then
                                 topprint(id)
                        end
                 end
          end
    end.   {main}
```

Appendix K

Sample MAUM Survey for Directors of Special Education and Superintendents of Schools

High School Special Education Program Attributes

Directions

Complete the following questions by referencing your high school's **special education programs for students with mild to moderate handicaps.**

Circle the number which best represents your judgment. If a program activity minimally applies to the attribute, circle "1." If the activity highly applies to the attribute, circle "6." Values between 1 and 6 allow you to specify the degree to which the activity applies. If the activity is not available in your program, circle "NA," meaning "not available."

Example

Suppose one of the important attributes of a traditional vocational education program is the extent to which students acquire "skills in accepting criticism." A variety of training activities are included in many vocational programs, e.g.,(a) classroom lectures, (b) role playing exercises, and (c) on-the-job experience.

Question: To what extent does each of the following activities develop a student's skills in accepting criticism?

Low					High		Training Activity
NA	1	(2)	3	4	5	6	(a) classroom lectures
NA	1	2	3	4	(5)	6	(b) role playing exercises
(NA)	1	2	3	4	5	6	(c) on-the-job experience

The "classroom lectures" provide some information on skills in accepting criticism, but not much, thus the rating of "2." "Role playing exercises" address this attribute extensively, therefore the rating might be "5." The program does not offer "on-the-job training," hence it was rated "NA," meaning "not available."

1. To what extent does each of the following program activities develop successful independent living skills? (17)

Program Activities		Low					High	
(a) Career education	NA	1	2	3	4	5	6	(6)
(b) Fine arts instruction	NA	1	2	3	4	5	6	(23)
(c) Peer tutoring and peer counseling	NA	1	2	3	4	5	6	(15)
(d) Transition planning	NA	1	2	3	4	5	6	(19)
(e) Computer-assisted instruction and training	NA	1	2	3	4	5	6	(21)
(f) Behavior modification plans	NA	1	2	3	4	5	6	(26)
(g) Driver's education instruction	NA	1	2	3	4	5	6	(4)

2. To what extent does each of the following program activities incorporate a vocational and career orientation? (12)

Program Activities		Low					High	
(a) Physical education instruction	NA	1	2	3	4	5	6	(2)
(b) Transition planning	NA	1	2	3	4	5	6	(19)
(c) Social skills instruction	NA	1	2	3	4	5	6	(8)
(d) Assessment plan	NA	1	2	3	4	5	6	(28)
(e) Guidance and counseling services	NA	1	2	3	4	5	6	(9)
(f) Inclusion in mainstreaming classes	NA	1	2	3	4	5	6	(13)
(g) Learning strategies instruction	NA	1	2	3	4	5	6	(10)

3. To what extent does each of the following program activities develop successful leadership and support from your high school administration? (36)

Program Activities		Low					High	
(a) Inclusion in mainstreaming classes	NA	1	2	3	4	5	6	(13)
(b) Work-study program	NA	1	2	3	4	5	6	(7)
(c) Social skills instruction	NA	1	2	3	4	5	6	(8)
(d) Transition planning	NA	1	2	3	4	5	6	(19)
(e) Independent living skills instruction	NA	1	2	3	4	5	6	(3)
(f) Career education	NA	1	2	3	4	5	6	(6)
(g) Inclusion in regular education school activities	NA	1	2	3	4	5	6	(12)

4. To what extent does each of the following program activities influence successful personal and social adjustment? (16)

Program Activities		Low				High		
(a) Behavior modification plans	NA	1	2	3	4	5	6	(26)
(b) Guidance and counseling services	NA	1	2	3	4	5	6	(9)
(c) Academic assistance for mainstreamed classes	NA	1	2	3	4	5	6	(11)
(d) Speech and communications instruction	NA	1	2	3	4	5	6	(20)
(e) Driver's education instruction	NA	1	2	3	4	5	6	(4)
(f) Peer tutoring and peer counseling	NA	1	2	3	4	5	6	(15)
(g) Individualized instruction	NA	1	2	3	4	5	6	(14)

5. To what extent does each of the following program activities elicit support from staff, parents, business and the community? (27)

Program Activities		Low				High		
(a) Social skills instruction	NA	1	2	3	4	5	6	(8)
(b) Transition planning	NA	1	2	3	4	5	6	(19)
(c) Speech and communications instruction	NA	1	2	3	4	5	6	(20)
(d) Inclusion in regular education school activities	NA	1	2	3	4	5	6	(12)
(e) Behavior modification plans	NA	1	2	3	4	5	6	(26)
(f) Physical education instruction	NA	1	2	3	4	5	6	(2)
(g) Work adjustment and work activities	NA	1	2	3	4	5	6	(24)

6. To what extent does each of the following program activities contribute to your high school special education teachers' success with students? (24)

Program Activities		Low				High		
(a) Academic assistance for mainstreamed classes	NA	1	2	3	4	5	6	(11)
(b) Work adjustment and work activities	NA	1	2	3	4	5	6	(24)
(c) Assessment plan	NA	1	2	3	4	5	6	(28)
(d) Regular and adapted vocational education	NA	1	2	3	4	5	6	(5)
(e) Independent living skills instruction	NA	1	2	3	4	5	6	(3)
(f) Inclusion in regular education school activities	NA	1	2	3	4	5	6	(12)
(g) Behavior modification plans	NA	1	2	3	4	5	6	(26)

7. To what extent does each of the following program activities contribute to a post-secondary transition curriculum? (9)

Program Activities	Low					High	
(a) Driver's education instruction	NA	1	2	3	4	5	6 (4)
(b) Vocational assessment	NA	1	2	3	4	5	6 (17)
(c) Inclusion in regular education school activities	NA	1	2	3	4	5	6 (12)
(d) Parent or employer involvement	NA	1	2	3	4	5	6 (27)
(e) Guidance and counseling services	NA	1	2	3	4	5	6 (9)
(f) Hands-on materials and activities	NA	1	2	3	4	5	6 (22)
(g) Individualized instruction	NA	1	2	3	4	5	6 (14)

8. To what extent does each of the following program activities influence employment success? (15)

Program Activities	Low					High	
(a) Social skills instruction	NA	1	2	3	4	5	6 (8)
(b) Career education	NA	1	2	3	4	5	6 (6)
(c) Computer-assisted instruction and training	NA	1	2	3	4	5	6 (21)
(d) Job placement program	NA	1	2	3	4	5	6 (25)
(e) Behavior modification plans	NA	1	2	3	4	5	6 (26)
(f) Inclusion in regular education school activities	NA	1	2	3	4	5	6 (12)
(g) Basic skills instruction	NA	1	2	3	4	5	6 (1)

9. To what extent does each of the following program activities successfully involve regular education support and integration? (3)

Program Activities	Low					High	
(a) Hands-on materials and activities	NA	1	2	3	4	5	6 (22)
(b) Regular and adapted vocational education	NA	1	2	3	4	5	6 (5)
(c) Community-based instruction	NA	1	2	3	4	5	6 (18)
(d) Individualized instruction	NA	1	2	3	4	5	6 (14)
(e) Behavior modification plans	NA	1	2	3	4	5	6 (26)
(f) Speech and communications instruction	NA	1	2	3	4	5	6 (20)
(g) Physical education instruction	NA	1	2	3	4	5	6 (2)

10. To what extent does each of the following program activities contribute to individualized, appropriate instruction? (1)

Program Activities		Low				High		
(a) Speech and communications instruction	NA	1	2	3	4	5	6	(20)
(b) Learning strategies instruction	NA	1	2	3	4	5	6	(10)
(c) Regular and adapted vocational education	NA	1	2	3	4	5	6	(5)
(d) Inclusion in regular education school activities	NA	1	2	3	4	5	6	(12)
(e) Work adjustment and work activities	NA	1	2	3	4	5	6	(24)
(f) Hands-on materials and activities	NA	1	2	3	4	5	6	(22)
(g) Peer tutoring and peer counseling	NA	1	2	3	4	5	6	(15)

School Superintendents and Directors of Special Education Information

1. Please check one:

   I am a ___ school superintendent.

   ___ director of special education.

   ___ other. (Tell us.) _____

2. The region in which I work might be best characterized as:

   ___ rural, isolated geographically and sparsely populated

   ___ rural, small town

   ___ suburban

   ___ urban

3. Please complete one of the following statements (a or b):

   a. What is the total enrollment in your school district? _____

   b. If your service area includes a number of school districts, such as in a special education cooperative or interlocal, what is the total enrollment of those school districts?

      _____

4. What was the last degree you earned? (Please check.)

   ___B.A./B.S. ___M.A./M.S. ___Ed. Spec. ___ Ph.D./Ed.D.

5. How many years have you been at the current district? _____

6. Please correct any incorrect information on the attached mailing label:

   |‾ ‾|

Please use the enclosed envelope and mail this survey to us by May 15, 1987 (Friday). Thank you.

If you would like a summary of our results, please write your name and address on the back of the return envelope.

Survey 5: Implementation Survey of Pre-service Special Education Teacher Training Activities

Overview

The high school's instructional experiences provide the last formal educational opportunities for most students with mild to moderate disabilities. Numerous reports on the efficacy of these experiences have been equivocal or at best very troubling. Many reviewers have called into question the value of special education services as they currently are provided and speculated on alternative organizational changes to better accommodate students identified as having special needs.

From the National High School Project staff's perspective, very important aspects of these high school experiences can be understood by examining both the relative emphasis given to different curricular content and activities and the characteristics of those instructors providing the learning experiences. The curricular aspects of the high school special education experiences were reviewed in the results reported in the section entitled "Survey 4: Implementation Survey of High School Special Education Program Activities." This section details the methodology and findings of the Implementation Survey mailed to pre-service teacher trainers (PTT) at institutions of higher education. This survey is a parallel of the format from Survey 4 used with the directors of special education (DOSE) and superintendents of schools (SOS), but differs to reflect the emphasis and perspective provided by pre-service teacher trainers. The previous surveys provided a framework for understanding desired attributes and activities in a high school special education program and the desired qualities of instructional staff in that setting. Indeed, in Survey 4 the numerical relationship between program attributes and activities was identified. This relationship provided a quantitative dimension to understanding how different curricular activities and content were perceived as facilitating particular program goals. On the basis of such information state and local education agencies could examine their own special education programs for a variety of purposes, such as a needs assessment or to establish a baseline against which changes could be monitored.

As indicated above, in addition to a program's curricular content and activities, another major facet is the quality of the instructional staff. More than any other single factor the instructional staff is responsible for a program's quality. This finding was confirmed in both Survey 3, the Weighting Survey, and the qualitative component of the National High School Project (Knowlton & Clark, 1989). Given this, the pre-service program is believed to have the major influence on the entry level skills of the instructional staff. Thus, on the basis of these perspectives, an important inquiry is the relationship between the desired qualities of high schools' teaching staffs and pre-service training activities. This relationship was assessed in Survey 5, the implementation survey to pre-service teacher trainers. The question could be stated as: Given a defined set of ten desired teacher attributes, which pre-service training activity has the greatest utility for developing that defined set of desired teacher attributes? Recall that the ten desired teacher attributes identified in Survey 2, the Ranking Survey, included: (1) Instructional skills, (2) Assessment skills for planning and instruction, (3) Curriculum and instructional planning skills, (4) Knowledge of transition, (5) Behavior management skills, (6) Works well with people, (7) Classroom organization skills, (8) Works cooperatively with staff and administration, (9) Skill in assessing outcomes, and (10) Incorporates vocational/career education.

Methodological Considerations

The survey methodology used in the National High School Project was designed to establish a database of the perspectives held by directors of special education, superintendents of schools, and pre-service teacher trainers on the desired qualities of high school special education programs and staff. In this particular survey, the efforts were directed at establishing the relationship of teacher training programs' activities with the desired qualities of high school instructional staff for students with mild to moderate handicaps. That is, in the judgment of the special education teacher trainers themselves, how well do the activities in their programs develop identified, desired skills in teachers?

The methodological issues in this fifth survey were the same ones as described for Survey 4. That is, two major concerns were identified. The first concern was to minimize the effort required of the respondents both to ensure a high participation rate and the accuracy of the data provided. A matrix sampling plan was followed again to reduce the number of responses required by any one respondent. Further elaboration of the matrix sampling procedures are provided in the procedures section of this report.

The second methodological issue was the concern regarding possible order effects if all the respondents received uniform survey items all in the same order. As in Survey 4, a randomization procedure was followed in which the computer generated unique versions of the survey.

Method

Subjects

Part of the first mailing for Survey 1, the Elicitation Survey, was a letter to 716 special education department chairpersons at institutions of higher education. The chairpersons were asked to complete and return a stamped postcard. On the postcard, the respondents were to write the names and addresses of colleagues who were teacher trainers for secondary settings and would be interested in participating in the study. This process generated 640 names from fifty states which were entered into a database for the mailing list. From this list, 550 names were randomly selected without replacement. The minimum criterion employed was that at least one individual from each state must be included in the sample. Among the 550 names, 225 Pre-service Teacher Trainers (PTT) were sent the Weighting Survey (Survey 3), while 325 were targeted for Survey 5, the PTT Implementation Survey.

Materials

Two versions of the Implementation Survey were developed: one for the DOSE and SOS and another for the PTT. The DOSE and SOS version, generating multi-attribute utility measurements of special education program activities, was discussed under Survey 4.

This section details the Implementation Survey for the PTT, which employed a multi-attribute utility measurement procedure and generated a numerical value for the degree to which pre-service training activities foster the attributes of special education teachers.

Construction of survey. The main body of the survey (see Appendix L for a sample form) was comprised of ten items. Each item corresponded to a separate special education teacher

attribute, identified as among the top ten by professionals who participated in the Ranking Survey (Survey 2). These top ten attributes were previously identified from a list of 23 categorized in the Elicitation Survey (Survey 1).

A sample item is presented in Figure 3. In this example, two teacher attributes are presented with six accompanying training activities. Respondents assigned a value ranging from "1" (low) through "6" (high) to six pre-service teacher training activities listed with each teacher attribute. The respondents were asked to choose a value based on the degree to which the training activity contributed, developed, or otherwise influenced the particular teacher attribute. If the training activity was not part of the respondent's particular special education teacher training program, then s/he assigned a value of "NA (not applicable), to the training activity.

The top ten attributes of quality special education teachers, identified in the Ranking Survey (Survey 2) were randomly ordered for each survey form using a Pascal computer program. The Pascal computer program (see Appendix M) was used for generating the surveys to achieve uniqueness for each of the survey forms. Six training activities were randomly selected without replacement and randomly ordered for each of the ten teacher-attribute items. The six training activities were randomly selected from the set of 18 categorized in the Elicitation Survey (Survey 1).

Consideration was given to how many of the 18 activities should be presented with each of the ten attributes. Six was chosen as a number which seemed reasonable for the type of decision required, the speed at which each item could be completed, and the total time involved. A minimum of 30 responses for each activity was considered necessary to yield a stable measurement of each training activity. By using six activities for each of the ten attributes, the respondents were asked to make 60 judgments (6 X 10 = 60) in the survey. Each survey was a unique form due to these random selection of the six training activities from the set of 18 and random ordering (of the ten teacher attributes as well as the six randomly selected training activities) procedures for generating the survey items.

Construction of background information section. The first two pages of the PTT Implementation Survey was designed to elicit background information regarding each survey participant. Respondents were asked to signify their last degree earned, area of specialization, age level of specialization emphasis, number of years in current institution, percent of time spent in work-category area, number of students enrolled at the institution, special education teacher-certification requirements, and number of faculty members in the department.

Survey Procedure

This section describes the survey procedure followed, starting with the pilot test, then the survey dissemination and returns, the data coding for the survey forms returned, and the data analyses on the resulting database.

Pilot test. Prior to the Weighting and Implementation Surveys, two pilot studies were conducted. The first one involved staff members of the Institute for Research in Learning Disabilities at the University of Kansas and was a precursor to the Weighting Survey, which is discussed in the report on Survey 3, the Weighting Survey.

Figure 3. Sample items from Implementation Survey in the Multiattribute Utility Measurement Procedures for PTT.

1. To what extent does each of the following training activities develop skills in working with people? (9)

Training Activities		Low					High	
(a) Individual advisement or conferences	N A	1	2	3	4	5	6	(13)
(b) Curriculum development experiences	N A	1	2	3	4	5	6	(3)
(c) On-going assessments	N A	1	2	3	4	5	6	(12)
(d) In-service activities	N A	1	2	3	4	5	6	(15)
(e) Group experiences	N A	1	2	3	4	5	6	(16)
(f) Lecture coursework	N A	1	2	3	4	5	6	(2)

2. To what extent does each of the following training activities enhance knowledge of post-secondary transition? (4)

Training Activities		Low					High	
(a) Clinical teaching	N A	1	2	3	4	5	6	(7)
(b) Case study presentations	N A	1	2	3	4	5	6	(18)
(c) Oral presentations by students	N A	1	2	3	4	5	6	(9)
(d) Student teaching activities	N A	1	2	3	4	5	6	(1)
(e) Individual advisement or conferences	N A	1	2	3	4	5	6	(13)
(f) Curriculum development experiences	N A	1	2	3	4	5	6	(3)

The second pilot study was conducted in a graduate level research design class at the University of Kansas. In February, 1987, class members were asked to complete the pilot version of the survey which used the multi-attribute utility measurement procedure. Helpful recommendations and clarifications resulted from both pilot studies.

Survey mailing. The Implementation Survey was mailed in the week of April 17, 1987. The mailing included a letter of explanation, the survey itself, a postage-paid return envelope, and a pencil to facilitate the respondent's reply.

Survey returns. Table 36 shows the number of PTT Implementation Surveys mailed out to institutions of higher education as well as the number and percentage of respondents.

Table 36

Mailing Targets and Respondents for the PTT Implementation Survey

Number of survey forms	
Mailed	325
Returned usable	104
Returned unusable	17
Total returned	121
	(37.23%)

Note. PTT = Pre-service Teacher Trainers.

Data coding. As the survey forms were returned by mail, each set was assigned an identification number for tracking purposes. Seventeen returned surveys were found unusable, most of them for the reason that the items were not completed, i.e., the respondent could not or chose not to respond to the ten items. Those returned surveys that were found usable were coded for data entry and entered into a database for statistical analyses.

On the surveys the background information and survey responses were coded. The survey responses are technically referred to as a location measure, which in this survey was the number (ranging from one through six) assigned by the PTT for a particular training activity's impact on a teacher attribute.

The location measure represented each respondent's view of the extent to which a particular training activity contributed, developed, or influenced a teacher attribute. A low value (1 or 2) indicated that the activity made little contribution, while a high value (5 or 6)

indicated that the activity made a major contribution to the particular teacher attribute. Thus, the utility measurement reflected the importance that the respondents attached to particular training activities as a means of realizing teacher attributes. The training activity with the highest numerical value can be regarded as the activity which has the greatest utility or value in attaining the desired teacher attributes.

In computing the utility measurements for the teacher attributes, a database was created which might be conceptualized as a matrix of rows and columns. A matrix was developed for each respondent. The matrix's columns represented each of the teacher attributes with its calculated mean weight (obtained from the Weighting Survey). Each of the top ten teacher attributes identified in the Ranking Survey was weighted by the PTT. These weights were the results reported in the Weighting Survey. The matrix's rows represented the training activities. The individual cells included the product of multiplying a teacher attribute's weight by the location measure assigned by the respondent. The utilities were summed across all of the attributes (columns) to determine the overall utility of a given activity. In the analyses, the focus was on the utility measurements assigned to the training activities.

Once these computations were completed for each respondent, the results were summed across all survey respondents. These sums were the utilities for each of the training activities. However, since the magnitude of the sum depended in part on the number of respondents, statistical analyses were required before further interpretations could be completed.

Data analyses. Statistical indices were calculated on the utility measurements of the pre-service training activities. The analysis was directed at determining the overall training activities judged as having the greatest utility, and then secondly, whether or not particular characteristics of the respondents influenced their judgments. In that regard the PTT respondents were subdivided on three variables: number of years in current institution, percent of time spent on teaching, and enrollment size at institution. For number of years in current institution, the PTT were subgrouped into the following categories: 1 (1 through 5 years), 2 (6 through 11 years) and 3 (12 through 29 years). The percent of time spent on teaching categories were: 1 (5% through 43%), 2 (45% through 65%), and 3 (70% through 97%). The enrollment size subdivisions were: 1 (2,500 students or less), 2 (2,501 to 10,000 students) and 3 (10,001 students or more).

In the analyses, the dependent variables were the 18 training activities and the independent variables were the subgroupings of the PTT on the three aforementioned variables. These statistics included descriptive statistics – means, standard deviations, and confidence intervals. In addition, inferential statistics were generated for comparing the PTT subgroups' rankings of the pre-service training activities.

Results

Descriptive Statistics

Table 37 shows the mean weight, standard deviation, and 95% confidence interval for each pre-service training activity. These values are based on the assigned ranks by the 103 responding pre-service teacher trainers. The training activities are listed in rank order on the basis of the utility measures (derived from the matrix of teacher attribute mean weights and location measures) assigned by the PTT for each training activity. The activity having the highest utility from their perspective has the rank of 1.

This listing provides important insight into the value that teacher trainers place on the diverse training activities which were identified in the first survey of the project, the Elicitation Survey. The first part of the listing, which contains those activities having the greatest value, differ from those activities appearing later in the list. The first six of these activities emphasize student *activity*. The student is engaged in an experience (e.g., "Student teaching," "Modeling and demonstrations," "Clinical teaching," "Observational activities," "Simulations," and "Curriculum development activities") that on first blush requires a higher level of direct involvement than those activities appearing later in the list. These experiences also have an emphasis on approximating the teacher role. The next six activities have a lower level of direct involvement and, as such, are more passive, e.g., seminars, lecture coursework, videotape and media usage, discussion groups, on-going assessments, and oral presentations.

Interestingly, "In-service activities" ranked 16th on the list. Recall that in the initial survey, Survey 1, titled the Elicitation Survey, the three responding groups, DOSE,. SOS, and PTT, were asked to identify any important training activities important to developing and improving teachers' skills. "In-service activities" was nominated among other activities, and was thus included based on those responses. Only in Survey 5 did the focus shift to emphasizing activities from the perspective of "pre-service" training rather than training in general.

While in-service activities are frequently required by state departments of education, one might question the value of such a training procedure in light of its rank among these activities. Perhaps some of the activities having a higher rank would be more suitable for continuing professional development among instructional staff. For example, could a mentoring program, comparable to student teaching procedures, be suitable? No doubt one of the difficulties with in-service activities is maintaining continuity across a series of sessions which are frequently separated by significant time gaps.

That "Computer-assisted instruction" ranked last among the 18 activities may be surprising. While computers have demonstrated utility for a variety of instructional activities in the K-12 system, that value apparently is not recognized among pre-service teacher trainers. Teachers' skills and knowledge of computers are developed as a splinter of their training experiences rather than being integrated within the training.

Table 37

PTT Rank-ordered Cell Means and Standard Deviations of Pre-service Training Activities

(n = 103)

Pre-service training activity	Rank	Mean	Std. dev.	95% conf. int.
Student teaching activities	1	177.52	92.94	159.35 to 195.68
Modeling & demonstrations	2	169.52	91.22	151.69 to 187.34
Clinical teaching	3	163.29	93.93	144.94 to 181.65
Observational activities	4	151.76	77.47	136.62 to 166.90
Simulations	5	149.71	80.82	133.91 to 165.51
Curriculum development experiences	6	136.81	74.28	122.29 to 151.32
Formal & informal seminars	7	128.31	77.45	113.17 to 143.45
Lecture coursework	8	125.62	67.12	112.50 to 138.74
Videotape & media usage	9	124.83	62.98	112.52 to 137.13
Large & small group discussions	10	123.77	65.56	110.95 to 136.58
On-going assessments	11	119.26	67.43	106.08 to 132.44
Students' oral presentations	12	117.77	62.48	105.56 to 129.98
Case study presentations	13	111.11	64.16	98.57 to 123.65
Individual advisement & conferences	14	110.26	69.47	96.69 to 123.84
Group experiences	15	109.93	59.92	98.22 to 121.64
In-service activities	16	106.46	83.70	90.10 to 122.81
Research experiences	17	92.33	59.66	80.67 to 103.99
Computer-assisted instruction	18	70.92	64.26	58.36 to 83.48

Note. PTT = Pre-service Teacher Trainers

Multivariate Tests of Significance

Hotelling's multivariate test of significance was performed on the pre-service training activities. Hotelling's test simultaneously considered the mean weights of all training activities for the three subgroups of PTT on three variables – the years that the teacher trainer has worked in his current institution, the percent of time spent by the teacher trainer on teaching, and the institution's enrollment size – and determined whether any statistically significant differences existed. Table 38 shows that no statistically significant differences occurred for the pre-service training activities' mean weights when the teacher trainers were subgrouped on the variables of percent of time spent on teaching and the institution's enrollment size. This two factor design (percent of time spent on teaching by institutional enrollment size) permitted a simultaneous test of the two factors for a possible interaction effect.

Table 38

Percent of Time Teaching by Enrollment Size: Multivariate Tests of Significance for Pre-service Training Activities (S = 4, M = 6 1/2, n = 37)

Test Name	Value	Exact F	Hypoth. DF	Error DF	*p* -value
Hotellings	.93282	.96521	72.00	298.00	.560

Table 39 includes the results of the Hotelling's multivariate test of significance on all training activities for the three subgroups of PTT on the two variables, respondent's number of years in current position by the institution's enrollment size. No statistically significant differences were calculated.

Table 39

Years in Current Position by Enrollment Size: Multivariate Tests of Significance for Pre-service Training Activities (S = 4, M = 6 1/2, n = 37)

Test Name	Value	Exact F	Hypoth. DF	Error DF	*p* -value
Hotellings	.69508	.71922	72.00	298.00	.953

Tables 40, 41, and 42 include the results of the Hotelling's multivariate tests of significance for the three subgroups of PTT on each of the three variables taken singly: percent of time spent on teaching, institution's enrollment size, and respondent's number of years in current position. No statistically significant differences were calculated.

Table 40

Percent of Time Teaching: Multivariate Tests of Significance for Pre-service Training Activities (S = 2, M = 7 1/2, n = 37)

Test Name	Value	Exact F	Hypoth. DF	Error DF	*p* -value
Hotellings	.45204	.94176	36.00	150.00	.569

Table 41

Enrollment Size: Multivariate Tests of Significance for Pre-service Training Activities (S = 2, M = 7 1/2, n = 37)

Test Name	Value	Exact F	Hypoth. DF	Error DF	*p* -value
Hotellings	.41036	.85493	36.00	150.00	.703

Table 42

Years in Current Position: Multivariate Tests of Significance for Pre-service Training Activities (S = 2, M = 7 1/2, n = 37)

Test Name	Value	Exact F	Hypoth. DF	Error DF	*p* -value
Hotellings	.38189	.79560	36.00	150.00	.786

Since the multivariate tests of significance indicated no statistically significant differences among the subgroups of pre-service teacher trainers, no further post hoc tests were performed.

Discussion

As in the other survey reports of this series, this section will enumerate the limitations of this survey's sample size, return rate, and instrumentation; provide a brief summary and conclusions; and make recommendations regarding policy and future research.

The first three surveys (Elicitation, Ranking, and Weighting) dealt with the identification and ranking in importance of the desirable attributes of special education programs. The Elicitation Survey (Survey 1) resulted in categorizations of 40 special education program attributes, 28 special education program activities, 23 special education teacher attributes, and 18 pre-service teacher training activities; however, the listings were not ranked. While the Elicitation Survey provided extensive information, that information comprised four sets of nominal categories. The Ranking Survey (Survey 2) involved 16 professionals who ranked the 40 special education program attributes and 23 special education teacher attributes. The ten highest-ranked attributes from the Ranking Survey were listed in the Weighting Survey (Survey 3), in which DOSE, SOS and PTT weighted the program attributes and teacher attributes.

The Implementation Survey for DOSE and SOS (Survey 4) generated utility measurements for special education program activities as they impact on program attributes. Survey 5, the Implementation Survey for PTT provided an opportunity to list a ranking of pre-service training activities as they enhance or otherwise influence the desirable attributes of special education teachers. Hence, the results of this fifth survey are not directly comparable to the previous four surveys' responses, since the focus shifted, from identifying and ranking the attributes of quality special education teachers, to the degree of influence that pre-service training activities have upon the aforementioned teacher attributes. The Implementation Survey for PTT generated utility measurements for pre-service training activities as they impact on special education teacher attributes.

Two particular aspects of the survey responses are of interest. The first aspect is the ranking of the activities themselves in their order of perceived utility. The second aspect is that subgrouping the 103 respondents along three different variables did not reveal a differential set of responses. No statistically significant differences were calculated. This latter finding suggests that these training activities are evaluated comparably regardless of the individual's time spent in teaching, the length of time at the institution, or the enrollment size of the institution. This common perspective provides an important foundation as one examines the training of teachers. We would have assumed that the variation in training programs' emphases would have yielded differences. In addition, even though institutions train teachers to conform to their respective certification requirements, which vary across states, the trainers still value the same kinds of training content and activities to meet these varied requirements.

On the positive side, this similarity may speak to the robustness of teacher training. For example, the activity of student teaching has the greatest utility of all preservice training activities. This utility is noted across the states with their varied certification requirements -- with their varied distinctions of the substance, purpose, and value of education (Cornbleth, 1986). One might question whether such uniformity actually has demonstrated the apparent value attributed to it, or rather as Cornbleth (1986) suggests, a ritual has been adopted without further consideration. On the other hand, one would also want to examine and describe the training activities carefully. This examination is needed to assess the actual degree of comparability in the operational steps and procedures which give the training activities their substance. One might expect that many variations exist among the teacher training activities.

Structure of teacher preparation. Pugach (1987) reviewed publications of selected authors writing about needed reforms in teacher preparation in regular education. She noted that most authors would deemphasize the university's role and place greater emphasis on field-based instruction. An interesting and important datum is learning if regular teacher educators perceive comparable utility to their most valued teacher training activities. That is, do teacher trainers in regular education perceive "Student teaching activities," "Modeling and demonstrations," "Clinical teaching," "Observational activities," and "Simulations" as the five training activities having the greatest value for developing the desired characteristics among general education teachers? Given the structure and content of most teacher education programs, such an outcome might be expected.

An important consideration is whether such consistency among trainers exists because of an assumed linkage to the particular instructional approach being advocated for teachers. For example, do "direct instruction" and "learning strategies," as two different instructional methodologies, require the same kinds of training activities? Do "student teaching activities" work equally well regardless of the trainer's instructional methodology? Alternatively, "student teaching activities" may have become institutionalized without a serious consideration of its fit with the particular goals and content of the training.

Limitations

Although the Implementation Survey for PTT involved 325 teacher trainers randomly chosen from a database of 640 special education staff members at institutions of higher education, the usual constraints apply regarding precipitate inferral of generalizations without due regard for the limitations of the population sample, the return rate, or the survey instrument itself.

The major issue in these results concerns the replicability of the findings. Replication is an issue on two counts. The first threat to the findings was the response rate. Of the 325 surveys sent out, 121 or 37.23% were returned. This return rate occurred despite efforts to elicit strong

participation and use of multiple mailings. The second threat was whether the particular instrumentation was inappropriate for the desired responses. Both issues could be addressed in follow-up studies examining similar research questions.

Implications for Policy Directives

Teacher education has implications across a variety of audiences, including the training institutions, state and local education agencies who certify and employ teachers, and the public who purchase the teachers' services. The following recommendations address several policy concerns.

1) Adopt a mechanism for timely communication between SEA, LEA, and higher education. The findings suggest that LEAs have a major role for effectively communicating their desired qualities for a teaching staff to higher education. Quite likely the teacher training lobby representing and residing in colleges and universities is not likely to be changed in the near future in spite of some reformers' protestations to the contrary. The teacher training institutions have demonstrated a long history during which those teacher training models have become entrenched in their missions, goals, administrative structures, course work emphases, and experiences. Similarly, these training models vary with the particular campus or college, which further complicates any efforts of national or even local change. Thus, the LEAs' needs need to be communicated effectively. At a local level those efforts might be focused on the specific higher education institutions from which most entry level teachers are hired. Similarly, the teacher trainers need to provide a databased foundation for their current focus of teacher training attributes and corresponding activities. The results of polling teachers (Elam, 1989) suggest that teachers feel that they are in the best position for determining the appropriate instructional goals and curriculum of their respective districts. Clearly this finding differs from practice and poses an interesting point for further discussions.

2) Integrate school districts' ed·· _ational model and higher education's instructional models. A distinction is dr . between an educational model in a school district and an instructional model presented by a teacher training program of how students learn. A district's educational model exists in a district in its assumptions, policies, and practices. The educational system incorporates those elements in providing for students' education. The teacher training program makes similar assumptions, but independent of any particular district's situation and incorporates those assumptions into a model of student learning. LEAs would benefit and likely value a model of teaching that would compare differing instructional methodologies, e.g., cognitive, behavioral, developmental, and holistic.

Dimensions on which these instructional methodologies differ can be identified (e.g., Marshall, 1988) for the purpose of forming multiple comparisons. However, comparing one instructional model with another is limited. A needed cross-reference is for LEAs to be able to describe their own goals, administrative structures, role expectations, and resources from a perspective that would help distinguish the utility of the different instructional approaches. In this manner the two models, that is, the teacher training instructional model and the LEA's educational model, could be analyzed and integrated through better planning. As Clark (1984) suggested, this planning needs careful consideration of the distinctions between secondary and elementary levels of special education. Similarly, such a matrix would provide a basis for local reforms, which, in turn, could then impact training (Cornbleth, 1986).

Implications for Future Research

The research results of this survey have implications for subsequent research as well. Certainly the policy issues addressed above should be accompanied with research, but additional questions lacking such direct linkages to policy can also be identified. The following material provides several such alternatives.

(1) Describe the content of training programs and its actual integration into varied training experiences. An interesting and important question is evaluating the current training curriculum at the nation's teacher training institutions for the degree to which they utilize these varied training activities. Again, the respondents placed greater emphasis on those training experiences which required higher levels of student activity (e.g., student teaching and modeling) versus experiences which required less active doing (e.g., lecture coursework and use of videotapes and media). Is this distinction actually apparent in the teacher training sequence?

In addition, if teacher training programs can be considered as espousing a particular instructional philosophy (e.g., direct instruction, community based instruction, career education, and learning strategies,) do the training programs differ in their instructional experiences offered to students intending to become teachers? Second, to what degree do the training programs actually adopt those same methodologies in the training sequence. For example, for teachers being taught cognitive perspectives of learning, is this cognitive psychology foundation evidenced in the students' actual training experiences? Such an infusion of the particular perspective might be particularly helpful in deepening the students' appreciation and knowledge of the instructional approach. A potentially valuable description would be to contrast teacher training programs on their instructional models as well as the integration of that model in the variety of their training activities.

(2) Describe decision-making guidelines among trainers. When the results of the Ranking Survey and this survey are examined together, an interesting issue is apparent. School districts differ on a number of important dimensions, such as the degree of autonomy teachers have in implementing a particular curricular approach, e.g., community-based instruction. However, the challenge is that the training institutions may provide a specialized training experience that orients teachers to different instructional skills. How do trainers come to make those decisions and how could those trainers be best influenced to change? Or in other words, what is the criterion guiding the decision-making of trainers? McLaughlin, Valdivieso, Spence, and Fuller (1988) have suggested that "teacher training is being driven by forces such as certification policies that are largely out of the control of the profession and needs of local school districts.

Summary and Conclusions

The Implementation Survey for PTT was the final phase of the multi-attribute utility measurement procedure adapted to seek a numerical value for the degree to which a pre-service teacher training activity influences attributes of successful special education teachers. Previous surveys, specifically, the Elicitation Survey, the Ranking Survey, and the Weighting Survey, were essential to this Implementation Survey.

A matrix was created in which the mean weights of the teacher attributes, obtained from the Weighting Survey, made up the columns. The pre-service training activities represented the matrix's rows. Individual cells held the product of the teacher attribute's weight by the location measure ((viz., the ranking given by the PTT, ranging from 1 (low) to 6 (high))

assigned by the respondent. The products were summed across the columns to determine the utility measurement of a given activity. The results were summed across all the respondents within the group, to generate the utilities for each of the training activities.

The five pre-service training activities with the highest utility measurements, as rated by the PTT (see Table 37) were: "Student teaching," "Modeling and demonstrations," "Clinical teaching," "Observational activities," and "Simulations."

The five pre-service training activities with the lowest utility measurements, as rated by the PTT were: "Computer-assisted instruction," "Research experiences," "In-service activities," "Group experiences," and "Individual advisement and conferences."

The PTT respondents were sub-grouped according to their responses on three characteristics: respondent's number of years in current position, respondent's percent of time spent in teaching, and the institution's enrollment size. Analyses of variance were performed on the multi-attribute utility measurements for pre-service training activities generated by the three sub-groups of PTT. No significant differences were found in the responses of the three sub-groups of PTT. That is, the response pattern was similar across the three characteristics.

In conclusion a distinctive set of training activities were identified by the respondents for preparing teachers to meet a desired set of attributes. "Student teaching activities" were judged as most relevant to the preparation of those skills and content areas. Overall, the higher the level of activity, the greater utility was judged among the various alternative instructional experiences. While "learn by doing" may be the consensus, the unresolved issues are in determining the appropriate mix of these options and defining competencies shared among teachers, the public in general, SEAs, and LEAs.

Appendix L

Implementation Survey for Preservice Teacher Trainers

High School Special Education Teacher Attributes

Directions

Complete the following questions by referencing your pre-service training program for high school special education teachers of students with mild to moderate handicaps.

Circle the number which best represents your judgment. If a program activity minimally applies to the attribute, circle "1." If the activity highly applies to the attribute, circle "6." Values between 1 and 6 allow you to specify the degree to which the activity applies. If the activity is not available in your program, circle "NA," meaning "not available."

Example

Suppose one of the important attributes of a physician is "accurate diagnoses." In medical school training, assume that among the many training activities are (a) lecture classes, (b) laboratory work, and (c) hospital visits.

Question: To what extent does each of the following training activities develop a physician's diagnostic accuracy?

Low						High	Training Activity
NA	1	2	(3)	4	5	6	(a) lecture classes
NA	1	2	3	4	5	(6)	(b) laboratory work
(NA)	1	2	3	4	5	6	(c) hospital visits

The lecture class activities provide information on diagnostic accuracy in about half of the classes, thus the rating of "3." "Laboratory work" is totally related to developing diagnostic accuracy, hence the rating of "6." Since "hospital visits" are not part of this medical school's training program, it was rated "NA," meaning "not available."

1. To what extent does each of the following training activities develop skills in working with people? (9)

Training Activities	Low					High		
(a) Individual advisement or conferences	NA	1	2	3	4	5	6	(13)
(b) Curriculum development experiences	NA	1	2	3	4	5	6	(3)
(c) On-going assessments	NA	1	2	3	4	5	6	(12)
(d) In-service activities	NA	1	2	3	4	5	6	(15)
(e) Group experiences	NA	1	2	3	4	5	6	(16)
(f) Lecture coursework	NA	1	2	3	4	5	6	(2)

2. To what extent does each of the following training activities teach skills in assessing outcomes? (20)

Training Activities	Low					High		
(a) Computer-assisted instruction	NA	1	2	3	4	5	6	(14)
(b) Research experiences	NA	1	2	3	4	5	6	(17)
(c) Lecture coursework	NA	1	2	3	4	5	6	(2)
(d) On-going assessments	NA	1	2	3	4	5	6	(12)
(e) Simulations	NA	1	2	3	4	5	6	(5)
(f) Student teaching activities	NA	1	2	3	4	5	6	(1)

3. To what extent does each of the following training activities develop instructional skills? (2)

Training Activities	Low					High		
(a) Curriculum development experiences	NA	1	2	3	4	5	6	(3)
(b) Videotape and media usage	NA	1	2	3	4	5	6	(6)
(c) Simulations	NA	1	2	3	4	5	6	(5)
(d) Research experiences	NA	1	2	3	4	5	6	(17)
(e) Formal and informal seminars	NA	1	2	3	4	5	6	(4)
(f) Large and small group discussions	NA	1	2	3	4	5	6	(11)

4. To what extent does each of the following training activities teach assessment skills for planning and instruction? (15)

Training Activities	Low					High	
(a) Lecture coursework	NA	1	2	3	4	5	6 (2)
(b) Group experiences	NA	1	2	3	4	5	6 (16)
(c) Videotape and media usage	NA	1	2	3	4	5	6 (6)
(d) Oral presentations by students	NA	1	2	3	4	5	6 (9)
(e) In-service activities	NA	1	2	3	4	5	6 (15)
(f) Observational activities	NA	1	2	3	4	5	6 (8)

5. To what extent does each of the following training activities develop skills in working cooperatively with staff and administration? (8)

Training Activities	Low					High	
(a) Large and small group discussions	NA	1	2	3	4	5	6 (11)
(b) Oral presentations by students	NA	1	2	3	4	5	6 (9)
(c) Formal and informal seminars	NA	1	2	3	4	5	6 (4)
(d) Observational activities	NA	1	2	3	4	5	6 (8)
(e) On-going assessments	NA	1	2	3	4	5	6 (12)
(f) Research experiences	NA	1	2	3	4	5	6 (17)

6. To what extent does each of the following training activities enhance knowledge of post-secondary transition? (4)

Training Activities	Low					High	
(a) Clinical teaching	NA	1	2	3	4	5	6 (7)
(b) Case study presentations	NA	1	2	3	4	5	6 (18)
(c) Oral presentations by students	NA	1	2	3	4	5	6 (9)
(d) Student teaching activities	NA	1	2	3	4	5	6 (1)
(e) Individual advisement or conferences	NA	1	2	3	4	5	6 (13)
(f) Curriculum development experiences	NA	1	2	3	4	5	6 (3)

7. To what extent does each of the following training activities teach curriculum and instructional planning skills? (1)

Training Activities	Low					High		
(a) Group experiences	NA	1	2	3	4	5	6	(16)
(b) Oral presentations by students	NA	1	2	3	4	5	6	(9)
(c) Lecture coursework	NA	1	2	3	4	5	6	(2)
(d) Large and small group discussions	NA	1	2	3	4	5	6	(11)
(e) In-service activities	NA	1	2	3	4	5	6	(15)
(f) Curriculum development experiences	NA	1	2	3	4	5	6	(3)

8. To what extent does each of the following training activities develop classroom organization skills? (5)

Training Activities	Low					High		
(a) Large and small group discussions	NA	1	2	3	4	5	6	(11)
(b) Clinical teaching	NA	1	2	3	4	5	6	(7)
(c) Computer-assisted instruction	NA	1	2	3	4	5	6	(14)
(d) Formal and informal seminars	NA	1	2	3	4	5	6	(4)
(e) Videotape and media usage	NA	1	2	3	4	5	6	(6)
(f) Curriculum development experiences	NA	1	2	3	4	5	6	(3)

9. To what extent does each of the following training activities develop behavior management skills? (7)

Training Activities	Low					High		
(a) Large and small group discussions	NA	1	2	3	4	5	6	(11)
(b) Case study presentations	NA	1	2	3	4	5	6	(18)
(c) Lecture coursework	NA	1	2	3	4	5	6	(2)
(d) Computer-assisted instruction	NA	1	2	3	4	5	6	(14)
(e) On-going assessments	NA	1	2	3	4	5	6	(12)
(f) Modeling and demonstrations	NA	1	2	3	4	5	6	(10)

10. To what extent does each of the following training activities enhance knowledge of vocational and career education? (22)

Training Activities		Low					High	
(a) Research experiences	NA	1	2	3	4	5	6	(17)
(b) In-service activities	NA	1	2	3	4	5	6	(15)
(c) Observational activities	NA	1	2	3	4	5	6	(8)
(d) Videotape and media usage	NA	1	2	3	4	5	6	(6)
(e) Large and small group discussions	NA	1	2	3	4	5	6	(11)
(f) Curriculum development experiences	NA	1	2	3	4	5	6	(3)

Teacher Trainers' Information

Please fill in or check items as appropriate.

A. Respondent characteristics

1. What was the last degree you earned? (Please check.)

___B.A./B.S. ___M.A./M.S. ___Ed. Spec. ___Ph.D./Ed.D.

2. What is/are your area(s) of specialization in special education?

A. ___M.R. F. ___H.I./Deaf K. ___Early Child. Hand.

B. ___L.D. G. ___V.I./Blind L. ___Diag./Assess.

C. ___B.D./E.D. H. ___Lang./Comm.Dis. M. ___Career/Voc. Ed.

D. ___SpEd. Ad. I. ___Phys. Hand. N. ___Generic/Cross Categ.

E. ___Gifted J. ___Multiple Hand. O. ___Other: _____

3. If you checked more than one item above, write the letter that represents your primary area of specialization:

_____

4. What is the age level of your specialization emphasis? (Please check one.)

___Early childhood ___Elementary ___Secondary ___Post-sec.

5. What is your academic rank? (Please check.)

___Instructor ___Assist. Professor ___Associate Professor

___Full Professor ___Other (Describe) _____

6. How many years have you been at the current college/university?

_____

7. Please record the percentages of time you give to each area. (Total equals 100%.)

___teaching ___administration ___research

___service ___other (Describe) _____

B. Program characteristics

8. Number of students in the college/university:

___2,500 or less ___10,001 - 15,000 ___25,001 - 30,000

___2,501 - 5,000 ___15,001 - 20,000 ___30,001 - 35,000

___5,001 - 10,000 ___20,001 - 25,000 ___35,001 or more

9. Does your state have certification requirements for the secondary level which are separate from the elementary level (i.e., K - 6) for teachers of students with mild to moderate handicaps?

___Yes ___No

10. In the requirements at the secondary level for teachers of the mild to moderately handicapped, does <u>your training program</u> require student teaching or practica in a high school setting?

___Yes ___No

11. Age level(s) for which you train special education teachers:

___EarlyChildhood ___Elementary ___Secondary ___Post-secondary

12. Including yourself, how many faculty members (those with a rank of at least assistant professor) teach preservice courses specifically targeted for secondary level teachers of students with mild to moderate handicaps?

_____

13. Are you interested in participating in a special interest group of the CEC-TED focusing on secondary and post-secondary teacher trainers?

___Yes ___No

14. Please correct any incorrect information on the attached mailing label:

|‾ ‾|

Please use the enclosed envelope and return this survey to us by May 15, 1987 (Friday). Thank you.

If you would like a summary of our results, please write your name and address on the back of the return envelope.

Appendix M

Pascal Program for Generating Implementation Surveys

```
 2  program nhssurvey2;     {Training survey}

 4  { April, 1987
 5    National High School Teachers' Training Survey
 6     Questionnaire-Generating Program
 7    File name: /NHSS/PASC2

 9   This program generates questionnaires for the National High School
10   Teachers' Training Survey.  It uses an external Fortran function
11   (random number generator) to determine the order of 10 questions and
12   to select 6 activities per question.

14   The questionnaire consists of 4 pages, each of which contains 3 questions
15   except for the last page.  The default for the number of questionnaires
16   generated at a time is 50.  The default can be changed by modifying the
17   statement

19         for id := fnum to (fnum + 49) do

21   in the main program.  A distinct ID number is printed at the top of
22   each page.  The starting ID number is obtained from an external file
23   ("/NHSS/FNUMFILE") which contains a single integer.  The integer in
24   the external file is then incremented by 50, which will become the
25   new starting ID number.

27   The output from the Pascal program contains Roff commands.  It needs
28   to be formated with Roff before being IPRINTed (or XPRINTed).

30   The commands for generating questionnaires--including XPRINT--are
31   contained in the CRUN file "/NHSS/QRUN".)


34  type
35       ten = array[1..10] of integer;

37  var
38      dim: ten;      {questions--1 to 10}
39      fnum,          {starting IDNUM}
40      id,seed,index: integer;

42  function rcm(var s: integer) : real;
43  extern fortran;     {random number generator--external}

45  function iseed(var s: integer) : integer;
46  extern fortran;

48  {*****************************************************************************}

50  procedure getfnum(var fnum: integer);
51                {get the starting IDNUM from the file /NHSS/FNUMFILE}

53  var
54      fnumfile: text;
```

```
55      num: integer;
56  begin
57      openf(fnumfile,'1gixnhsproj/nhss/fnumfile','r');
58      readln(fnumfile,fnum);
59      num := fnum + 50;      {The starting ID is set to new IDNUM after 50 QR's are generated}
60      openf(fnumfile,'1gixnhsproj/nhss/fnumfile','w');
61      writeln(fnumfile,num:1);
62      closef(fnumfile)
63  end;      {getfnum}

65  {*****************************************************************************}

67  procedure initialize(var numlist: ten);
68                  {initialize questions and activities spaces to zero}

70  var
71      i: integer;
72  begin
73      for i := 1 to 10 do
74          numlist[i] := 0
75  end;  {initialize}

77  {*****************************************************************************}

79  procedure idprint(num: integer);

81  begin
82      if num < 1000
83          then
84              begin
85                  write('0');
86                  if num < 100
87                      then
88                          begin
89                              write('0');
90                              if num < 10
91                                  then
92                                      write('0')
93                          end
94              end;
95      write(num:1)
96  end;  {idprint}

98  {*****************************************************************************}

100 procedure titleprint(num: integer);

102 var
103     i: integer;

105 {*********************************}
106 procedure underline;

108 var
```

252

253

```
109       col: integer;
110   begin
111      for col := 1 to 84 do      {underline 84 columns}
112         write('_');
113      writeln
114   end;  {underline}
115   {*********************************}

117   begin  {titleprint}
118      writeln('.pl 60');
119      writeln('.ll 96');
120      writeln('.po 6');
121      writeln('.m1 0');
122      writeln('.m2 0');
123      writeln('.m3 0');
124      writeln('.m4 0');
125      writeln('.nf');
126      writeln('.tr $ ');
127      writeln('.fi');
128      writeln('.nj');
129      writeln('.ti +27');
130      writeln('National High School Project$$$$$$$$$$$$$$$$$$');
131      writeln('ID:$');
132      idprint(num);
133      writeln;
134      writeln('.br');
135      writeln('.ti +18');
136      writeln('Evaluation of Preservice Training for Teachers');
137      writeln('.br');
138      writeln('.ti +19');
139      writeln('of Students with Mild to Moderate Handicaps');
140      writeln('.br');
141      writeln('.nf');
142      underline
143   end;  {titleprint}

145   {*************************************************************************}

147   procedure dimselect(var seed: integer; var newlist: ten);
148                                 {determine the order of questions}

150   var
151       list: ten;
152       ind,num: integer;

154   {*********************************}
155   procedure selectnum(ind: integer; var seed,num: integer);
156                          {randomly select 10 numbers}

158   var
159       i: integer;
160   begin
161      i := 11 - ind;
162      num := trunc( rcm(seed) * 100.0) mod i + 1
```

```
163  end;  {selectnum}
164  {************************************}
165  {************************************}
166  procedure getlist(ind,num: integer; var list,newlist: ten);
167                          {store the numbers in the order they were selected}

169  var
170      i,j: integer;
171  begin
172     newlist[ind] := list[num];
173     i := 10 - ind;
174     for j := num to i do
175        list[j] := list[j + 1]
176  end;  {getlist}
177  {************************************}
178  begin  {dimselect}
179     for ind := 1 to 10 do
180        list[ind] := ind;
181     for ind := 1 to 10 do
182        begin
183           selectnum(ind,seed,num);
184           getlist(ind,num,list,newlist)
185        end
186  end;  {dimselect}

188  {*****************************************************************************}

190  procedure qprocess(index,quest: integer; var seed: integer);

192  var
193      actv: ten;

195  {************************************}
196  procedure qprint(index,quest: integer);     {print the question}
197  {********************}
198  procedure qline1(q: integer);     {print line 1 of question}
199  begin
200     write('To what extent does each of the following training activities ');
201     case q of
202        1,8,9 : writeln('teach');
203        2,4,5,6,7 : writeln('develop');
204        3,10 : writeln('enhance')
205     end
206  end;  {qline1}
207  {********************}

209  {********************}
210  procedure qline2(q: integer);     {print line 2 of question}

212  var  i,sp,dimn: integer;
213  begin
214     case q of
215        1 : write('curriculum and instructional planning skills');
216        2 : write('instructional skills');
```

```
217         3 : write('knowledge of post-secondary transition');
218         4 : write('classroom organization skills');
219         5 : write('behavior management skills');
220         6 : write('skills in working cooperatively with staff and administration');
221         7 : write('skills in working with people');
222         8 : write('assessment skills for planning and instruction');
223         9 : write('skills in assessing outcomes');
224        10 : write('knowledge of vocational and career education')
225      end;
226      write('?');
227      case q of      {determine number of blanks inserted up to question number}
228         1 : sp := 29;
229         2 : sp := 53;
230         3 : sp := 35;
231         4 : sp := 44;
232         5 : sp := 47;
233         6 : sp := 12;
234         7 : sp := 44;
235         8 : sp := 27;
236         9 : sp := 45;
237        10 : sp := 29
238      end;
239      for i := 1 to sp do
240         write('$');
241      writeln;
242      case q of      {determine question number--obtained from earlier survey}
243         1 : dimn := 1;
244         2 : dimn := 2;
245         3 : dimn := 4;
246         4 : dimn := 5;
247         5 : dimn := 7;
248         6 : dimn := 8;
249         7 : dimn := 9;
250         8 : dimn := 15;
251         9 : dimn := 20;
252        10 : dimn := 22
253      end;
254      writeln('(',dimn:1,')')
255   end;  {qline2}
256   {********************}
257   begin  {qprint}
258      writeln;
259      write(index:2,'. ');      {Nth question--1 to 10}
260      qline1(quest);
261      writeln('.fi');
262      writeln('.nj');
263      writeln('.ti +5');
264      writeln('.ul');
265      qline2(quest);
266      writeln('.br');
267      writeln;
268      writeln('.ti +8');
269      writeln('.ul');
270      writeln('Training Activities$$$$$$$$$$$$$$$$$$$$$$$$Low          High');
```

```
271     writeln('.br');
272     writeln('.nf')
273  end;  {qprint}
274  {************************************}

276  {************************************}
277  procedure actvselect(var seed: integer; var actv: ten);   {select activities}
278  {********************}
279  procedure select(var seed: integer; var a: ten);

281  var
282        i,j,num: integer;
283      samenum: boolean;
284  begin
285     for i := 1 to 6 do      {select 6 activities out of 18}
286        begin
287           samenum := false;
288           num := trunc( rcm(seed) * 100.0) mod 18 + 1;
289           if i > 1
290              then
291                 begin
292                    j := 1;
293                    while j <= (i - 1) do
294                       begin
295                          samenum := (num = a[j]);
296                          if samenum
297                             then
298                                begin
299                                   num := trunc( rcm(seed) * 100.0) mod 18 + 1;
300                                   j := 1
301                                end
302                             else
303                                j := j + 1
304                       end
305                 end;
306           a[i] := num
307        end
308  end;  {select}
309  {********************}
310  begin  {actvselect}
311     initialize(actv);
312     select(seed,actv)
313  end;  {actvselect}
314  {************************************}

316  {************************************}
317  procedure actvprint(actv: ten);      {print activities}

319  var
320      i,j: integer;
321      ch: char;
322  {********************}
323  procedure aprint(a: integer);
```

```
325  var  i,sp : integer;
326  begin
327     case a of
328        1 : write('Student teaching activities');
329        2 : write('Lecture coursework');
330        3 : write('Curriculum development experiences');
331        4 : write('Formal and informal seminars');
332        5 : write('Simulations');
333        6 : write('Videotape and media usage');
334        7 : write('Clinical teaching');
335        8 : write('Observational activities');
336        9 : write('Oral presentations by students');
337       10 : write('Modeling and demonstrations');
338       11 : write('Large and small group discussions');
339       12 : write('On-going assessments');
340       13 : write('Individual advisement or conferences');
341       14 : write('Computer-assisted instruction');
342       15 : write( In-service activities');
343       16 : write('Group experiences');
344       17 : write('Research experiences');
345       18 : write('Case study presentations')
346     end;
347     case a of      {determine the number of blanks up to the activity number}
348        1 : sp := 9;
349        2 : sp := 18;
350        3 : sp := 2;
351        4 : sp := 8;
352        5 : sp := 25;
353        6 : sp := 11;
354        7 : sp := 19;
355        8 : sp := 12;
356        9 : sp := 6;
357       10 : sp := 9;
358       11 : sp := 3;
359       12 : sp := 16;
360       13 : sp := 0;
361       14 : sp := 7;
362       15 : sp := 15;
363       16 : sp := 19;
364       17 : sp := 16;
365       18 : sp := 12
366     end;
367     for i := 1 to sp do
368        write('$')
369  end;  {aprint}
370  {********************}
371  begin   {actyprint}
372     for i := 1 to 6 do
373        begin
374           ch := chr(i + 96);
375           write('    (',ch,') ');      {Nth activity--(a) to (f)}
376           aprint(actv[i]);
377           write('  NA   1   2   3   4   5   6');
378           for j := 1 to 14 do
```

```
379                write('$');
380             writeln('(',actv[i]:1,')');
381             if not(i = 6)
382                then
383                   writeln
384          end
385    end;  {actvprint}
386    {*********************************}

388    begin  {qprocess}
389       qprint(index,quest);
390       actvselect(seed,actv);
391       actvprint(actv)
392    end;  {qprocess}

394    {*****************************************************************************}

396    procedure botprint(ind: integer);     {print page number at bottom of page}

398    var
399       pnum: integer;     {page number}
400    begin
401       writeln('.fn');
402       writeln('.ti +35');
403       case ind of          {determine page number}
404          3 : pnum := 2;
405          6 : pnum := 3;
406          9 : pnum := 4;
407          10 : pnum := 5
408       end;
409       writeln('page ',pnum:1,' of 7');
410       writeln('.en');
411       writeln('.bp')
412    end;   {botprint}

414    {*****************************************************************************}

416    procedure topprint(num: integer);     {print IDNUM at top of page but 1}

418    var
419       i,page: integer;
420    begin
421       writeln('.fi');
422       writeln('.nj');
423       writeln('.ti +75');
424       writeln('ID:');
425       idprint(num);
426       writeln;
427       writeln('.br');
428       writeln('.nf')
429    end;  {topprint}

431    {*****************************************************************************}
```

```
433  begin  {main}
434     seed := iseed(seed);
435     getfnum(fnum);
436     for id := fnum to (fnum + 49) do      {repeat 50 times}
437        begin
438           initialize(dim);
439           titleprint(id);
440           dimselect(seed,dim);
441           for index := 1 to 10 do
442              begin
443                 qprocess(index,dim[index],seed);
444                 if (index = 3) or (index = 6) or (index = 9) or (index = 10)
445                    then          {end page after questions 3,6,9,10}
446                       begin
447                          botprint(index);
448                          if (index = 3) or (index = 6) or (index = 9)
449                             then
450                                topprint(id)
451                       end
452              end
453        end
454  end.   {main}
```

Synopsis and Conclusions

In this last section we have chosen to offer both an integrated review of the different surveys' results and a broadened discussion regarding issues from the project. In these few remaining pages, we review the issues initially considered important in proposing this research, summarize the findings from the survey methodology, and integrate the findings with the two other phases of the National High School Project, the survey of state departments of education (Bodner, Clark, and Mellard, 1987) and a qualitative study of four school districts' goals, current practices, and barriers to the delivery of special education programs at the secondary level (Knowlton & Clark, 1989). Integration of these three segments provides an important description of the current efforts in education from multiple levels within that system, e.g., state level, local level, and pre-service teacher training level. In summarizing our data and perspectives we offer two sets of principles for directing reform. The first set focuses on instructional reform in secondary level special education. The second set focuses on reforms in pre-service teacher training The principles are intended to guide discussions for improving students' educational outcomes, a topic which appears most critical.

Like others (Hagerty & Abramson, 1987; Johnson et al., 1987) we believe that an important, and perhaps most important, first step to effective programs is to have a clearly articulated statement of values. This study was an opportunity for selected stakeholder groups to identify and examine their values regarding high school special education programs for students with mild to moderate disabilities and the pre-service training programs for teachers teaching in such settings. That is, what are the important characteristics on which such programs and staffs should be evaluated? At a very general level, we were interested in determining the attributes of a program which were important to evaluate so a qualitative judgment could be made about that program, i.e., how good the particular program was. One important assumption guiding this work was that such qualitative judgments varied with particular perspectives; second, that no single attribute should serve as the criterion for evaluating a program's qualities. Just as multiple attributes are required in determining a student's eligibility for special education's services, programs providing those services should be evaluated on multiple attributes. The opinions about a program's desired attributes were expected to vary depending on membership in a particular stakeholder group. Two groups of district level administrators, superintendents of schools and directors of special education, were chosen for inquiry. A third group, pre-service teacher trainers, was added because of the apparent significant role they have on local classrooms, and yet are not part of the district or even the state level governance of schools. This unique position of teacher trainers suggested that their viewpoints on the desired qualities of both programs and teaching staff should be described and compared to those views of district level administrators.

The study was conducted at a time when many efforts were occurring to reform schools in general and to reshape the philosophy of special education. In general, school directed reforms have incorporated recommendations from numerous commissions and authors, though their perspectives and recommendations are not compatible. The National Commission on Excellence in Education was perhaps the most famous with its report, A Nation At Risk: The Imperative for Educational Reform. Adler (1982), Boyer (1983), Goodlad (1984) and Sizer (1984) each offered their views of reforms needed in the public schools, specifically the high school. The common theme among these efforts is that of improving the quality, the excellence, of schools as reflected in the skills of their graduates. A comparison of these authors' works, however, indicate that excellence is not a unitary characteristic, nor does a consensus exist on how to define it.

The directives for improving excellence that come from most advocates are not necessarily compatible with improving the educational opportunities for those students who are only marginally successful in schools. Minority students, students from lower socio-economic segments, and students with disabilities are not considered specifically in the planned reforms (Edgar, 1987; Moran, 1984). In the absence of an inclusive planning model for reform, students with such characteristics are less likely to benefit. For example, one of the major thrusts in special education has been increasing the probability of students making a successful transition to independent living and employment from high school. These two desired outcomes require a specific curricular focus, perhaps longer, with varied instructional opportunities and in varied settings than traditionally associated with high school. Since most all of the high school reforms, however, seek to narrow the coursework options and increase the standards for graduation, these students with mild to moderate disabilities are even less likely to receive suitable educational and vocational training experiences to realize these outcomes. These outcomes would not be realistically expected with a three or four year emphasis at the secondary-level on basic academic skills (Knowlton & Clark, 1987). This example illustrates the complicated and often competing values in establishing policy to direct educational practices.

The linkage between *values* and *practices* is important. We have assumed that a school's practices are based on agreed values. That is, the school's practices are directed from a foundation of shared values. In our research we chose to examine the relationship of values and practices in two areas: (1) districts' high school level special education programs for students with mild to moderate disabilities and (2) preservice training programs for secondary special education instructional staff. Each program has multiple objectives and multiple activities towards realizing those objectives. The objectives reflect the values or the mission of the program. We might understand these objectives as multiple statements of purpose. For example, a special education program exists to accomplish several different goals. Similarly, preservice training programs have multiple objectives, perhaps preeminently, to train effective instructional staff. A goal of our research was to identify those values considered important to the respective programs. In our research, these value statements were described as attributes. That is, the values or attributes which are important to examine to understand the quality of a program.

As suggested above, we believe that programs, such as special education programs in high schools or preservice training programs, are intended to address multiple attributes. That is, the programs are designed to satisfy several dimensions of quality. The attributes, however, are only part of understanding a program. These attributes are addressed through activities. This relationship of attributes and activities might be understood by considering that if we desire to characterize our program by (a) acquisition of basic academic skills, (b) completion of the high school curriculum, and (c) strong community support, then a defined set of activities (e.g., x, y, and z) is more likely to be suitable than another set of activities. Thus, we would expect that a clear illustration of desired attributes could be paired with planned activities. The variations in the desired attributes among three respondent groups would also result in a change of emphasis in the planned activities. This relationship of desired attributes and corresponding activities has not been examined nationally. The results of our surveys yielded a set of attributes by each of the three groups. Our data provide three different groups' perspectives. Such a description is important if we are to understand current practice and plan meaningful reform. A national evaluation of such linkages is important if we are to agree to a national agenda for school reform and special education programs. This linkage of desired attributes and the activities intended to reflect those attributes provides a valuable perspective on current practices. As a result of the research, the data provide the attributes and an estimate of how well the programs' activities enhance or reflect those attributes.

In the following section, important findings from the surveys are summarized and reviewed. In this review results from each of the five surveys are included in providing an integrated summary of information which might on first blush appear as quite disparate. We have organized the results into two broad categories. The first category represents information for which we have the greatest confidence and on which we feel policy and practice can be based. In the second category we have made comparisons with the results of the qualitative study (Knowlton and Clark, 1989). Both sets of results provide a basis for recommendations for further action in research, practice, and policy development.

What Do We Know That We Didn't Know?

1. Uniformity of shared perceptions for desired qualities for secondary level special education programs.

In our first survey, the Elicitation Survey, we asked respondents to list those attributes they considered important if one was to evaluate special education programs for students with mild to moderate handicaps at the secondary level. We were surprised by the uniformity evidenced in the responses of our three groups: directors of special education (DOSE), school superintendents (SOS), and pre-service teacher trainers (PTT). The ten most frequently cited attributes by the DOSE are presented in Table 43 along with the percentages of the SOS and PTT who included those same ten attributes. The commonality was surprising because of the very different responsibilities each group has regarding the local special education programs at the secondary level. Those varied responsibilities provide different opportunities for discussions and activities with the programs. In the Elicitation Survey the most desired attributes categorized from the responses concerned program characteristics, e.g., provided individualized, appropriate instruction, was supported and integrated with regular education,

Table 43

Attributes of Quality Special Education Programs for High School Students with Mild to Moderate Handicaps, Ranked by Percent of Cites from Elicitation Survey of DOSE (n = 73), SOS (n = 19), and PTT (n = 173)

Program attribute	DOSE		SOS		PTT	
	Rank	(%)	Rank	(%)	Rank	(%)
Individualized, appropriate	1	(41.1)	2	(36.8)	2	(32.4)
Regular education support & integration	2	(38.4)	1	(42.1)	4	(29.5)
Vocational/career orientation	3	(37.0)	3*	(31.6)	1	(37.6)
Program support from staff, parents, business, and community	4	(34.2)	3*	(31.6)	6	(22.0)
High school completion	5	(23.3)	5*	(26.3)	12	(14.5)
Effective staff	6	(20.5)	24*	(0.0)	18*	(11.6)
Monitoring assessment system	7*	(19.2)	12*	(10.5)	3	(31.8)
Multi-disciplinary approach	7*	(19.2)	5*	(26.3)	9	(19.1)
Employment success	9*	(17.8)	19*	(5.3)	7	(21.4)
Life skills curriculum	9*	(17.8)	12*	(10.5)	5	(27.2)

Note. * indicates a tie. Other top-ten attributes: for SOS - Successful academic achievement 5* (26.3), Student satisfaction and Successful personal and social adjustment 8* (21.1), and Case management system and Successful independent living 10* (15.8); and for PTT - Personal social skills curriculum 8 (19.7) and Community based program 10 (17.9).

had the support of the staff, parents, and community, and had an effective staff. While high school completion was an important outcome to the DOSE and SOS, the PTT assigned "Life Skills Curriculum" the equivalent rank and a much lower rank to high school completion. Our respondents placed less emphasis on students' accomplishments than on how they would like to characterize programs. We refer to this perspective as a "Program characteristics" orientation. We conclude that an outcomes orientation had limited meaning to our respondents. From their perspectives, the quality program was one which looked organizationally and philosophically like a good program.

On the other hand, we might speculate that the responses elicited were a function of our phrasing on the survey. We would predict that if our respondents had been asked a question such as "What are the most important **goals** for a secondary level program for students with mild to moderate handicaps?" the responses would have been quite comparable for the three groups. We believe that the desired goals or outcomes are similar, but that those outcomes do not translate into a direction for operating the programs. Rather, operating the programs is more closely tied to the types of program characteristics listed above. Our assumption is that, in fact, an "outcomes orientation" is quite different from a "program characteristics" orientation. In the former the orientation shifts to an emphasis on the knowledge, skills, or abilities of the students. The program's values are described from the student's attainments and characteristics of the programs are considered as having a mediating role secondary to the students' accomplishments. The proverb that "you can't tell a book by its cover" applies well to our point. Programs may look good from a variety of vantage points on the surface, but the most important criterion is the students' outcomes from participating in those programs.

2. Uniformity of shared perceptions for desired qualities of instructional staff in the secondary level special education programs.

In the Elicitation Survey, respondents also were asked to indicate the desired qualities of the instructional staff. The three groups' shared perspectives were also evident in the desired attributes for instructional staff in that personal characteristics and training experiences were among the most frequently cited attributes. Specific instructional skills were mentioned frequently also (e.g., curriculum and instructional planning, instructional skills, classroom organization skills, behavior management skills, and consultation skills). The ten most frequently cited attributes by the DOSE are included in Table 44 along with the percentages of the two other responding groups for the same concept.

Table 44

Attributes of Quality Special Education Teachers for High School Students with Mild to Moderate Handicaps, Ranked by Percent of Cites from Elicitation Survey of DOSE (n = 73), SOS (n = 19), and PTT (n = 173)

Staff attributes	DOSE		SOS		PTT	
	Rank	(%)	Rank	(%)	Rank	(%)
Personal characteristics	1	(78.1)	1*	(57.9)	2	(50.3)
Background training and experience	2	(58.9)	3	(52.6)	3*	(46.8)
Works well with people	3	(53.4)	4	(42.1)	3*	(46.8)
Works cooperatively with staff and administration	4	(47.9)	7	(31.6)	8	(32.9)
Classroom organization skills	5*	(46.6)	5*	(36.8)	12	(16.2)
Instructional skills	5*	(46.6)	1*	(57.9)	1	(55.5)
Curriculum and instructional planning skills	7	(42.5)	5*	(36.8)	7	(35.3)
Assessment skills for planning & instruction	8*	(27.4)	8	(26.3)	5	(38.7)
Consultation skills	8*	(27.4)	10*	(10.5)	9	(27.7)
Behavior management skills	10	(24.7)	9	(21.2)	6	(35.8)

Note. * indicates a tie. Other top-ten attributes: for SOS - Innovative instructional skills 10* (10.5); and for PTT - Philosophical position 10 (23.1).

Knowledge of specific curricular content was mentioned infrequently by the respondents. The uniformity of desired instructors' skills, rather than curricular content, suggests that content knowledge is seen from a different, less valued vantage. Perhaps the perspective among the respondents is that if the high school teachers have generic instructional skills, their breadth and depth of content knowledge is less critically important. Such a view would suggest the school's adopted curriculum is well enough defined that advance preparation or background knowledge plays a less critical role. We challenge that assumption on the basis of the long established emphasis in secondary education on subject matter content knowledge of teachers. Instructional skills are important, but we were surprised with the degree to which those skills were so frequently cited over appropriate content or procedural knowledge. From our perspective the issue is one of relative difference, meaning that both content knowledge and instructional skills are important. The emphasis was placed too heavily on the instructional skills rather than content or curricular knowledge. Content knowledge is particularly important if the special education program is viewed as providing the majority of the instruction in particular areas of academics or vocational training. Similarly, if the special education program is viewed as supplementing instruction offered in mainstream programs, content knowledge is critical for providing needed elaboration or enrichment. Seemingly, improved quality of instruction places a greater burden on the special education staff who feel that the uniqueness of special education is in providing alternative instructional methods and curriculum than the mainstream provides. As several authors have suggested, current special education lacks broad support because the cumulative effects are minimal (e.g., Edgar, 1987; Stainback & Stainback, 1984; Reynolds, Wang, & Walberg, 1987).

3. Uniformity of weights assigned to program attributes and instructional staff attributes.

The respondents to the third survey provided weights to program and staff attributes. The weights represent a ratio of the importance assigned by the DOSE, SOS, and PTT to ten desired attributes of programs and of teachers. These weights are rank ordered and presented in Table 45 for the program attributes and Table 46 for the teacher attributes. The left column includes the attribute statement. To the right of the attribute statement are two columns for each of the responding groups (i.e., DOSE, SOS, and PTT). The columns contain the numerical ranks (1 = the highest rank) and the groups' mean weights assigned to the particular attribute. The higher the mean weight, the greater importance assigned to the particular attribute for judging the quality of the special education program (or teacher).

Two aspects of these data are significant. First, the three groups of respondents had very high intercorrelations among their weights. For the program attributes the intercorrelation was .94 and for staff attributes the intercorrelation was .93. These correlations numerically indicate the shared perceptions among the three groups. The groups assigned the attributes a similar rank in their ordering of importance. All three groups assigned their two highest weights to the same program attributes: "Effective staff" and "Individualized, appropriate instruction." Interestingly, while "Effective staff" was weighted so heavily here, this

Table 45

Rank Ordered Attributes of Quality Special Education Programs

Program Attributes	DOSE (N = 142) Mean Rank	DOSE (N = 142) Mean Weight	SOS (N = 67) Mean Rank	SOS (N = 67) Mean Weight	PTT (N = 112) Mean Rank	PTT (N = 112) Mean Weight
Effective staff	1	16.8	1	15.6	1	15.5
Individualized, appropriate instruction	2	13.3	2	13.2	2	12.9
Administrative leadership and support	3	11.4	4	10.5	3	12.2
Successful personal and social adjustment	6	9.5	3	11.3	4	10.5
Program support from staff, parents, business and community	5	10.3	5	10.2	5	9.4
Regular education support and integration	4	10.4*	7	9.7	6	8.8*
Successful independent living	7	8.1*	6	10.1*	8	8.4
Vocational/career orientation	8	8.0†	9	6.4*†	7	8.6*
Employment success	9	7.3	8	7.8	9	7.7
Post-secondary transition curriculum	10	4.9*	10	5.6	10	6.2*

Note: DOSE = Director of Special Education. SOS = Superintendent of Schools. PTT = Pre-service Teacher Trainer.
*, † indicates $p < .05$ on Scheffé comparison of group mean values.

Table 46

Rank Ordered Desired Attributes of Special Education Teachers

Teacher Attributes	DOSE (N = 141)		SOS (N = 65)		PTT (N = 105)	
	Mean Rank	Weight	Mean Rank	Weight	Mean Rank	Weight
Instructional skills	1	15.3	1	14.1	1	15.1
Working well with people	2	12.9	2	13.8*	4	11.3*
Curriculum and instructional planning skills	3	11.8	6	10.3*	2	12.7*
Assessment skills for planning and instruction	4	11.0	5	10.5	3	11.6
Behavior management skills	5	10.8	4	11.7	5	10.7
Classroom organization skills	6	11.0	3	12.4*	6	9.9*
Working cooperatively with staff and administration	7	9.8	7	9.1	7	8.8
Incorporating vocational/career education	8	6.3	9	5.2*	9	7.1*
Skill in assessing outcomes	9	6.5*	8	8.1*	8	7.6
Knowledge of transition	10	4.9	10	4.6	10	5.6

Note: DOSE = Director of Special Education. SOS = Superintendent of Schools. PTT = Pre-service Teacher Trainer.
* Indicates $p < .05$ on Scheffé comparison of group mean values.

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attribute was infrequently cited in the open-ended format of the Elicitation Survey. (See Table 43 above.) The shift in emphasis raises several questions about the groups' perspectives and their robustness. Uniformity was evident in the most valued staff attribute. All three groups assigned their highest weighting to the same attribute, "Instructional skills," which had received frequent mention in the Elicitation Survey.

The second aspect of these data is the similarity in the magnitude of the assigned weights. For the top five weighted program attributes of the SOS and PTT, the mean weights were of comparable value across the groups. Inspection of the data indicates that these attributes are considered comparably by the groups and that they weighted them similarly in importance. The ratio weighting procedures were a means of capturing the importance assigned to the respective attributes. For each responding group the top two program attributes were at least twice as important as the last two attributes. The significance of these weights is the heavy emphasis given to the quality of the staff as defining the program and that "Post-secondary transition curriculum" was least important. For the teacher attributes, the top two attributes were considered twice as important as the last two attributes, but the groups differed in their assigned weights. That is, the mean weights were reliably different. These differences were reflected in the statistically significant mean comparisons calculated with the Scheffé tests. We are uncertain, however, how these apparent differences would translate into differences of the goals or day-to-day activities.

4. **Uniformity of shared perceptions about pre-service teacher training activities.**

Teacher training activities appear to have a formula approach. Our reference to a formula is that the respondents were remarkably consistent in the value they attached to specific training activities. As we planned analyses of responses from PTT, we envisioned that both institutional factors, such as enrollment size, or specific characteristics of the teacher trainers, such as percent of time teaching or length of time at the institution, would influence the value attached to different pre-service training activities. No differences were noted in our analyses.

Given a defined set of desired teacher attributes, the respondents uniformly agreed on the appropriate training activities. The final ranking of teacher training activities is included in Table 47. This ranking was based on responses to the fifth survey, which elicited utility measurements from PTT. Differences at their institutions or in their own perspectives did not result in varied responses. The background descriptors did little to explain the responses. We were left with the question whether institutional factors and professional background differences truly have little or no impact on their views about teacher training activities. Could it be that the traditional approach to teacher training that focuses on academic instructional skills dominates the respondent view simply because of the sheer numbers who identify with remedial and developmental academics as an extension of elementary school efforts?

Table 47

PTT Rank-Ordered Cell Means and Standard Deviations of Pre-service Training Activities (n = 103)

Pre-service training activity	Rank	Mean	Std. dev.	95% conf. int.
Student teaching activities	1	177.52	92.94	159.35 to 195.68
Modeling & demonstrations	2	169.52	91.22	151.69 to 187.34
Clinical teaching	3	163.29	93.93	144.94 to 181.65
Observational activities	4	151.76	77.47	136.62 to 166.90
Simulations	5	149.71	80.82	133.91 to 165.51
Curriculum development experiences	6	136.81	74.28	122.29 to 151.32
Formal & informal seminars	7	128.31	77.45	113.17 to 143.45
Lecture coursework	8	125.62	67.12	112.50 to 138.74
Videotape & media usage	9	124.83	62.98	112.52 to 137.13
Large & small group discussions	10	123.77	65.56	110.95 to 136.58
On-going assessments	11	119.26	67.43	106.08 to 132.44
Students' oral presentations	12	117.77	62.48	105.56 to 129.98
Case study presentations	13	111.11	64.16	98.57 to 123.65
Individual advisement & conferences	14	110.26	69.47	96.69 to 123.84
Group experiences	15	109.93	59.92	98.22 to 121.64
In-service activities	16	106.46	83.70	90.10 to 122.81
Research experiences	17	92.33	59.66	80.67 to 103.99
Computer-assisted instruction	18	70.92	64.26	58.36 to 83.48

Note. PTT = Pre-service Teacher Trainers

Regardless, the stability of the findings leads us to believe that a strong consensus exists on appropriate training activities. We are uncertain about the basis of those beliefs supporting the training activities, but the support appears quite robust.

Summary. This preceding capsule review was intended to provide an integrated, brief description of major findings from our work in which we have the greatest confidence. From those findings and our understanding of current policy and practices, we next examine the similarities of our survey data to the case study information collected in the naturalistic inquiry. We then offer some further observations on specific topics in the following question and answer format.

Findings Shared with the Qualitative Study

The first volume of findings from the National Study of High School Programs for Handicapped Youth in Transition (Knowlton & Clark, 1989) detailed results of a qualitative inquiry. The qualitative study was conceived as an independent, though complementary investigation to the surveys completed with directors of special education, superintendents of schools, and pre-service teacher trainers. The complementary intent was to provide a context in which the survey data might be interpreted. The naturalistic inquiry included four high school programs from different regions and settings of the country. The resulting case studies described high school special education programs and their contributions to the transition from school to adult life of students with mild to moderate disabilities.

To integrate the two methodologies' results, a common framework was established using the concepts of (1) program and staff attributes and (2) program activities. Several confirmatory findings were noted among program and staff attributes. For example, "Effective Staff" was singled out by the survey respondents and in the case study reviews as the most important attribute to a quality program. The quality of the personnel was of significant importance as indicated in the third survey's results. In the four case studies, an individual or group was identified as central to the successful operation of each program, which established the program's reputation. The case study data indicated how a program's success was influenced so strongly by an individual or corps of closely knit professionals. The case studies shared two other attributes identified as important characteristics of quality teachers in the surveys. Those two attributes were "Working cooperatively with staff and administration" and "Incorporating vocational/career education." These staff attributes commonly were cited as important in the four case studies.

Additional program attributes identified in this study which were also cited in the case studies were "Administrative leadership and support," "Program support from staff, parents, business and community," and the programs' "Vocational/career orientation." Other attributes also distinguished the four exemplary programs but were not common across the sites. The degree of overlap between the quantitative surveys' findings and the case studies corroborate the importance of these values.

We are encouraged by this cross-validation of attributes describing staff and programs. Such validation is important in understanding the generalization of the findings. The information obtained through the case studies, however, provided little insight about the relationship of the particular activities to specific attributes. The question we raised earlier about linkages of activities to enhancing specific program attributes is not resolved in the case study data. In a retrospective review, that linkage appears to be weak. In these sites, interviewees did not elaborate on a clear description indicating that the activities in the programs were tied explicitly to the qualities for which the programs are recognized. Such a

linkage warrants a closer evaluation in future research, both in surveys and case studies. Clearly, a paradigm is needed for helping to describe this relationship.

Questions to address: How should reform in special education be focused?

The National High School Project was initiated to provide policy makers at the federal, state, and local levels with information to design and evaluate the quality of special education programs through which youth with mild to moderate handicaps receive their education. As such, we believe that reforms should be directed by the outcomes of those educational experiences for individual students.

While we concur with Mitchell and Encarnation (1984) that the themes of efficiency, equity, and quality can be evidenced in education's pattern of reforms, the substantive effects have been narrowly defined. One might be able to argue successfully that none of these themes has altered the education system in a major way. As Cornbleth (1986) suggested, a ritual of educational reform seldom occurs that results in major changes in the system. Our recommendation is that reforms in education and in particular, special education, be directed by a shared understanding of its desired outcomes (Johnson et al., 1987). Educational reform should be directed at improving the outcomes of all those students, not just the capable majority.

From our perspective and others (Gerber, 1988) accommodating students with disabilities in a regular education classroom is highly desirable as long as the students and classmates improve their learning ability and achievement. Members of the class should all benefit as evidenced by increased learner outcomes. Efforts directed in the transition movement would appear consistent with this intended outcome. The transition concept focuses on the students' eventual successful integration into the environments apart from school. Our data suggested that the value of transition planning and monitoring received very limited understanding or acceptance among educators at the district or school level. We can speculate on several reasons for this finding. Transition planning seems unfamiliar to teachers, inconsistent with curricula, and since transition is directed towards specific students, that it doesn't fit well in settings in which the emphasis is more on teaching to the group rather than the strengths and weaknesses of individual students. A more cynical speculation might be that transition planning is ignored because teachers and districts are not evaluated on their efforts or success in that area.

Our observations regarding the uniformity among our respondents on desired qualities of special education programs and instructional staff provides an interesting dilemma. Recall that the directors of special education, superintendents of schools and pre-service teacher trainers yielded quite similar rankings of desired program attributes and teacher attributes in both surveys one and three. (Table 45 provides a summary from the third survey.)

On the one hand, the consistency speaks to a well grounded perspective on the mission, structure, power base, and resources in special education. This perspective leads us to believe that the principles of the Education of the Handicapped Act (P.L. 94-142) have become operational in the field, at least in its rhetoric. The three groups have that shared perspective. On the other hand, we would have expected greater differences. For example, the professional literature read and conferences attended by the respective groups are not likely similar. Their experiences with the programs are dissimilar. The superintendent of schools does not have the same concerns about a special education program as does the director of special education or a teacher trainer. Thus, based on differences of experiences and training we would have predicted differences in responses. Our inclination is to suggest that the findings represent accurately all three groups' perspectives. We are cautioned, however, to recall that the response rate was lower than desired and perhaps the uniformity merely reflects the special sample completing the surveys.

As suggested we believe that more characteristics exist to distinguish the responding groups' perspectives than supports the uniformity observed in the data. The lack of distinction suggests a lack of leadership for defining secondary special education's mission and the supporting factors at the secondary level that would improve the quality of high school special education programs. For example, "knowledge of transition" was identified as a staff attribute and ranked high by our panel of experts (in the second survey), but ranked low by our responding groups and had the lowest assigned weight of desired teacher attributes (in survey three). While transition program and service funding recently have increased substantially in a national discussion (Knowlton & Clark, 1987), the impact apparently is minimal at a local level on those individuals guiding special education services. Another finding exemplifying our concerns is the emphasis on administrative or compliance related attributes. In our view, legislative requirements establish minimums for administrative compliance, not evidence of quality. For example, providing individualized instruction is a minimum, the quality of the program should be evidenced in the outcomes of that instruction. The crux of that issue then turns on one's concept of the appropriate outcomes for students with mild to moderate disabilities in special education. Here, this issue is not just compliance, but rather a philosophical position as to what should be appropriate outcomes for individuals.

Edgar (1987) provided a good context in which to consider the outcomes issue in his observation that "the truth is that secondary curriculum for special education students appears to have very little, if any, impact on their eventual adjustment to community life" (p. 560). In his plan, Edgar espoused an emphasis on functional skills, vocational skills, and independent living skills in the curriculum. Such a shift has the impact of truly distinguishing the goals of special education programs from the mainstream of a traditional academic high school curriculum. As a result, several consequences might be evidenced including: primary instruction for the students would be in special education classes, opportunities for interaction with the mainstream student would be different, graduation requirements would need reconsideration, and teacher preparation would have to be redefined. On the other hand, Edgar's observations appear supported by others' recommendations (Benz & Halpern, 1987; Clark & Kolstoe, 1990; Halpern, 1979; Halpern & Benz, 1987; Kokaska & Brolin, 1985; McDonnel & Hardman, 1987; Thomas & Halloran, 1987). Such views also would appear at odds with others' perspectives (Carnine, Silbert, & Kameenui, 1990; Kameenui & Simmons, 1990; Polsgrove & McNeil, 1989; Shevin-Sapon, 1987; Will, 1986).

We believe that the program attributes, which were so consistently shared by the respondents, are insufficient. Second, we are concerned with the DOSE's and SOS' rankings of program activities. Our concern with the program attributes is that they provide little direction for instruction, or more importantly, the desired outcomes of instruction. For example, "Administrative leadership and support" was ranked as an important attribute of a high quality special education program. We have no quarrel with the concept that administrative leadership is important for all of education. Administrative leadership and support, however, are insufficient. The focus, methods, and degree of leadership are more important considerations. The quality of the program should depend on the outcomes of instruction rather than the methods, administrative, or process characteristics of the program. In this perspective a clearly defined, agreed upon curricular sequence of content and goals should be evident and given greater emphasis. We agree with the statement made by Zigmond and Miller (1992): "There is no question that schools need to organize curricular offerings so that students have the opportunity to learn what they need to know to be adequately prepared for life after high school: for work, postsecondary training, and postsecondary education" (p. 24).

We expect a greater emphasis on students' special education outcomes in light of the national educational goals (White House, 1990) and assessment programs (National Center on Educational Outcomes, 1991) being considered as part of educational reforms. We might

speculate the degree to which these areas of reform would impact students with disabilities and, in particular, students at the secondary level. As we have pointed out, comparable reforms for school improvement or increased accountability have given little attention to the needs of students with disabilities or the potential impact.

The rankings for program activities present several apparent conflicts. The respondents were asked to rate how well the combined set of ten program attributes, which were rated as the most important attributes, was facilitated or enhanced by that particular activity. The survey was intended to elicit their judgments of which program activity as implemented in their schools most enhanced the set of program attributes. Table 48 includes the five activities that had the highest utility ratings by the two groups of respondents. (Seven activities are actually included in the table because the DOSE and SOS included two different activities in their top five rankings. A review of the listing shows that three activities were common for the two groups. For the DOSE, "Inclusion in regular school activities," "Individualized instruction," and "Regular and adapted vocational education" were the three most valued activities. From the SOS's responses, "Basic skills instruction," "Inclusion in mainstream classes," and "Academic assistance for mainstream classes" were the three program activities with the highest utility ratings.

Table 48

Ranks of Top Five Special Education Program Activities

	DOSE (n = 155)		SOS (n = 108)	
Program activity	Rank	Mean	Rank	Mean
Inclusion in regular school activities	1	125.2	7	116.4
Individualized instruction	2	125.1	4	122.6
Regular and adapted vocational education	3	121.2	10	110.6
Basic skills instruction	4	120.0	1	131.2
Functional academics instruction	5	119.5	5	122.5
Inclusion in mainstream classes	6	111.4	2	128.2
Academic assistance for mainstream classes	8	107.0	3	122.8

An emphasis for integration in regular class programs is evident in both the DOSE and SOS's responses, a concept consistent with the theme of the regular education initiative. The superintendents' responses are conceptually consistent with one another and have the

emphasis of specifying basic skills content. That content emphasis is similar to the direction of many reform efforts, and was similarly ranked by the DOSE. The apparent conflict is that "Regular and adapted vocational education" curriculum emphasized by the special education directors is very different from its emphasis by the school superintendents. The latter vocational education focus was ranked tenth by the SOS, which suggests great disparity about the curricular focus of the programs as related to the ten program attributes. Thus, these differences of perspective among districts' top administrators is very fundamental to the outcomes of secondary level special education. While we documented a remarkably high correspondence on desired attributes in earlier surveys, the daily activities' surveys indicate very different approaches to accomplishing those goals. Both groups linked greater participation in school-wide activities, but emphasize different curricular content, basic skills by the SOS and vocational education by the DOSE.

What principles should guide the special education reforms?

Much of the preceding material has advocated for a particular perspective regarding secondary level special education for students with mild to moderate handicaps. A theme commonly expressed in that perspective is the need for careful integration of desired goals with the content, instructional activities, and learning activities provided to secondary students with mild to moderate handicaps. That perspective is elaborated in a set of principles. The principles guiding our instructional model are not pedagogical. Our principles of interest in an instructional reform model are:

(1) Curricular placement and evaluation decisions are databased.
In the short term, we would emphasize an increased attention to assessment activities to provide the database of students' performance. The assessments would be to evaluate the outcomes from the day's instructional and learning activities. The students' performance would be evaluated in terms of the level of mastery, and over time would be useful in evaluating students' educational placements. In the long term, we would expect that assessment would be better linked to the curriculum so that instruction and assessment are viewed as more integrated and used in curricular planning.

(2) Instructional and curricular planning are outcomes oriented with an applied focus.
While our data suggested a strong orientation towards inclusion of students into regular education's classes and activities and a basic skills orientation, we are uncertain that the students' benefits would extend beyond the school setting. That is, the student's adjustment to school might improve, but we would expect little change in students' degree of community participation, independent functioning, and occupational success. Curricular planning should be focused on the application of academic skills to independent functioning and demonstrating social responsibility. In this way, the interested stakeholders should have a clear understanding of the results from the student's education.

(3) Curricular goals are locally agreed upon.
The intended outcomes of the curriculum should be locally agreed upon by multiple stakeholders. This issue includes both the specific content of the curriculum as well as the relative emphasis given to the different content. Since the data have repeatedly demonstrated that students with disabilities have relatively few options for either living independently or pursuing post-secondary education, the focus must shift to more specific goals which, from our perspective, must be approved by community representatives. We find little evidence to suggest that as the White House (1990) or schools adopt curriculum and higher standards in their search for excellence that students with disabilities will be considered. Thus, the local perspective is important and should reflect the needs of those students with mild to moderate disabilities. We envision that if these students are considered, the multi-ethnic diversity will also be accommodated.

(4) The performance goals in special education may at times be distinct from the mainstream of education.
As suggested above, the high school students with mild to moderate disabilities may require different curricular emphasis and instructional methods (Edgar, 1992; Gerber, 1988). The distinctness in these areas may translate into a need for students to demonstrate their knowledge and skills differently.

(5) The performance assessment of students with disabilities may be modified or specially designed for their response capabilities.
The competency assessment for the general student population may require a method of performing (e.g., timed test, handwritten text, or oral presentation) that's inappropriate for students with disabilities. Thus, the assessment process may change. This issue is certainly one that has been confronted as states have implemented competency-based assessment or exit testing and will be an extension of that accommodations.

(6) A choice may exist for students and their families between an academic and a functional course of study in high school.
Each course of study would have its own performance and outcome goals. Explanations of positive and negative consequences of those goals are understood by parents, students, and educators and explained at initial consideration of any educational placement. We are uncertain that parents, and students in particular, fully appreciate the immediate and long-term consequences from education offered through current programs. The initial interest identification for special education services is appropriately oriented towards getting the students the kind of help they need or are perceived as needing. Our data suggest that administrative features of a special education program may receive more attention than instructional and curricular aspects. As a consequence, the students may benefit from annual conferences regarding their IEPs, which is an administrative and compliance issue, but that has little relationship to the students' needs for a free, appropriate education. At a minimum the school district's staff should be able to describe to parents and students the consequences of participating in regular or special education for similar students (e.g., the number who were fully mainstreamed, the number who graduated or dropped out of school, the content of the classes the students took, and available post-secondary opportunities).

Quite clearly this instructional reform model is directed from the local level, which is in contrast to the major directives in educational reform. The major reform efforts have followed a top-down approach. This juxtaposition of reform efforts poses several challenges to successfully integrating the differing values between and among public agencies such as the state departments of education, pre-service teacher training programs, and the general public.

What principles should guide pre-service teacher training reforms?

The preceding section suggested principles for guiding reforms that include special education. Regardless of the service delivery model, the classroom teacher has the responsibility and delivers the instruction, curriculum, and learning opportunities, and assesses the students' daily learning. These critical roles must be appreciated and understood to influence the student's outcomes. We have expressed our concerns about the uniformity of the pre-service training activities in spite of philosophical, pragmatic, and methodological distinctions thought to distinguish training institutions, even to distinguish some institutions as better than others. Can such differences thought to distinguish the institutions' level of quality primarily be attributed to the institutions' faculty and staff?

In a previous section of this volume we reviewed the results of our fifth survey and offered policy recommendations. The first directive was intended to increase the shared understanding among SEA, LEA, and pre-service training institutions regarding the desired

qualities of instructional staff for students with mild to moderate disabilities in a high school setting. The shared understanding is important in light of the continuing debates about service delivery models and attempts to more fully integrate special education into regular education (e.g., Clark, 1984; Pugach, 1987; Schumaker & Deshler, 1988). The second recommendation addressed a need for better integration between a school district's educational model and the teacher training institutions' instructional model. We argued that the districts have particular models of education which vary in their compatibility with instructional models emphasized in teacher training programs. As an extension and in a somewhat different avenue we believe that more specific recommendations would also be appropriate. The following principles are offered to direct reform in teacher training. We also realize the diversity of opinions on the subject and do not expect initial agreement. We believe, however, that the principles could serve as a basis for discussion among the involved stakeholders. Our principles for focusing teacher training are:

(1) Emphasize that as teachers the goal of their classroom activities are student outcomes. We are concerned that some reforms may have unintended outcomes of emphasizing accountability indices, but not learning and achievement. Classroom activities are not directed towards students' earning particular grades, meeting a criterion on a test, completing a set of objectives, or finishing a curriculum. Such outcomes are merely proxies. What the students should perform is based on locally accepted curricular goals which have a focus on successful adult transition. We also recognize that in light of recent efforts to set national goals for education, the local curriculum may have some different emphases. Such differences should not be ignored, but carefully considered as a basis of further understanding the mission of school and special education programs.

(2) The individual student is the most important part of the class. Homogeneous groupings of students, even along the lines of disability and severity groupings, still include variability (Gerber, 1988) and those students need to be viewed as individuals (Sapon-Shevin, 1987). As we reflect on our surveys' results, we are impressed by the emphasis given to individualized, appropriate instruction for students with mild to moderate disabilities in the various surveys. The pre-service teacher trainers need to consider how this desired attribute for a teacher can be incorporated into that teacher's training. We believe that successfully modeling individualized instruction as part of a training program with college students would help their adopting the model into their teaching routines. Whether teacher training is best delivered in a categorical or noncategorical model is not as clear to us as to others (Kubic, 1989; O'Sullivan, Marston, & Magnusson, 1987), especially when the positions for one or the other model ignores the differences between elementary and secondary level programming.

(3) Instructional activities must be based in a theoretical perspective that provides a basis for reflecting on the students' performance. Lyon, Vaassen and Toomey (1989) reported that both regular and special education teachers (97% and 95%, respectively) that they surveyed and interviewed believed that their professors did not link theory to teaching practices. Without such a linkage isn't the teacher left to following the instructional model outlined in the adopted curriculum rather than being responsive to the characteristics of the students? If the pre-service training institution demonstrates this principle in coursework and other training activities, the novice teacher will have a good experience for guiding instruction in a class. In addition the framework provides a basis for discussing a teacher's performance as part of a student teaching experience.

(4) Good teaching skills can be taught and are independent of the adopted textbooks. As an extension of the preceding principle, we stress our belief that desirable instructional

skills can be identified and taught (e.g., Bursuck & Epstein, 1986; Chapey et al., 1985; Council for Exceptional Children, 1989; Wong, 1989). In light of an increasingly varied role for the special educator (McLaughlin, Valdivieso, Spence, & Fuller,1988; Pugach, 1987; Stainback, Stainback, & Harris, 1989), those instructional skills are likely to be applied in varied curricula (e.g., functional academics, basic skills, learning strategies, and social skills) and service delivery models (e.g., resource room, consultation models, cooperative teaching, and teacher assistance teams). While both emphasize different aspects of the student, teacher, and colleague interactions, the fundamental issue remains one of providing high quality instruction. Thus, we would encourage pre-service training opportunities that emphasize the development of those instructional skills recognized as most influencing a student's learning. In a survey of teachers by Lyon et al., (1989), the substantial majority indicated that their training programs did not provide the effective, explicit, and contextualized instruction advocated in our recommendation.

(5) Student teaching activities must include frequent, formal evaluation. Our survey respondents consistently emphasized student teaching activities as the training activity that had the highest utility. On the other hand we doubt that student teaching, which includes only one or two formal observations from a supervisor in a semester, can be effective and yet such limited supervision is not infrequent. Numerous models for supervising student teachers (Kueker & Haensly, 1991; Miller, Harris, Watanabe, 1991; and Schuster & Stevens, 1991) offer alternatives for improving this facet of pre-service teacher training.

The list of recommended principles are not novel as indicated by the literature cited in support or to further describe them. We recognize the complexity of reforms in the pre-service training area and believe that coupling the policy directives described with our fifth survey and these principles provide an excellent basis for discussion. Through such discussion the conflicts in the missions of the respective institutions, as well as the need for examining their basic theories and social structures would be highlighted (McLaughlin et al., 1988; Reid, 1987). That discussion can be initiated through the SEA, LEA, or even the pre-service trainers as part of their own review and efforts to contribute to the educational reforms. Certainly, while we have clear preferences for particular curricular emphases (Clark, 1984) we recognize that the issues raised in our principles are more fundamental and would thus have a bearing on the content emphasis of pre-service teacher training.

How does one provide an integrated system that incorporates the varied constituencies' concerns?

Local, state, and federal agencies respond to different agendas for ensuring quality education. Each agency balances educational budgets against other priorities. This antagonism then adds to the difficulties of working cooperatively on a long-range strategy and more immediate procedures of educational reform. Halpern, Benz, and Lindstrom (1991) proposed a systems change approach to improving special education and transition programs at the community level. The state agency also adopted key roles of training, dissemination, and support networks for the local district. This capacity building role had a significantly different impact than the state's more familiar regulatory and monitoring role. We believe that the system change model's description would accommodate our principles of instructional reform.

Briefly, Halpern et al. (1991) developed a community transition team model (CTTM) for systematic transition planning that emphasizes participation from members of the community including parents of students with disabilities, adult agency personnel, employers, and educators. These teams complete a needs assessment on 38 areas important to

student transitioning. (In our research, these 38 areas are conceptually compatible with the ten attributes on which a program is evaluated and the ten attributes on which staff are evaluated.) Following the needs assessment, the more pressing needs are identified and a plan is developed to address those needs. During the subsequent 9 to 12 months the transition team works to meet those goals. At the end of that interval, an evaluation is completed and the cycle is repeated.

Several important outcomes accrue from the CTTM approach. The students in special education programs are the immediate beneficiaries. In addition, the programs themselves are changed and become more integrated within the community and the high school. As the community transition teams are developed, they integrate the community's administrative structures and resources better, as well as those resources of the neighboring communities. The cooperating adult agencies benefit as well by a sense of more fully meeting their mandates. So while administrative characteristics and procedural steps are better defined as a result of the transition team's efforts, the outcomes of students are different and better.

From our interpretation of our survey data, we conclude that the apparent conflicting recommendations among desired attributes and activities need resolution through further discussions. The CTTM (Halpern, et al., 1991) provides a workable framework suitable to a state and local level. In particular, the value of such procedures comes in recognizing that no single attribute accounts for a quality program or outstanding teacher.

We conclude from our data sets that outstanding or exemplary high school programs or teachers for students with mild to moderate handicaps must be described in terms of multiple attributes. Reforms in education must also incorporate multiple attributes. In balancing those attributes clear choices and accommodations will be required because the desired attributes are not necessarily compatible. For example, emphasizing excellence does not mean equal or even equitable distribution of resources. From our data a parallel can be made among conflicting program activities. "Basic Skills Instruction," "Functional Academics Instruction," and "Inclusion in Regular School Activities" had some of the highest utilities among the various program activities as ranked by the directors of special education and superintendents of schools. Could a high school program effectively provide such varying activities, or even should these three all be offered? The dilemmas need resolution at a local level and need involvement of a broad range of constituencies including parents, administrators, teachers, pre-service trainers, and community representatives. The CTTM procedures could make such discussions focused and results oriented.

Next Steps and Intended Outcomes

Whether at a national, state, or local level, attention needs to be focused on identifying the expected outcomes of special education programs, agreeing on attributes to characterize those programs, and establishing the linkage of attributes, curriculum, instruction, and learning activities. Recent amendments to P.L. 94-142 in the Individuals with Disability Education Act of 1990 (P.L. 101-476) mandate transition planning for students 16 years of age and older. Desired outcomes have been addressed only generally in legislation. Thus, local districts need latitude to examine transition planning in light of their local perspectives on mission, power distribution, structure, and resources for special education. This theme has been reemphasized with each additional set of collected data. Halpern et al. (1991) provide a framework in which such a question might be analyzed locally and yet permit an aggregation at the state department level. In that manner the state department might know the best means to facilitate implementation. Among the advantages of such an approach is that the efforts are locally initiated, the local perspectives are easily recognized, a broader sense of ownership might be expected than if the effort were mandated, and that the capacity of the local district is developed (McDonnell & Elmore, 1987).

Questions of purpose of special education are difficult to address in comparison to more pragmatic questions of what works. In this final section we have realized that the more difficult questions of mission and meaning of special education for students need the most careful scrutiny. The central issue is determining the values and standards (e.g., equality, equity, excellence, and accountability) from which we can draft our mission statements in our educational achievements.

To address the issue of equity and to achieve better integration of desired program attributes and appropriate day-to-day instructional activities would take greater time and effort. In this integrative activity desired attributes of the programs can be agreed upon and the activities for the students can be optimized for achieving those attributes. In such a manner, clearer statements of a school's mission and philosophy can be described accurately and acted upon by all segments of the schools and community. Such a model would fit well with the attributes identified in the project, the work initiated by Halpern et al. (1991), and our instructional reform principles that addressed the need for a broader cooperative arrangement among parents, school staff, business, and other community segments. The commitment is worthwhile and seemingly provides the only meaningful basis for hoped for improvements in our schools.

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