THE STATE OF GIFTED EDUCATION IN NEBRASKA

by

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The purpose of this study was to examine the current status of gifted education in the state of Nebraska and to determine the extent to which the school districts' programs align with best practices, as determined by a review of the existing literature. The study identified and evaluated specific gifted and talented program components that were compared with the practices recommended in the gifted and talented program literature. Areas of evaluation included student identification methods, program options, staff development, and program evaluation.

Of the 252 public school districts in Nebraska, 203 districts submitted gifted program plans. Data were obtained by examining each of the district plans with the use of the rubric and checklist instruments created by the researchers. Rubrics were set forth with rating scales to determine exemplary, minimum, or non-existent program standards. Checklists were used to provide specific criteria about each program plan. Data were analyzed using frequency counts, percentages, and cumulative percentages.

Based on the research findings, the following conclusions were drawn by the researchers as they relate to current gifted program components of identification, staff development, program options, and program evaluation:

1. A majority of school districts rely on staff with limited knowledge of gifted/talented learners in the nomination process and use identification measures that are limiting and narrow in scope.
2. Most Nebraska school districts provide some type of services for these students, yet they vary greatly from district to district.
3. Staff development in the area of gifted education is a weak component in Nebraska school districts.

4. To evaluate gifted programs, it was noted most school districts utilized a formative evaluation process to guide their programs.

ACKNOWLEDGMENTS

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CHAPTER I

INTRODUCTION

The Marland Report, which was presented to Congress in 1972, was the catalyst for an increase of public interest regarding gifted education. The report stated the gifted "are children who require differential educational programs and services beyond those normally provided by the regular school program in order to realize their contribution to self and society" (U. S. Congress, Senate, Committee on Labor and Public Welfare, 1972, p. 2). Since that time, involvement at the state level has increased and the accepted definition has undergone numerous revisions. In 2002, the federal definition used for gifted students, within the Elementary and Secondary Education Act, defines gifted students as "Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities" [Title IX, Part A, Definition 22. (2002)]. Although states and districts are not required to use the federal definition, and almost all decisions about gifted education are made at the state and local levels, many states base their definitions on the federal definition or have adopted similar definitions of this population.

Since 1967 when the Nebraska Legislature passed Section 79-1337, Nebraska has allowed local school districts to operate reimbursable programs for gifted students. Moreover, in Nebraska, Rule 3 was revised in 1997 and Section 79-1108 stipulated that "For school year 1997-98 and each school year thereafter, each school district shall identify learners with high ability and may provide accelerated or differentiated

curriculum programs that will address the educational needs of the identified students at levels appropriate for the abilities of those students" (Nebraska Department of Education, 1997c, p. 2). The distribution of funds to eligible local systems is based upon the submission of program plans for gifted that meet the standards of quality established by the Nebraska Department of Education.

Few evaluation reviews have been compiled for programs and/or services, which serve the Nebraska gifted population. In a 1978 survey of existing gifted programs in Nebraska and other states, Crabbe (1978) reported ninety-three programs in twenty-three states as exemplary. He cited seven programs for gifted students in Nebraska as being exemplary. Although the Nebraska Education Department has included guidelines through legislation for the "Development of an Approvable District Plan," as well as policy for an evaluation process, sparse attention has been paid to such evaluations (Nebraska Department of Education, 1997c). In a review of Nebraska gifted programs, Flood (1984) found a high percentage of school districts had no written plan for the gifted program and many discrepancies existed regarding identification, teaching strategies, program options, staff development, and program evaluation.

In 1998, the National Association for Gifted Children (NAGC) developed and released the Pre-K-Grade 12 Gifted Program Standards to assist school districts in examining the quality of their programming for gifted/talented learners. The NAGC standards included a framework to assist in the evaluation and revision of programs that included both minimum standards (nominal requirements for satisfactory programs) and exemplary standards (characteristics of excellence in gifted education programming). A standard is a criterion-based designated level of performance against which programming

success is measured (Worthen, Sanders, & Fitzpatrick, as cited in NAGC). NAGC lists seven criterion areas in the Standards: Program Design, Program Administration and Management, Student Identification, Curriculum and Instruction, Socio-Emotional Guidance and Counseling, Professional Development, and Program Evaluation. These standards allow districts to evaluate existing programs, compare services across schools and districts, and provide guidance for developing new programs for gifted learners.

Evaluation is conducted for many reasons ranging from making decisions about a program to fostering public relations. Patton (1988) linked evaluation and its utility when he described evaluation practice as a

> systematic collection of information about the activities, characteristics, and outcomes of programs, personnel, and products for use by specific people to reduce uncertainties, improve effectiveness, and make decisions with regard to what those programs, personnel or products are doing and affecting (p. 301).

In December of 2004, the Nebraska State Board of Education ratified the "Essential Education" document that recommended all schools have a plan to address the needs of high ability learners (Nebraska Department of Education, 2004b). This plan may be developed by a representative committee that may include classroom staff, administrators, district High Ability Learner (HAL) facilitators, and other members who have expertise in the education of learners with high ability.

Therefore, the Nebraska Department of Education provided informational work sessions across the state to staff and administrators charged with the development of the gifted/talented program district plans. The High Ability Learner Program Proposal is based on nine elements as identified under Title 92, Chapter 3, Section 003 (Nebraska

Department of Education, 1997c). All school districts were required to have a District HAL plan submitted to the Nebraska Department of Education by September 1, 2006, for the purpose of serving as an evaluative method for funding purposes of HAL programs.

Statement of the Purpose

The purpose of this study was to examine the current status of gifted/talented programs in Nebraska and to determine the extent to which these programs match best practices, as determined by a review of existing literature. The study attempted to identify and evaluate specific gifted and talented program components that were compared with the practices recommended in the gifted and talented program literature. Areas of evaluation included student identification methods, program options, staff development, and program evaluation.

Delimitations

The study included the 252 public school districts in the state of Nebraska. The gifted plans submitted to the Nebraska Department of Education were used for archival data.

Limitations

The study was limited to the public school districts that submitted gifted program plans to the Nebraska Department of Education. Information was limited by the comprehensiveness of the plans and the degree to which the plans followed the guidelines required by the state department. No visits to the school districts were conducted and no contact was made with school district personnel.

Assumptions

The primary assumption in this study was the program requirements detailed in the Diagnostic and Evaluative Scales for Differential Education for the Gifted (DESDEG)

model for gifted program evaluation and the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) are rational in nature. An additional assumption was the Nebraska school districts' plans for gifted programming were efficient sources for obtaining data for the evaluation of gifted/talented programs in Nebraska. The final assumption was the program plans in general matched the practices of the districts.

Research Questions

The study was designed to answer the following questions:

1. To what extent do the Nebraska school districts' gifted/talented program definitions, identification methods, and program options align?
2. What procedures are used for the identification of gifted/talented learners in the school districts in the state of Nebraska?
3. To what extent do the school districts in the state of Nebraska meet the exemplary standards for identification of gifted/talented learners?
4. What program options are available for gifted/talented learners across grade levels K-12 within each school in the state of Nebraska?
5. To what extent do the school districts in the state of Nebraska meet the exemplary standards for program options?
6. What professional development opportunities focusing on serving the gifted/talented learners are offered to staff in the school districts in the state of Nebraska?
7. To what extent do the school districts in the state of Nebraska meet the exemplary standards for professional staff development for gifted/talented learners?

8. What components of program evaluation are used to study the effectiveness of the gifted/talented program in the school districts in the state of Nebraska?
9. To what extent do the school districts in the state of Nebraska meet the exemplary standards for program evaluation?
10. What commonalities exist within the exemplary gifted/talented programs in school districts in Nebraska?
11. To what extent does affiliation with an educational service unit relate to Nebraska school districts meeting exemplary standards for gifted/talented programs?

Methodology

A descriptive analysis was chosen for this study. The intent of the researchers was not to compare the programs of the different school districts in the state, but rather to examine the components of the programs that met exemplary standards as developed by the researchers. Areas of evaluation included student identification methods, program options, staff development, and program evaluation.

Descriptive data about the gifted program plans were collected through the use of a set of checklists and rubrics developed by the researchers based on best practices determined through the review of literature on gifted education. Of the 252 public school districts in Nebraska, 203 districts submitted program plans. The researchers used the plans submitted to the Nebraska Department of Education to collect data for this study.

Definition of Terms

Ability Grouping: Class or group assignment based on observed behavior or performance. Ability grouping is not the same as tracking (NAGC, 2005).

Accelerated Learning: A strategy of progressing through education at rates faster or ages younger than the norm (NAGC, 2005).

Affective Curriculum: Curriculum that focuses on personal/social awareness and adjustment, and includes the study of values, attitudes, and self (NAGC, 2005).

Advanced Placement (AP): A program developed by the College Board where high schools offer courses that meet criteria established by institutions of higher education. In many instances, college credit may be earned with the successful completion of an AP exam in specific content areas (NAGC, 2005).

Cluster Grouping: A grouping assignment for gifted students in the regular heterogeneous classroom. Typically, five or six gifted students with similar needs, abilities, or interests are "clustered" in the same classroom, which allows the teacher to more efficiently differentiate assignments for a group of advanced learners rather than just one or two students (NAGC, 2005).

Concurrent or Dual Enrollment: Most often refers to high school students taking college courses, often for college credit. Dual enrollment is viewed as providing high school students benefits such as greater access to a wider range of rigorous academic and technical courses, savings in time and money on a college degree, promoting efficiency of learning, and enhancing admission to and retention in college. The terms may also be used to refer to middle grade students taking high school courses and earning credit towards graduation (NAGC, 2005).

Creativity: The process of developing new, uncommon, or unique ideas. The federal definition of giftedness identifies creativity as a specific component of giftedness (NAGC, 2005).

Criterion-Referenced Testing: An assessment that compares a student's test performance to their mastery of a body of knowledge or specific skill rather than relating their scores to the performance of other students (NAGC, 2005).

Curriculum Compacting: A method for showing a level of proficiency in the basic curriculum so that a student can then be allowed to exchange instructional time for other learning experiences (NAGC, 2005).

Differentiation: Modifying curriculum and instruction according to content, pacing, and/or product to meet unique student needs in the classroom (NAGC, 2005).

ELL: An English Language Learner is a student whose primary language is not English (Nebraska Department of Education, 2004).

ESU: Educational Service Unit system in Nebraska consisting of 17 units that provide supplemental services to school districts. They are designed to achieve a balance of educational opportunities for all students in Nebraska regardless of population, financial differences, or geographic limitations of the school districts (NDE, 1998).

Enrichment: Activities that add to or go beyond the existing curriculum. Activities may occur in the classroom or in a separate setting (NAGC, 2005).

Evaluation: A process of obtaining, reporting, and applying descriptive and judgmental information in order to guide decision-making, support accountability, and increase understanding of the involved phenomena (Stufflebeam, McKee, & McKee 2003).

Flexible Grouping: An instructional strategy where students are grouped together to receive appropriately challenging instruction. True flexible grouping permits students to

move in and out of various grouping patterns, depending on the course content. Grouping can be determined by ability, size, and/or interest (NAGC, 2005).

Gifted and Talented Students: The Federal Elementary and Secondary Education Act defines gifted and talented students as "Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities" [Title IX, Part A, Definition 22. (2002)]. Many states and districts follow the federal definition (NAGC, 2005).

Guiding Principle: Simple rules interacting within a defined area starting with some goals (Lah, O'Connor, Peterson, 2003).

Heterogeneous Grouping: Grouping students by mixed ability or readiness levels. A heterogeneous classroom is one in which a teacher is expected to meet a broad range of student needs or readiness levels (NAGC, 2005).

Homogeneous Grouping: Grouping students by need, ability, or interest. Although variations between students exist in a homogeneous classroom, the intent of this grouping pattern is to restrict the range of student readiness or needs that a teacher must address (NAGC, 2005).

Independent Study: A self-directed learning strategy where the teacher acts as guide or facilitator and the student plays a more active role in designing and managing his or her own learning (NAGC, 2005).

Intelligence: The ability to learn, reason, and problem solve. Debate revolves around the nature of intelligence as to whether it is an innate quality or something that is

developed as a result of interacting with the environment. Many researchers believe that it is a combination of the two (NAGC, 2005).

Learner with High Ability: Learner with high ability means "a student who gives evidence of high performance capability in such areas as intellectual, creative, or artistic capacity or in specific academic fields and who requires accelerated or differentiated curriculum programs in order to develop those capabilities fully" (NDE, 1997c). In Nebraska, the terms "high ability learner" and "gifted and talented" are used interchangeably.

Learning Styles: Preferred way(s) in which individuals interact or process new information across the three domains of learning identified in the taxonomy of education objectives: cognitive (knowledge), psychomotor (skills) and affective (attitude). An individual's preferred learning style is how he/she learns best (NAGC, 2005).

Mentor: A person who shares his or her expertise with a student of similar career or field of study aspirations (NAGC, 2005).

NAGC: National Association for Gifted Children

NDE: Nebraska Department of Education

Pullout Program: A program that takes a student out of the regular classroom during the school day for special programming (NAGC, 2005).

Screening: The phase of the identification process where additional information is collected on the nominated students (Johnsen, 2004).

Socioeconomic Status: A person's position or standing in a society because of such factors as social class, level of education, income, and type of job (Hirsch, Kett, & Trefil, 2002).

Stakeholders: Program staff, program sponsors, taxpayers, students, parents, teachers, and administrators involved in the program being evaluated (Joint Committee for Standards for Educational Evaluation, 1981).

Tiered Assignments: A differentiation strategy that addresses a particular standard, key concept, and generalization, but allows several pathways for students to arrive at an understanding of these components, based on the students' interests, readiness, or learning profiles (Adams, nd.).

Summary

In summary, this study examined current gifted/talented programs in Nebraska and determined the extent to which these programs aligned with best practices in gifted education, as set forth by a review of the literature. Components of the DESDEG evaluation model, the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) as well as guidelines from the Nebraska Department of Education Regulations Governing High Ability Learners, Title 92, Chapter 3, were used to create a tool to evaluate school district plans. An overview of the research questions, purpose of the study, delimitations, limitations, and definitions has been discussed. Chapter II is a review of existing literature related to this study. The methods and procedures used in this study are presented in Chapter III. Chapter IV presents the data, and Chapter V consists of discussion, summary, and recommendations.

CHAPTER II

LITERATURE REVIEW

This chapter reviews the literature related to this study and examines the following six areas: (1) evaluation of gifted education; (2) philosophy, goals, and objectives; (3) identification; (4) gifted programming; (5) staff development; and (6) program evaluation.

Evaluation of Gifted Education

A search of literature relating to evaluation of programs was conducted to gain a more comprehensive understanding of program evaluation and to assist in the development of an evaluation tool of the Nebraska pubic school district gifted program plans. Although most conceptual models available for use in the evaluation of education programs were not developed specifically for evaluating programs for gifted students, they were extensive enough in their structured framework to serve as a model or to use specific components in the development of an evaluative tool.

CIPP Model for Evaluation

Stufflebeam, McKee, & McKee (2003) described the CIPP Model as a framework for guiding both formative and summative evaluations of a wide variety of purposes including projects, programs, personnel, products, institutions, and systems (see Figure 1.1). The main purpose of the CIPP Model was to improve, not to prove or disprove, but can be used to determine the worthiness of a program or service. According to Renzulli, as reported in Flood (1984), continuous feedback is necessary to ensure that improvements can be made as the program progresses. It was intended for use by internal and external evaluators alike. The core concepts included context, inputs,

processes, and products, as indicated by the acronym CIPP. The purpose of the context evaluations was judging goals, priorities, and outcomes. Input evaluations assess budgets, staffing needs, alternative approaches, and cost effectiveness. Process evaluations assess how the plans are implemented and later will help in the interpretation of program performance and outcomes. The product evaluations identify and assess outcomes to guide the users in continuing to meet target goals. Stufflebeam et al. listed the following questions used by evaluators while preparing the summative report:

- Were important needs addressed?
- Was the effort guided by a defensible plan and budget?
- Was the service design executed competently and modified as needed?
- Did the effort succeed?

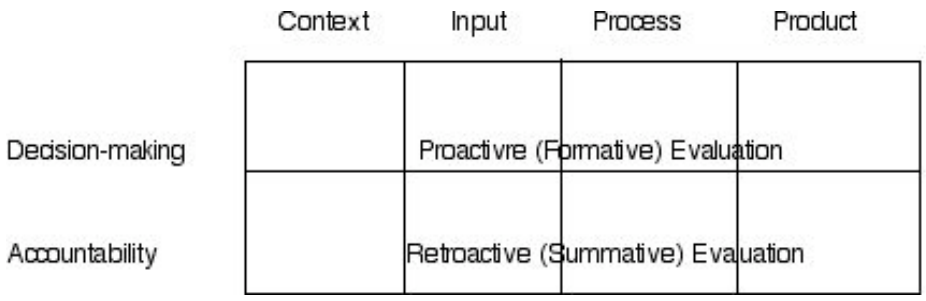

Figure 1.1. Stufflebeam's framework for relating the CIPP Model to the formative and summative roles of evaluation (Popham, 1988, p.37).

The CIPP Model is fundamentally a values-oriented model and identifies four core values used to ground the evaluation. These values are goals, plans, actions, and outcomes. The corresponding evaluation for each is as follows: goals-context evaluation, plans-input evaluation, actions-process evaluation, and outcomes-product evaluation. The purpose of the goals is to assure that the results will be justifiable and

defensible (Stufflebeam et al., 2003). When a contracted evaluator conducts an evaluation, it is important to develop an internal evaluation system. It is the responsibility of the external evaluator to assist the institution in the development of such a tool.

An integral part in the implementation of the CIPP model is the use of checklists, primarily the CIPP Evaluation Model Checklist. The checklists provide guidance for formative and summative evaluations of long term, ongoing programs. The CIPP Evaluation Model Checklist ensures the evaluation will meet the standards set forth in the Joint Committee on Standards for Educational Evaluation (1981) *Standards for Evaluations of Educational Programs, Projects, and Materials* of utility, feasibility, propriety, and accuracy.

Stufflebeam et al. (2003) reported the need for conducting a wide range of qualitative and quantitative methods and triangulation procedures, and suggested engaging multiple observers and informants to seek out all information to meet the needs and requirements of all stakeholders in the evaluation. He suggested team members may need to construct instruments, must find all pertinent information, use multiple procedures, address all evaluation questions, and cross-check the findings. Renzulli (as cited in Flood, 1984) reported the CIPP Model is costly and cumbersome and requires a large staff for implementation.

Stake's Countenance Model

In 1967 Robert E. Stake developed a system of education evaluation that emphasized description and judgment as reported in an article entitled "The Countenance of Education Evaluation." The model is divided into three phases of the educational

program: antecedent (conditions prior to instruction, i.e., a student's prior experiences, ability, interests, and willingness), transaction (process of instruction, i.e. interactions between teacher and student, class discussions, and tests), and outcome (effects of the instructional program, i.e., measurements of the effect of instructional program on teachers, administrators, and others) (Popham & Stake, as cited in Flood, 1984). The descriptive acts were divided between the intended and the observed. The judgment acts were separated according to the standards used and the actual judgments (Popham, 1988). Stake's Countenance Model focused on the outputs of an educational program, using a relative comparison (comparing two programs), absolute comparison (comparing the program to non-specific standards of excellence), or a combination of both. The following table, taken from Popham, illustrates the statements and data needed to evaluate an instructional program (see Figure 1.2).

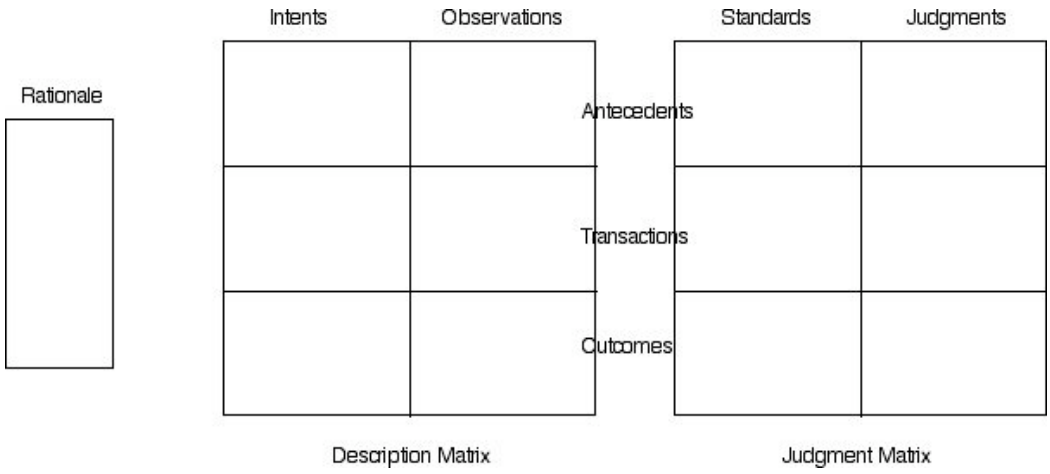

Figure 1.2. Statements and data needed to evaluate an instructional program (Propham, 1988, p. 32)

Stake's Responsive Model

In the early 1970's, Stake devised another evaluation model that was more responsive to the concerns of those individuals involved in the evaluation process. Stake contended that the evaluation would achieve this responsive nature if it "orients more directly to program activities than to program intents; responds to audience requirements for information; and if the different value perspectives present are referred to in reporting the success and failure of the program" (Popham, 1988, p. 42). The responsive model makes use of observers and judges to gather data important to the stakeholders of the program. Results of the evaluation process are commonly case studies, videotapes, or artifacts. Rather than the traditional formal, preplanned, and objective evaluation, the responsive model is intended to be informal, flexible, and subjective.

Discrepancy Evaluation Model

Malcolm Provus developed the Discrepancy Evaluation Model (DEM) in 1969 as a means of evaluating program development, stabilization, and assessment. Provus (as cited in Popham, 1988), defined program evaluation as "the process of (1) defining program standards; (2) determining whether a discrepancy exists between some aspect of program performance and the standards governing that aspect of the program; and (3) using discrepancy information either to change performance or to change program standards" (p. 37). The model can be used as a formative assessment to determine the fate of a program, or as a design tool for a program from its inception to its conclusion (Marsh, 1999). The DEM consists of five stages of evaluation, each of which is an indicator of performance that is compared to a standard (a criterion of performance). At Stage I, a comparison is made between the program design and the design criteria

standard. The program design consists of input, process, and output dimensions. The discrepancy is reported to the program manager. Stage II looks for discrepancy between the program operation and the program design developed in Stage I and is reported to a program manager for the purpose of redefining the program procedures. Stage III compares the interim program products and the program design. This information is used as a program progress evaluation. Stage IV compares the final products to the standard for program design. It is intended to estimate the terminal effects of the program. At this point the program managers may choose to do Stage V, a comparison of the program cost to other programs with the same intended product (Provus, 1969). Provus set up the model as seen in Figure 1.3.

Stage	Performance	Standard
I	Program Design Input Dimension Process Dimension Output Dimension	Design Criteria
II	Program Operation	Program Design Input Dimension Process Dimension
III	Program Interim Products	Program Design Process Dimension Output Dimension
IV	Program Terminal Products	Program Design Output Dimension
V	Program Cost	Cost of Other Programs with Same Product

Figure 1.3. Provus' Discrepancy Evaluation Model (Provus, 1969, p. 10)

According to Gredler (as cited by Marsh, 1999), the DEM is most effective under the following circumstances:

- When the type of evaluation desired is formal, and the program is in the formative rather than summative stages,
- When evaluation is defined as continuous information management addressing program improvement and assessment, and where evaluation is a component of program development,
- Where the purpose of evaluation is to improve, maintain or terminate a program,
- Where the key emphasis of evaluation is program definition and program installation,
- Where the roles of the evaluator are those of facilitator, examiner of standards, observer of actual behaviors, and design expert,
- When at each stage of evaluation the program performance is compared with program objectives (standards) to determine discrepancies,
- Where the program evaluation procedure is designed to identify weaknesses and to make determinations about correction or termination,
- Where the theoretical construct is that all stages of programs continuously provide feedback to each other,
- Where the criteria for judging programs includes carefully evaluating whether:
    - The program meets established program criteria
    - The actual course of action taken can be identified, and
    - A course of action can be taken to resolve all discrepancies. (para. 13)

Diagnostic and Evaluation Scales for Differential Education for the Gifted (DESDEG) Model

The program evaluation model Diagnostic and Evaluative Scales for Differential Education for the Gifted (DESDEG), developed by Renzuli and Ward (1969), is an evaluation model specifically designed for use in gifted and talented programs. The model focuses on five key categories: (1) philosophy and objectives; (2) student identification and placement; (3) curriculum; (4) the teacher; and (5) program organization and operation (see Figure 1.4).

Key Feature A: Philosophy and Objectives	
Program Requirement 1: Existence and Adequacy of a Document	Program Requirement 2: Application of the Document
Key Feature B: Student Identification and Placement	
Program Requirement 3: Validity of Conception and Adequacy of Procedures	Program Requirement 4: Appropriateness of Relationship Between Capacity and Curriculum
Key Feature C: The Curriculum	
Program Requirement 5: Relevance of Conception	Program Requirement 6: Comprehensiveness
Program Requirement 7: Articulation	Program Requirement 8: Adequacy of Instructional Facilities
Key Feature D: The Teacher	
Program Requirement 9: Selection	Program Requirement 10: Training
Key Feature E: Program Organization and Operation	
Program Requirement 11: General Staff Orientation	Program Requirement 12: Administrative Responsibilities and Leadership
Program Requirement 13: Functional Adequacy of the Organization	Program Requirement 14: Financial Allocation
Program Requirement 15: Provision for Evaluation	

Figure 1.4: Renzulli and Ward's "DESDEG Model" (Renzulli & Ward, 1969, p.27)

Moreover, the organization of the DESDEG, as developed by Renzulli and Ward (1969), was carefully designed on a group of program variables that collectively comprised a representation of a total gifted program. Each of the five key features of the DESDEG was the basic structured framework used in the evaluation of programs. Under each of these five key features were two or more specific program requirements. There were a total of fifteen essential program practices that were representative of central theoretical principles of differential education for the gifted as was found in the literature.

Both program requirements and scale standards were defined. Program requirements were defined to provide program evaluation with an undeniable meaning of the concept that was evaluated. A set of five scale standards was developed for each program requirement, which measured varying degrees of program quality on a five- interval hierarchy. Each set of standard scores was given a verbal and numerical value. Verbal designations were ideal, superior, commendable, neutral, and negative and the numerical values for these verbal designations ranged from plus three for an ideal to a minus one for negative.

Finally, the evaluation process began with program participants compiling data forms for the DESDEG evaluation process. Once the descriptive information was processed, interpreted, and organized an outside evaluator developed a final report providing a summary of the program's effectiveness and stating recommendations for improvement for each of the key categories.

District Philosophy, Goals and Objectives

A philosophy statement is a necessary component to provide direction and guidance towards developing goals and objectives of educational programs. When developing

goals and objectives for the high ability program, the reasons for creating such an educational program need to be reviewed as to how they parallel the district's mission, philosophy, and beliefs statement. The impetus for developing challenging learning environments for all students is usually implicit in mission and philosophy statements proposed by districts (Gubbins, 1998). Such statements provide the rationale for developing justifiable programs and services for gifted and talented students. Moreover, the statement should match the focus of what the school wants to provide for all students.

Although there are many variations in definitions of giftedness and programming model options, The National Association for Gifted Children (NAGC) recommends in their *Pre-K-Grade 12 Gifted Program Standards* (1998), gifted education programming must be developed with a philosophical base that reflects the values and beliefs of the community. Further, this base is designed not only to mirror the values of the community at large, but also the specific needs of the identified population of gifted learners. Including members of the teaching community as well as students and parents to assist with the development of the philosophy, goals, and objectives of a high ability program for gifted/talented learners is a positive step towards gaining support from all stakeholders.

Program philosophy, goals, and objectives should be based on research that exemplifies best practices in the field. The philosophy, goals, and objectives will drive the identification, programming, and curricular decisions. In a document titled *Lessons Learned from Program Evaluation* (Callahan, Austin, Brighton, & Moon, 2003), philosophy statements were noted as being reflections of beliefs that based decisions on

current research and current thinking, providing a challenge for all gifted and talented learners.

The philosophy, goals, and objectives should document what is to be accomplished and how it is to be accomplished (Gubbins, 1998). Thus this becomes a means to review what has been done, determine its effectiveness, generate options for making improvements, and make decisions regarding the most appropriate course of action.

Identification

Identification procedures and practices have been debated, discussed, and written about extensively. Recognition and awareness of the need to meet the educational needs of gifted and talented learners has increased over the last two decades. Gifted education has evolved into a controversial issue within many school districts as educators search for methods to best meet and serve the needs of gifted learners (Clark, 2002). The process of identifying gifted, talented, and creative children is the foundation of any program which strives to provide educational services to this group, as before any child can be placed into a program for the gifted, one must be identified as being "exceptional" or "gifted." This task thus becomes the responsibility of the schools and educators to recognize, identify, and provide them with appropriate educational opportunities to fully develop their potential.

Historically, most high ability programs for gifted/talented students have relied upon intelligence test scores. Prior to the 1950's, programs followed Terman's practice of basing most decisions about the gifted on intelligence and achievement test data (Tuttle, 1978). Terman used the Stanford-Binet Intelligence Scale as the tool to identify gifted children. Those who scored in the top 1% of the population that equaled an intelligence

test score of 135 were labeled gifted/talented, and those who did not were not viewed as gifted (Brown et al., 2005). Throughout the 20th century, the influence of intelligence and achievement tests on the attitudes of parents, teachers, administrators, psychologists, and the general public towards identification of gifted/talented children remained strong. The practice of utilizing intelligence test and achievement test scores to solely determine giftedness has been difficult to diminish in importance and reliability.

Lewis Terman (as cited in Brown et al., 2005) proposed a conservative definition of giftedness, which was determined solely on scores of intelligence tests. On the other hand, The Gifted and Talented Children's Education Act of 1978 defined "gifted children" as:

> children and, whenever applicable, youth who are identified at the preschool, elementary, or secondary level as possessing demonstrated or potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic, or leadership ability, or in the performing and visual arts, and who by reason thereof, require services or activities not ordinarily provided by the school.

Education has battled for years to find a definition between these two extremes that is not so narrow to eliminate people with valued talents, yet not so broad that it fails to address the needs of those with talents that need differentiated educational challenges.

Moreover, Renzulli (2002) presented a continuum of definitions that ranged from "conservative" or "restrictive" to liberal. At the restrictive end, according to Renzulli, definitions limit the number of areas of performance that are considered in determining giftedness or specify the degree or level of excellence to be used as a cut-off in the identification process of the gifted. Renzulli places definitions, which are broad and

more general, using such adjectives as “superior,” “outstanding,” etc. with minimal operational definitions at the liberal end of the continuum. Therefore, the broader or more liberal the definition, the less utility it will have in the actual identification process. Consequently, state education departments and school districts favor use of broader definitions and condense them to more restrictive equipped definitions, which are more subjective than the broader definitions, and functionally work better for such institutions.

Yet, the problem of how to adequately define and identify the characteristics of such children persists. Likewise, the problem of what identification methods best accomplish this also remains unanswered. Part of the confusion lies with the manner in which giftedness is defined. Boston (1975) declared, “There is probably no more widely discussed problem in the whole field of gifted education than what we mean by gifted” (p. 23).

It is imperative that school districts select the definition of giftedness that will best serve their gifted population, as this definition will determine the identification procedures used, impact what students will be provided services, and thus define the whole of any gifted program. Furthermore, criteria for the selection of gifted students must match the original rationale or definition of giftedness held by the school district (Hoge, 1988). The manner in which giftedness is defined is central to the whole of any gifted education program. Martinson (1975) asserted, “Any definition of the gifted should result in the identification of those children who need special educational provisions in order to learn and use their capacities properly” (p. 7).

Obviously, certain identification methods are better suited to assess specific behaviors over others. For example, if mathematical ability is to be assessed, then a written test is

commonly used, whereas use of such a test method to assess skill in the performing arts would not prove reliable, valid, or an effective assessment tool. Therefore, if the gifted definition that has been adopted has several areas of giftedness it targets, then the identification task will be more complex and require using more than one assessment method.

One purpose of the Jacob K. Javits Gifted and Talented Students Education Act of 1989 was to support research and development of identification procedures and methods that are based on more than just standardized tests and traditional methods of identification in order to create a less biased method of identifying culturally different and economically deprived populations. Maker (as cited in Han & Marvin, 2000) indicated many states continue to use the two traditional criterions of IQ and achievement tests for entrance into gifted programs. Coleman and Gallagher (as cited in Han & Marvin) found a significantly high number of under identified gifted students from these populations. To ensure the strengths of culturally and linguistically diverse students are assessed, identification instruments (including checklists) must be valid and reliable as well as culturally sensitive (Ford, Braytops, & Harmon, 1997). Moreover, NAGC, in their gifted program standards, cited exemplary identification practices as those which provide assessments in the language which students are most fluent and use assessments that are responsive to a variety of factors that discriminate against fair assessment including "economic conditions, gender, developmental differences, and handicapping conditions," (Hansford, Bonar, Scalley, & Burge, 2001, p. 45).

Use of standardized tests for identification of gifted students in rural areas frequently leads to these students being underidentified as often the tests contain an urban bias.

Standardized tests are based on familiarity with urban/suburban values and life experiences. According to Spicker, Southern, and Davis (as cited in Lewis, 1999), this bias can lower test scores and limit the opportunities for rural children to be recognized as gifted/talented regardless of culture. Consideration about the differences in background between rural and urban communities must be given when deciding what identification methods and processes should be used to identify gifted/talented learners in rural communities. According to Spicker, Southern, and Davis (1987), rural communities should employ more nontraditional assessments in their identification process.

In addition, social economic status is one of the most significant factors affecting gifted students as Cross (2004) notes:

> The research on SES and achievement is clear: There are certain factors that mitigate against school success. I contend that the achievement gaps between what is possible and what is actually accomplished among our gifted students from the poorest families is the greatest risk for underachievement. (p. 19)

Spicker et al. (1987) supported the contention that it is poverty that limits opportunities for children, and poverty is an on-going problem for many families in rural areas. Burney and Cross (2006) stated, "program designers may want to consider nonverbal measures and performance assessments in an early identification schema to find and nurture talent that occurs in children of poverty" (p. 15).

Moreover, all students should have an equal opportunity to be nominated to gifted/talented programs if they display any characteristics that indicate they have special gifts or talents (Johnsen, 2004). To be considered an exemplary practice, information about the nomination process should be disseminated to parents, students, community

members, and staff, and be available in a variety of languages (Hansford et al., 2001). In addition, informational meetings and workshops should be provided to parents so they can "get a full meaning of giftedness" (Hansford et al., p. 43). Collecting input and information from parents, staff, community members, and students is a necessary component of the nomination process.

If teachers are to be a part of the nomination process, they need to receive training and staff development regarding the characteristics of gifted/talented learners. Gear (as cited in Johnsen, 2004) stated, "With training, teachers identify more children (e.g., 85%) than untrained teachers (e.g., 40%)" (p. 110). In addition, the nomination must be culturally fair and should include teacher observations that are open-ended and require higher-level, more complex thinking. The 1992 Nebraska (Javits) Project, the Nebraska Starry Night Observation (NSNO), developed ways for classroom teachers to identify K-grade 2 students that may be gifted or talented-based on 17 behaviors commonly found in gifted students. The identification process was based on observation of daily performance over a period of time, thus providing a means for identification of able/creative students linked very closely to what teachers saw in the classroom, thus providing improved educational opportunities for students.

Ki-soon Han and Christine A. Marvin, in a 2000 follow-up study of the Nebraska Project, found many staff members were aware of the need for gifted services and exhibited a more positive attitude toward gifted programs. However, identification was still based mainly on the use of IQ scores and achievement tests. In their study of 18 of the 240 students who were identified as potentially able/creative from the original 1992 Nebraska Project, only seven students were enrolled in the gifted/talented program. The

other eleven students were described as performing at an average or below average level. Only one of the eight identified students had qualified by criteria other than the traditional IQ score. All of the 18 students still demonstrated the 17 behavioral attributes used in the original study for identification purposes, but none of these behaviors were considered in the identification process. The study indicated test scores still are the predominant method used for identification for gifted/talented services, including differentiation in the classroom.

According to Sternberg, (as cited in Han & Marvin, 2000), all of these students deserve further evaluation before excluding them from the gifted/talented program. The lack of services, or the lack of identification for services, for the eleven non-identified students may, or may not, have contributed to their lower performance as indicated in the study conducted five years after the initial identification using the 17 behavioral traits of creative/able students. However, research has shown that the most productive and successful members of society are not always those who score at the 95th percentile on standardized tests (Renzulli, as cited in Han & Marvin, 2000).

Han and Marvin (2000) suggested rather than spending a large amount of state funds on identification of gifted and talented students, money should be allocated for identifying the hidden able/creative students in more diverse populations. Maker (as cited in Han & Marvin) noted changes in identification procedures should be linked to changes in curriculum and instruction. The study suggested training for teachers is necessary to enable them to meet the diverse needs of all students in their classrooms.

In a study done by The National Research Center on the Gifted and Talented (NRC/GT) regarding instruments used in the identification of gifted and talented

students, the focus was (a) to identify current practices in identifying gifted students and in evaluating gifted programs, (b) to collect relevant data on assessment instruments, (c) to evaluate those instruments using standards established by the measurement field, and (d) to identify promising practices in identification and evaluation (Callahan, Hunsaker, Adams, Moore, & Bland, 1995). The study utilized a review of literature by the experts as a basis for making comparisons between "ideal" practices and "actual" practices.

The 1998-1999 State of the States Gifted and Talented Education Report (Council of State Directors, 1999) conducted a survey of state directors regarding the status of state identification requirements. Of the 16 state directors who responded, 94% indicated an intelligence/ability/aptitude assessment was mandated; 75% indicated an academic achievement/performance assessment was mandated; 44%, a teacher/parent/student/peer nomination; 44%, characteristics of behavioral checklists/observations; 38%, grades/anecdotal records/student interest inventories/assessment of student motivation, and 63%, other. Clearly, reliance upon objective measures such as intelligence and achievement tests are more prevalent for state identification mandates than mandates based on subjective measures, such as student work, behavior, and/or characteristics. There is no doubt identification based on the process of relying upon numbers from a set of scores to determine gifted/talented students allows objectivity and a less complicated process. Yet the fact remains, students who demonstrate creativity and high performance within the classroom are often overlooked with this method of identification.

However, the federal definition of giftedness includes not only intellectual and academic giftedness, but also creative, artistic, and leadership traits. As noted by Clark and Zimmerman (1992), identifying students in the visual arts should be based upon

multiple criteria, and attention needs to be made to examine student potential through performance and products. Ryser (2004) stated, "qualitative assessments use words to describe and understand an individual's strengths or other characteristics" (p. 24). Moreover, Ryser cited use of three commonly used qualitative assessments as portfolios, interviews, and observations. Use of these instruments requires teachers and other individuals who are involved with the identification process to receive training to become knowledgeable and competent with the use of such identification tools.

Exercise of multiple criteria in the decision making process of identification of gifted/talented learners has been widely recommended in the literature and is characterized by use of both standardized and non-standardized instruments, process and performance indicators, and multiple sources of data (e.g., student, teachers, parent, or peers) (Callahan et al., 1995, p. 28). In fact, this recommendation of multiple criteria use has been placed within policy statements of 44 states (Ford, Baytops, & Harmon, 1997, p. 204). In the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998), exemplary practices include the need for student assessment data to "represent an appropriate balance of reliable and valid quantitative and qualitative measures" and "come from multiple sources and include multiple assessment methods" (Hansford et al., 2001, p. 50). Use of such a process allows multiple ways for one to be identified as gifted, however, often misuse of this process occurs and a district expects a student to meet all criteria.

School districts that rely on both qualitative and quantitative information in the identification process of gifted/talented learners may organize this data in various forms including, but not limited to, profiles, case studies, and matrices. Regardless of which

approach is used in the identification process, Johnsen (2004) provided the following five guidelines when organizing multiple kinds of data:

1. Do all assessments receive equal weight or value?
2. Are the scores comparable?
3. Are errors in measures considered?
4. Does the form or process provide the opportunity for the identification committee to examine each student's best performance?
5. Does the form or process allow the committee to consider anecdotal and other descriptive information? (p. 121)

Looking at the state of Nebraska, one would find that giftedness is defined as:

> Learner with high ability means a student who gives evidence of high performance capability in such areas as intellectual, creative, or artistic capacity or in specific academic fields and who requires accelerated or differentiated curriculum programs in order to develop those capabilities fully (NDE, 1997c).

According to the guidelines set forth in Section 00.4 of Title 92, Chapter 3 (NDE, 1997c), such students can be identified at any given time and schools within Nebraska must have a system to identify learners that will use multiple assessment measures and appraisals so schools can identify students in different talent areas and at different ages. Moreover, equal access to identification and multiple criteria should be included and the process should be based on a combination of standardized instruments and non-standardized means.

Due process procedures are imposed on school districts under the Fifth and Fourteenth Amendments and in order to assure due process rights, school districts should

have an appeals process that clearly identifies time frames and action steps to take in this process (Johnsen, 2004). Likewise, the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) includes an identification guiding principle stating the need for written procedures at a minimum should include " provisions for informed consent, student retention, student reassessment, student exiting, and appeals procedures" (Hansford et al., 2001, p. 51). In the guidelines for high ability learners, the Nebraska Department of Education requires school systems include a provision to appeal decisions regarding the identification or non-identification of students. In addition, notification of gifted learners must be made within the first thirty school days of each school year, and the identification process must provide equal access and include multiple criteria based on a combination of standardized instruments and non-standardized means (NDE, 1997c).

In summary, the sole purpose of identification is to serve the educational and learning needs of students. According to the *Procedures for the Identification of High-Ability Learners Manual,* compiled by the Nebraska Department of Education (1997a), "locating well-designed assessments to identify a wide range of high ability students in Nebraska's economically, ethnically, and socially diverse population is challenging" (p. 33). Moreover, gifted constructs other than intelligence need to be considered, as gifted/talented learners possess abilities in many forms and these abilities must be recognized and accommodated for within the learning experience. Identification is not a method used for labeling rather it is one of determining appropriate educational services for children and enhancing potential (Callahan & McIntire, 1994).

Gifted Programming

Parke (1992) identified two challenges for High Ability Learner Program planners: full service education and educational experiences that are challenging and appropriate. They must create a learning environment that allows gifted/talented students to fully develop their talents and interests while still feeling a part of the class. Educational programming must be designed with an eye to both the theoretical and empirical (i.e., research which supports particular designs or practices with gifted learners) and the practical (i.e., available resources). In addition, knowledge of gifted learners' development, appropriate forms of assessment, evaluation, and the interrelationship of differentiated curriculum and instructional practices should be reflected in program planning (Gubbins, 1998).

> Linda Silverman (as cited in Fiedler-Brand; Lnage; & Winebrenner, 1992) said,
>
> As children veer from the norm in either direction, their educational needs become increasingly more differentiated. A child three standard deviations below the norm (55 IQ) could not profit from placement in a cooperative learning group in the heterogeneous classroom; neither does a child three standard deviations above the norm (145 IQ). (p. 3)

Students who are gifted and talented are found in all types of classrooms including regular self-contained classrooms, pull-out programs, magnet schools, and resource rooms, but no matter where they are taught, they need a differentiated curriculum that is designed to meet their individual characteristics, needs, abilities, and interests (Berger, 1991b). All children deserve the right to come to school and learn something new each day. This will not happen unless provisions are made for the learning experience of each

student. Berger suggests, while teachers are focusing on concepts and skills, modifications can be made that include modifying the pace and level of instruction, incorporating flexible grouping, and varying the products of learning to reflect students' learning styles (p. 1). One of the most important responsibilities of a teacher is to know the abilities, strengths, weaknesses, and learning needs of each student in the class. Only then can meaningful learning take place for all students (Tomlinson & McTighe, 2006).

According to the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998), gifted programming should be available for the full continuum of grades PreK-grade 12. According to Tomlinson (1995b), middle school educators and gifted educators disagreed on the role of gifted education. Areas of agreement included instruction, meeting the affective needs of the young adolescent, and the need for challenging learning experiences. There were, however, several issues where there was disagreement on what is best for the young adolescent. These included excellence vs. equity, heterogeneous grouping, appropriate curricula, and the use of cooperative learning. The gap in beliefs is narrowing as educators raise the level of expectations for middle school students and see the need for differentiation.

Rural school districts face problems different than urban districts. There are fewer identified students, lack of resources, and increased costs. In the smaller classes teachers are able to meet the needs of individual students more easily. Acceleration is a viable concept as it is both cost efficient and effective (Howley, as cited in Luhman & Fundis, 1989). Through the use of modern technology, high school students can be enrolled in online classes and have dual enrollment in college to gain access to higher level classes than the school district is equipped to offer (Luhman & Fundis).

There are many different program options available to educate gifted/talented students, all of which claim to be "ideal." According to Berger (1991a), an effective program is comprised of eight major components:

1. Needs assessment that enables educators to gather information about the needs of the students and the resources of the school district.
2. Definition of population that is based on information gathered in the needs assessment.
3. Identification procedures used to locate students who have needs not met by the core curriculum and use a variety of instruments.
4. Program goals written and stated broadly and refer to desired student outcomes and the assessed needs of the student population.
5. Program organization and format laying out how, where, and how often instruction will take place, and who will participate.
6. Staff selection and training are crucial.
7. Development of curriculum that is rigorous and challenging, and creates problem solvers and hard workers.
8. Program evaluation that is both formative and summative and used for reassessment of student needs and program success. (pp. 1-2)

In order for a program for gifted/talented learners to survive budget cuts and public opinions, it must be seen as a part of the mainstream education and an integral part of the school curriculum.

Moreover, in a 2004 NAGC presentation, Callahan, Austin, Brighton, & Moon conveyed to their audience that the following are imperative to a successful high ability program:

1. Emphasizes gifted services rather than a gifted program.
2. Connects elementary, middle and high school in a continuum of gifted services in a meaningful way rather than operating as separate units without clear transitions and sequence.
3. Balances individual creative freedom with the district goals and needs.
4. Gifted education programming must be an integral part of the general education school day allowing for flexible grouping of students in order to facilitate differentiated instruction and curriculum.

Meeting the needs of all students in a classroom has been a dilemma since the days of the one-room schoolhouse. The solution is differentiation (Hess, 1999).

Differentiation is defined in the literature in several different ways, but all of the definitions revolve around meeting the needs of each individual student in the classroom. Tomlinson (2001b) defined differentiation as "the efforts of teachers to respond to variance among learners in the classroom" (p. 2). Tomlinson and Eidson (2003) defined differentiation as responsive teaching with the "goal to maximize the capacity of each learner by teaching in ways that help all learners bridge gaps in understanding and skill and help each learner grow as much and as quickly as he or she can" (p. 2).

"Differentiating instruction means creating multiple paths so that students of different abilities, interest or learning needs experience equally appropriate ways to absorb, use,

develop, and present concepts as a part of the daily learning process" (Theroux, 2004, p.1). Differentiation is a way of teaching and a classroom practice that values the individual needs of each student and enables all students to experience continuous learning (Kingore, 2005; Theroux, 2004; Tomlinson, 2000). Differentiation has the added benefit of providing an experience rich in educational opportunity to all members of the classroom (Winebrenner & Berger, 1994). Many teachers today feel the pressure of covering the standards and raising test scores. But if the standards are well conceived, "there is no contradiction between effective standards-based instruction and differentiation. Curriculum tells us what to teach: Differentiation tells us how" (Tomlinson, 2000, p. 9).

Kaplan (as cited in Gubbins, 1994) listed three main principles for use in designing curricular options. They include:

- Allow for in-depth learning of a self-selected topic within an area of study.
- Develop productive, complex, abstract and/or higher level thinking skills.
- Encourage the development of products that challenge existing ideas and produce "new" ideas. (p. 2)

Principles and characteristics of a successful differentiated classroom should include: ongoing assessment that is linked to concept focused and principle driven instruction; activities that are perceived as worthwhile and valuable; flexible grouping; modified pace of instruction; varied products to reflect learning styles; and active student explorers with teachers acting as facilitator, not dispensers of knowledge (Kingore, 2005; Landrum et al., 2001; Tomlinson, 1995a, 2001b). Students should be engaged in the learning activities with the goal of understanding the concepts being taught. The level of

thought processes and application of the key concepts of the lessons should be differentiated. The intent of differentiated instruction is to provide students with the feeling of success that will motivate future effort (Kingore).

The four most common components of differentiation are content (what the students need to know), process (activities), product (culminating projects that extend learning), and learning environment (Tomlinson, 2001b, Tomlinson & Eidson, 2003). Riley (as cited in Dinnocenti, 1998) added assessment of performance. Renzulli (as cited in Dinnocenti, 1998) defined the goals of his Five Dimensions of Differentiation as:

- Content – put more depth into the curriculum through organizing the curriculum concepts and structure of knowledge.
- Process – use many instructional techniques and materials to enhance and motivate learning styles of students.
- Product – improve the cognitive development and the students' ability to express themselves.
- Classroom – enhance the comfort by changing grouping formats and physical area of environment.
- Teacher – use artistic modification to share personal knowledge of topics related to curriculum as well as personal interests, collections, hobbies, and enthusiasm about issues surrounding content area. (p. 1)

A review of the literature indicated the methods of differentiation are interrelated and overlap. In the following discussion of differentiation methods, an attempt has been made to separate the information into the categories of content, process, product, and learning environment.

Differentiating Content

Replacement activities should extend concepts and let the students make personal connections to the content of the curriculum. This does not mean "extra credit" work that is in addition to the basic assignments of the classroom. These activities should make it possible to challenge, promote cognitive growth, and meet the interests of the gifted/talented learners. Curriculum content includes concepts, ideas, strategies, images, and information that occur in figural, symbolic, semantic, and behavioral forms. In order for the curriculum to be more meaningful for gifted students, it should be modified to require more in-depth understandings and connection with life (Berger, 1991b; Maker & Nielson, 1995). Maker and Nielson described the following six methods for modifying the content: abstractness, complexity, variety, organization for learning value, the study of people, and the study of methods.

Gifted students who express themselves well and who have outstanding problem solving and reasoning skills will benefit from abstract learning opportunities that cause them to make generalizations and formulate and test theories.

> Gifted learners need to spend much less time on concrete information and little time in drill and practice in their areas of giftedness. The development of abstract concepts, derivation of generalizations, and induction of unknown principles is a much more effective use of their learning time. (Maker & Nielson, 1995, p. 75)

The modification of complexity is especially appropriate for gifted learners who have the ability to explore ideas and make connections. Maker and Nielson (1995) believe that gifted students need to be taught "complex content from a variety of disciplines and experiences with the tools for evaluating for communicating in ways that are appropriate

to specific disciplines" (p. 79). Gifted learners then have the opportunity to organize new information into a meaningful structure.

Modifying the content with a variety of learning activities should include opportunities to broaden and deepen understandings in a wide range of fields and should be tailored to the interests of the students. It is important that the learning activities be stimulating and relevant, rather than just providing a novelty. Modifying content to include enrichment, or extension of learning opportunities, is especially important to gifted/talented learners. "By providing a wide range of content, a teacher has a greater chance of finding areas of intrinsic interest that will engage gifted learners' passionate desire to find out more about an issue or topic" (Maker & Nielson, 1995, p. 82). "Since these students have previously mastered many of the concepts they are expected to 'learn' in a given class, a huge part of their school time may be wasted. They need exactly what all other students need: consistent opportunity to learn new material and to develop the behaviors that allow them to cope with the challenge and struggle of new learning" (Winebrenner & Devlin, 2001, para.5). In describing the Schoolwide Enrichment Model, Renzulli & Reis (2002) noted,

> We believe that true equity can only be achieved when we acknowledge individual differences in the students we serve, and when we recognize that high-achieving students have as much right to accommodations in their schooling as do students who are experiencing learning difficulties. We also believe that equity is not the product of identical learning experiences for all students; rather, it is the product of a broad range of differentiated experiences that take into account each student's unique strengths. (p. 20)

The organization of the content should allow students to make generalizations, compare and contrast, and to learn the thought systems of a variety of disciplines. Gifted students have the ability to learn the regular content more quickly than their non-identified peers, thus they need a modification in the ways the content is presented. "Organization and integration of content according to broad themes and abstract generalizations are built on the belief that when content is richly connected, gifted students gain more from their learning experiences" (Maker & Nielson, 1995, p. 88).

The study of people helps the gifted students to understand themselves better, as they often are aware they are different from other students their age. Their curriculum needs to include socio-emotional content. Gifted students should also study successful people and how they reacted to their success, fame, failure, and the lack of social recognition. Another way to learn about people and fields of study is through interviews or interaction, such as a mentor (Maker & Nielson, 1995).

The final method of differentiating content, according to Maker and Nielson (1995), is the study of methods of inquiry. Knowledge is constructed through the use of data and research. Gifted students need to learn how research is conducted, and how data is processed and used in a variety of disciplines. The common attributes of intuition, imagination, reasoning, problem solving, motivation, sense of humor, and creativity suggest that gifted students "need and can profit from an analysis of the methods used by creators, scholars, and leaders in various fields or occupations" (p. 95).

Differentiating Process

Process is the presentation of content. It includes the learning activities, questions, teaching methods, and thinking skills used. The activities must be intellectually

demanding and encourage students to think about subjects in complex and abstract ways. The activities should be based on student interests and encourage self-directed learning (Berger, 1991b).

The Nebraska Department of Education (1997b) and Maker and Nielson (1995) listed the modifications of process as the following:

- Higher levels of thinking – Emphasizing questions that enable the learner to analyze, synthesize or evaluate.
- Open-endedness – Asking questions that promote critical and creative thinking.
- Inquiry and discovery – Providing opportunities for the learner to arrive at self-drawn conclusions or generalizations.
- Active exploration – Providing opportunities for movement and learner driven explorations.
- Inductive and deductive reasoning – Asking the learner to cite the sources, clues given, and logic used in drawing conclusions.
- Freedom of choice – Providing opportunities for self-directed activities such as independent study.
- Group interactions/simulations – Using structured simulations for group problem solving.
- Variety – Encouraging a variety of teaching strategies.
- Pacing
    - The rapidity with which content is presented.
    - The extension of time and deadlines so that further integration of ideas may take place.

- Flexibility in time allowance.

A model that encourages higher level thinking processes is Benjamin Bloom's Taxonomy of Educational Objectives. This model is the classification system often used for analyzing levels of thought and used by teachers when developing activities and questions for gifted/talented students. The model identifies six levels of thinking ability. The first three levels (knowledge, comprehension, and application) are basic levels of thinking. The last three levels (analysis, synthesis, and evaluation) are levels of critical thinking. Because gifted students acquire knowledge quickly, they need time and practice in using effective strategies for analyzing, synthesizing, and evaluating that knowledge (Maker & Nielsen, 1995).

Along with the higher level of thinking, the students need the opportunity to use both convergent and divergent thinking skills. Both types of thinking are necessary in life, and one does not replace the other. It is important that as a teacher asks open-ended questions the students are allowed to use these thinking skills, and not for the purpose of discovering what answer the teacher is seeking. True open-endedness allows for students to discover relationships, generalizations, and theories. This discovery is accomplished through doing, not listening, and development of inductive reasoning skills. Bruner (as cited in Maker & Nielson, 1995) gave four reasons for using a discovery approach:

- Intellectual potency develops only by using one's mind.
- The rewards of discovery are intrinsically motivating.
- Students learn how to organize and carry out an investigation.
- Memory is enhanced through reasoning out concepts or principles rather than simply hearing them. (p. 110)

An important part of discovery learning is providing evidence of the logic and reasoning used in arriving at conclusions. The discovery approach not only facilitates the use of higher level thinking skills, it also provides an opportunity for others to learn from the student and to evaluate the process and the products of their thinking. In addition, discovery learning allows students to reflect on their own thought processes (Maker & Nielson, 1995).

As with differentiating content, offering a freedom of choice in some activities is important to gifted students, building on their interests and motivation. Activities that provide freedom of choice include learning centers, contracts, projects, independent study, computer-mediated learning, and self-directed learning. One caution is that gifted learners still need to spend time interacting with the teacher and other students. Maker and Nielson (1995) gave three cautions to consider when implementing freedom of choice. They included "the degree and kind of freedom allowed, the student's ability to manage or profit from the freedom given, and the teacher's ability to relinquish control of a part of the student's learning activities" (p. 121). Not all students are ready for high levels of independence at the same time. Treffinger (as cited in Maker & Nielson, 1995) designed a model for assessing the degree and kind of freedom that individual gifted students can manage. It includes the identification of goals and objectives, assessment of entering behaviors, identification and implementation of instructional procedures, and assessment of performance (p. 121). Within each of these areas, there are varying degrees of freedom. Coleman, Reis and Schack, and Betts (as cited in Maker & Nielson, 1995), all have designs and procedures for teaching gifted students to work independently.

Group interaction develops leadership and interpersonal skills through the use of simulation games and discussion. These are particularly useful for the practice of problem-solving skills, cooperation, and influencing and motivating others. They require the use of inductive and deductive thinking, high level thinking, decision-making, planning, and making predictions about the consequences of alternative actions (Maker & Nielson, 1995).

Pacing, progressing through the curriculum at an advanced rate, is an extremely important process modification for gifted students. It involves moving students through the standard curriculum as quickly as possible, while maintaining mastery. Gifted students become bored easily when activities are not challenging. Organizing for learning value is a method of alleviating this boredom. One model that utilizes fast-paced instruction and acceleration is Renzulli's Enrichment Triad Model and is used in many schools systems (Maker & Nielson, 1995). The process modification allows time after mastery of the traditional content for in-depth study in areas of interest by individuals or groups.

Maker and Nielson (1995) suggested offering variety in the way information is presented is another method of modifying the process. Teachers can use videos, lectures, demonstrations, field trips, computer-assisted instruction, and learning centers. Students can participate in group learning, committee work, individual projects, and discovery activities. This allows all students the opportunity to work in their favored intelligences. According to Maker and Nielson, gifted students need to learn to compare and contrast learning processes to discover when one process is more appropriate and why.

Differentiation of Product

Products are the outcomes of the learning activities and instruction that reflect the learners' expression, knowledge, and the ability to manipulate ideas. They should be used to consolidate learning and communicate ideas. Products should be based on real problems, concerns, and audiences, and possess characteristics that are professional in nature. They should synthesize information and include a self-evaluation process (Berger, 1991b; Dinnocenti, 1998; Maker & Nielson, 1995; Nebraska Department of Education, 1997b). Gifted students need to learn to create a variety of products that are self-selected. "When students have opportunities to choose how they will demonstrate what they have learned, the results often far surpass teachers' expectations" (Maker & Nielson, 1995, p. 173).

Differentiation of the Learning Environment

The learning environment is the physical setup of the classroom and the psychological setting. Students need to feel challenged, yet safe to explore new ideas and concepts in unique ways. It should be student-centered and foster complexity and independence. Flexible grouping that fits instruction and the needs of the students is important (Nebraska Department of Education, 1997b). A classroom where differentiation is occurring will have interest and learning centers, study areas, computer stations, and areas that allow for artistic and scientific discovery (Dinnocenti, 1998).

Learning environment changes are necessary for modifications to curricula. Maker and Nielson (1995) recommended the following eight principles for modifications to learning environments preferred by gifted students as a group that pertain to both the physical and psychological environment.

- Learner centered rather than teacher or content centered.
- Independence rather than dependence emphasized.
- Open rather than closed to new ideas, innovations, exploration.
- Acceptance rather than judgment exercised.
- Complexity rather than simplicity as a focus.
- Variety of grouping options rather than one grouping as a general organization.
- Flexibility rather than rigid structure or chaotic lack of structure.
- High mobility rather than low mobility permitted and encouraged. (p. 31)

Learner Centered vs. Teacher Centered

In a learner-centered classroom, the role of the teacher is to provide opportunities for students to construct knowledge and use a variety of thinking patterns. Maker and Nielson (1995) listed three key indicators of classroom focus: teacher talk, teacher authority, and patterns of interaction.

When the teacher does most of the talking, learner participation decreases and so does the opportunity for students to think reflectively. Through teacher-student interaction and observation, teachers can provide appropriate pacing.

> Open-endedness, discovery, group interaction, and freedom of choice cannot be incorporated to a significant degree in classrooms dominated by teacher talk…Variety in information acquisition, processing, and management can happen only when teachers limit the amount of classroom time used for lectures, textbook reading, or other informing methods. (Maker & Nielson, 1995, p. 33)

Gifted students are often seeking the approval of the teacher and the assurance they are correct in their answers and hypotheses. Teaching students to trust themselves and to

make decisions is a challenge to the teacher in the learner-centered classroom. Students must learn to "judge ideas through the use of appropriate methods, such as logical coherence, support through research, comprehensiveness, generalizability, replicability, and other scientific procedures" (Maker & Nielson, 1995, p. 34). When the teacher becomes more of a partner in the learning process open-endedness, self-discovery, freedom of choice, and group interaction increases.

Independence vs. Dependence

Most gifted students prefer working independently without micro-management from the teacher. But in order for a classroom to function cohesively in an independent atmosphere, the teacher must train the students to think and make their own decisions. Maker and Nielson (1995) offered several methods of teaching independence including the areas of methods of conflict resolution, classroom procedures for independent center activities, and classroom government systems. When classroom management is based on independence, students have the freedom to explore and discover to a level equal to their ability.

Open vs. Closed

Open-endedness in a classroom refers to the academic areas of methods and learning activities, and non-academic areas of management and tolerance of divergent thinking. Maker and Nielson (1995) noted this type of classroom requires a teacher who acts as a facilitator and classroom manager. An open-ended classroom allows for a variety of activities and ideas that may change as study is conducted. Often gifted students have the desire to change directions and take off in totally different directions in their studies. They change their areas of passion as they explore ideas. Teachers in an open

environment are aware of the intuitive thinking of gifted students and are willing to probe to find the thinking behind their often seemingly off track answers to discover the real meaning of their thought processes. According to Maker and Nielson, "Students who are imaginative or creative and who like to use ideas, materials, and processes to create unique products need an open climate in which teachers and other students value diversity and tolerate ambiguity" (p. 45).

Acceptance vs. Judgment

In a student-centered classroom, it is vital for a teacher to demonstrate and encourage a climate of acceptance of ideas, content, process, and product modification. Both the teacher and student have the responsibility of raising the level of thinking and learning through encouragement and probing. It is important that students, especially gifted students, learn patience and the art of encouragement when working with their peers. The timing of peer and teacher response to ideas and processes is critical to the response of the student. The majority of gifted students want evaluation of their products, not judgment. They want to know what can be done to improve their work. Gifted students are dissatisfied with high grades that are not accompanied by evaluation that can be used to improve their next project (Maker & Nielson (1995).

> Enhancing the strengths and minimizing the difficulties of gifted students require that teachers develop classroom climates in which all ideas, regardless of how bizarre, unique, clever, or ordinary they may be, are accepted as having value. Teachers do not want to destroy creativity, imagination, or humor by requiring too much evaluation, too early judgment, or too little recognition of the worth of these qualities among gifted students (Maker & Nielson, 1995, p. 53-54).

Complexity vs. Simplicity

Complexity in a classroom refers to both the physical environment and the kinds of tasks required of the students. Complex activities and products require higher levels of thinking in abstract, complex ideas and should require evaluation and synthesis. The environment should be rich in learning, creativity, and complex reference materials. Many gifted students who are creative prefer a complex environment where they can make connections between concepts and processes (Kingore, 2006; Maker & Nielson, 1995).

Varied Groupings vs. Similar Groupings

Maker and Nielson (1995) suggested that grouping arrangements should depend on the purpose of the activity. Affective activities may require different grouping patterns than cognitive activities where gifted students will benefit from working with peers on their same intellectual level. "Groupings should approximate real-life situations and students should be able to make choices about how groups will be set up" (p. 57). Students have areas of comfort in learning style and natural talents. They need time each day to participate in activities in their areas of comfort. Maker and Nielson stated,

> Modifying the learning environment to provide varied groupings for learning activities gives gifted students varied opportunities to learn different group process skills and helps them make connections from the classroom environment to the community at large and, ultimately, to the human community. (p. 60)

Flexibility vs. Rigidity

Classrooms should be flexible in furniture arrangement, structure, and in activity choices. Maker and Nielson (1995) suggested that there should also be flexibility in time

constraints. Gifted students should be given the opportunity to determine the amount of time to be spent on activities, including routine curricular activities. This allows extra time for studying areas of interest.

High Mobility vs. Low Mobility

Maker and Nielson (1995) defined mobility as the freedom to move, both within the school and out of the school. Gifted students need the opportunity to work in different classrooms, work with mentors, and go on field trips. Mobility is closely related to the modification of independence. "High mobility is a key to the success of other learning environment modifications as well as many of the product, process, and content changes recommended as important for gifted students" (p. 65).

Differentiation of Instructional Delivery

Many options are available for use in differentiating the content and the delivery of instruction in the classroom. Among the most common are

- Acceleration
- Cluster grouping
- Ability grouping/flexible grouping
- Mentors
- Compacting
- Enrichment
- Learning contracts – independent study
- Learning centers
- Adjusting questions

- Tiered assignments. (Tomlinson, 1995a; Toth, 1999; Winebrenner & Berger, 1994)

Acceleration

The *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) state curriculum and instruction must meet the unique needs of gifted/talented learners. For the highly gifted student, acceleration is an option. "Acceleration is an educational intervention that moves students through an educational program at a faster than usual rate or younger than typical age" (Colangelo, Assouline, & Gross, 2004). Chandler (2001), Colangelo et al., and Southern and Jones (2004) cited the following acceleration programming options:

- Single-subject or partial
- Whole-grade-skipping
- Advanced placement courses
- Early entrance into kindergarten or first grade, middle school, high school, or college
- Curriculum compacting
- Continuous progress
- Self-paced instruction
- Telescoping curriculum
- Mentoring
- Testing out of course requirements
- Advanced courses in summer or after school
- Correspondence courses

- Specially designed credit courses
- Concurrent/Dual enrollment
- Early graduation

These options meet a variety of needs of gifted/talented students, but it is recognized that not all school districts will be able to develop the whole range of possibilities due to budget, location, school size, beliefs about giftedness, and the bureaucracy of the district (Southern & Jones, 2004).

The goals of acceleration are to adjust the pace of instruction and to provide the appropriate level of challenge. This strategy is reserved for the highly gifted students for whom traditional methods of differentiation (compacting and curriculum revision) are not sufficient to fulfill their academic potential (Chandler, 2001; NAGC, 1992). It is essential that decisions about acceleration be made carefully and only after extensive collection of data, both academic and readiness (Chandler, 2001; Rogers, 2004). Rogers emphasized, "it is imperative for educators, considering the use of acceleration with a gifted learner, collect adequate supplementary information on the individual learner's levels of cognitive functioning, learning strengths, learning preferences, and interests and involvements inside and outside of school" (p. 56). According to both Chandler and Rogers, it is also critical that the type of acceleration be matched to the needs of the individual student.

Research has shown that in most cases acceleration has been successful and positive for both achieving and underachieving students (Kulik, 1992). A meta-analysis of two studies conducted at the University of Michigan and at Johns Hopkins University revealed that students with higher aptitudes than those of their peers usually benefit

academically, as measured by standardized tests, from ability grouping of some type. The gains made by these students were highest when they were placed in special classes that entailed acceleration of instruction. The increase jumped from about one month on a grade-equivalent scale in a classroom that had little or no curricular adjustment to about one year when the students were accelerated. Students participating in enriched classes (where students spend about half of their time working with a varied curriculum) had gains of about four months, still much higher than when they spent their entire day in the regular classroom (Kulik).

The main objections to gifted programming in many schools stem from cost, low numbers of gifted students, and believing it is elitist. "Acceleration and cluster or ability grouping need not create any additional costs, nor do they necessarily run counter to the ideas of inclusion and 'fairness'" (Toth, 1999, p. 6).

The benefits of acceleration to the highly gifted students are a challenging curriculum where hard work is required and failure is a possibility, thus preparing them for future life. "Failure is difficult for many gifted students to accept, and they may not try something difficult because of the possibility of failure" (Toth, 1999, p. 8). Toth quoted Rimm and Lovance

> If we don't provide a challenging environment, we are, in a defacto way, teaching our children to underachieve. If for years "being smart" is easy and fast, we can't expect them to cope well with their first challenging experiences when curriculum becomes more complex, nor can we expect them to cope easily with being second or third or tenth in competition if their early years in school provided them only with "being first" experiences. (p. 8)

Cluster Grouping

According to Toth (1999) and Winebrenner and Devin (2001), placing up to the top six students in a classroom for the majority of the day allows gifted/talented students the chance to work with their peers and extend their learning. They can learn together and help avoid permanent grouping for students of other abilities. It is also more likely that differentiation will take place if the teacher has a group of students for which to plan. It is common for teachers to fear taking the top students from their classes to put into cluster groups will make it more difficult for them and for the other students when the "leaders" are removed. The opposite is true. This arrangement allows more students to step up and become "leaders." It also helps gifted/talented students to accept their learning differences when they are grouped with peers of like abilities. Cluster grouping should not replace out-of-class enrichment activities, especially the time spent with the High Ability Learner program resource teacher. The teacher should have some level of training in working with gifted/talented learners. Winebrenner and Devin list the following prerequisites for cluster teachers:

- Recognize and nurture behaviors usually demonstrated by gifted students.
- Create a learning environment in which all students will be stretched to learn.
- Allow students to demonstrate and get credit for previous master of concepts.
- Provide opportunities for faster pacing of new material.
- Incorporate students' passionate interests into their independent studies.
- Facilitate sophisticated research investigations.
- Provide flexible grouping opportunities for the entire class. (p. 3)

Ability Grouping/Flexible Grouping

A common misconception of ability grouping is that it is the same thing as tracking. Tracking implies permanent full-time placement into a certain instructional group. Ability grouping is the process of grouping students with peers who have similar learning needs for the time it takes to complete a learning experience (Fiedler-Brand et al., 1992). Feldhusen (as cited in Fiedler-Brand et al., 1992), in his studies of the literature, confirmed gifted and talented youth need time to work with peers of the same intellectual level either in special differentiated classes or within the heterogeneous classroom with differentiated instructional activities. He stated that the students need "accelerated, challenging instruction in core subject areas that parallel their special talents or aptitudes. They need teachers who both understand the nature and needs of the gifted and talented youth and are knowledgeable of the content they teach" (p. 3).

Mentoring

Not all of the needs of gifted and talented students can be met in the school setting. These students often have very diverse interests that go beyond the normal curriculum. When students have skills and interests that are so different from their peers, they require mentors with similar interests to help them explore and learn more deeply and at a faster pace. Mentorships are also beneficial to students who do not learn well in a traditional classroom setting (Renzulli, 2001; Siegle, 2003). "One of the most valuable experiences a gifted student can have is exposure to a mentor who is willing to share personal values, a particular interest, time, talents, and skills" (Berger, 1990, p. 1). Mentor relationships raise the self-confidence and the aspirations of gifted learners, especially when they come from a disadvantaged background.

Goff and Torrance (1999) stated mentor programs were needed for these students, especially when they were creatively gifted. They believed the students would leave the primary grades without their creativity if they lacked the attention of someone serving as a mentor. Students learn many things from the mentor, not only about the profession of the mentor, but also the lifestyle associated with the profession and the required educational background (Berger, 1990; Toth, 1999). Torrance (as cited in Goff & Torrance, 1999) purported both men and women who have worked with a mentor completed more education than their peers without a mentor, and mentors have a direct affect on the achievement of students in adult life. Often the mentor-mentee relationship continues into the adult life of the student (Berger, 1990; Toth, 1999).

Telementoring is a popular option for gifted and talented students. For many rural and low-income students, it is difficult to find local mentors. The Internet provides an opportunity for students to interact with mentors from anywhere in the world. Because the Internet is so vast, it is difficult to locate the right person to mentor students. However, a number of organizations exist that provide online mentorship opportunities for students (Siegle, 2003). Telementoring is delivered in a variety of ways. It can be as simple as a single email response and as involved as a collaborative project among the teacher, the student, and the mentor. Riel (as cited in Siegle, 2003) listed three types of programs: "mentor experts who agree to respond to questions; mentors who are paired with a single learner; and mentors who work in partnerships" (p. 52).

The International Telementor Program (as cited in Siegle, 2003), identified five advantages of telementoring over traditional mentoring:

- Provides a means of connecting thousands of professionals with students on a scale that is impractical with traditional face-to-face mentoring.
- Matches students with appropriate mentors without geographic limitation.
- Allows convenient, consistent, weekly communication between students, and mentors and creates an archive of all communication.
- Eliminates scheduling problems between mentors and students because an e-mail communication can be sent any time.
- Provides the opportunity for students to work on long-term projects with their mentors and allows mentor to see the impact they are having on student. (p. 53)

Compacting

Renzulli (2001) defined curriculum compacting as:

"…a system designed to adapt the regular curriculum to meet the needs of students by either eliminating work that has been previously mastered or streamlining work that can be mastered at a pace commensurate with the student's motivation and ability." (p. 72)

Compacting allows students to spend less time with material they have already mastered, while at the same time guaranteeing that curriculum standards have been met, and more time with extension and enrichment activities, thus creating a more challenging learning environment (Renzulli, 2001; Toth, 1999; Winebrenner & Berger, 1994). Taylor and Frye (as cited in Reis & Renzulli, 1995) found that 78% to 88% of fifth and sixth grade average readers could pass pretests on basal comprehension skills before they were covered in the basal reader. Textbooks contain a large amount of repetition to facilitate learning (Usiskin & Flanders, as cited in Reis & Renzulli, 1995). Thus, high ability

students spend much of their time in school doing redundant work and learning little new content and concepts.

Reis et al. (1993) conducted *The Curriculum Compacting Study* of 27 school districts and approximately 436 second through sixth grade classroom teachers throughout the country, representing demographically different populations. Three treatment groups were formed with each receiving a different level of staff development training in curriculum compacting. Each teacher selected two students they thought were high ability for out-of-level testing to obtain a base score. The study lasted one school year. The study showed that about 40-50% of traditional classroom material could be eliminated from the areas of mathematics, language arts, science, and social studies, with math being the most common. Students in all of the treatment groups scored significantly higher in math concepts on the post-test than did control group students whose curriculum was not compacted. None of the targeted students suffered any detrimental changes in achievement test scores in any of the curriculum areas. Activities that extend or enrich the subject content should be provided as replacement work for students who show they have prior mastery of the content (Reis et al.).

Learning Contracts – Independent Study

Tomlinson (1999) defined independent study as a means of teaching students to become independent learners. She stated,

> Independent study is a tailor-made opportunity to help students develop talent and interest areas, as long as teachers understand that the independent study needs to meet students at their current readiness for independence and move them toward greater independence a little at a time. (p. 92)

The student develops the skills necessary for independent learning. The degree of assistance required from the teacher will depend on the skills of the individual student (Theroux, 2004). In a learning contract, the agreement is set up in the form of a contract that includes what, how, and when students will learn, and how they will be evaluated (Parke, as cited in Winebrenner & Berger, 1994). Moreover, Winebrenner and Berger recommend grades should be assigned based on the effort of the students and the quality of the replacement work; high-level work receives an A and mediocre work earns a B. A lower grade is not an option, as the students would have earned a comparable grade had they completed the standard curriculum study. Activities in the learning contract are based on the standards and objectives for the unit of study in the classroom. As with compacting, the learner has demonstrated prior mastery of content, but is required to work with the class on material that has not been completely mastered. The student works back into the class on a flexible schedule when it is beneficial to learning the concepts being taught.

Independent study is an excellent method in middle school and high school as a way of preparing students for college and real life, but it can be started with younger students who function at high levels. The process of independent study requires the student to research the problem, create some type of product or presentation, and share their final work. Students not only gain authentic skills, but they become more confident. Independent study can be structured or unstructured depending on the amount of freedom for which the students are developmentally ready (Renzulli, 2001; Toth, 1999).

Steffi Pugh (1999) described an independent study program for ninth graders at the Downington Educational Enrichment Program (DEEP) that incorporates the use of a

study of Bloom's Taxonomy as a beginning unit prior to developing the independent study project. As a result of the study of Bloom's levels of higher order thinking, the students were prepared to design projects that were based on a synthesis of concepts.

> By asking their own provocative questions, students learn how to approach problems comprehensively and elicit their own in-depth answers. The empowering nature and positive outcome of student-generated higher level questioning make it a powerful tool for fully engaging high school students in challenging self-selected study (Pugh, 1999, p.1).

Students gain confidence in their ability to undertake the challenging task of an independent project and the projects will thus demonstrate a high quality of work (Pugh).

Enrichment

Enrichment can take place both in the regular classroom or in another setting (e.g., library, resource room, another classroom, or with a mentor), often as a result of compacting. Much like learning contracts and independent study (see next section), the student uses high-level cognitive skills to study an area of interest in more depth. Often the topic is an extension of the curriculum, intended to increase the level of understanding (Toth, 1999).

One well-known model for enrichment is the Schoolwide Enrichment Model (SEM) developed by Joseph Renzulli and Sally Reis. The SEM has three components: Total Talent Portfolio, Curriculum Modifications, and Enrichment Teaching and Learning. One component of the Enrichment Teaching Learning is enrichment clusters (Gentry, Moran, & Reis, 1999). Renzulli, Gentry, and Reis (2003) noted, "enrichment clusters allow groups of students who share a common interest to come together each week

during specially designated time blocks to produce a product, performance, or targeted service based on that common interest" (p. 15). Enrichment clusters focus on student-driven learning based on real-world problems using inductive learning and reasoning. "Clusters are modeled after the ways in which knowledge acquisition and application take place in real-world situations" (p. 16). All students and teachers can participate when the cluster groups meet at uniform times. Renzulli et al. provided eight guidelines for enrichment clusters that serve as a checklist to ensure the cluster is taught on an inductive model of teaching and learning. These guidelines included:

- Focus on application of content and process
- Self-selection by both teachers and students
- Cross grade levels by interest
- Units and lessons developed by the participants
- Use authentic methods and advanced content and materials
- Develop multiple talents through division of labor
- Designated time blocks
- Different environment than regular school

An enrichment cluster is a vehicle by which all students have the opportunity to use the techniques used in gifted programs "to acquire advanced-level understandings, develop self-directed learning skills and pursue authentic problems and products" (Reed & Westberg, 2003, p. 27). Renzulli et al. summarized the use of enrichment clusters thus, "Although products play an important role in creating these authentic learning situations, the development and application of a wide range of cognitive, affective, and motivational processes are the major goals of this type of learning" (p. 13).

Learning Centers

Learning centers consist of a collection of materials students use to explore topics or practice skills. The activities are matched to the variety of readiness and interests of the class. Differentiation takes place in the activities that are developed for the center (Tomlinson, 1995a).

Adjusting Questions

The level of questions used during class discussions, test, and homework is varied depending on the readiness and interests of the students (Tomlinson, 1995a). The six levels of questions in Bloom's Taxonomy are utilized to require higher level thinking in all students, but especially in the gifted/talented students. Teachers may assign different levels of questions to different groups of students, depending on their readiness, but the option is available for students wanting a challenge to go beyond their minimum (Theroux, 2004).

Tiered Assignments

Tasks for a key concept and resource materials are adjusted in complexity to levels of readiness (Tomlinson, 1995a). All of the activities are related to essential understandings and key skills for the unit of study, taking into account the individual needs of the students (Theroux, 2004). Tiered instruction blends assessment and instruction and aligns complexity with the readiness levels of the students. It allows all students to focus on the concepts and skills of the lesson, but still be challenged at appropriate readiness levels (Kingore, 2006). Kingore suggested five guidelines for tiered instruction:

- Use flexible groups.
- The number of levels depends on the instruction area.

- Complexity is relative to the level of the students.
- Use high-level thinking activities in each tier.
- Provide teacher support at each level.

Kingore (2006) suggested when developing tiered lessons the teacher should identify the complexity factors of the tasks. She noted the teacher can easily modify some factors, whereas some factors are non-negotiable. Examples of modifiable tasks include "the degree of assistance teacher provides, the complexity of the resources used, and the concrete or abstract nature of the process or product" (Kingore, 2006, para. 1). Non-negotiable factors "require teachers to understand and accommodate within every tier, such as the background knowledge and skills students bring to the task" (Kingore, 2006, para. 1). Other complexity factors listed by Kingore include the degree of structure, the quality and number of resources, and the complexity of the process and product. Of tiered instruction Kingore noted,

> Tiered instruction evolves from teachers' assessments and decisions regarding how to modulate tasks around the combinations of factors they select that influence complexity. The intent is to accommodate the unique diversity of learners rather than to divide students into leveled groups. (para. 2)

Creative, Artistic, and Leadership Giftedness

The *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) Guiding Principle 1 states curriculum differentiation must be available across all grade levels and in all subject areas. Chandler (2001) included core academic areas, creativity, leadership, and specialized programs of study, such as art, music, and the visual and performing arts, in this standard.

Creative Giftedness

Van Tassel-Baska (2004) defined creativity as "the capacity to develop original, high-quality products in a domain that is judged so by the relevant peer group in that field at a given point in time" (para. 18). However, there are many definitions that have evolved over the years (Van Tassel-Baska). Sternberg (2000) suggested a definition with a different perspective stating creativity is purposefully learned; a person chooses to be creative. He believes people learn to be creative through their attitude toward work and the way in which they make decisions, thus creative giftedness is a decision-making skill and can be observed through the decisions gifted people make. Creative giftedness manifests itself in the way a student determines a problem, decides on a plan of action, allocates resources, and monitors solutions (Sternberg, as cited in Callaway & Goertz, 1999). Callaway and Goertz noted intrinsic motivation and a sense of accomplishment drive a creative person, while recognition, grades, and awards diminish creativity.

Independent study is one method of meeting the needs of creatively gifted students as they develop a goal and follow through on it through self-directed activities and choosing a method of reporting and sharing their finished product. Torrance (as cited in Callaway & Goertz, 1999) recommended students have the opportunity to choose a topic of interest to study in depth, thus becoming what Winebrenner (as cited in Callaway and Goertz) calls a resident expert on the chosen topic. Students can work on their independent projects with periodic guidance from the teacher, whenever they finish their class assignments.

Artistic Giftedness

There is little research upon which to draw for serving students who are gifted in the visual arts, and as Clark and Zimmerman (1992) stated, "The paucity of research currently available is a deterrent to further progress in efforts to provide meaningful programming opportunities for students gifted and talented in the visual arts" (p. xviii).

Clark and Zimmerman suggested,

> The major purposes of a visual arts program for artistically gifted and talented students are to bring students together with high interests and abilities in art in ways that will broaden and deepen their knowledge about art, sharpen their art skills, and offer them learning opportunities rarely found in a regular art classroom setting. (p. ix)

Clark and Zimmerman concluded, "Highly able gifted and talented visual arts students need access to spaces and facilities that resemble those used by artists" (p. xviii).

Goetz (as cited in Smutney, 2002) noted art instruction increases a student's skills in observation, abstract thinking, and problem analysis. Research has proven the visual arts contribute to higher test scores, greater academic progress, self-confidence, observation skills and concentration (Kendrick, 1998; Smutney, 2002).

Leadership

Leadership is listed in the federal and many state definitions of gifted students; however, it is rarely a part of the curriculum for these students. Leadership is not well defined in the literature, but is often described through characteristics such as the following:

- The desire to be challenged

- The ability to solve problems creatively
- The ability to reason critically
- The ability to see new relationships
- Facility of verbal expression
- Flexibility in thought and action
- The ability to tolerate ambiguity
- The ability to motivate others. (Karnes & Bean, 1990, para. 3)

Leadership skills can be taught at home through discussions about current events, helping to plan outings or trips, and opportunities for decision-making. At school, these skills should be infused into the curriculum through small group settings, studying world leaders, and participation in planning events in extra-curricular activities (Karnes & Bean).

Social-Emotional Services

In order to best meet the needs of gifted and talented learners, one needs to understand the needs and characteristics of such learners. Moreover, it is imperative that educational systems provide appropriate services to assist in the development of social and emotional needs of such learners. Practitioners and experts, as well as the National Association for Gifted Children (NAGC, 1998), recognize and support providing gifted children emotional and social support and services (Clark, 2002; Janos, Marwood, & Robinson, 1985; Moon, 2002; Reiss & Moon, 2002; Robinson, 2002; Silverman, 1993). Yet Porath (1996) noted affective services are often not included within programming.

Although many school systems offer services and programs that meet the academic and intellectual needs, as well as offer career guidance for gifted/talented students, few

have implemented support to assist students to achieve their potential and develop self-understanding (Van Tassel-Baska, 1990). Often the emotional and social development sequence experienced by gifted children is not understood as educators and adults assume that gifted children have no special or psychological needs or challenges, except for academic and intellectual concerns (Lovecky, 1992). An issue that may intensely frustrate gifted students is when their intellectual awareness and capabilities exceed their emotional control. Robinson (2002) noted gifted youth exhibit emotional responses that are generally less developed than their intellectual abilities.

Giftedness does not constitute purely high academic achievement. According to Smutny (2000), it is "more than developing skills faster or going through the developmental milestones earlier" (p. 1). In fact, it can often put children at risk for a variety of disturbances such as boredom, frustration, and depression (Smutny, 2000, p. 1). Boredom in the classroom can lead to any number of behaviors such as acting out or becoming disruptive. Not only does this delay the development of the child that is acting out, it can also impede the learning of other children in the classroom. Robinson (2002) stated it is imperative to meet the social and emotional issues of gifted children "not because these youngsters sustain any inherent vulnerability associated with their giftedness per se, but because their needs are so often unrecognized and unmet, with predictable negative consequences" (p. xii).

Leta Hollingworth was one of the first researchers to study this population. As a clinician, a researcher, and gifted person herself, she studied and worked with gifted children and as Silverman (1990a) noted, Hollingworth recognized their loneliness, their isolation, their imaginary worlds, their argumentativeness, their zeal for accuracy, their

impatience with superficiality and foolishness, their desire to find like minds, their occasional resorting to "benign chicanery" (p. 171), and the healing power of their sense of humor. Furthermore, Hollingworth recommended "emotional education" for gifted children to assist them with problems that emerge at an early age.

During the last twenty years there has been an increase in the number of research articles published that have focused on the adjustment issues that challenge gifted children (e.g., Brown & Steinberg, 1990; Lajoie & Shore, 1981; Lewis, Kitano, & Lynch, 1992; Lupart & Pyryt, 1996; Manaster & Powell, 1983; Neihart, 1999; Porath, 1996; Reis, 2002; Roeper, 2002; Sowa & May, 1997). Providing opportunities to engage in groups that explore and discuss issues such as being troubled by their differences can assist gifted learners to understand and deal with such issues (Silverman, 1993). Education can assist gifted children with problems of social isolation, leadership, attitudes towards authority, tolerance towards others, conformity, and dysynchrony development (Silverman, 1990a).

Because of the unique characteristics of gifted children, some of the strategies used by other children to cope and adjust to physical, social, and emotional development, are not appropriate development strategies for these children. Issues related to creativity, high intensity, energy, and high aspirations of gifted students were noted by Robinson (2002). Silverman (1993), through her research, supports the statement that gifted children think and feel differently as they experience life, as giftedness has an emotional as well as a cognitive component because intellectual complexity produces an emotional intensity in gifted individuals. Moreover, Silverman (1993) noted, "Feeling everything more deeply than others do is both painful and frightening" (p. 17).

Robinson (2002), through a summary of current research regarding social and emotional needs of gifted learners, noted in general these youth are as well adjusted as other youth. Yet Robinson noted there is the probability of factors associated with emotional and social development of gifted individuals that include educational environments which are not appropriate for the pace or level of learning of gifted learners; anti-intellectual, unsupportive, or negative societal pressures; peer pressure and efforts by gifted youth to appear like their more average peers.

Due to their unique social emotional development, it is imperative gifted learners have programming that meets their needs. They are often troubled by their differences, by difficulties they encounter in communicating with others, and by making career choices among many appealing options (Silverman, 1993). In a survey conducted among counselors, educators, and parents, the researchers concluded that peer relations, social adjustment, stress management, and emotional adjustment are key issues that gifted youth confront (Moon, Kelly & Feldhusen, 1997). Moon (2002) proposed "The most common counseling need of this population is assistance in coping with stressors related to growing up gifted in a society that does not always recognize, understand or welcome giftedness" (p. 213). Other areas of concern for gifted students, as noted by Moon, include underachievement, school and family relationships.

Gross (2002) listed five stages of hierarchy of age-related stages: play partner, people to chat to, help and encouragement, intimacy/empathy, and the sure shelter. Gross noted intellectually gifted children advance through the stages more quickly than their age-peers of average ability. This difference was most prevalent in the elementary school aged children. She stated, "In grades 3 and 4, even moderately gifted children have the

conceptions of friendship which characterize average ability children three or more years older" (p. 2). Girls in Gross's study were significantly further along the friendship scale than boys, causing boys to be at even greater risk of social isolation in the early years of school and often preferring the friendship of girls. Gross found "it is in the earlier grades, rather than the upper grades, that placement with chronological peers, without regard to intellectual ability or emotional maturity, is more likely to result in the gifted child experiencing loneliness or social isolation" (pp. 2-3). Children gravitate toward others of similar mental age, thus gifted children often choose friends from their gifted peers (Gross, 2003).

Efforts to provide services and programming to meet the social and emotional needs of gifted students are often omitted in the educational realm. Yet it is essential that educational programs should provide gifted/talented students opportunities to achieve their potential and develop self-understanding. Bouchet and Falk (2001) stated, "gifted programs need to be sensitive not only to intellectual, but also to the emotional needs of these students" (p. 266). Van Tassel-Baska (1990) noted

> Counseling and guidance should be integral components of a program for gifted students, to be addressed as a part of a program treatment rather than apart from it. While many school districts offer academic programs for the gifted, very few offer the commensurate counseling experiences that will aid students in holistic self-understanding. Advocacy for addressing the confluence of cognitive and affective needs in gifted students through developmental counseling is essential. (p. 3)

The National Association for Gifted Children (NAGC) advocates exemplary standards and practices to address the social and emotional development of gifted

students as a component of the *Pre-K- Grade 12 Gifted Program Standards* (1998). According to this organization, educational institutions must establish a plan to recognize and foster the social emotional needs of gifted learners within the programming of gifted education. Appropriate services, awareness of the best practices, and knowledge of gifted learner characteristics are essential understandings towards the development of a comprehensive affective guidance plan. Moreover, the standards set by NAGC include guiding principles with exemplary standards to guide the development of gifted education programming.

Providing differentiated social, emotional, and academic guidance efforts, career and vocational awareness, and college guidance for gifted learners are exemplary standards set forth in the *NAGC Pre-K-Grade 12 Gifted Program Standards* (1998). Such recommendations provide opportunities for gifted learners to understand their social and emotional needs which may assist these learners to focus on their academic needs. Gifted children experience uneven development and greater variations in their intellectual, social, physical, and emotional growth than their peers. For instance, intellectual development is usually ahead of physical growth, which causes frustration for a gifted child to complete a physical task they cognitively understand (Robinson, 2002). Integrating an affective component within the gifted education curriculum through counseling can be a preventive measure as Johnsen (2001) suggested this would help gifted students move towards self-actualization and lifelong learning.

Exemplary standards (NAGC, 1998) include guidance and counseling services designed to meet the personal, social and adjustment needs through a well-defined affective curriculum that includes a differentiated scope and sequence and a

comprehensive guidance program. The standards also include serving gifted students who are underachieving through specialized intervention services that will provide guidance and counseling from counselors and teachers, who have received training and education to address the issues and problems related to underachievement. Parents, teachers and students should be included in the collaboration of developing specific plans to address issues related to underachievement and promote student success.

Gifted students begin to choose their career paths at different stages of their lives, with what Silverman (1993) refers to as early and late decision-makers. In both cases students need guidance with many experiences in shadowing, internships, mentorships, community services and volunteer work, job studies, part-time employment and work/study. The early decision-makers require exposure to these real-life experiences to help them discover the vast diversity of opportunities that will be available, while late decision-makers need assistance in channeling their many interests. Silverman (1993) refers to this interest overload as multipotentiality and states, "The counselor can guide multipotential students in planning as rich a program as possible, on the will prepare them to enter any of several fields" (p. 221).

Counselors involved with gifted learners need knowledge and experience with counseling and gifted learners. Counselors and other individuals who will work with gifted learners should be trained in the characteristics and specialized social and emotional needs of gifted students (NAGC, 1998). "A developmental counseling program in a school will foster both the cognitive and the affective growth of gifted youngsters" (Colangelo, 1997, p. 363). Counseling is an essential component towards the successful development of a gifted learner's talent.

Staff Development

In the report "*National Excellence: A Case for Developing America's Talent,*" an update regarding the education of gifted and talented students was provided by the U.S. Department of Education (Ross, 1993). Although the report cited substantial increases in the number of gifted programs and exemplary programs that have raised the expectations for all students, and highlighted specific examples of state legislation that has promoted the development of gifted education programs, the report also described the existence of a "quiet crisis" within the educational experience of many students. The "quiet crisis" Ross referred to is the mindset of educators and practice of not providing appropriate educational opportunities to all students that will challenge them to reach their full potential.

Many recommendations were offered by this report. Among them was the need for appropriate professional development. The U.S. Department of Education report stated, "schools must conduct training sessions for teachers on how to provide challenging curriculum and varied learning opportunities that accommodate the different needs of children" (Ross, 1993, p.28). Linked to this need is the issue of how to develop professional experiences to improve understanding regarding effective practices that are rewarding to both students and educators. One of the key findings from a three-year project conducted at the University of Virginia involving novices in three experimental groups [no intervention, workshop, and workshop plus coach] was teachers need to be provided with professional development experiences that will enhance the learning opportunities for high ability learners as well as all other students (Tomlinson, 1996). After an examination of reform challenges Guskey (2000) stated, "If teachers are to

successfully teach all students to high standards, virtually everyone who affects student learning must be learning virtually all of the time" (p. ix).

In the state of Nebraska, legislation under Title 92, Chapter 3 states, "each school district will identify high ability learners and may provide accelerated or differentiated curriculum programs that will address the educational needs of the identified students at levels appropriate for the abilities of those students" (Nebraska Department of Education, 1997c). Moreover, under this legislation, section 001.03B5 stipulates "Educators have a responsibility to be adequately trained to meet the needs of learners with high ability" (p. 7). Yet what is meant by adequately trained? Within the "Education" 006 section of legislation exists a statement that all educators and administrators should have an understanding of the characteristics of high ability learners and should be aware of the district-wide plan for these learners. Furthermore, this section of legislation details the type of experience, amount of training, and extent of working with others that those who provide instruction and services for high ability students should have.

The National Association for Gifted Children (1998) supports exemplary standards and practices relating to the professional development needs for educators who work with gifted learners as a component of the Pre-K- Grade 12 Gifted Program Standards. Ongoing, comprehensive staff development plans are necessary to provide educators specialized preparation and training with differentiation methods, instructional strategies, and characteristics of gifted learners (NAGC, 1998). The professional development purported by NAGC is based on the premise that all gifted students should be served by qualified staff. NAGC exemplary standards for professional development include training, in-services, participation with regular staff development programs, and

certification/specialization in gifted education. Research indicates educators are not prepared, trained, or experienced with professional competencies related to gifted education (Landrum, 2001). Therefore, schools will need to provide professional development opportunities in gifted education through staff development efforts, recognizing staff have varied professional development needs and enter and exit staff development programs at different points according to their needs and existing knowledge base (Roberts & Roberts, as cited in Landrum).

Hansen and Feldhusen (2004) cited several researchers who had data that confirmed: teachers who received training in issues of gifted education to be more competent with the identification of gifted children (Borland & Jacobs); trained teachers are more supportive of gifted students and programs for gifted learners, whereas untrained teachers are apathetic and sometime hostile (Wiener & O'Shea); teacher used teaching methods they did not know before training began (Gallagher, Aschner, & Jenne; Martinson). Moreover, in this study conducted by Hansen and Feldhusen where they compared teachers who received training with gifted issues with untrained teachers, the results of their study showed teachers trained in gifted education demonstrated greater teaching skills and maintained a more positive classroom climate than did non-trained teachers. Instructional methods relying on higher level thinking and questioning skills were also more prevalent in the trained teachers classrooms (Hansen & Feldhusen). Joyce and Showers (1980) indicated all teachers can learn powerful and complex teaching strategies if they participate in well designed staff development.

Five common themes related to the development of professional in-service regarding gifted education emerge through the literature. First, when involved with

planning for effective staff training, staff developers should review a school district's goals and objectives related to gifted education and involve educators in the development of training opportunities that will meet these goals (Dettmer & Landrum, 1998; Sparks & Loucks-Horsley, 1990). Second, staff developers should plan for the appropriate types of training to meet individual needs of staff (Dettmer & Landrum, 1998; Kaplan, 1986). Third, in-service activities that are planned should engage learners as active participants (Killion, 1999). Fourth, effective staff development will provide for interaction between peers through support from coaching and other feedback opportunities (Guskey, 2000; Loucks-Horsley, 1994). Finally, Killion stated commitment from all educational levels within a district must exist for gifted staff development to be successful.

A district should set clear goals and objectives regarding gifted education. A framework and mission should be provided that focuses on improving teacher practices that will positively influence student achievement. According to Dettmer and Landrum (1998),

> Staff development requires the establishment of goals, local leadership, extensive involvement of school administrators, careful planning based on needs assessment data, collaborative decision making to build ownership, design of appropriate in-service opportunities and further experiences to address perceived needs, and long-range evaluation of effects. (pp. 9-10)

In a research study which focused on eight schools, considered award winning models for professional development, Killion (1999) determined these exemplary schools to have shared components, "schools with strong leadership; dedicated people who work and learn within a community of learners; adequate resources; focused, clear goals;

multiple, rich opportunities for professional learning; and a spirit of efficacy, responsibility, and accountability, achieve increased student performance" (p.78).

Effective professional development will only result when staff developers and administrators involve the teachers in defining the purpose and activities of the in-service (Roberts & Wright, 1989). Allowing teachers to play a role in determining what types of professional development they need and want to improve their teaching is a positive step towards enhancing the effectiveness of professional development. Moreover, gifted education has often been viewed as an elitist program; therefore, it is essential gifted education practices should be introduced as Dettmer (1986a) stated, "a natural tool for initiating an overarching climate of educational progress to more effectively nurture all student potential" (p. 101).

According to Kaplan (1986), teachers are key to successful delivery of curriculum and instruction. Maximum academic achievement for gifted and talented students can only be accomplished when teachers are given the tools, support, and training needed to strengthen instructional skills and develop knowledge of the social and emotional needs of the students they serve (Feldhusen, 1997). Teachers need to be provided the necessary and appropriate types of training and background regarding gifted education. Staff in-service and training should be developed from what teachers actually do know and what they view as needing or wanting to know. An assessment of staff members' needs and where individual knowledge and understanding lies regarding gifted education needs to be done before an appropriate staff-development model is selected (Dettmer, 1986b). To assist with the process of designing training activities, many researchers have suggested utilizing a needs assessment tool towards creating activities that will meet individual

needs. Kulieke (1986) stated, "A needs assessment will permit the development of an in-service program that addresses and prioritizes those areas where teachers need the most training" (p. 140). An assessment can be a helpful tool in planning staff development as no developer can successfully predict the level of knowledge or skills that staff members possess.

Developers of staff training should keep in mind that one size does not fit all and should tailor in-service presentation to the needs of adult staff. Much like students in a diverse classroom benefit from differentiated instruction, such strategies could maximize the training experiences of adult learners. When planning gifted program in-service, Dettmer (1986b) supports differentiated staff development based on the need to focus on the characteristics and needs of adult learners. Moreover, Tomlinson (2000) remarked on the use of differentiated in-service as, "If we honor the premise that teachers would benefit from differentiation exactly as their students would, we should approach staff development in terms of varied levels of complexity" (p. 82).

Wood and Leadbeater (1986) proposed a staff-training model designed to offer opportunities based on seven stages of staff development. The model incorporated the identification of a Target Group (teachers and facilitators, administrators, parents, students and others) and a stage of entry (awareness, orientation, curriculum design, advanced training, parental involvement, evaluation, and modification of program based on evaluation results) to assist in the development of appropriate gifted in-service training opportunities. According to Wood and Leadbeater, after the Target Groups have been formed, the stage of entry is then "based on experience in gifted education and what the Target Group needs to know" (p. 127).

Another concept of professional development is the individual development plan that involves teachers in the decision making and goal setting of professional development and allows the teachers to learn more about the needs of their students, their own learning needs, and how to align these with district goals and national standards (Karnes & Shaunessy, 2004). Educators set their own goals with use of the individual professional development plan. As Karnes and Shaunessy noted,

> This plan is a tool that allows teachers opportunities to formulate questions to research and learn from, create authentic learning opportunities based on individual unique needs, execute the learning plan, document accomplishments, assess the effectiveness of the plan, and reflect on the process, and repeat the process (p. 60).

Kaplan (1995) offered staff developers the suggestion that in-service for staff regarding gifted education should parallel the levels of experiences with which educators require gifted students to be involved with. It is important to recognize students are not the only ones who learn in different ways. She indicated "the dimensions of acceleration, depth, complexity, and novelty that create a differentiated curriculum for students should define the learning experiences of the teacher" (p. 34). In addition, she purported teachers should be given opportunities to be active participants so they can transfer new ideas and practices into their classrooms.

The third essential thing that needs to happen is staff members need to be active participants with the in-service staff development. When one reviews settings where reforms have been successful, Fullan (1992) supports the need for gifted staff to work with other staff and sustains the belief "teachers working with other teachers at the school and classroom levels is a necessary condition for improving practices" (p. 130). Not only

should trained gifted staff work with other peers but developing partnerships and having time to collaborate is important for continued professional development.

The National Research Center on the Gifted and Talented conducted a National Research Needs Assessment Study based on four research studies designed to address the teacher training and staff development needed for curriculum modifications or development (Renzulli, Reid, & Gubbins, 1991). From the results of the studies the importance of including information about strategies to use, modeling, demonstration, opportunity for practice and a system for feedback. Moreover, it was found involvement of teachers in a variety of professional development activities enabled them to increase their repertoire of teaching strategies (Joyce & Showers, 1980). Therefore, when planning for in-service on gifted education issues, training strategies introduced should be kept simple and an opportunity to work with peers and practice the strategy is essential for change within the classroom to occur.

From the National Research Needs Assessment Study (Renzulli, Reid, & Gubbins, 1991), conclusions were made regarding the use of peer coaching and increasing levels of staff development were associated with more success in the implementation of this strategy. This conclusion supports the need to provide opportunities to receive prompt feedback and support from peers. Educators who participate in gifted program staff development are best served when they are involved in self-assessment of needs, mutual goal planning, and self-evaluation of learning with supportive feedback and follow-up (Dettmer, 1986b). Teachers are more likely to keep and use new strategies and ideas if they receive coaching while they are trying out new ideas and practices in their classroom. If the goal of in-service training is to have educators utilize new ideas and

transfer them into their classrooms, then training followed by coaching allows for immediate application, experimentation, and adaptation of the "new" into the learning environment. Joyce and Showers (1996) asserted coaching programs present powerful strategies for implementing instructional improvement that positively impacts student learning.

However, those charged with providing feedback and support should be knowledgeable about the methods, have demonstrated success in the classroom, be skilled at offering encouragement and constructive criticism, and be accessible to others (Kaplan, 1986). In a research study done to evaluate the effectiveness of the Catalyst Program (Landrum, 2001), a gifted program that placed gifted education specialists working collaboratively with regular education classroom teachers, it was found redirecting the gifted education specialists to guide, support, and provide feedback to others resulted in a positive environment as the result of such collaboration was "there was enhanced professional development for the entire staff of each school" (p. 149).

Finally, districts need to show their commitment for gifted education within their learning communities. Staff should be recognized and rewarded for the small steps and progress made with implementing gifted education and training. Dettmer and Landrum (1998) suggested incentives to participate in staff development be offered to school personnel. Incentive choices included graduate credit, increments on a salary schedule, in-service equivalency credit, a sabbatical, a stipend, release time from professional responsibilities, certification renewal, a substitute to fulfill professional responsibilities. Schools need to convey to staff they are valued for their initiative and willingness to grow and learn.

Moreover, districts should encourage and support staff development outcomes concerning gifted education practices by providing time, strategies, and adequate numbers of staff development personnel. Furthermore, it is essential learning opportunities be provided for teachers, which include extended time to practice, reflect, evaluate, and implement (Loucks-Horsley, 1994). As educators are provided new information regarding practices and ideas about gifted education and they move through the process of learning to implementing, they will need time. According to Tomlinson (1999) it becomes essential for the school's leaders to

> provide time for planning of differentiated lessons, give opportunities for teachers to visit differentiated classrooms, provide a wide range of materials, provide a safe environment for practice, give meaningful feedback, provide networks of support, and express appreciation for their change efforts (pp.113-114).

According to the National Foundation for the Improvement of Education (1996), the Commission of Teaching and America's Future reported, the primary reason teachers participate in professional development activities is to improve student achievement. Therefore, in an effort to encourage staff to encompass gifted in-service opportunities, the focus of gifted education training must be placed on the way in which strategies, techniques, or methods will directly affect the learner and increase student achievement (Tomlinson, 1986). "An age of meaningful accountability calls out for school contexts in which teacher learning is as paramount a concern as student learning" (Van-Tassel-Baska & Little, 2003, p. 366). If schools are to exist as true learning institutes, they must support learning for both students and staff (Woodilla, Boscardin, & Dodds, 1997).

Program Evaluation

According to the Council of State Directors of Programs for the Gifted, (as cited in Avery & Van Tassel-Baska, 2001), only seven states that require some type of gifted/talented services have conducted some form of evaluation of the school districts' programs since 1996. Avery and Van Tassel-Baska also cited Johnsen who found only 15-reported local school district evaluations recorded in the literature since 1990. The literature supports the need for evaluation of gifted education programs, but little guidance has been given in the field (Callahan, 2004).

Borland (1989) gives the following definition of program evaluation.

> Program evaluation consists of the collection of information related to the effect of an educational program on its students and the application of critical judgment to determine the extent to which the information suggests that important program goals have been met, all of this being done for the primary purpose of improving the program under evaluation. (pp. 199-200)

Trochim (2002) defined evaluation as "the systematic acquisition and assessment of information to provide useful feedback about some object" (p. 1) where an object could refer to a program, policy, technology, person, need or activity. Callahan (2001) defined program evaluation as "the systematic study of the value and impact of services provided" (p. 77). The purpose of evaluation is to assess information, make judgments about its validity, provide useful feedback to interested parties, and guide the decision-making process (Trochim, Callahan). The *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) determined four guidelines for program evaluation stating it

must be purposeful, efficient and economic, competently and ethically conducted, and made available in a written report.

A combination of formative and summative evaluation components strengthen the evaluation results. Nan (2003) defined formative evaluation is an ongoing evaluation used to guide efforts in program development. It can take the form of observations, interviews and dialogue with participants, focus groups, analysis, and reports. The four main goals of formative evaluation are planning evaluation, implementation evaluation, monitoring evaluation, and progress evaluation. Planning evaluation is used to ensure all stakeholders agree on the project plans. It paves the way for further evaluation, both formative and summative, as the project progresses. Implementation evaluation is used for evaluating how a project is progressing in relation to the project goals and plans. Monitoring evaluation is an ongoing appraisal, usually conducted by an outside evaluator. Progress evaluation uses the project's goals to measure how a project is progressing and is often used in a summative evaluation (Nan, 2003). Trochim (2002) listed five types of formative evaluation: needs assessment, evaluability assessment, structures conceptualization, implementation evaluation, and process evaluation (p. 3). A needs assessment determines who needs the program, the degree of the need, and methods of fulfilling the need. Evaluability assessment is an evaluation of the feasibility of the assessment and the role of all people involved in the program. Structured conceptualization assists in the definition of the program, the target population, and possible outcomes. Implementation evaluation measures the reliability of the delivery of the program. Process evaluation involves the appraisal of the delivery procedures and possible alternatives.

Trochim (2002) listed four major questions and methodologies used in formative evaluation.

1. What is the definition and scope of the problem or issue, or what is the question?
2. Where is the problem and how big or serious is it?
3. How should the program be delivered to address the problem?
4. How well is the program delivered? (pp. 4-5)

Formative evaluations are ongoing and intended to focus on improvements as the project progresses. They do not stand alone as an evaluation method.

Summative evaluation is usually quantitative and assesses the final product or project. It measures the extent to which the product or project has accomplished its goals and objectives. Trochim (2002) listed five types of summative evaluation: outcome evaluations, impact evaluation, cost-effectiveness and cost-benefit analysis, secondary analysis, and meta-analysis (p. 4). The purpose of outcome evaluation is to determine the extent to which the program affected the specifically defined target outcomes. Impact evaluation assesses the overall effects of the program. Cost-effectiveness and cost-benefit analysis determines the value and efficiency of the money spent on the program. Secondary analysis looks at the existing data to determine new questions or methods that could be used in the program. Meta-analysis looks at the results of multiple studies to make summary judgments. Trochim listed three typical questions and methods used in summative evaluation.

1. What type of evaluation is feasible?
2. What is the effectiveness of the program?
3. What is the net impact of the program? (p. 5)

It is imperative that whatever evaluation model is used, it is appropriate to the purpose of the evaluation and meets the goals, focus, and context of the program. This is the only way to assure utility of the results (Callahan, Tomlinson, Hunsacker, Bland & Moon, 1995).

Evaluation of gifted programs faces special challenges. One of these challenges is the uniqueness of local gifted programs designed to meet the needs of the individual student. There are many models for gifted programs, e.g., cluster grouping, pullout, special classrooms or schools, the School-Wide Enrichment Model, the Enrichment Triad Model to name a few. It is difficult to devise a generic evaluation model.

Another challenge in evaluation of gifted education is the lack of standardized measures, thus there has been a heavy reliance on attitude surveys. Evaluations have typically been short-term. Use of students' standardized test scores for evaluation data is unreliable due to the ceiling factor with on-level tests. Comparisons of previously given on-level tests and out-of-level posttests are invalid due to a regression to the mean (Borlund, 1989; Callahan, Tomlinson, Hunsaker, Bland, & Moon, 1995). Group administered tests when given to gifted and talented students only are less reliable than when given to a heterogeneous group (Thorndike & Hagen, as cited in Flood, 1984). Renzulli (as cited in Flood) described another problem with standardized tests in that they often do not measure the curriculum provided to the gifted and talented students. Gallagher (as cited in Flood) listed five factors that impair efforts to evaluate gifted programs as follows:

1. A display of student growth over time is not definitive proof of program effectiveness, since students grow naturally as they mature. We expect gifted

students to show greater mastery and growth than average students, even with mediocre education; what we need, therefore, is an expected growth baseline for gifted students without special programs, to be compared to parallel data for gifted students under special conditions.

2. Gifted students usually score at or near the top on many test instruments, which leaves little or no room to show "gains" as a result of the introduction of special programs. Gain scores often prove to be unreliable evidence unless treated by a statistically sophisticated method.
3. Program objectives for gifted education are often designed individual by individual. The administration of group achievement tests may thus fail to reflect the individual nature of program goals and results.
4. Available test instruments are weakest precisely in those program areas where gifted education places its major emphasis: The stimulation of higher thought processes, and the mastery of abstract concepts. Most achievement tests, designed to reveal breadth of knowledge rather than depth of understanding, are constructed to allow the average student to perform on them. This provides little opportunity to test top student performance. It merely documents knowledge mastery at a low level of abstraction.
5. Many program evaluation efforts are mandated by outside agencies and implemented by school personnel with limited evaluation background. Consequently, many standard evaluation design problems are overlooked. (pp. 39-40)

A review of the literature indicated evaluation methodology and the goals of the evaluation are paramount in the usefulness of the results. In their 2001 study, Avery and Van Tassel-Baska also found student evaluation to be the central focus of gifted program evaluation. Thus, choosing the appropriate evaluation methodology is part of the difficulty in the evaluation process. Because of the constant threat of losing funding for gifted programs, it is important that sound evaluations of gifted programs be conducted and shared with funding stakeholders. Guidelines for useful evaluations of gifted programs include:

1. Make evaluation a part of the gifted program. Use evaluation both for examining the program's effectiveness and for improving it. Both formative and summative evaluations should be utilized.
2. Clearly identify all audiences who have an interest in or need for evaluation result, and involve them in the evaluation process. Provide reports to all appropriate audiences.
3. Develop or select assessment tools that are appropriate for evaluating gifted programs. Develop evaluation designs that address complex issues of measurement in gifted programs. Ask evaluation questions about the goals, structures, and activities of the program being evaluated.
4. Consider the use of a combination of qualitative strategies and quantitative data gathering methods designed to reflect the unique structure and goals of programs for gifted learners (e.g., out-of-level testing, portfolio assessment, product rating with demonstrated inter-rater reliability). Avoid reliance on traditional

standardized measures that offer little promise of reflecting academic growth in gifted students.

5. Provide adequate funding and time for appropriate evaluation procedures to be followed. (Borlund, 1989; Callahan, Austin, Brighton, & Moon, 2003; Johnsen, as cited in Avery & Van Tassel-Baska, 2001)

It is important to maintain credibility in the study by ensuring that the evaluation team is knowledgeable in evaluations methods, gifted education, and in the challenges that face evaluation of gifted programs. Failure to maintain credibility of the study will compromise the usefulness of the study and future improvements that could have been realized. It is imperative to the future of gifted education programs that they continue to be evaluated and appropriate methods of evaluation are used in the evaluation process. This is the only way to ensure gifted programs will be recognized and valued (Flood, 1984).

Conclusion

Few models have been developed for evaluating gifted programs. However, five models stood out in the research that could be adapted for use in the evaluation of gifted programs: CIPP Model for Evaluation, Stake's Countenance Model, Stake's Responsive Model, Discrepancy Evaluation Model, and Diagnostic and Evaluation Scales for Differential Education for the Gifted Model. Specific components of the models assisted with the formation of a framework for the development of an evaluation tool for use with gifted programs.

High ability students deserve an education program that meets their unique needs and is aligned with the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998).

These standards are broken down into seven areas: curriculum and instruction, program administration and management, program design, program evaluation, socio-emotional guidance and counseling, professional development, and student identification. As the research of literature revealed, each of the program standards is an essential part of a gifted program. The omission of any area will weaken the program. There are a multitude of methods to modify curriculum to meet the needs of gifted students, many through differentiation. The administration and management of the gifted program should be by personnel who are trained in gifted education. The design of the program should include flexibility, a PreK-Grade 12 continuum of services, and a financial commitment on the part of the school district. In order for a program to grow and change to meet the needs of students, both formative and summative evaluations should be conducted on a regular basis. The program must provide for the unique social and emotional characteristics of high-level students. Ongoing professional development opportunities are needed for the staff members who will work with the students. And finally, it is imperative that there are a variety of instruments used to identify students, with the objective of being inclusive, rather than exclusive.

The next chapter discusses the methodology used to evaluate the gifted programs of the school districts in Nebraska that submitted gifted/talented program plans to the Nebraska Department of Education.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this study was to examine the current status of gifted/talented programs in Nebraska and to determine the extent to which these programs match best practices, as determined by a review of existing literature. The study attempted to identify and evaluate specific gifted and talented program components that were compared with the best practices recommended in the gifted and talented program literature. Areas of evaluation included student identification methods, program options, staff development, and program evaluation.

The intent of the researchers was not to compare the programs of the different school districts in the state, but rather to examine the components of the programs that met exemplary standards as developed by the researchers, based on the criteria used for analysis of the programs. The following topics are described: (1) design for the study; (2) selection of the sample; (3) collection of data; (4) development of the evaluation instrument; (5) validation and field-testing of the instrument, (6) reliability testing; and (7) analysis of data.

Design for the Study

A descriptive analysis was selected as the most appropriate and comprehensive method of research for the examination of the current gifted and talented programs in Nebraska compared to best practices as found in the existing literature. A descriptive analysis study was selected due to the nature of the data collected. Because the evaluation of the gifted/talented program plans were not compared to each other, correlation and comparative results were not determined. Rather, conclusions were made

regarding alignment to best practices, as determined by the literature. Descriptive data about the program plans were collected through the use of a set of checklists and rubrics that were created by the researchers. Scoring rubrics were developed as rating scales for evaluation. Checklists were created to collect specific information about each program plan. Both instruments were based on best practices determined from a review of the literature and the *NAGC Pre-K-Grade 12 Gifted Program Standards* (Landrum et al., 2001).

Selection of Sample

To address the research questions of this study, it was necessary to collect information from public school districts in the state of Nebraska. The presumption was data would be available from each Nebraska public school district because they were required by legislation to submit a plan for high ability learners to the Nebraska Department of Education by September 1, 2006. Of the 252 public school districts in Nebraska, 203 districts submitted program plans. The researchers used the plans submitted to the Nebraska Department of Education to collect data for this study.

Collection of Data

According to Creswell (1994), use of archival documents enables the researchers to obtain data that is represented in a thoughtful manner with an understanding of words and language compiled by the informants. Accessing such documents is beneficial when the informants cannot be directly observed. The Nebraska Department of Education requires the public school districts to submit a gifted/talented program plan and budget to obtain state funding. The plan format was revised in 2006 so it was more inclusive and

consistent from district to district throughout the state and based on best practices as stated by NAGC.

The new revised plan required districts to provide information regarding eight separate gifted program plan components: philosophy statement, definition, goals and objectives, identification, program options, professional development, program evaluation, and program management. Philosophy, goals, and objectives are not separate standards set forth by NAGC, but are imbedded throughout all of the standards. Program management, as stated in the *NAGC Pre-K-Grade 12 Gifted Program Standards* (Landrum et al., 2001) includes administrative management of tasks such as personnel to administer programs, funding, public relations, and daily management of the gifted/talented program. The NAGC standards set forth in program management are performance criteria that are integrated within the selected program standards. Therefore the researchers eliminated this standard due to the number of small school districts in Nebraska and the lack of multiple administrators at these schools. There were 213 small school districts with high school populations of less than 240 students, all of which are located outside of the metropolitan areas of Nebraska. These school districts are classified a Class C or Class D district based on the Nebraska School Activities Association guidelines and were considered small districts by the researchers. Therefore, identification, program options, professional development, and program evaluation were selected for evaluation by the researchers.

Each of the plans was evaluated with use of the researcher-developed rubric and checklist instruments. The rubrics were designed to include rating scales to determine exemplary, minimum, or non-existent levels on each of the program standards.

According to the *NAGC Pre-K-Grade 12 Gifted Program Standards* (Landrum et al., 2001), "exemplary standards provide statements that describe excellence in gifted education programming practice. These standards make it likely that gifted education service will occur" (p. xii). "Minimum standards include requisite conditions for acceptable gifted education programming. These standards make it possible for appropriate practices to occur" (Landrum et al., 2001, p. xii). A non-existent rating means either the school district plans did not include any information on the standard, or the information did not meet the minimum standard. The checklists were used to collect specific information about each program plan.

Demographic information for each school district relating to Educational Service Unit (ESU), number of students, socio-economic status (SES), and number of English language learners (ELL) were obtained from the Nebraska Department of Education web site. A political map depicting counties and an ESU map were utilized to determine proximity to institutions of higher learning. The *Demographic and Economic Profile: Nebraska*, compiled by the Rural Policy Research Institute, was used to determine metropolitan, micropolitan, and non-core areas of the state. The map contained in the *Demographic and Economic Profile: Nebraska* was used to categorize the counties of the school districts by metropolitan, micropolitan, or non-core. The data were used to create a table depicting demographic characteristics of each school district.

Development of the Instrument

Four analytic scoring rubrics for assessing the gifted/talented program plans of the school districts in Nebraska were developed by the researchers. A scoring rubric is "the established criteria, including rules, principles, and illustrations, used in scoring

responses to individual items and clusters of items" (AERA/APA/ NCME, as cited in Westat, 2002, 2.1 Definition of a scoring rubric section, para. 1). According to Westat, analytic scoring rubrics are often used to evaluate instructional programs with the purpose of determining their strengths and weaknesses. Scoring rubrics provide a means for uniform and objective criteria, thus improving the reliability of the assessment. The rubrics developed for this study were what Westat refers to as specific rubrics, as each item measures a specific standard in the program plans.

Scriven (2005) notes a checklist to be "a list of factors, properties, aspects, components, criteria, tasks, or dimensions, the presence or amount of which are to be separately considered" (p. 1). According to Stufflebeam et al. (2000), checklists are valuable evaluation instruments if they are carefully developed. A checklist is frequently valuable in that it clarifies the criteria that should be considered when evaluating something in a particular area, reminds the evaluator of key elements that should be included in the evaluation, forces the evaluator to consider separately and allocate appropriate merit to each of the elements, and enhances the assessment's objectivity, credibility, and reproducibility (Scriven; Stufflebeam et al.). Although the checklist may be evaluative, the context of use justifies certain types of evaluative conclusions (Scriven). Five checklists were developed for the purpose of identifying specific components found in the gifted/talented program plans by the researchers. The checklists were designed to give specific information and details about the components contained in the scoring rubrics.

A review of existing literature and the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998) were used to synthesize best practices in the education of

gifted and talented learners, which then became the foundation for the program evaluation checklists and scoring rubrics. A review of the literature on evaluation models and best practices in the education of gifted/talented learners was the basis for the evaluation instruments. The scoring rubrics were adaptations of the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998). The checklists were developed from the best practices noted in the literature and from elements within the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC*)* rubrics.

Program requirements and standards, as developed by Renzulli and Ward (1969) in the DESDEG, *Diagnostic and Evaluation Scales for Differential Education for the Gifted*, were used as the basis for determining program components essential in the evaluation of gifted programs. Gifted educational program requirements were identified from a review of the literature and from components required by the Nebraska Department of Education in the school districts' gifted/talented program plans. The following program components were selected for evaluation:

- Definition of gifted/talented
- Student identification methods
- Program options, services, and/or strategies for differentiation
- Staff development
- Program evaluation

Validation and Field Testing of the Instrument

Based on a review of literature, the following validation process was used to develop the evaluation instruments:

- An analysis of a variety of program evaluation models dealing with gifted education.
- An online search of the Education Index and ERIC to obtain valid and reliable information about the use of appropriate models of evaluation for gifted/talented programs.
- Program components of each model were dissected and analyzed in the search for the most relevant evaluation tool.
- The components of the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998).
- The 2006 gifted program components required by the Nebraska Department of Education.

The instrument included checklists and scoring rubrics for evaluation of the definition of giftedness, program evaluation, identification procedures, program options and services, and staff development.

According to Westat (2002), the rubric should be pilot tested with actual samples. The rubrics used in this study were tested for content validity by scoring approximately twelve percent of the submitted high ability program plans. The researchers continued making modifications and testing for content validity until the instrument aligned with information required of and submitted by Nebraska public school districts to the Nebraska Department of Education.

Reliability Testing

"The two forms of reliability that typically are considered in assessment and in rubric development involve rater (or scorer) reliability. Rater reliability generally refers to the

consistency of scores that are assigned by two independent raters" (Moskal & Leyens, 2000, p. 1). This form of reliability is referred to as inter-rater reliability. Inter-rater reliability was established for the rubrics used in this study through use of a team-scoring process. Ten plans were evaluated by the researchers and discussed. This process continued with two more groups of ten until there was an inter-rater reliability of 0.8. At that point each of the researchers evaluated two parts of each plan, with one of every ten plans evaluated by both researchers for a total of 49 plans double scored (see Table 3.1).

TABLE 3.1

Inter-rater Reliability

Set	n	Concur	Reliability
First set	10	7	0.7
Second set	10	8	0.75
Third set	10	9	0.8

Analysis of Data

Data were tabulated according to frequency and percentage of occurrence of program components in regard to minimum and exemplary program standards as developed by the researchers. The data were then disaggregated according to school district size, region of the state, ESU, SES, and ELL. The components of the definition of gifted/talented learners were also tabulated according to frequency. Identification and program options were examined to determine if the components listed in the definition were also evident in those parts of the program plans.

Nebraska school districts were divided into five classes based on the total number of students and on the Nebraska School Activities Association (NSAA) division of schools by size of high school population. The division containing the largest districts was divided into two groups due to a large size discrepancy of 12,000 students between the third and fourth largest districts.

The school districts were also separated into three economic and demographic profile areas: metropolitan, micropolitan, and non-core. They were then analyzed according to the gifted/talented program offerings, Advanced Placement classes and dual enrollment, and proximity of the school districts to institutions of higher learning.

The scoring rubric data were used to determine the top ten percent of the school districts according to exemplary ratings on the scoring rubrics. These 20 school districts were analyzed to determine commonalities that existed in relation to ESU, SES, and ELL characteristics. The 20 schools with the highest SES and 20 schools with the highest percent of ELL students were examined in relation to the identification processes.

The Educational Service Units were examined to determine what percent of the schools in each service unit were exemplary on the individual program standards. Relationships to size and location were included in the analysis.

The gifted/talented program plans were also examined to determine which school districts used a matrix in the identification process. The matrices were analyzed to determine four specific practices influencing identification. A matrix utilizes both quantitative and qualitative assessment data to provide a more total profile of a student and one's abilities (Johnsen, 2004).

Data were displayed in the form of frequency tables and graphs. Displays show relationships among categories of information and demographic variables. All data were summarized through descriptive analysis.

CHAPTER IV

THE DATA

This study sought to examine the current status of gifted/talented programs in Nebraska and to determine the extent to which these programs match best practices as recommended in the gifted/talented literature. Standards for educational practices in gifted education were identified and synthesized from a review of the literature and the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998). Current Nebraska public school district gifted programs plans submitted to the Nebraska Department of Education were analyzed using rubrics and checklists created as a result of the study of the existing literature and the *NAGC Pre-K-Grade 12 Gifted Program Standards* (NAGC, 1998).

This chapter is divided into two sections: 1) demographic data, and 2) gifted program data.

Demographic Data

According to the 2000 census as reported by the Nebraska Department of Economic Development (n.d.), Nebraska has a total of 93 counties and had a total population of 1,711,264. Only two counties had a population over 250,000, Douglas County with 463,585 and Lancaster County with 250,291. Both counties are in the eastern part of the state. The other 91 counties had less than 130,000 people each. Nine counties were part of metropolitan areas and 20 counties were part of the micropolitan areas. A micropolitan category includes an urban area with a population of 10,000 to 49,999 plus surrounding counties that are linked through commuting ties and represent important economic and trade centers in rural areas. The remaining 64 counties were considered non-core

counties (RUPRI: Rural Policy Research Institute, 2006). According to the Rural Policy Institute, based on these classifications and the population estimates for 2005, 56.9% of Nebraska residents lived in metropolitan areas, 22.8% lived in micropolitan areas, and 20.3% lived in non-core areas (see Figure 4.1).

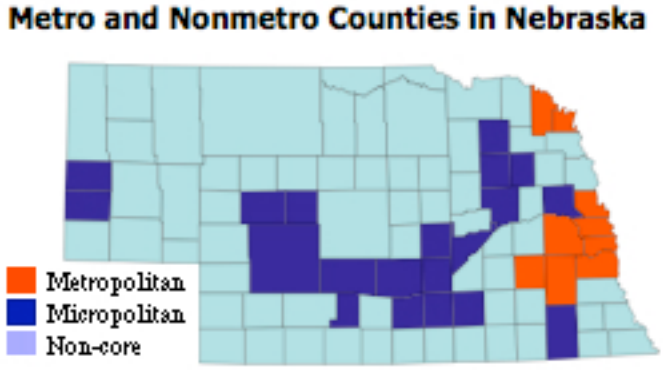

FIGURE 4.1 Source: U.S. Census Bureau and Office of Management and Budget. Map prepared by RUPRI (2006)

Nebraska has an area of 77,421 square miles and had a population density of 22.3 people per square mile. The largest density was located in the eastern one third of the state with approximately 1,200,000 people living in urban areas and 500,000 residing in rural areas (Nebraska Department of Economic Development, n.d.) (see Figure 4.2).

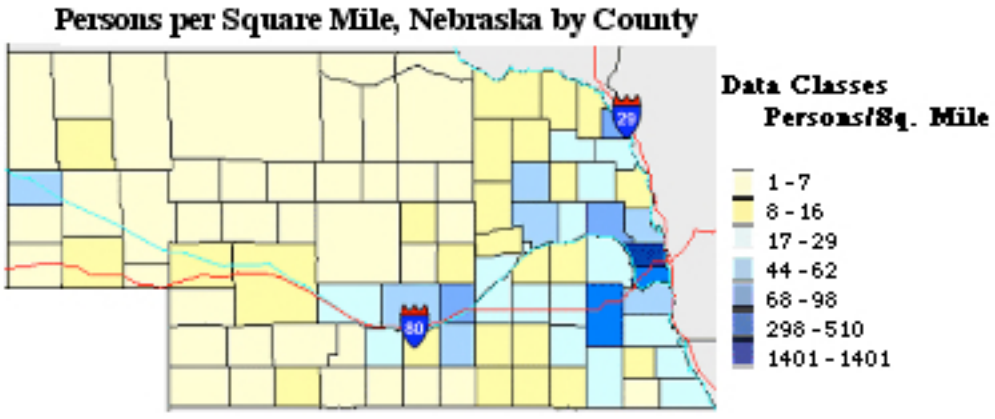

Figure 4.2 Source: Nebraska Department of Economic Development (n.d.) Census 2000. Prepared with American FactFinder

The population of Nebraska in 2000 was divided among the following ethnic groups: White, 1,553,261; Black, 68,541; American Indian, Eskimo or Aleut, 14,896; Asian or Pacific Islanders, 22,767; Hispanic origin, 94,425; and other races, 71,798 (Nebraska Department of Economic Development, n.d.). According to the Demographic and Economic Report done by the Rural Policy Research Institute, 2006, African Americans populated metropolitan areas 7.1% compared to 88.4% White, and accounted for .8% and .3% in micropolitan and non-core areas respectively. "People of Hispanic origin make up 6.6 percent of the metropolitan population, 10.2 percent of the micropolitan population, and 3.8 percent of the non-core population" (RUPRI: Rural Policy Research Institute, 2006, p. 4). According to the American Federation for Immigration Reform (Nebraska Department of Education, 2004a), 41% of Nebraska's overall population growth from 1990-2000 was from foreign-born immigrants and the children born after their arrival to the United States. During this same time period, the percent of non-English speaking households increased from 4.8% to 7.3%. Since the 2000 Census, the annual rate of change in the number of foreign-born people in Nebraska was 36.9% of the annual population increase.

The poverty rate in Nebraska in 2003 was 10%, and the poverty rates in Nebraska counties ranged from 5.5 % in Sarpy County to 20.3% in Thurston County (RUPRI: Rural Policy Research Institute, 2006). Nebraska's per capita income has slightly declined over the past several decades. Per capita income in non-metro areas has fallen behind metro areas and the gap has continued to widen during the late 1980's and early 1990s. "In 2003, non-metro per capita income was 79.2 percent of metro per capita income" (RUPRI: Rural Policy Research Institute, 2006, p. 9).

According to the Nebraska Department of Education (n.d.), there were a total of 252 public school districts in the state of Nebraska, with a total of 279,379 K-12 students in 2005-2006. Of this number, 14.64% of the students were identified as gifted/talented. The Nebraska Department of Education (n.d.) separated the student population according to the following race and ethnicity percentages (see Table 4.1).

TABLE 4.1

Race and Ethnicity Comparisons

Race and Ethnicity	% Student Enrollment PreK-12	% Student Enrollment Identified as Gifted K-12
White	78.48	13.78
Hispanic	11.48	6.04
Black	7.57	8.93
Asian/Pacific Islanders	1.81	17.53
American Indian/Alaskan Native	1.64	6.18
Total Students	285,548	40,902

Source: Nebraska Department of Education, (n.d.)
Note: The percent of student enrollment was based on PreK-12 populations and the gifted percentages were based in K-12 data, thus a total number of gifted/talented students per ethnic group could not be tabulated.

Gifted Program Data

Eighty-one percent of the Nebraska public school districts submitted gifted program plans to the Nebraska Department of Education. Data used to answer the research questions were gathered from these 203 school districts. The guiding principles and

exemplary standards discussed in this section refer to the components of the rubrics developed by the researchers for evaluative purposes.

Research Question 1

To what extent do the Nebraska school districts' gifted/talented program definitions, identification methods, and program options align?

Of the 203 plans submitted, 30 school districts submitted gifted/talented program plans containing no definition for giftedness. The Nebraska state definition of gifted/talented learners was used by 111 of the school districts in their gifted program plans. Fifty school districts had gifted/talented definitions and identification that aligned with one another; however, of these districts only 38 districts had identification processes that corresponded to the Nebraska state definition of gifted/talented learners. Definitions and program options aligned in only five school districts, whereas identification methods matched program options in 36 districts. When comparing gifted definition to identification methods to program options, 19 school districts were aligned with all three components. However, only 11 of the 19 school districts utilized the state definition of giftedness. It should be noted an additional 15 districts used the state definition, but also included leadership in their identification procedures and program options.

Research Question 2

What procedures are used for the identification of gifted/talented learners in the school districts in the state of Nebraska?

Ninety-three percent of the school districts indicated they use some form of nomination for the gifted/talented identification process. Most prevalent was nominations from staff at 70%, parents 54%, self 27%, peers 23%, and community

members 3%. When reviewing the use of nomination practices, the researchers found 21% of the school districts that indicated nominations were a part of their identification process used nominations from staff, parents, self, peers, and community members as the sole nomination tool. Moreover, 44% of the school districts employed nominations from staff, parents, self, peers, and community members with achievement and/or intelligence tests. In addition, 23% of the school districts indicated the nomination phase included nominations from staff, parents, self, peers, and community members in combinations with multiple assessments such as portfolios, performances, grades, district assessments, etc. Relying on scores from an intelligence and/or achievement test and not including nominations from staff, parents, self, peers, and community members in the nomination phase was practiced by 5% of Nebraska school districts. Moreover, 79% of the districts had a screening process in place, and 72% had a placement plan (see Table 4.2).

Use of informed consent for placement of gifted/talented learners was 61%. Fifty-six percent of the school districts included provisions for an appeals procedure. Only 12% of the Nebraska school districts included an exit policy for students who do not desire to continue in the gifted/talented program (see Table 4.3).

TABLE 4.2

Procedures for Identification by Nomination

Procedures for Identification	n	%
Nomination	189	93
Staff/Teachers	142	70
Parents	110	54
Self	54	27
Peers	47	23
Community Members	6	3
Screening	160	79
Placement	147	72

Note: Percentages do not equal 100% because several procedures for identification were often used.

TABLE 4.3

Provisions of Identification

Provisions	n	%
Informed Consent	124	61
Appeals Process	114	56
Student Retention	56	28
Student Reassessment	42	21
Student Exiting (exit policy)	24	12

Note: Percentages do not equal 100% because several procedures for identification were often used.

Only one percent of the Nebraska school districts utilized a test that provides non-biased assessment for non-English speaking students. The most commonly used quantitative tests included academic achievement tests and intelligence tests. Fifty-two percent of the school districts indicated they used some form of academic achievement test. Nineteen percent specified the use of the TerraNova and 15% the ITBS (see Table 4.4).

TABLE 4.4

Academic Quantitative Measures Used for Identification

Quantitative Measure	n	%
Academic Achievement Test-General	106	52
TerraNova	39	19
ITBS-Iowa Tests of Basic Skills	30	15
ACT-American College Test	19	9
PLAN-Pre ACT Test	18	9
STARS-School-based Teacher-led Assessment and Reporting System	14	7
CAT-California Achievement Test	13	6
SAT-Scholastic AptitudeTest	12	6
Stanford Achievement Test	4	2

Note: Percentages do not equal 100% because several procedures for identification were often used.

Use of general intelligence/aptitude tests were noted by 17% of the school districts; more than 10% of the school districts used the following intelligence/aptitude tests: Stanford Binet, 15%; WISC, 14%; CoGAT, 13%; and KBIT, 11%. Forty-three percent of the school districts stated they used either an intelligence/aptitude or achievement test as the only test for identification. The use of such a sole measurement led to automatic placement within the gifted and talented program of these school districts. Moreover, 3% of the school districts based identification upon results from the PLAN Test for grade ten, and results from the A.C.T and/or S.A.T. for students in grades eleventh and twelfth.

In reviewing the identification procedures across the K-12 spectrum, it was noted 28% of school districts had identification and placement procedures in place for students in grades K-2. Specifically, 19% of these school districts began identification procedures at the kindergarten grade level, 2% began identification procedures at the first grade level, and 7% began at the second grade level. All other school districts began the identification procedures at third grade level or higher. Twenty-six percent of the districts indicated grades were used as a part of the identification measures (see Table 4.5).

TABLE 4.5

Quantitative Measures Used for Identification

Quantitative Measures	n	%
Aptitude Tests-General	34	17
Stanford Binet Intelligence Scales	30	15
WISC- Wechsler Intelligence Scale for Children	29	14
CoGAT-Cognitive Abilities Test	26	13
KBIT–Kaufman Brief Intelligence Test	22	11
SIT–Slosson Intelligence Test	21	10
OLSAT–Otis Lennon School Abilities Test	14	7
Woodcook Johnson Tests of Achievement	8	4
WISC-R- Wechsler Intelligence Scale for Children Revised	5	2
ELDA-English Language Development Assessment	2	1
NNAT – Naglieri Nonverbal Ability Test	1	<1
Raven Progressive Matrix	1	<1
SOI – Structure of Intellect	1	<1
CTONI-Comprehensive Test of Nonverbal Intelligence	1	<1
Other – Grades	53	26

Note: Percentages do not equal 100% because several procedures for identification were often used.

Rating scale measures used for the identification of gifted/talented learners included tests, checklists, portfolios, and performances. School districts in Nebraska noted highest use of the SRBCSS (Scale for Rating the Behavioral Characteristics of Superior Students)

at 18%. The Torrence Test of Creative Thinking was utilized by 13% of the school districts (see Table 4.6). Student performance was used as an identification tool in 27% of the school districts; creative portfolios were utilized by 16% of the districts, observations 16%, and a checklist for creativity 15% (see Table 4.7).

TABLE 4.6

Rating Scale Measures Used for Identification

Rating Scale Measures	n	%
SRBCSS – Scales for Rating the Behavioral Characteristics of Superior Students	37	18
Torrance Tests of Creative Thinking	27	13
Kingore Observation Scales	11	5
Tests for Creativity, Artistic Abilities, Specific Areas, etc.	5	2
GATES – Gifted and Talented Evaluation Scales	4	2
SIGS – Scales for Identifying Gifted Students	3	1
Group Inventory for Finding Interests	3	1
GES – Gifted Evaluation Scale	2	1

Note: Percentages do not equal 100% because several procedures for identification were often used and not all districts used qualitative data.

TABLE 4.7

Qualitative Measures of Performance Used for Identification

Additional Qualitative Components	n	%
Performances	54	27
Portfolios – Creative	32	16
Creativity checklist	30	15
Observations	30	15
Leadership checklist	15	7
Non-existent	12	6
Case Studies	7	3
Interviews	5	2
Portfolios – Academic	5	2
Career interest and vocational checklist	3	1

Note: Percentages do not equal 100% because several procedures for identification were often used and not all districts used qualitative data.

Reviewing the identification component of the Nebraska school districts that submitted gifted program plans, 24% of the schools specified use of a matrix with the identification process. Of these schools, 31% indicated the assessment or source of information used in the identification process were equally weighted and none carried more weight or received a multiplied weight. Moreover, 44% of the schools that used a matrix in the process of identifying gifted/talented students listed using more than one type of identification source, and 52% examined more than one trait. Quantitative and

qualitative assessment data were used equitably by 24% of the schools using a matrix with the identification process (see Figure 4.3).

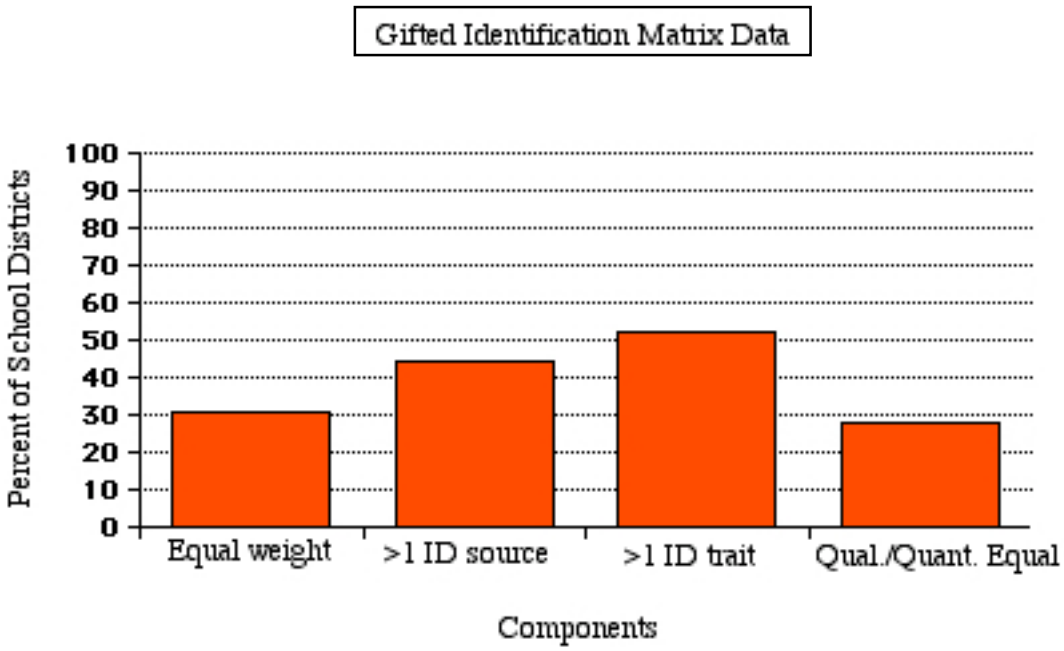

FIGURE 4.3 Use of Matrix for Identification Percents Based on 48 School Districts

Research Question 3

To what extent do the school districts in the state of Nebraska meet the exemplary standards for identification of gifted/talented learners?

In the process of assessing students for gifted/talented identification, **Guiding Principle 1** states that a comprehensive and cohesive process for student nomination must be coordinated in order to determine eligibility for gifted education services. Yet, no Nebraska school districts indicated providing nomination procedures in a variety of languages to meet the Exemplary Standard 1.2 and Exemplary Standard 1.0. Moreover, providing information annually in a variety of languages was met in only two districts. Exemplary Standard 1.1, the nomination process should be ongoing, was met by 7% of

the school districts, and 10% indicated they provide special workshops and seminars for parents regarding giftedness to fulfill Exemplary Standard 1.3.

Guiding Principle 2 states instruments used for student assessment to determine eligibility for gifted education services must measure diverse abilities, talents, strengths, and needs in order to provide students an opportunity to demonstrate any of these strengths. Only 2% of the school districts indicated their assessments were responsive to students' economic conditions, gender, developmental differences, handicapping conditions, and any other factors that might prohibit fair assessment as required by Exemplary Standard 2.0. However, 17% and 18% of the districts met Exemplary Standards 2.1, all gifted/talented students are assessed equally across grade levels and 2.2, assessment instruments and strategies are sensitive to all stages of talent development respectively.

Few Nebraska school districts met the exemplary standards for **Guiding Principle 3** that states a student assessment profile of individual strengths and needs must be developed to plan appropriate intervention. Only 2% of the districts met Exemplary Standard 3.0, to provide individual assessment plans for all gifted/talented learners, and 7% met Exemplary Standard 3.1, the assessment profile should reflect the gifted/talented learners' interest, learning style, and educational needs.

Approximately one-fourth of the districts attained exemplary standards under **Guiding Principle 4** that states all student identification procedures and instruments must be based on current theory and research. Exemplary Standard 4.0, multiple sources and assessment methods should be used to collect student assessment data, was met by 25% of the school districts. Twenty-four percent of the school districts noted student

assessment data represented an equitable balance of quantitative and qualitative measures, thus meeting Exemplary Standard 4.1.

Guiding Principle 5 includes provisions for informed consent, student retention, student reassessment, student exiting, and appeal procedures, and was met by approximately one-fourth of the Nebraska school districts. Exemplary Standard 5.0 requires appropriate balance measures be used to collect student placement data. Exemplary Standard 5.1 directs districts to review and revise guidelines and procedures. Twenty-four percent of the districts met both of these standards (see Figure 4.4).

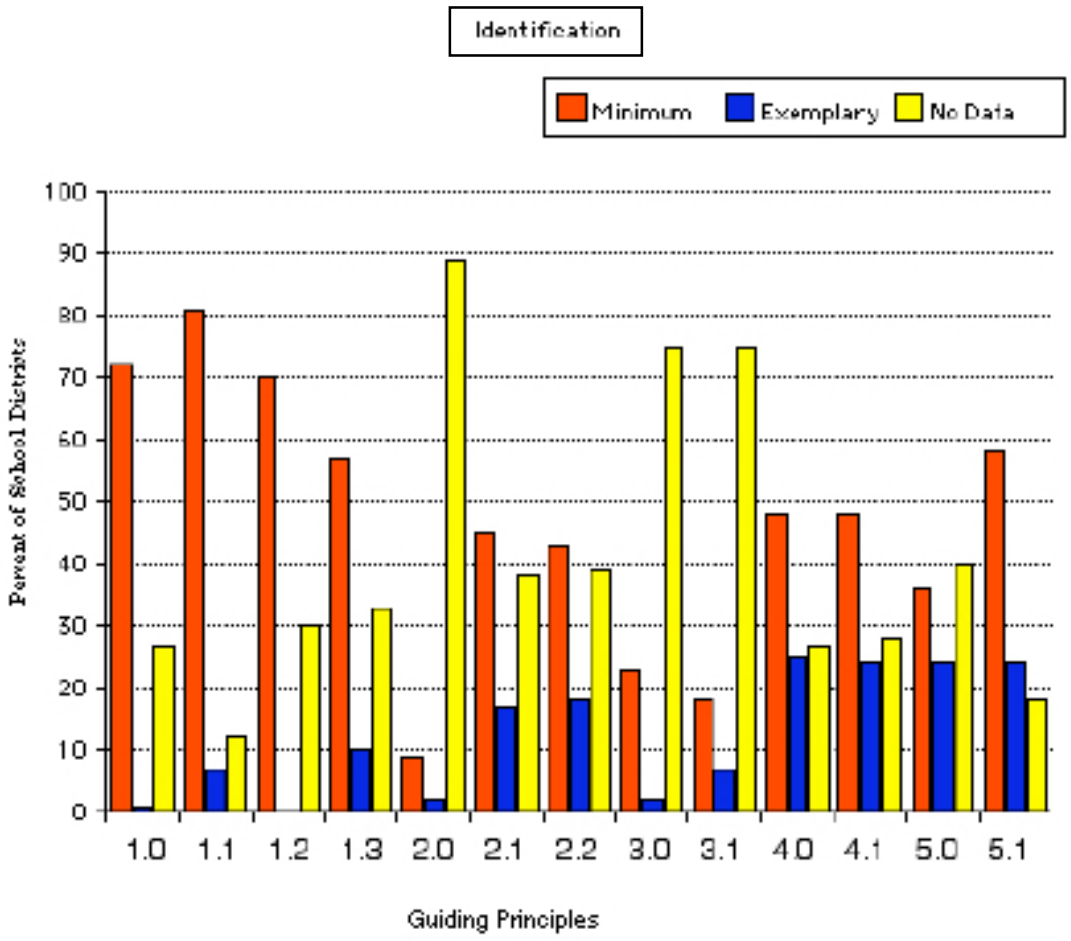

FIGURE 4.4 Levels of Performance in Identification

Research Question 4

What program options are available for gifted/talented learners across grade levels K-12 within each school in the state of Nebraska?

A consensus of the literature indicates program options for gifted/talented learners should include both affective and specialized counseling. Services for gifted/talented students should be available across all grade levels and offered in a variety of settings.

When looking at programming, less than 35% of Nebraska school districts provided affective curriculum and specialized counseling for gifted/talented students. Thirty-two percent of the school districts provided an affective curriculum to meet the socio-emotional needs of gifted/talented learners, and 34% offered specialized counseling to meet these learners' special interests and needs (see Table 4.8).

TABLE 4.8

Specialized and Affective Counseling Services

Program Components	n	%
Specialized Counseling	69	34
Affective Curriculum	65	3

Note: Percentages do not equal 100% because the data referred to two different components that may both be offered.

Over half of the districts, 56%, utilized some type of differentiated curriculum. The most commonly used strategies for differentiation across the state of Nebraska included: compacted curriculum, 54%; curriculum enrichment, 48%; and flexible student grouping,

44%. The least common practices included: use of advanced texts and resource material, 6%; leveled assignments, 14%; learning contracts, 10%; and cluster groups and adjusted levels of questions, 11% each (see Table 4.9).

TABLE 4.9

Differentiation of Curriculum and Instruction Strategies

Program Components	n	%
Compacted Curriculum	110	54
Curriculum Enrichment	97	48
Flexible Student Grouping	90	44
Mentors	87	43
Independent Projects	86	42
Pacing	73	36
Leveled Assignments	28	14
Interest Centers	25	12
Adjusting Level of Questions	22	11
Cluster groups	22	11
Learning Contracts	20	10
Multi-grade grouping	13	6
Advanced texts and resource material	12	6
Cross-building grouping	3	1
Cubed Instruction	3	1

Note: Percentages do not equal 100% because several program options were often used.

Less than 35% of the school districts offered some type of acceleration. Thirty-nine percent offered dual enrollment (see Table 4.10). Of those 80 schools, 30 were within 20 miles of a post-secondary institution. Other distance relationships included: 29 districts, 21-40 miles; 14 districts, 41-60 miles; four districts, 61-80 miles; and two districts, 100 or more miles (see Table 4.11). Grade skipping was offered by 19%, subject acceleration by 14%, and 8% offered early entrance into kindergarten for gifted/talented preschool age children. Only four percent indicated they offer early graduation (see Table 4.10).

TABLE 4.10

Forms of Acceleration

Program Components	n	%
Early Graduation	9	4
Dual Enrollment	80	39
Early Entrance into Kindergarten	16	8
Grade Skipping	39	19
Subject Acceleration	29	14

Note: Percentages do not equal 100% because several provisions for acceleration were often used.

TABLE 4.11

Proximity to a Post-Secondary Education Facility

Program Component	n	0-20	21-40	41-60	61-80	81-100	100+
Dual Enrollment	80	30	29	14	4	0	2

Note: n=total number of districts offering dual enrollment. Distance measured in miles.

Special classes offered most frequently included extra-curricular classes (i.e., clubs, contests, camps, and summer classes) at 35% and Advanced Placement (AP) classes at 29% (see Table 4.13). Of the 59 school districts that offered Advanced Placement classes, 39% of them were located in non-core areas of the state, 21% were in micropolitan areas, and 25% were in metropolitan areas. Twenty-three percent of the teachers hold a master's degree in the non-core area districts, 32% in the micropolitan area districts, and 42% of the districts located in metropolitan areas (see Table 4.12). Least frequently used types of classes for gifted/talented students included: service learning, 5%; fine arts, 7%; seminars, 3%; and less than 1% self-contained classrooms (see Table 4.13).

TABLE 4.12

Demographic and Educator Advanced Degree Levels in Districts with AP Offerings

Demographic Area	% of Districts Offering AP Classes	% with Master's Degree
Non-Core	39	23
Metropolitan	36	32
Micropolitan	25	42

Note: Percent of districts is based on a total of 59 school districts.

TABLE 4.13

Special Classes Offered to Gifted/Talented Students

Program Components	n	%
Extracurricular (clubs, contests, camps, summer)	71	35
Advanced Placement Classes	59	29
Pullout	34	17
Ability Grouped Classes	29	14
Leadership	27	13
Distance Education	17	8
Creativity – Fine Arts	14	7
Service Learning	11	5
Seminars	7	3
Self-contained Classroom	1	<1

Note: Percentages do not equal 100% because several types of classes are often used.

Research Question 5

To what extent do the school districts in the state of Nebraska meet the exemplary standards for program options?

Thirty percent of the school districts met **Guiding Principle 1** that states gifted education programming must evolve from a sound base and be articulated through a clear philosophy statement that addresses the need for gifted programming with goals and objectives, as stated in Exemplary Standard 1.0.

Seventeen percent of the school districts met Exemplary Standard 2.0, services should be matched to the needs of learners, and met **Guiding Principle 2**, a continuum of services must exist for gifted/talented learners.

Guiding Principle 3 states gifted education programming services must be an integral part of the general education school day. Twenty percent of the districts met Exemplary Standard 3.0 that directs gifted services to supplement and build on classroom curriculum at all grade levels. Exemplary Standard 3.1, districts should offer multiple service delivery options, was met by 29% of Nebraska school districts.

Guiding Principle 4 states flexible grouping of students must be developed in order to facilitate differentiated instruction and curriculum. Twenty-three percent of Nebraska school districts were noted as complying with Exemplary Standard 4.0 and provided flexible grouping arrangements in all content areas and across all grade levels to gifted/talented learners.

Seventeen percent of the school districts adhered to **Guiding Principle 5** that states policies specific to adapting and adding to the nature and operations of the general education program are necessary for gifted education. These districts achieved exemplary status for Standard 5.0 for the inclusion of a comprehensive PreK- Grade 12 program plan that includes policies and procedures for all areas of gifted education. Nineteen percent of the districts had identification procedures and program options beginning at kindergarten, 2% at first grade, and 7% in second grade. Seventy-two percent of the gifted programs began their services at the third grade level or later,

Twenty-two percent of Nebraska school districts met **Guiding Principle 6** that provides curricular options, instructional approaches, and resource materials, and

specifically met Exemplary Standard 6.0 that provide students with learning experiences matched to their readiness, interest, and learning styles.

Guiding Principle 7 states differentiated curriculum for grades PreK-Grade 12 designates regular classroom instruction to be differentiated to meet the unique needs of gifted/talented learners. Only 7% of Nebraska school districts met Exemplary Standard 7.0 to assess proficiency and provide more challenging educational opportunities to gifted/talented learners.

Twenty-two percent of Nebraska public school districts were exemplary with **Guiding Principle 8** and Standard 8.0 that provide for the instructional pace to be flexible and accelerated to meet the areas of strength and interest of gifted/talented learners.

Twenty-six percent of Nebraska school districts met Exemplary Standard 9.0 by indicating they engaged in the practice of partial or full acceleration and educational opportunities for subject and grade skipping for gifted/talented learners, as stated in **Guiding Principle 9**.

Less than 10% of the school districts met exemplary status on **Guiding Principle 10** stating gifted learners must be provided with differentiated guidance efforts to meet their unique socio-emotional development. Only 9% of the districts provided a trained counselor who was familiar with characteristics and socio-emotional needs of gifted/talented learners as stated in Exemplary Standard 10.0. Exemplary Standard 10.1, college and career guidance that is appropriately different is delivered earlier than normal to gifted/talented learners, was met by 4% of the school districts.

Only 1% of Nebraska school districts achieved exemplary status for **Guiding**

Principle 11, gifted at-risk students must be provided with guidance and counseling to help them reach their potential, and Exemplary Standard 11.0 that requires the counselor to have special training in the characteristics and socio-emotional needs of gifted learners.

Guiding Principle 12 and Exemplary Standard 12.0 designate gifted learners should be provided with affective curriculum, differentiated guidance with academic planning, counseling services, and vocational and career awareness. Exemplary status of this standard was achieved by 5% of Nebraska school districts (see Figure 4.5).

Research Question 6

What professional development opportunities focusing on serving the gifted/talented learners are offered to staff in the school districts in the state of Nebraska?

Sixty-six percent of the districts reported they had a plan for making teachers aware of the district-wide gifted/talented program, yet only 26% of the districts had staff who had some type of specialized training or certification to work with gifted/talented learners. Although 66% of the districts indicated they had a plan to make teachers aware of the characteristics of gifted/talented learners, only 22% of the districts stated opportunities for staff to become aware of the social/emotional needs of these students, and 42% of the districts addressed cognitive needs. Staff development for differentiation strategies was a strong component as 48% of the school districts included this in their program plans (see Table 4.14).

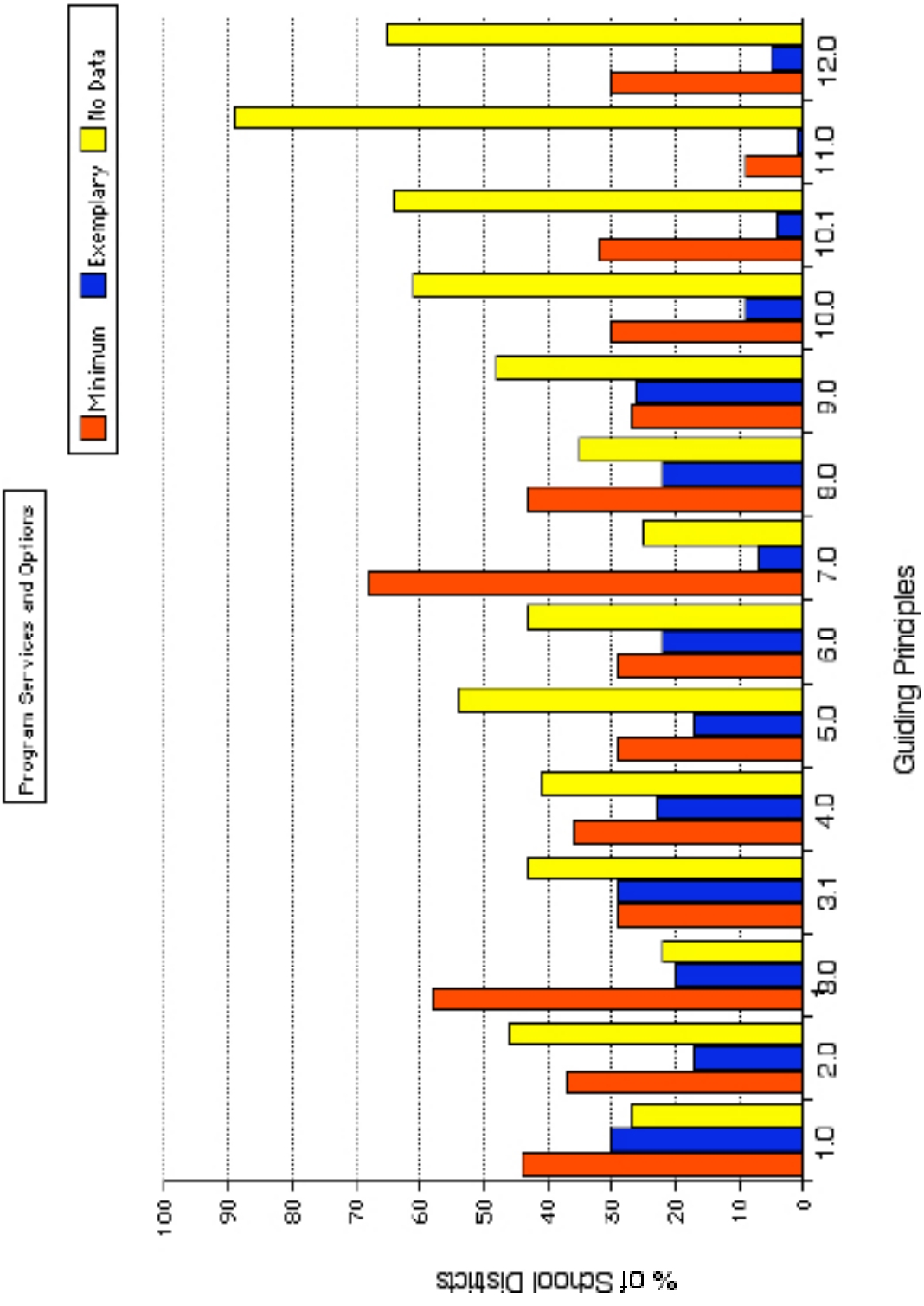

FIGURE 4.5 Level of Performance in Program Options and Service

TABLE 4.14

Professional Development Provisions Provided by School Districts

Staff Development Components	n	%
The district has included a plan to make teachers aware of the characteristic of gifted/talented learners.	134	88
The district has included a plan to make teachers aware of the district-wide plan for gifted/talented learners.	133	66
Credentials, specialized preparation, and training of professionals who work with gifted/talented learners are listed.	53	26
Professional opportunities for staff responsible for gifted/talented learners on the following topics:		
Differentiation strategies	97	48
Cognitive needs	85	42
Non-existent	58	29
Social/Emotional needs	45	22
As needed	37	18
Assessment of work done by gifted/talented learners	38	19

Note: Percentages do not equal 100% because several types of professional development were often used.

Research Question 7

To what extent do the school districts in the state of Nebraska meet the exemplary standards for professional development for gifted/talented learners?

Few Nebraska school districts achieved exemplary status in professional development standards, except for **Guiding Principle 3** that requires school personnel to receive support for efforts related to the education of gifted/talented learners. Specifically, Exemplary Standard 3.0 indicates all staff development activities should be funded at least in part by school districts or educational agencies. Twenty-eight percent of Nebraska school districts indicated they comply with this standard. However less than 10% of the school districts achieved exemplary status for **Guiding Principle1** that states comprehensive staff development must be provided for all staff involved with the education of gifted/talented learners. Exemplary Standard 1.0 notes all school staff should receive ongoing staff development addressing the needs of gifted/talented learners, yet only 9% of the districts complied with this standard. Moreover, only 5% of school districts met Exemplary Standard 1.1 that states all teachers of gifted/talented learners should continuously be involved with staff development or graduate degree programs in the study of gifted education.

Exemplary Standards 2.0 and 2.1 linked to **Guiding Principle 2**, stating only qualified personnel should be involved in the education of gifted/talented learners, were met by 3% and 1% of the districts respectively.

No school districts met exemplary status for **Guiding Principle 4**, educational staff must be provided with time and other support for the preparation and development of the differentiated education plans, materials, and curriculum (see Figure 4.6).

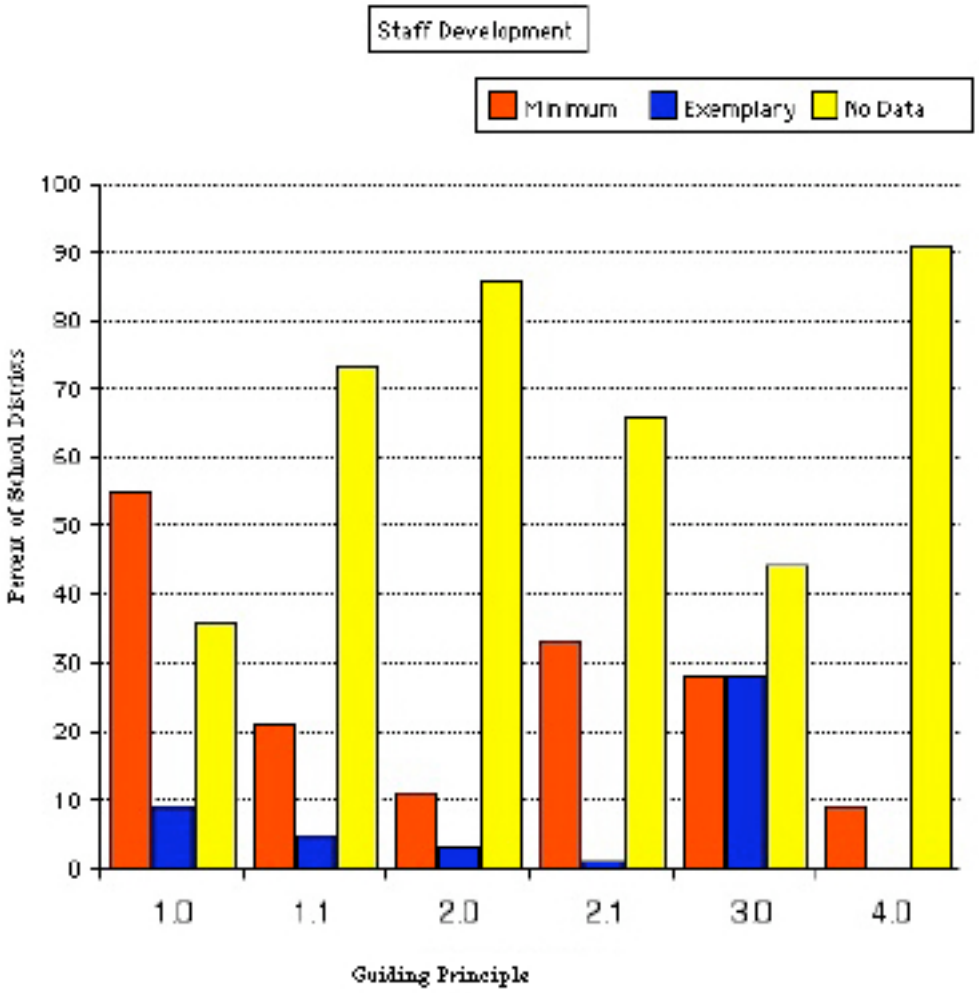

FIGURE 4.6 Level of Performance in Staff Development

Research Question 8

What components of program evaluation are used to study the effectiveness of the gifted/talented program in the school districts in the state of Nebraska?

When conducting surveys for the purpose of evaluating gifted programs, 60% of the districts surveyed parents, 59% teachers, and 57% students. Administrators and community members were only included in the survey process in 31% and 22% of the districts respectively. An average of 14% of the school districts that conduct surveys reported results of the surveys to the groups mentioned above (see Table 4.15).

Forty-two percent of the districts carried out some type of formative evaluation of their gifted programs, whereas only 10% conducted summative program evaluations (see Table 4.15). Only 28% of the school districts considered the effectiveness of staff development in their program evaluation process. When reviewing program components, 38% of the districts gathered information on program design, 33% students needs, 29% curriculum, 26% learning environment, 20% student achievement, and only 3% considered activity participation. The student identification process was evaluated by 36% of the school districts (see Table 4.16).

TABLE 4.15

Program Evaluation Surveys

Program Evaluation Components	n	%
Surveys of:		
Parents	121	60
Teachers	119	59
Students	116	57
Administrators	62	31
Community Members	45	22
Evaluation results reported to:		
Community Members	31	15
Students	31	15
Teachers	31	15
Parents	26	13
Administrators	24	12

Note: Percentages do not equal 100% because multiple groups were surveyed.

TABLE 4.16

Program Evaluation Elements

Program Evaluation Components	n	%
Evidence of formative evaluation	85	42
Program design	78	38
Student identification	74	36
Student needs	68	33
Resources	61	30
Curriculum	59	29
Staff development	57	28
Learning environment	53	26
Communication	52	26
Personnel qualifications	40	20
Student achievement	40	20
Evidence of summative evaluation	20	10
Program management	18	9
Portfolios-Learning logs	14	7
Activity participation	6	3

Note: Percentages do not equal 100% because several components were often evaluated.

Research Question 9

To what extent do the school districts in the state of Nebraska meet the exemplary standards for program evaluation?

Approximately 25% of the school districts met exemplary status on four of the five components of the guiding principles for program evaluation. Of the 126 plans that provided information regarding **Guiding Principle1**, an evaluation must be purposeful, 29% of the school districts achieved exemplary status in the collection of information that addresses constituency groups' questions and is responsive to the stakeholders' needs.

Inconsistencies existed within the three parts of **Guiding Principle 2** that states an evaluation must be conducted competently and ethically. Twenty-five percent of the districts met exemplary requirements that the evaluation design should report strengths, weaknesses, and other critical issues of the program in Standard 2.0. Only 9% of the districts were exemplary in Standard 2.1 that requires valid and reliable collection instruments be used with equal opportunities for all members of the target population to be addressed in the data-collection process. Exemplary status in Standard 2.2 requires regular formative evaluations and summative evaluations every five years at a minimum. Only 12% of the school districts were exemplary.

Twenty-two percent of the districts achieved exemplary status for **Guiding Principle 3** and Standard 3.0 that encourage a written report of the evaluation is presented to all stakeholders (see Figure 4.7).

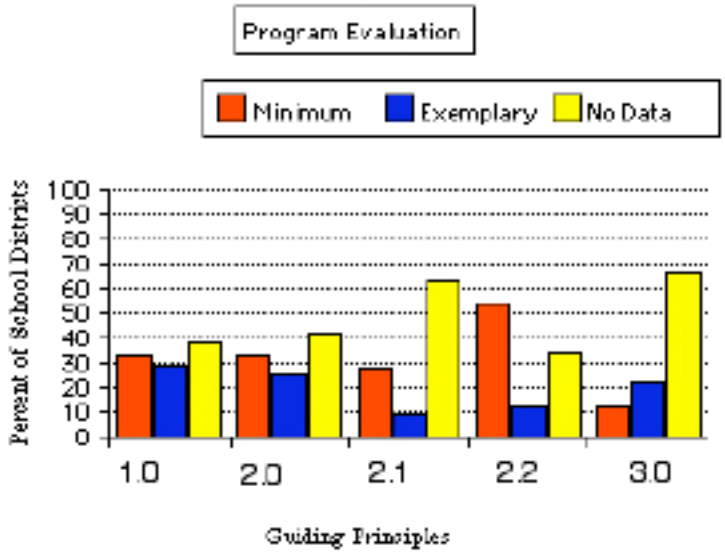

FIGURE 4.7 Levels of Performance in Program Evaluation

Research Questions 10

What commonalities exist within the exemplary gifted/talented programs in school districts in Nebraska?

The researchers identified the top ten percent exemplary gifted/talented programs in Nebraska by using the rubrics to examine exemplary program standards in the areas of identification, programming, staff development, and program evaluation. An overall exemplary rating was achieved if the program attained an exemplary marking on over 50% of the gifted/talented standards. Individual components of the program standards shared by over 75% of the exemplary districts were identified.

Of the 20 school districts identified by the scoring rubrics as exemplary, the majority (12) of the districts were located within non-core areas. Five of the school districts were located in micropolitan areas and three were within metropolitan areas.

Within the program standards of identification, Exemplary Standard 2.1 states gifted/talented students are assessed equally across grade levels and was met by 90% of

the exemplary schools in the state of Nebraska. The use of assessment instruments and strategies that are sensitive to all stages of talent development is Exemplary Standard 2.2, and 100% of the exemplary school districts met this standard. Exemplary Standards 4.0 and 4.1 relating to multiple sources of assessment data and a balance of reliable and valid quantitative measures being used had 100% of the exemplary schools in compliance with this standard. Ninety-five percent of these school districts met Exemplary Standard 5.0, that states student placement data should be collected with an appropriate balance of measures (see Figure 4.8).

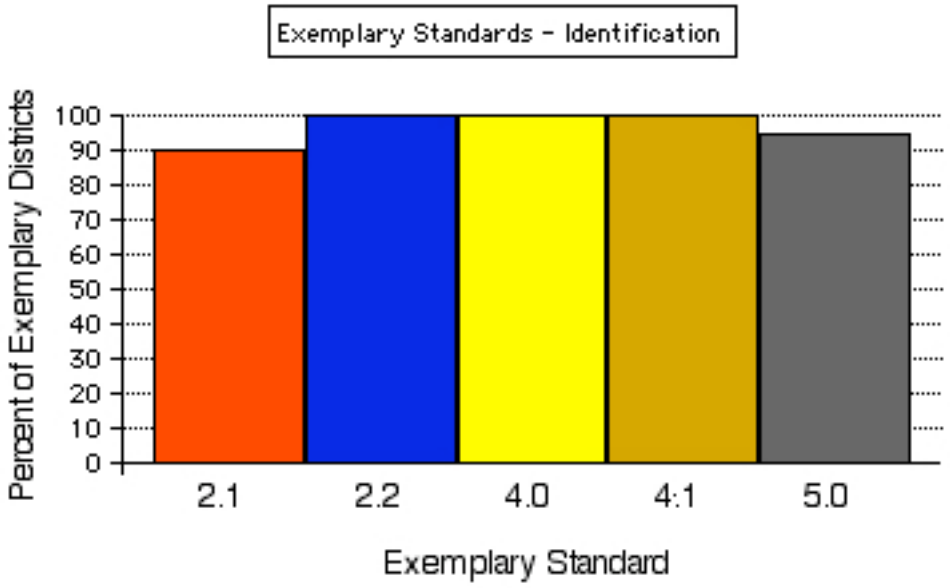

FIGURE 4.8 Identification Components Shared by Exemplary School Districts

Exemplary schools had an exemplary rating on eight of the thirteen program option standards. Ninety-five percent of the exemplary schools had a philosophy statement that guided the goals and objectives for the gifted/talented programming meeting Exemplary Standard 1.0. Moreover, 95% of the exemplary school districts met Exemplary Standard 2.0, which provides for a continuum of services to exist for gifted learners, and

Exemplary Standards 3.0 and 3.1, which states gifted programming services must be an integral part of the school day. In meeting exemplary standards which direct instructional strategies to meet gifted/talented learners' needs, 100% of the school districts met Exemplary Standards 4.0 and 6.0 that require flexible grouping and modifications to be included in the school curriculum. Ninety-five percent of the exemplary Nebraska school districts met Exemplary Standard 5.0 that mandates school districts have a PreK-Grade 12 program plan including comprehensive policies and procedures related to gifted education. Ninety-five percent of the exemplary school districts indicated they provide full or partial acceleration of curriculum content and grade levels, as stated in Exemplary Standard 9.0 (see Figure 4.9).

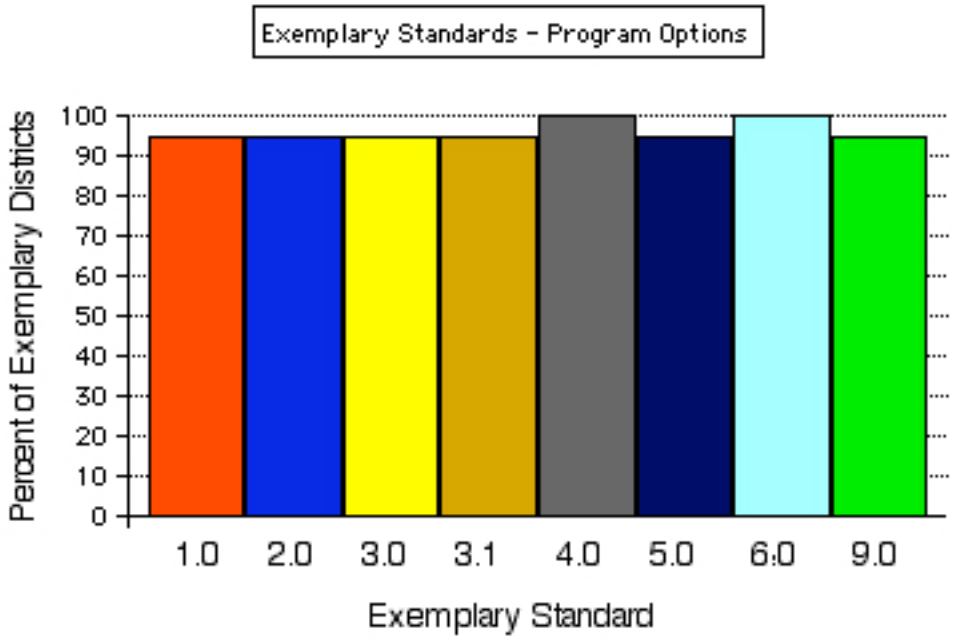

FIGURE 4.9 Program Options Shared by Exemplary School Districts

Seventy-five percent of the exemplary school districts met Professional Development Exemplary Standard 1.0 that indicates there should be ongoing staff development related

to the nature and needs of gifted/talented learners and appropriate instructional strategies. Exemplary Standard 1.0 in program evaluation states information collected should address pertinent questions and be responsive to the needs of all stakeholders and was met by 85% of the exemplary school districts. Exemplary Standards 2.1 and 2.2 were met by 80% and 75% of the exemplary school districts respectively. These exemplary standards state school districts should use reliable and valid instruments and formative and summative evaluations should occur minimally every five years. Eighty percent of the exemplary school districts had Exemplary Standard 3.0 in common, which notes evaluation reports should be presented and should encourage follow-through by stakeholders.

Research Question 11

To what extent does affiliation with an educational service unit relate to Nebraska school districts meeting exemplary standards for gifted/talented programs?

As per Nebraska law LB79 Section 1204, the role and the mission of educational service units are to provide core services identified and requested by member school districts. Educational service units provide services through leadership, research, and development in elementary and secondary education.

The researchers reviewed data indicating exemplary status of standards amongst the 17 Educational Service Units. The researchers looked at concentrations of multiple exemplary standards that existed in the four criterion areas. Patterns were identified within individual service units. Out of these 17 service units five emerged as having school districts with strong student identification components that were exemplary. Three service units were noted as achieving exemplary status with program standards

under program options. In one service unit 100% of the school districts achieved an overall comparative exemplary status in all four of the criterion areas. Affiliation with educational service units is in large part dependent upon the region of the state where the school districts are located. The researchers reviewed the demographics of the individual service units and found no strong relationship to being a metropolitan, micropolitan, or non-core area.

CHAPTER V

SUMMARY, DISCUSSION, OBSERVATIONS AND IMPLICATIONS, AND RECOMMENDATIONS

Summary of the Study

The purpose of this study was to examine the current status of gifted/talented programs in Nebraska and to determine the extent to which these programs match best practices as determined by a review of existing literature. The study identified and evaluated specific gifted and talented program components that were compared with the practices recommended in the gifted and talented program literature. Alignment of definition to identification, definition to program options, and identification to program options were reviewed. Other areas of evaluation included student identification methods, program options, staff development, and program evaluation.

Data were obtained by examining each of the 203 district plans submitted to the Nebraska Department of Education. The researchers created rubric and checklist instruments for the collection of data. The rubrics included rating scales to determine exemplary, minimum, or non-existent program standards. Checklists were used to provide specific information about each program plan. The data were analyzed using frequency counts, percentages, and cumulative percentages.

Discussion of the Findings

Following is a discussion of the findings of this study as compiled by the researchers. Lack of staff development in all components of gifted education in Nebraska emerged as a major trend in the research data. Few districts had qualified staff to work with gifted/talented learners, as only 3% of Nebraska school districts stated their

gifted/talented educators possessed certification or a degree in gifted education; less than 10% of Nebraska school districts provided professional staff development opportunities in this area. Lack of staff development equals lack of educator knowledge, which limits effective participation in many of the tasks related to gifted education, such as being able to nominate students in a reliable and valid manner, designing educational experiences that provide differentiated learning opportunities, and recognizing and being able to meet the social and emotional needs of these students (Hansen & Feldhusen, 1994; NAGC, 1998).

Staff development in the area of gifted education is a weak component in gifted programming of Nebraska public school districts. Although the majority of districts stated they had a plan to make staff aware of the characteristics of gifted/talented learners, less than 10% stated all staff received any type of ongoing staff development addressing the needs of gifted/talented learners. In addition, no Nebraska school districts indicated they provided release time for preparation and development of differentiated educational materials. This lack of staff development affects a district's ability to effectively implement and administer the components of a gifted/talented program including identification, ability to recognize characteristics of gifted/talented learners, and the skills to provide differentiation of instruction and a variety of delivery options.

The collected data confirmed association with an educational service unit that provides support to school districts and their staff on gifted education topics is beneficial. This was evident as over one-half of the school districts that received an exemplary rating in the research study were associated with one specific educational service unit that offers gifted/talented staff development opportunities to its associated school districts.

According to the research (Hoge, 1989; Johnsen, 2004; Renzulli, 2002), the identification instrument should relate to the district's definition of giftedness and program options. However, less than 17% of Nebraska school districts had definitions, identification procedures, and program options that are aligned to each other. It is apparent to the researchers that if a school district is going to make the effort to define giftedness and to identify gifted/talented learners, it is imperative that appropriate program options be in place to meet the needs of those students. As research confirmed, it is essential that districts adopt definitions and implement valid identification instruments to be matched with program services (Hoge, 1989; Martinson, 1975).

Although Nebraska mandates all school districts have an identification process in place for gifted and talented learners, one-fourth or less of the school districts met exemplary status with any component of the standards set forth by NAGC and from best practices as stated in the literature. Moreover, the Nebraska Department of Education regulations governing high ability learners mandates school districts will use multiple assessment measures and appraisals in the process to identify high ability learners (Nebraska Department of Education, 1997c). However, 43% of Nebraska school districts relied solely on using intelligence and/or achievement tests for identification and automatic placement into gifted/talented programs. Use of a nomination form from staff, parents, students, and/or community members was the only appraisal used in the identification process.

Twenty-four percent of the school districts that submitted gifted/talented plans used a matrix to collect quantitative and qualitative data for use with the identification process. Yet, reported practices indicated the matrix was not utilized as a reliable or valid tool as

24% of those districts used quantitative and qualitative assessment data equitably. As Johnsen (2004) noted, multiple assessments should be considered, assessments should be equally weighted, and quantitative and qualitative assessment data should be equitably used if school districts want to adequately match gifted students' characteristics with the district's program. Therefore, the data established a need for additional information and training for Nebraska school districts in the development and use of an identification matrix for gifted/talented students.

Nebraska's population has experienced a steady rate of change with an increase in the number of non-English speaking students as the most notable change (RUPRI, 2006), Yet, only three school districts utilized a non-verbal identification measure. Moreover, the researchers determined from the collected data that of the 10% of school districts having the highest SES ranking, only one school district achieved exemplary status with use of an assessment that was responsive to a student's economic and other physical conditions. Looking at the demographic data and from a consensus of existing literature (Ford, Braytops, & Harmon, 1997; Hansford et al., 2001), there was an explicit need for Nebraska school districts to implement the use of a culturally fair and non-biased assessment in the identification process.

Due process procedures are imposed on school districts under the Fifth and Fourteenth Amendments (Johnsen, 2004), and the Nebraska Department of Education requires school systems to include a provision to appeal decisions regarding the identification or non-identification of students. Yet, only slightly over half of the Nebraska school districts complied with these regulations by stating an appeals process was in place as part of their identification procedure.

Research provides evidence that gifted/talented students require an affective curriculum and specialized counseling to meet social and emotional needs (Clark, 2002; Janos, Marwood, & Robinson, 1985; Moon, 2002; NAGC, 1998; Reis & Moon, 2002; Robinson, 2002; Silverman, 1993) yet, less than 35% of the school districts reported providing this service to their students. Research dating as far back as the work of Leta Hollingworth in 1939 substantiates the need for meeting the needs of gifted/talented children and adolescents. These students face both social and emotional problems uncommon with other children their age in areas of public opinion towards giftedness, underachievement, and school and family relations (Moon, 2002). Affective and specialized counseling are not a widespread component of gifted programming within Nebraska public school districts as only 9% of the districts reported they had counselors with this training. At the time of this study, Nebraska state law did not require school counselors to have special training or be knowledgeable in the characteristics and socio-emotional needs of gifted/talented students. Therefore, a limited number of counselors were educationally prepared to guide or assist teachers in meeting the affective needs of these students.

The research also indicates gifted/talented students require earlier academic guidance than their classmates in the areas of college choices, entrance requirements, and vocational awareness (NAGC, 1998; Silverman, 1993). This type of specialized counseling was only provided by 4% of Nebraska school districts. The lack of trained counselors also affects having a plan in place for helping gifted/talented students who are performing below their potential, as only 1% of the school districts provided this service.

The findings of this study verify that most Nebraska school districts provided some type of services for gifted/talented students. However, the types of services varied greatly from district to district with some offering a full spectrum of services both during and outside the school day, while other districts offered limited services only through clubs or classroom differentiation. Only about one-half of the school districts indicated they utilize differentiation of instruction. School districts that reported using some form of differentiation most commonly used compacting (54%), curriculum enrichment (48%), and flexible grouping of students (44%). School districts that utilized compacting created time for flexible groups of students to participate in curriculum enrichment activities that provided for depth and breadth of their knowledge.

Greater opportunities for staff development in strategies for differentiation are essential to assist educators make better use of higher order thinking skills in questioning, the development of interest centers, and adjustment of assignments. These strategies, when used effectively, benefit children of all learning levels (Berger, 1991b; Kingore, 2005; Theroux, 2004; Tomlinson, 2000; Winebrenner & Berger, 1994). Many forms of differentiation can be accomplished with no additional staff or materials, i.e. adjusted level of questions, compacted curriculum, flexible student grouping, independent projects, learning centers, and tiered assignments. Many gifted/talented models are available to guide a district in the implementation of some form of differentiation (Fielder-Brand et al., 1992; Kingore, 2005; Pugh, 1999; Reis et al., 1993; Renzulli, 2001; Renzulli & Reis, 2002; Tomlinson, 1995a; Tomlinson, 1999; Toth, 1999; Winebrenner & Berger, 1994).

According to the research (Chandler, 2001; Colangelo, Assouline, & Gross, 2004; NAGC, 1992; Rogers, 2004), acceleration can take on many forms, but actual subject or grade acceleration is an option for the highly gifted and should be considered only after extensive assessment of the student's needs. Only about one-third of Nebraska school districts reported use of acceleration. As Southern & Jones (2004) noted, districts might hesitate to offer accelerated courses as a result of budget, location, district size, and beliefs about giftedness. Dual enrollment was offered by 39% of the school districts, with almost three-fourths of those districts located within 40 miles of an institution of higher learning. Twenty-nine percent of Nebraska school districts offered Advanced Placement classes, and of those districts, 39% were located in non-core areas, rural and remote sections of the state with low total student enrollments. With only 23% of teachers in the non-core areas of the state holding a master's degree, a requirement for teaching an AP class, it appears that these school districts were utilizing some alternative form of instruction, such as online classes from colleges or universities. Thus, even small districts have the ability to use some form of acceleration.

NAGC (1998) and Clark (2002) recommend a continuum of services across grade levels PreK-12. These services should be a seamless flow from one grade level to the next, yet less than 20% of the school districts reported such a program. Twenty-eight percent of the school districts had identification and program options in place for kindergarten through grade two. Specifically, 19% of the districts had identification procedures and program options beginning at kindergarten, 2% at first grade, and 7% in second grade. Seventy-two percent of the gifted programs began their services at the

third grade level or later, even then the program options varied greatly from elementary to middle school to high school.

Forty-two percent of the school districts utilized a formative evaluation process to guide their program. A common means of gathering data was through surveys; however, it was difficult for the researchers to determine the usefulness of these surveys, as they were not included in the plans. NAGC (1998) suggests summative program evaluations be conducted a minimum of every five years; however, only 10% of the school districts indicated they conduct summative evaluations of their gifted/talented programs.

Recommendations

As a result of this study, the researchers determined six major recommendations for strengthening gifted education in Nebraska. These recommendations include: (1) the program reporting form utilized by the Nebraska Department of Education; (2) alignment of definition of giftedness, identification of gifted/talented students, and program options; (3) legislation for preservice education on gifted/talented training; (4) legislation for continuing staff development on gifted/talented education; (5) legislation regarding NDE authority; and (6) NDE staffing.

1. The Nebraska Department of Education should develop minimum gifted/talented program standards so that all school district gifted/talented program plans can be evaluated using these standards. The year-end reporting form should require specific data regarding definition, identification, program options, staff development, and program evaluation.

2. Districts must provide evidence of alignment among definition, identification, and program options and demonstrate how the service provided will have an impact on gifted/talented education.
3. Nebraska school districts must be held accountable for programs that are monetarily supported by state funds. Legislation should be enacted allowing the NDE to withhold funding for school districts that are not in compliance with state requirements, and provide funding commensurate with gifted/talented year-end reports submitted to the state department.
4. The Nebraska Department of Education gifted/talented office should be adequately staffed to support local school districts and utilize a set of state standards for evaluation of Nebraska school districts' gifted/talented program plans in order to determine the level of state funding each school district will receive.
5. Legislation must be enacted that requires all preservice educators, including school counselors, fulfill a course requirement regarding the characteristics and educational needs of gifted/talented students. Coursework on this topic would provide new educators with the knowledge and skills necessary to meet the needs of gifted/talented students in the educational environment.
6. Legislation should be enacted to support and fund delivery of statewide staff development opportunities regarding characteristics, identification procedures, and instructional methods for serving gifted/talented learners through Nebraska Educational Service Units.

Recommendations for Further Study

This study focused on the state of gifted/talented education in Nebraska. The data presented in this research study were based on program plans submitted to the Nebraska Department of Education by school districts. Based on the information available from the school districts there are three recommendations for future research.

Research Suggestion #1:

To fully understand the gifted/talented programs in Nebraska school districts, additional qualitative research should be conducted onsite through observations, interviews, and surveys. This research would provide more detailed information on all aspects of the gifted programs.

Research Suggestion #2:

Conduct an in-depth examination of what distinguishes a school district program that has been identified as exemplary and what are the influences of such exemplary programs on student achievement and effort. Onsite observations, interviews with staff, students, and parents, a review of the gifted/talented program documentation, as well as student achievement scores should be the data sources for the research. This research could yield information that would be used to develop a gifted/talented representative program model for other school districts.

Research Suggestion #3:

In order for any program to be successful there needs to be strong leadership by informed individuals. Evaluating how the presence of a certified gifted education specialist affects the instructional strategies, materials used, and success of gifted/talented learners within the learning environment of a school compares to a school void of a

certified gifted/talented specialist could provide useful data to school districts as they plan for staffing needs. Such a research study could also prove invaluable to those charged with formulating educational requirements for educators and teacher education programs.

Research Suggestion #4:

A strong program begins with an administrator who is a knowledgeable advocate for gifted/talented education. A future research study comparing a school district's gifted/talented program that has a trained or certified school district administrator with a school district who does not have an administer with gifted/talented training could prove to be useful information to school districts that are attempting to implement gifted/talented programs. Moreover, this data could prove to be effective information to those charged with formulating educational requirements for school administrators.

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APPENDICIES

APPENDIX A
DEFINITION COMPONENT CHECKLIST

DEFINITION COMPONENTS	IN DEFINITION	IN IDENTIFICATION	IN PROGRAMMING
No Data			
Intellectual			
Creative			
Artisitic capacity			
Specific academic fields			
Leadership			

APPENDIX B
IDENTIFICATION EVALUATION INSTRUMENTS

GUIDING PRINCIPLES	MINIMUM STANDARDS	EXEMPLARY STANDARDS
1. A comrehensive and cohesive process for student nomination must be coordinated in order to determine eligibility for gifted education services.		
	1.0m Information regarding the characteristecs of gifted students in areas served by the district must be annually disseminated to appropriate staff members and nominations for services may be accepted from any source (e.g., teachers, parents, peers, etc.)	1.0e The school district should provide information annually, in a variety of languages, regarding the process for nominating students for gifted education programming servies, as well as the nomination procedures and forms.
	1.1m All students mut comprise the initial screening pool of potential recipients of gifted educaion services.	1.1e The nomination process should be ongoing and screening of any student should occur at any time.
	1.2m Nominations must be accepted from any source (e.g., parents, teachers, community members, peers, etc.)	1.2e Nomination procedures and forms should be available in a variety of languages.
	1.3m Parents must be provided information regarding an understanding of giftedness and student characteristics.	1.3e Parents should be provided with special workshops or seminars to get a full meaning of giftedness.

2. Instruments used for student assessment to determine eligibility for gifted education services must measure diverse abilities, talents, strengths, and needs in order to provide students an opportunity to demonstrate any strengths.		
	2.0m Assessment must be culturally fair and provisions made to measure capabilities of students in a student's native language.	2.0e Assessments should be responsive to students' economic conditions, gender, developmental differences, handicapping conditions, language needs, and other factors that mitigate against fair assessment practices.
	2.1m The purpose(s) of student assessments must be consistently articulated across all grade levels.	2.1e Students identified in all disignated areas of giftedness within a school district should be assessed consistently across grade levels.
	2.2m Student assessments must be sensitive to the current stage of talent development.	2.2e Students assessments should be sensitive to all stages of talent development.
3. A student assessment profile of individual strengths and needs must e developed to plan appropriate intervention.		
	3.0m An assessment profile must be developed for each child to evaluate eligibility for gifted education programming services.	3.0e Individual assessment plans should be developed for all gifted learners who need gifted education.

	3.1m An assessment profile must reflect the unique learning characteristics and potential and performance levels.	3.1e An assessment profile should reflect the gifted learner's interests, learning style, and educational needs.
4. All student identification procedures and instruments must be based on current theory and research.		
	4.0m No single assessment instrument or its results must deny student eligibility for gifted programming services.	4.0e Student assessment data should come from multiple sources and include multitple assessment methods.
	4.1m All assessment instruments must provide evidence of reliability and validity for the intended purposes and target students.	4.1e Student assessment data should represent an appropriate balance of reliable and valid quantitative and qualitative measures.
5. Written procedures for student identification must include, at the very least, provisions for informed consent, student retention, student reassessment, student exiting, and appeals.		
	5.0m District gifted programming guidelines must contain specific procedures for student assessment at least once during the elementary, middle, and secondary levels.	5.0e Student placement data should be collected using an appropriate balance of quantitative and qualitative measures with adequate evidence of reliability and validiy for the puposes of identification.

5.1m District guidelines must provide specific procedures for student retention and exiting, as well as guidelines for parent appeals.	5.1e District guidelines and procedures should be reviewed and revised when necessary.

IDENTIFICATION	DISTRICT COMPONENTS	COMMENTS
TEST NAME		
1. Components of District Gifted/Talented Plan:		
1a. Nomination--		
1a.1. Staff/Teachers		
1a.2. Parents		
1a.3. Peers		
1a.4. Community Members		
1a.5. Self		
1b. Screening--		
1c. Placement--		
1d. Provisions for:		
1d.1. informed consent		
1d.2. student retention		
1d.3. student reassessment		
1d.4. student exiting (exit policy)		
1d.5. appeals procedures		
2. Quantitative Measures		
2a. Acacemic Achievement Tests		
2a.1. Academic Achievement Test--General		
2a. 2. TerraNova		
2a.3. ITBS--Iowa Tests of Basic Skills		

2a. 4. ACT

2a. 5. PLAN

2a. 6. STARS

2a. 7. CAT--California Achievement Test

2a. 8. SAT

2a. 9. ASVAB

2a. 10. Stanford Achievement Test

2a. 11. CTBS

2a. 12. MAT--Metropolitan Achievement Test

2a. 13. CBM

2a. 14. GORT

2a. 15. ITED--Iowa Tests of Educational Achmt/Normative Update

2a. 16. NWEA

2a. 17. AIMS

2a. 18. Buros

2a. 18. Explore

2a. 19. Morrison McCall

2a. 20. TAP

2b. Aptitude Tests

2b. 1. Aptitude Tests--General

2b. 2. Stanford Binet Intelligence Scales

2b. 3. WISC

2b.4. CoGAT--Cognitive Abilities Test

2b.5. KBIT--Kaufman Brief Intelligence Test

2b.6. SIT--Slosson Intelligence Test

2b.7. OLSAT--Otis Lennon School Abilities Test

2b.8. Woodcock Johnson Tests of Achievement

2b.9. WISC-R

2b.10. ELDA

2b.11. NNAT--Naglieri Nonverbal Ability Test

2b.12. Raven Progressive Matrix

2b.13. SOI--Structure of Intellect

2b.14. CTONI

2c. Grades

3. Rating Scale Measures

3a. Observation checklists, scales, etc

3a.1. SRBCSS--Scale for Rating the Behavioral Characteristics of Superior Students
3a.2. SAGES- Screening Assessment for Gifted Elementary Students
3a.3. Kingore Observation Scales

3a.4. GATES--Gifted and Talented Evaluation Scales
3a.4. SIGS--Scales for Identifying Gifted Students

3a.5. GES--Gifted Evaluation Scale

3a.6. Other

3b. Group Inventory for Finding Interests

3c. Tests for Creativity, Artistic Abilities, Specific Areas, etc
3d. Torrance Tests of Creative Thinking

4 Qualitative Measures.

4a. Interviews

4b. Observations:

4c. Portfolios--Creative

4d. Portfolios--Academic

4e. Performances

4f. Checklists

4g. Creativity checklist

4h. Leadership checklist

4i. Career interest and vocational checklist

4j. Case Studies

5. Non-existent

APPENDIX C
PROGRAM OPTIONS EVALUATION INSTRUMENTS

GUIDING PRINCIPLES	MINIMUM STANDARDS	EXEMPLARY STANDARDS
1. Gifted education programming must evolve from a comprehensive and sound base.		
	1.0m The philosophy statement, goals, and objectives must be evident in the gifted program.	1.0e Gifted programming must be guided by a clearly articulated philosophy statement that addresses the need for gifted programming and accompanying goals and objectives.
2. Rather than any single gifted program a continuum of programming services must exist for gifted learners.		
	2.0m A continuum of services must be provided across grades pre-K–12 and must be accessible to all gifted learners.	2.0e Levels of services should be matched to the needs of gifted learners through the provision of a full continuum of options.
3. Gifted education programming services must be an integral part of the general education school day.		
	3.0m Gifted education programming should be articulated with the general education program.	3.0e Gifted services must be designed to supplement and build on the basic academic skills and knowledge learned in regular classrooms at all grade levels to ensure continuity as students progress through the program.

	3.1m Appropriate educational opportunities must be provided in the regular classroom, resource classroom, separate, or optional voluntary environments.	3.1m Appropriate educational opportunities must be provided in the regular classroom, resource classroom, separate, or optional voluntary environments.
4. Flexible groupings of students must be developed in order to facilitate differentiated instruction and curriculum.		
	4.0m The use of flexible grouping of gifted learners must be an integral part of gifted education programming.	4.0e Gifted learners should be included in flexible grouping arrangements in all content areas and grade levels to ensure that gifted students learn with and from intellectual peers.
5. Policies specific to adapting and adding to the nature and operations of the general education program are necessary for gifted education.		
	5.0m Gifted education policies should exist for at least the following areas: early entrance, grade skipping, ability grouping, and dual enrollment.	5.0e A comprehensive pre-K–12 program plan should include policies and procedures for identification, curriculum and instruction, service delivery, teacher preparation, formative and summative evaluation, support services, and parent involvement.
6. Learning opportunities for gifted learners must consist of a continuum of differentiated curricular options, instructional approaches, and resource materials.		

	6.0m Flexible instructional arrangements (e.g., special classes, seminars, resource rooms, mentorships, independent study, and research projects) must be available.	6.0e Differentiated educational program curricula for students pre-K–12 should be modified to provide learning experiences matched to students' interests, readiness, and learning style.
7. Differentiated curriculum for the gifted learner must span grades pre-K–12. Regular classroom curricula and instruction must be adapted, modified, or replaced to meet the unique needs of gifted learners.		
	7.0m Teachers must differentiate, replace, supplement, or modify curricula to facilitate higher level learning goals.	7.0e Gifted learners should be assessed for proficiency in all standard courses of study and subsequently provided with more challenging educational opportunities.
8. Instructional pace must be flexible to allow for the accelerated learning of gifted learners as appropriate.		
	8.0m A program of instruction must consist of advanced content and appropriately differentiated teaching strategies to reflect the accelerative learning pace and advanced intellectual processes of gifted learners.	8.0e When warranted, continual opportunities for curricular acceleration should be provided in gifted learners' areas of strength and interest while allowing sufficient ceiling for optimal learning.

9. Educational opportunities for subject and grade skipping must be provided to gifted learners.		
	9.0m Appropriate service options for each student to work at assessed level(s) and advanced rates of learning should be available after a thorough assessment.	9.0e Possibilities for partial or full acceleration of content and grade levels should be available to any student presenting such needs.
10. Gifted learners must be provided with differentiated guidance efforts to meet their unique socio-emotional development.		
	10.0m Gifted learners, because of their unique socio-emotional development, must be provided with guidance and counseling services.	10.0e Gifted learners, because of their unique socio- emotional development, must be provided with guidance and counseling services by a counselor who is familiar with the characteristics and socio-emotional needs of gifted learners.
	10.1m Gifted learners must be provided with career guidance services especially designed for their unique strengths and needs.	10.1e Gifted learners should be provided with college and career guidance that is appropriately different and delivered earlier than typical programs.
11. Gifted at-risk students must be provided with guidance and counseling to help them reach their potential.		

	11.0m Gifted learners who do not demonstrate satisfactory performance in regular and/or gifted education classes should be provided with specialized intervention services and couseling to help them realize their full potential.	11.0e Counseling services should be provided by a counselor familiar with specific training in the characteristics and socio-emotional needs (i.e., underachievement, multipotentiality, etc.) of diverse gifted learners.
12. Gifted learners must be provided with affective curriculum in addition to differentiated guidance and counseling services.		
	12.0m Gifted learners must be provided with affective curriculum as part of differentiated curriculum and instructional services.	12.0e A well defined and implemented affective curriculum scope and sequence containing personal/social awareness and adjustment, academic planning, and vocational and career awareness should be provided to gifted learners.

PROGRAM OPTIONS	DISTRICT COMPONENTS	COMMENTS
Affective Curriculum		
Specialized Counseling		
Differentiated Curriculum		
Strategies for Differentiation		
Adjusting Level of Questions		
Advanced texts and resource material		
Cluster groups		
Compacted Curriculum		
Cross-building grouping		
Cubed Instruction		
Curriculum Enrichment		
Flexible Student Grouping		
Independent Projects		
Interest Centers		
Learning Contracts		
Leveled Assignments		
Mentors		
Multi-grade grouping		
Pacing		
Acceleration		
Early Graduation		
Dual Enrollment		
Early Entrance into Kindergarten		
Grade Skipping		
Subject Acceleration		
Special Classes and Offerings		
Ability Grouped Classes		
Advanced Placement Classes		
Creativity-Fine Arts		
Distance Education		
Extracurricular (clubs, contests, camps, summer)		
Leadership		
Pullout		
Self-contained Classroom		
Seminars		
Service Learning		

APPENDIX D
STAFF DEVELOPMENT EVALUATION INSTRUMENTS

GUIDING PRINCIPLES	MINIMUM STANDARDS	EXEMPLARY STANDARDS
1. A comprehensive staff development program must be provided for all school staff involved in the education of gifted learners.		
	1.0m All school staff must be made aware of the nature and needs of gifted students.	1.0e All school staff should be provided ongoing staff development in the nature and needs of gifted learners, and appropriate instructional strategies.
	1.1m Teachers of gifted students must attend at least one professional development activity a year designed specifically for teaching gifted learners.	1.1e All teachers of gifted learners should continue to be actively engaged in the study of gifted education through staff development or graduate degree programs.
2. Only qualified personnel should be involved in the education of gifted learners.		
	2.0m All specialist teachers in gifted education must have completed some graduate coursework in gifted education.	2.0e All specialist teachers in gifted education should possess a certification/specialization or degree in gifted education.
	2.1m Any teacher whose primary responsibility for teaching includes gifted learners, must have some knowledge or expertise in gifted education.	2.1e Only teachers with advanced expertise in gifted education should have primary responsibility for the education of gifted learners.

3. School personnel require support for their specific efforts related to the education of gifted learners.		
	3.0m School personnel should be released from their professional duties to participate in staff development efforts in gifted education.	3.0e Approved staff development activities in gifted education should be funded at least in part by school districts or educational agencies.
4. The educational staff must be provided with time and other support for the preparation and development of the differentiated education plans, materials, curriculum.		
	4.0m School personnel should be allotted planning time to prepare for the differentiated education of gifted learners.	4.0e Regularly scheduled planning time (e.g., release time, summer pay, etc.) should be allotted to teachers for the development of differentiated educational programs and related resources.

STAFF DEVELOPMENT COMPONENTS	DISTRICT COMPONENTS	COMMENTS
1. Credentials, specialized preparation, and training of professionals who work with gifted/talented learners are listed.		
2. The district has included a plan how to make teachers aware of the district-wide plan for gifted/talented learners.		
3. The district has included a plan how to make teachers aware of the characteristics of gifted/talented learners.		
4. Professional opportunities for staff responsible for gifted/talented learners on the following topics:		
4a. Cognitive needs		
4b. Social/Emotional needs		
4c. Differentiation Strategies		
4d. Assessment of work done by gifted/talented learners		
4e. Monthly		
4f. Other		
5. Non-existent		

APPENDIX E
PROGRAM EVALUATION INSTRUMENTS

GUIDING PRINCIPLES	MINIMUM STANDARDS	EXEMPLARY STANDARDS
1. An evaluation must be purposeful.		
	1.0m Information collected must reflect the interests and needs of most of the constituency groups.	1.0e Information collected should address pertinent questions raised by all constituency groups, and should be responsive to the needs of all stakeholders.
2. An evaluation must be conducted.		
	2.0m The program evaluation design must address whether or not services have reached intended goals.	2.0e The evaluation design should report the strengths and weaknesses found in the program, as well as critical issues that might influence program services.
	2.2m Ongoing formative and summative evaluation strategies must be used for substantive program improvement and development.	2.2e Formative evaluations should be conducted regularly with summative evaluations occurring minimally every five years or more often as specified by state or local district policies.
3. The evaluation results must be made available through a written report.		
	3.0m Evaluation reports must present the evaluation results in a clear and cohesive format.	3.0e Evaluation reports should be designed to present results and encourage follow through by stakeholders.

PROGRAM EVALUATION COMPONENTS	DISTRICT COMPONENTS	COMMENTS
1. Surveys of:		
1a. Students		
1b. Parents		
1c. Teachers		
1d. Administrators		
1e. Community members		
2. Evidence of formative evaluation		
3. Evidence of summative evaluation		
4. Evaluation instrument looks at program strengths and weaknesses of:		
4a. Program design		
4b. Student needs		
4c. Learning environment		
4d. Curriculum		
4e. Student identification		
4f. Communication		
4g. Personnel qualifications		
4g.1. Staff Development		
4h. Resources		
5. Evaluation results reported to:		
5a. Students		
5b. Parents		
5c. Teachers		
5d. Administrators		
5e. Community members		

APPENDIX F
EDUCATIONAL SERVICE UNIT MAP

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Cedar
Dixon
Dakota
Thurston
Wayne
Pierce
Knox
Antelope
Boyd
Holt
Keya Paha
Brown
Rock
Cherry
Sheridan
Box Butte
Dawes
Sioux
Scotts Bluff
Banner
Kimball
Cheyenne
Deuel
Garden
Morrill
Grant
Hooker
Thomas
Arthur
McPherson
Logan
Keith
Lincoln
Perkins
Dawson
Custer
Blaine
Loup
Garfield
Wheeler
Valley
Greeley
Sherman
Howard
Buffalo
Hall
Hamilton
Merrick
Nance
Boone
Platte
Madison
Stanton
Colfax
Dodge
Burt
Washington
Douglas
Sarpy
Cass
Otoe
Nemaha
Richardson
Pawnee
Johnson
Gage
Lancaster
Saunders
Butler
Seward
York
Polk
Fillmore
Saline
Jefferson
Thayer
Nuckolls
Webster
Clay
Adams
Kearney
Franklin
Harlan
Phelps
Furnas
Gosper
Frontier
Red Willow
Hayes
Hitchcock
Chase
Dundy

APPENDIX G
INSTITUTIONAL REVIEW BOARD APPROVAL OF STUDY

University of Nebraska Lincoln

March 21, 2007

HUMAN RESEARCH PROTE
Institutional Revie

Julie Hehnke, Wanda Stelk
Dr. Jim Walter
3117 Brentwood Drive
Grand Island NE 68801

IRB# 2007-02-215 EX

TITLE OF PROJECT: **The State of Gifted Education in Nebraska**

Dear Julie:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. This project has been approved by the Unit Review Committee from your college and sent to the IRB. It is the Board's opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study. Your proposal seems to be in compliance with this institution's Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt.

Date of EX Review: **2/5/07**

You are authorized to implement this study as of the Date of Final Approval: **3/20/07.** This approval is Valid Until: **3/19/08.**

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board. For projects which continue beyond one year from the starting date, the IRB will request continuing review and update of the research project. Your study will be due for continuing review as indicated above. The investigator must also advise the Board when this study is finished or discontinued by completing the enclosed Protocol Final Report form and returning it to the Institutional Review Board.

If you have any questions, please contact Shirley Horstman, IRB Administrator, at 472-9417 or email at shorstman1@unl.edu.

Sincerely,

Dan R. Hoyt, Chair
for the IRB

Shirley Horstman
IRB Administrator

cc: Faculty Advisor