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## Student perceptions of curricular modifications for identified gifted students in rural Iowa

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## Student perceptions of curricular modifications for identified gifted students in rural Iowa

### Abstract

This investigation describes the need for ongoing qualitative evaluation of gifted programs in rural Iowa, Area Education Agency 14 school districts, in order to plan curricular modifications that match better the unique needs of the gifted learner. The research questions addressed in the study included questions about modifications in curricular content, process, and product. It was found that curricular modifications in process occurred the most frequently, followed by modifications in product, and least often found were modifications in content. The most frequent curricular modification in content was in the area of creative and critical thinking, with the least frequent being content modifications in the regular classroom. The most frequent modifications in process involved group interaction activities, with the least frequent modifications being in opportunities to address real problems. The most frequent modification in product was the opportunity to be a better producer or learner, with the least frequent modification being opportunities for products or performances to be directed to real audiences.

STUDENT PERCEPTIONS OF CURRICULAR MODIFICATIONS FOR  
IDENTIFIED GIFTED STUDENTS IN RURAL IOWA

A Research Paper Presented

to the

Division of Education for the Gifted

Department of Curriculum and Instruction

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

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Entitled: STUDENT PERCEPTIONS OF CURRICULAR MODIFICATIONS FOR IDENTIFIED GIFTED STUDENTS IN RURAL IOWA

has been approved as meeting the research paper requirement for the Degree of Masters of Arts in Education.

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## ABSTRACT

This investigation describes the need for ongoing qualitative evaluation of gifted programs in rural Iowa, Area Education Agency 14 school districts, in order to plan curricular modifications that match better the unique needs of the gifted learner. The research questions addressed in the study included questions about modifications in curricular content, process, and product. It was found that curricular modifications in process occurred the most frequently, followed by modifications in product, and least often found were modifications in content. The most frequent curricular modification in content was in the area of creative and critical thinking, with the least frequent being content modifications in the regular classroom. The most frequent modifications in process involved group interaction activities, with the least frequent modifications being in opportunities to address real problems. The most frequent modification in product was the opportunity to be a better producer or learner, with the least frequent modification being opportunities for products or performances to be directed to real audiences.

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## CHAPTER I

### The Problem

#### Introduction to the Problem

Appropriate planning for gifted learners implies recognition of their unique characteristics. Such characteristics are generally thought to include accelerated pace of thought processes; high retention of information; ability to understand complex concepts; heightened capacity for seeing relationships among disparate data; advanced level of language development and verbal ability; curiosity and a broad spectrum of interest; and ability to generate original ideas and solutions (Ganapole, 1989). Due to these unique learning traits the most basic principle underlying curriculum development for the gifted is that the experiences for these children must be qualitatively different from the basic program provided for all children (Berger, 1991; Cramond, 1993; Feldhusen, 1986, 1989; Gallagher, 1985; Maker, 1982; Silverman & Leviton, 1991; Van Tassel-Baska, 1988, 1992). Researchers question whether rural school students are especially vulnerable to gifted and talented programs that lack well established differentiated curricular



experiences (Anderson, 1987; Jones & Southern, 1994). In a regular classroom practices survey Archambault, Westberg, and Brown (1992) found that only minor modifications were made in the curriculum for gifted students.

One of the most appropriate strategies to determine the existence of qualitatively different curriculum for the gifted and talented is through careful program evaluation (Lundsteen, 1987; Seeley, 1989). Callahan (1988, 1991) has stated that such evaluation can be a useful tool in establishing quality programs, helping improve programs as they evolve, and assessing program effectiveness in providing the most appropriate education to gifted students. Treffinger (1986) listed the following "flaws" that seem to impair progress in gifted programming: failure to recognize interrelations among identification, programming, and evaluation components; focus on "having a program" rather than defining and meeting students' unique needs and strengths; failure to recognize that students with different strengths and talents will require different services or instructional opportunities; and gifted education programs which stress only "offering a special activity." Callahan (1991) recommends using evaluation to help us in planning,

in improving implementation, and in evaluating program impact. She suggests observing and interviewing program participants to see whether the administrators and teachers are carrying out the program delivery and instruction according to the plan.

In summary, examination of the research reveals studies that focus on the importance of differentiated curriculum for the gifted and appropriate evaluation methods to monitor program effectiveness. Also, students are frequently cited as sources of information to evaluate the effectiveness of the gifted program.

#### Statement of the Problem

Delisle and Galbraith (1987) stated that interviews with hundreds of gifted and talented students revealed that they often find school to be a "boring, irrelevant, and unchallenging experience." Gifted learners have key cognitive and affective characteristics from which curriculum inferences may be made as cited in Van Tassel-Baska (1992). In discussing program evaluation, Kaplan (Cited in Renzulli, 1986) asserts that differentiated curriculum for gifted students should be defined by design rather than happenstance. She adds that analysis of each of the learning experiences includes the integration of these components: process,

content, and product.

It is interesting to note that many program evaluation designs incorporate student opinions as an important component in the process. Maker (1995) tells the reader that evaluation of gifted programs needs to include the matching of student abilities with curricular modifications and that the source for this information should include the learner. Gallagher (1985) reminds us that "if we are honestly committed to helping them think for themselves, then we cannot impress upon them only our own concepts of what is right or what is wrong" (p. 97). So, in order to make effective curricular modifications for gifted learners, he asserts that researchers should ask the identified gifted students how they perceive the curricular modifications which have been provided for them. The question which then arises is to what extent such an inclusion of student perceptions can determine a necessity for curricular improvement. It is this question that this work has addressed.

#### Statement of Purpose

The purpose of this study was to determine to what degree student perceptions of a school district's gifted programming efforts can reveal a need for further curriculum modifications in

terms of content, process, and product. Based upon a review of the literature, a survey instrument, "Student Perceptions of Gifted Programming Questionnaire," was designed. Subsequently, it was administered to identified talented and gifted middle school, junior high, and senior high school students of Iowa school districts located in Area Education Agency 14. The findings of the survey were then analyzed, and appropriate conclusions and recommendations were derived from those analyses.

### Definition of Terms

Gifted children: The Iowa Code definition of gifted children is as follows: "Gifted and talented children are those identified as possessing outstanding abilities who are capable of high performance. They are children who require appropriate instruction and educational services commensurate with their abilities and needs beyond those provided by the regular school program. Gifted and talented children include those children with demonstrated achievement or potential ability, or both, in any of the following areas or in combination: general intellectual ability, creative thinking, leadership ability, visual and performing arts ability, and specific ability aptitude." (Iowa School Provisions Code 12.1)

Gifted/talented: As used in the Area 14 school districts, the term refers to students who were selected to participate in programs based on specific criteria. The criteria for selection into these programs includes one or more of the following: Iowa Test of Basic Skills scores; nominations by parents, teachers, peers, and self; an intelligence test score (group or individual), and/or a teacher observation sheet or rating scale.

Gifted/talented program: For the purposes of this study, gifted-talented program refers to the course of study offered for those students who were identified as gifted/talented. It might also include services that were administered through the program to accommodate needs of the gifted/talented learner.

Differentiated curriculum: In this study this term is used to describe appropriate curriculum for gifted students which is qualitatively different from the program for nongifted students. Curriculum can be differentiated by modifying the content, the process of learning, the products of learning, and the learning environment. This type of curricular planning seeks to achieve a better match between the learner characteristics and the school coursework (Berger, 1991; Cramond, 1993; Feldhusen, 1986, 1989;

Gallagher, 1985; Maker, 1995; Silverman & Leviton, 1991; Van Tassel-Baska, 1988, 1992).

Program Evaluation: The surveying of students, teachers, administrators, and parents to collect information for the purpose of evaluating and making recommendations for further implementation or revision of services offered in gifted and talented programs (Callahan, 1991; Cox, 1985; Seeley, 1989; Lundsteen, 1987; Tomlinson & Bland, 1994).

#### Delimitations of the Study

In an attempt to understand better the current trends within the field, the review was limited to the literature on gifted education published from 1979 to 1995. Information was located through the University of Northern Iowa's Donald O. Rod Library and Northwest Missouri State University's Owens Library using UNISTAR and CD-ROM Educational Resources Information Center (ERIC) databases and through the Green Valley Education Agency's information search of computer databases. A hand search of current periodicals was also conducted.

A second delimitation is that subjects surveyed were participants in gifted and talented programs located in Iowa's Area

Education Agency 14 school districts. Participating students were predominantly Caucasian and middle class; very few minority students participated.

### Limitations of the Study

A limitation of the study would involve the interpretation of the questions on the survey instrument. Two drafts were evaluated by students not involved in the study before the final survey instrument was distributed in order to define better each question, but some misinterpretation was still possible.

A second limitation of the study is that the subjects were volunteers. Students who were not eager to complete a survey instrument might have had different opinions about the curricular modifications included in the questionnaire.

The attitudes of the students being surveyed is another consideration. The researcher planned for honest, thoughtful consideration of each question in the survey. This may not have been the case with some student volunteers.

## CHAPTER II

### Review of Related Literature

The review of related literature focuses on the need for differentiated curriculum and comprehensive program evaluation for gifted students, more specifically rural gifted students. It involves an examination of research dealing with curricular modifications in instruction for gifted students. Second, an overview of the accountability of programs through program evaluation is examined, with evaluation recommendations and evaluation design presented in detail. The final section of the literature review addresses differentiated curriculum for gifted programming, including previous studies dealing with evaluation of this area. Calls for additional research in these areas are noted in each sub-topic. The conclusion supports the need for using student perspectives in evaluation to help program planners refine program delivery as it is needed.

#### Curricular Modifications in Instruction for Gifted Students

Recent studies by the National Research Center on the Gifted and Talented portray a disturbing pattern of what happens to high ability



students in U. S. classrooms (Reis, 1994). For example, Reis points to a survey of third and fourth grade teachers in several thousand public and private schools around the country which revealed that fewer than half had ever received specific instruction in how to teach gifted students. She also states that it is not a surprise that, given this lack of training, most teachers make, at most, minor modifications in the regular curriculum to meet the needs of gifted students.

The reviewed literature showed that rural schools have a number of strengths that can enrich the school experience of gifted and talented students. On the other hand, several problems exist that make it difficult to provide all the services required by gifted and talented students (Jones & Southern, 1994). Some of the problems they cited include the lack of well established curriculum and fewer kinds of options in programming, such as acceleration.

Many sources cite the negative impact of ignoring the needs of gifted students (Jones & Southern, 1994; Reis, 1994; Webb, 1982). Reduced productivity and achievement, lowered expectations for post-secondary options, lowered ability to compete with urban/suburban students, and a reduction in the amount of time rural

students have to maximize their potential are specifically described by Jones and Southern (1994).

### Accountability of Gifted Programs through Evaluation

In the last twenty years talented and gifted programs have blossomed in numbers, but accountability of program goals has not been systematically developed. John Feldhusen of Purdue University (cited in Maker, 1995) contends that some programs have been developed with thorough and thoughtful consideration, while others have been rapidly put into place with very little thought and expertise. He further suggests that defensible programs for the gifted must be developed with attention to standards of accountability. The Richardson Study (1985) identifies key elements for the future success of gifted education. Included in this report is the recommendation for comprehensive and regular program evaluation to assure accountability. This evaluation includes individual program elements and their impact on student growth and achievement.

Silky and Reading (1992) point out that one area that allows and encourages the future success of gifted and talented programs is the area of program evaluation. Many sources are available to examine

the qualitative measurement of program successes. Jones and Southern (1994) contend that students are a valuable source of information in compiling data on the effectiveness of having the learner needs match the educational plan and curriculum for individual students. Borland (1989) recommends that the goal is to collect data from a number of sources that the evaluator can interpret in a way that will lead to program improvement. The information gained in this process is a guide to future steps to improve programming for these students, not for teacher evaluation or program showcases. He continues his argument for program evaluation by saying that if educators of the gifted view evaluation as an indispensable aspect of program planning and part of the obligation owed to gifted students, guidelines for evaluating programs for the gifted will emerge and be consistent with what we are trying to accomplish.

Seeley (1989) maintains that evaluation monitors program development in order to inform decisions along the way. He lists a variety of people who are needed for this research. A school might call upon outside experts, regular classroom teachers, teachers of the gifted, parents, students, administrators, and community

members. Teachers of the gifted should be very closely involved with the process, and students can be a valuable avenue for teacher input in the evaluation process.

Program evaluation is consistently mentioned as a determiner of program success, according to the Council for Exceptional Children and the U. S. Office of Education of the Gifted and Talented (1979). Evidence of this statement is supported by an analysis of gifted programs which survived the economic crisis in New England. Prior evaluation reports (Renzulli & Reis, 1991) are listed as contributing factors in program survival. Evaluation reports from effective programs can document the benefits to students by meeting the program goals. Feldhusen, Moon, and Dillon (1994) have examined the long-term effects of an enrichment program based on the Purdue Three-Stage Model. They (1994) found that the perception of seniors in high school and their parents indicated that the program was successful in achieving the goals of the program by having a long-term impact on the cognitive, affective, and social development of participating students.

Callahan (1987) postulates that using an effective program evaluation instrument can help answer the questions that are most

frequently raised as gifted programs are developed, implemented, and funded. She asserts that asking the right questions will help educators better understand their purpose, their directions, and their existence. Tomlinson and Bland (1994) recommend that when schools are evaluating gifted programs, it is important to ask questions which are well focused in order to provide information about the goals, the structure, and the activities of the program being evaluated. In this way, the evaluation questions will provide information that the evaluators can use to make significant program improvements.

Lundsteen (1987) maintains that qualitative assessment can be a productive way of answering questions about where the gifted participants think they are going, how they think they will get there, and how they think they know that they have arrived. She recommends using an ethnographic perspective in evaluation in the field of gifted education in order to help program directors gain new insights into the program. Interviewing students and observing student behaviors can be components of this evaluation process (Lundsteen, 1987).

Southern (1992) encourages evaluators to avoid the temptations

of bad evaluation by using the evaluation instrument as a guide for action and refinement rather than a summary judgment. He recommends the use of W. Edward Deming's model for use in improving and assessing gifted programs. Some of the pitfalls that he lists include: asking the wrong questions to satisfy different contingency groups; asking too few questions, missing some of the unintentional, but rich outcomes of the program; and using the evaluation instrument as a summary judgment, rather than a plan of action. The Deming model stresses these key points for change: a commitment for continual improvement of the quality of services and quality, and to see improvement as a goal toward which one strives.

Silky and Reading (1992) emphasize that gifted education must feel this same sort of commitment to gifted students by monitoring and assessing the program to serve best learner needs. They suggest using the REDSIL model for gifted program evaluation to ensure better accountability in recent fiscal restraints. The REDSIL model is a three phase model which focuses on qualitative research methodology. In Phase I of this model the researcher should identify and interview an initial group of stakeholders, interview additional

stakeholders, isolate and categorize critical study questions and issues, and agree with the evaluation sponsors on the study issues. In Phase II of the REDSIL Model the researcher should design a data collection plan that uses several forms of qualitative methods, including interviews, document analysis, and participant observation. The second step in this Phase II is to implement the plan and engage in inductive data analysis, concluding with a search of professional literature relative to each issue under study. The final phase of the REDSIL model involves the analysis of the data following the completion of all collection procedures and concluding with report writing and presentation. They stress that identifying the stakeholders in a survey leads to asking the right questions in a gifted program evaluation.

Southern (1992) argues that the trend of evaluation is healthy for the field of gifted education because educators often lack the vision to measure their objectives or lack the courage to look at their performance. He warns that in times of scarce resources educators must prove to their constituents that programs for the gifted are important and valuable.

## Differentiated Curriculum for Gifted Programming

Colangelo and Davis (1991) suggest other issues that need to be addressed in gifted research, including the nature of differentiated curriculum in terms of content, process, and product for the gifted student. VanTassel-Baska (1988) supports this idea by stating that research concerning appropriate curriculum for the gifted child is rather meager. Orange County Public Schools in Orlando, Florida, identified curriculum differentiation as a component in their evaluation (Thomas, 1992). Their evaluation team found that those schools with course/program analysis systems in place were found to be meeting student needs and expectations.

A differentiated curriculum for the gifted is "qualitatively different," the phrase most commonly used to describe appropriate school curriculum for gifted students (Maker, 1995). She states that it requires that the curriculum must be examined and modifications made according to individual learner needs. Gallagher (1985) asserts that to make the curriculum more appropriate for gifted students, an educator must modify the curriculum in terms of content (what is learned), process (the methods used and the thinking processes students are expected to use), and the learning



environment (the psychological and physical environment in which the learning is to occur). Maker (1995) includes product (the end products expected of children as a result of the processes used) as an additional dimension that must be modified. She includes in these sub-groups the topics which follow: content (abstractness, complexity, variety, organization, economy, study of people, and methods); process/method (higher level thought, open-endedness, discovery, proof/reasoning, freedom of choice, group interaction, pacing, and variety); product (real problems, real audiences, evaluation, and transformation); and learning environment (student centered, openness, accepting, complex, and high mobility).

Another approach to curricular differentiation is provided by Berger (1991). She states that content differentiation can be obtained by compacting and extending content to address the characteristics of the learners, by having the content focus on major concepts, methods, processes and attitudes essential to the investigation of real problems and issues, and by providing a wide variety of learning experiences. The process may be differentiated by various instructional strategies. These include: avenues to become independent learners, use of higher order thinking skills,

creative thinking and production strategies, activities which encourage understanding of self and others, and opportunities and methods for effective communication skills. She states that the learning environment may be differentiated by the teacher's role identified as that of a facilitator of learning and manager of resources, by student ability to make decisions about their own learning options, by group interaction of similar interest or intellectual peers, by a variety of grouping options for learners, and by a wide variety of resources beyond the confines of a normal classroom. The product, according to Berger, may be modified by providing students with opportunities to select and plan their own units of study and methods of sharing their newly gained knowledge. This individual freedom will help reflect growth in their cognitive, creative, and affective domains, resulting in products which are both tangible and intangible. She emphasizes that appropriate audiences should be made available for student outcomes and products, and finally, evaluation of student products should be varied and multi-dimensional.

Evaluation of gifted and talented programs must address the curriculum now and in the future. Many groups are concerned with

the continued growth and maintenance of programs for this population of learners. Rural schools are wondering about the feasibility of these programs in terms of student participation and community acceptance. They ask, "What kind of programming is appropriate for the handful of students we might serve?" (Anderson, Kleinsasser, 1987).

Many teachers of the gifted and regular classroom teachers would like to serve better the needs of the gifted, but lack of knowledge regarding how to do that stands in their way. As a result, few accommodations are made for gifted learners in terms of their unique characteristics. In a recent survey to assess regular classroom practices with gifted students it was found that only minor modifications were made in the curriculum for this group (Archambault, Westberg, & Brown, 1992). The survey included the following areas to assess for modification in the curriculum: advanced content, process, and product instruction, independent study with assigned topic, independent study with self-selected topics, and other differentiation experiences. Across all five subject areas the target gifted and talented students received no differentiation experiences in eighty-four percent of the activities

in which they were involved.

At-risk gifted students may be another population needing differentiation in instruction. One report of programs for at-risk gifted students found that schools made greater use of traditional program delivery models and less use of program approaches believed to be successful with at-risk gifted students (Van Tassel-Baska, Patton, Prillaman, 1991). This may demonstrate that gifted education program planners need to assess their own approaches in order to provide a model for regular education to follow in serving this population's needs. Once experts in the field realize what is needed to differentiate curriculum for the gifted, accommodations can be made (Cramond, 1993). The answer may be found in differentiating student learning objectives for gifted learners in core skill areas (Van Tassel-Baska, 1992).

### Conclusion

As we better define gifted education and its purpose in this age of reform, we need to blend our efforts with regular education through appropriate evaluation of program curriculum. Berger (1991) asserts that developing curriculum that is rigorous, challenging, and coherent for students who are gifted is a

challenging task. She argues that the curricular accommodations for these students will produce well-educated students who have had to work hard, mastered a substantial body of knowledge, and who can think clearly and critically about that knowledge.

This review of the literature seems to indicate that there is a need for educational research to assess the effectiveness of programs for gifted learners through examining the attitudes and opinions of those students participating in the programs. Knowledge of these attitudes and opinions can assist program developers in providing more effective experiences for gifted learners. These evaluations need to deal with the match between learner needs and abilities and the curriculum. "In order for gifted education to survive the onslaught of the 'no tracking' and cooperative learning bandwagons sweeping the country, more effective experimental research must be done to demonstrate the effectiveness of gifted programming intervention" (Vaughn, Feldhusen, & Asher, 1991, p. 97). In addition, with recent budget cuts and changes in philosophy accompanying the school restructuring movement, public school programs for the gifted are in greater peril than ever before (Silverman & Leviton, 1991). The strength of these studies suggests

that appropriate program evaluation may be the impetus for providing qualitatively different curriculum for the gifted learner, regardless of educational trends and fiscal variables.

## CHAPTER III

### Methodology

#### Statement of Purpose

The purpose of this survey was to determine to what degree student perceptions of a school district's gifted programming efforts can reveal a need for further curriculum modifications in terms of content, process, and product. This chapter presents the methods and procedures used in this study. It contains (a) a description of the subjects, (b) a description of the survey instrument employed to collect data, and (c) a description of the research design and procedures.

#### Subjects

The subjects surveyed were 101 middle school, junior high, and high school students participating in talented and gifted programs in 21 school districts located in Iowa's Area Education Agency 14. The sample of gifted and talented students who participated in this study were volunteers. The specific percentages of students from each category were 73 percent middle or junior high school and 27 percent high school students. The group was composed of 41 males (42 percent) and 59 females (58 percent). The number of years that

students had participated in a gifted program resulted in a mean of 4 years. The children were selected for their local program on the basis of district-selected criteria stressing intelligence, achievement test scores, and teacher and parent referral. No data was collected on ethnic makeup due to the relatively low representation of minority students in the participating school districts. The population of this study was primarily rural.

### Survey Instrument and Its Administration

#### Design of the Survey

The design of the study included the development of a survey instrument (see Appendix B) consisting of 20 statements reflecting respondents' perceptions of the degree to which they experienced modifications in curriculum as a result of being identified for the district's talented and gifted program. Each statement was generated from the issues and concerns addressed in the review of literature from ERIC computer database searches, text references from the UNISTAR system, and from hand searches of current periodicals. The respondents were asked to express their relative agreement/disagreement with each statement using a Likert-type Attitude Scale: I strongly agree; I agree; I am undecided; I disagree;



and I strongly disagree.

Specific statements asked for students' perceptions of content modification in coursework (statements 1-7); process modifications in coursework (statements 8-16); and product modifications in coursework (statements 17-20) as a result of being identified as talented and gifted. In addition, general questions were asked related to the total talented and gifted program experience, including program and curricular activities.

Demographic information was collected through questions 22-23 which asked for the number of years of participation, gender, and grade level.

The conclusions from this survey instrument were based upon a frequency of agreement/disagreement responses with statements eliciting their perceptions. These perceptions were reported in percentages in order to find a general trend, knowing that these perceptions may be limited by the experiences provided in individual school districts.

#### Administration of the Survey

After the survey was developed, it was administered on a trial basis to two gifted and talented students at one of the schools

participating in the study in early February of 1995. Minor problems in interpretation resulted from this trial, and minor changes were made in the survey questionnaire. Examples of different methods of inquiry were added to Question 7, an explanation of simulations was added to Question 12, and a description of various methods of instruction was added to Question 15. A modified survey instrument was then administered on a second trial basis to two gifted and talented students at one of the schools participating in the study. No discernible problems resulted from the second testing of the survey, and, therefore, no further changes were made in the survey questionnaire. These four students were not included as participants in the survey.

In early March of 1995, the surveys were forwarded to thirty-nine teachers in Iowa's Area Education Agency 14 school districts. The teachers who were sent surveys were teachers or coordinators of the gifted and talented classes at the middle school, junior high, or high school level in the 21 school districts used in the study. These teachers administered the survey to student volunteers in their individual buildings during the first three weeks in March of 1995. Participants recorded their responses directly on

the survey instrument. One hundred and one students elected to complete the study questionnaire. Approximately 373 students may have been eligible to participate, if schools surveyed used 5 percent of the total school enrollment as a guide for the number of students eligible for gifted and talented program participation. Using this rule as a guide, approximately 27 percent of eligible students participated in this study. Their anonymity was guaranteed in the cover letter which was sent with the questionnaire.

#### Data Analysis

For the purpose of data analysis, the two outside categories on both ends of the Likert Attitude Scale were combined: agree and strongly agree; disagree and strongly disagree. This was done to simplify reporting results in percentages. In addition, statements on the questionnaire were grouped into the following three categories for purposes of discussion: content modifications in curriculum, process modifications in curriculum, and product modifications in curriculum. The general question (21) was tabulated and listed in table form in the results. General questions (22 and 23) were included with the demographics describing the participants of the study.

## CHAPTER IV

### Results

#### Gifted and Talented Modifications in Curriculum

Table 1 (p. 30) shows students' perceptions toward content modifications made in their coursework as a result of being identified for the local talented and gifted program. Students surveyed indicated that the most frequent content modifications were in the areas of creative and critical thinking (98 percent), different or more in-depth areas of study (90 percent), organization around general topics or issues (85 percent), and provisions for opportunities for different methods of inquiry and research (80 percent).

Sixty-one percent of the students perceived that modifications had been made in the areas of famous people studies. While 52 percent had knowledge of modification in the area of acceleration or self-pacing in the regular classroom, 31 percent were undecided on this question, making it difficult to establish a clear trend on this modification. The content modification area of greatest concern dealt with the alteration of regular classroom work to meet the

Table 1

Gifted and Talented Content Modifications in Curriculum

	%Agree (No.)	%Undecided (No.)	%Disagree (No.)
The talented and gifted coursework provided me with opportunities to explore areas of study with creative and critical thinking activities.	98 (99)	2 (2)	0 (0)
My talented and gifted coursework has been organized around general topics.	85 (86)	13 (13)	2 (2)
My school has helped provide acceleration in subjects and/or self-pacing in the regular classroom.	52 (53)	31 (31)	17 (17)
My regular classroom work has been altered to meet my needs when I was presented with already mastered material.	26 (26)	28 (28)	47 (47)
My talented and gifted coursework has provided opportunities for me to study famous people.	61 (62)	15 (15)	24 (24)
The talented and gifted program has allowed me to study areas that were different or more in-depth.	90 (91)	8 (7)	2 (2)
The talented and gifted coursework has provided opportunities for me to explore different methods of inquiry/research.	80 (81)	11 (11)	9 (9)

Note: Student Responses ( $N = 101$ )

needs of the student, with only 26 percent of the respondents agreeing that regular classroom work had been altered to meet their needs. Twenty-eight percent were undecided on this modification, making any trend in this area less conclusive.

### Gifted and Talented Process Modifications in the Curriculum

Table 2 (p. 32-33) summarizes student's perceptions of process modifications made by school districts as a result of being identified as talented and gifted. A relatively high percentage of students perceived program modification through emphasis on process in the areas of group interaction activities (95 percent) and variety of methods of instruction (86 percent). Other very strong areas of modification were in activities which allowed open-ended questions and multiple answers (80 percent), hands-on activities (83 percent), and self-selection of topics, methods of study, and projects (83 percent).

Process modification occurred in four areas. Seventy percent of students responded that they were provided opportunities to develop opinions and hypothesis, asking that they provide reasons or evidence to support their opinions. Opportunities for structured simulations and quicker paces in learning were reported by 68

percent of the students surveyed. Opportunities to address real problems had the weakest response from students, with 65 percent

Table 2

Gifted and Talented Process Modifications in Curriculum

	%Agree (No.)	%Undecided (No.)	%Disagree (No.)
The talented and gifted course work has provided me with activities which have open-ended questions/multiple answers.	80 (81)	19 (19)	1 (1)
The talented and gifted coursework has provided hands-on learning activities.	83 (84)	12 (12)	5 (5)
The talented and gifted coursework has provided opportunities to develop opinions and hypothesis, asking that I provide reasons or evidence to support my opinion.	70 (71)	24 (24)	6 (6)
The talented and gifted program has allowed me to select topics, methods of study, and projects.	83 (84)	8 (8)	9 (9)
The talented and gifted program has provided opportunities for structured simulations.	68 (69)	16 (16)	16 (16)
The talented and gifted program has provided opportunities for group interaction.	95 (96)	5 (5)	0 (0)

(table continues)

### Gifted and Talented Process Modifications in Curriculum

	%Agree (No.)	%Undecided (No.)	%Disagree (No.)
The talented and gifted program has provided quicker paces in learning.	68 (69)	23 (23)	9 (9)
The talented and gifted teacher has used a variety of methods of instruction.	86 (87)	9 (9)	5 (5)
The talented and gifted program has provided opportunities to address real problems.	65 (66)	25 (25)	10 (10)

Note: Student Responses ( $N = 101$ )

marking "agree" with this statement. It is interesting to note the low percentage of students who marked "disagree" when responding to the process modification statements and that all statements concerning process modification were experienced by a majority of the student respondents.

The "undecided" responses in process modifications would not have any major significance in observing trends in this particular table. The modification responses would still reveal a majority of students perceiving this modification, even if the "undecided" responses had been marked "disagree." No weak areas in process modifications are revealed in this table, as perceived by the



research sample of students.

### Gifted and Talented Product Modification in the Curriculum

Table 3 (p. 35) reflects the student perceptions of product modification in their talented and gifted programming. Seventy-eight of the students (78 percent) responded that they had become better producers of knowledge or learners through participation in gifted and talented programs and opportunities. Perceptions concerning product modifications also were strong when related to perceived encouragement in developing products that generated new information or insights. Seventy-six students (75 percent) marked "agree" to this statement. Skills of self-evaluation in examining their own products and performances were reported by 72 of the students (71 percent) surveyed. Directing products and performances to real audiences seemed to be the weakest area of product modification, with a strong 62 percent (63 students) "agreeing" with the corresponding survey statement.

It is interesting to note the higher percentages of responses marked "undecided" in this section, with percentages from 13-26 percent selected on these four statements. Even so, the large number of "undecided" responses in product modifications have little

impact on the the final conclusions, with none of the "undecided" responses altering a majority in student responses.

Table 3

Gifted and Talented Product Modifications in Curriculum

	%Agree (No.)	%Undecided (No.)	%Disagree (No.)
The talented and gifted program has provided situations in which I could direct my products or performances to real audiences.	62 (63)	26 (26)	12 (12)
The talented and gifted teacher has provided opportunities for me to develop skills of self-evaluation for products and performances.	71 (72)	22 (22)	7 (7)
The talented and gifted program has encouraged me to develop products that generate new information or insights.	75 (76)	18 (18)	7 (7)
The talented and gifted program and its opportunities have made me a better producer or learner.	78 (78)	13 (13)	9 (9)

Note: Student Responses (N = 101)

Gifted and Talented Limited Curricular Modification Summary

Question 21 on the survey deals with the possible gifted and talented curricular modification which might be common among pull-out programs. This section was included to give the researcher

some information about the activities that may have been used to provide the content, process, and product modifications in the gifted and talented curriculum being offered by the 21 schools in the research project. It also provides a basis for possible future research on which specific activities are connected to each of the twenty curricular modifications. Table 4 (p. 37) presents a list of projects and competitions in which the students in the survey have participated. Independent study was the most common curricular modification for the students, with nearly three-fourths (72 percent) of students participating in this activity. Over half (50-55 percent) of the students reported participation in competitions such as Future Problem Solving, mock-trials, and other academic or writing competitions. The least common recorded activities were Summer Gifted Programs (19 percent), Leadership/Gifted Forums (17 percent), and Odyssey of the Mind competition (10 percent). College coursework was a curricular content modification in which only 8 percent of the students participated.

Table 4

Gifted and Talented Projects and Competitions Summary

Curricular Activity	Percentage/Number of Participants
Independent Study	72%/(72)
Future Problem Solving Competition	55%/(56)
Academic Competitions: Math, History Day, etc.	55%/(55)
Writing/Essay Contests	54%/(54)
Mock-trial Competitions	50%/(50)
Gifted Summer Programs	19%/(19)
Leadership/Gifted Forums or Seminars	17%/(17)
Odyssey of the Mind Competition	10%/(10)
College Coursework	8%/ (8)

Note: Student Responses (N = 101)

Summary of Data Analysis

The interpretation of the survey data may be summarized as follows:

1. A very large percentage of the 101 student volunteers participating in this study indicated that the gifted and talented coursework had provided them with content modifications in the areas of creative and critical thinking (98 percent); courses of study which were organized around general topics (85 percent); topics studied were different or more in-depth (90 percent); different methods of inquiry/research were provided (80 percent); and famous

people studies (61 percent).

2. Approximately half of the students participating in this study (52 percent) had been provided with acceleration in subjects and/or self-pacing in the regular classroom, as a content modification.

3. A small percentage of students (26 percent) participating in this study felt that the regular classroom content had been altered to meet their needs when they were presented with already mastered material. However, a strong 47 percent of students disagreed with this survey statement, indicating that classroom content had not been altered to meet their needs when they were presented with already mastered material.

4. Process modification received strong consideration in the curricular design of activities with which survey participants had been involved. Group interaction was the strongest modification in process with 95 percent perceiving that they had been provided with opportunities for group interaction. Other process modifications that received a strong response included: variety of methods of instruction (86 percent); hands-on learning activities (83 percent); self-selection of topics, methods of study, and projects (83 percent); and activities with open-ended questions/answers

(80 percent). Less common process modifications were: opportunities to develop opinions and hypothesis (70 percent); structured simulations and quicker paces in learning (68 percent); and opportunities to address real problems (65 percent), showing that process modifications were being well-handled in the curriculum being provided to the student volunteers in this study.

5. The most common product modification experienced by the respondents was opportunities to become a better producer of knowledge or learner. Opportunities to develop products that generate new information or insights were noted by 75 percent of the participants, with 71 percent of the students learning self-evaluation skills. Receiving the least amount of attention in product modification was the opportunity to direct products and performances to real audiences (62 percent). There were no particularly weak or extremely strong areas in product modifications.

6. The curricular content modification, independent study, was identified by 65 (72 percent) of the student participants in this study, while only 8 (8 percent) of the student participants had participated in the curricular modification, college coursework.

## CHAPTER V

### Conclusions, Recommendations, and Summary

#### Conclusions

A match between gifted learner characteristics and curriculum is a continuing concern for students, parents, and educators. (Delisle, 1987; Maker, 1995; Reis, 1994). Curricular options for rural students is a specific concern as discovered by Jones and Southern (1994). No matter where gifted and talented students obtain their education, they need an appropriately differentiated curriculum designed to address their individual characteristics, needs, abilities, and interests. Appropriate planning for their unique curricular needs requires that experiences for these children be qualitatively different (Maker, 1995). Evaluation reports and surveys can document the benefits to students and provide guidance for revisions in curricular and program design (Renzulli, Reis, 1991). Callahan and others recommend that if a gifted and talented program is to be successful in achieving its goals, it is important to identify areas of need in design and curriculum and make changes that enhance the goals of the program. Curricular modifications are an

area that can be evaluated to avoid the pitfalls described by researchers involved with rural gifted program evaluations.

Although there has been relatively little research dealing with the education of rural gifted students, the findings of this survey both supported and negated the results of previous studies.

Surveyed students supported the research by indicating the following:

1. They are limited in their advanced coursework.
2. The number of curricular options are not particularly broad.
3. Acceleration opportunities are limited in the rural school setting.
4. Regular classroom teachers make only minor modifications in the regular classroom to meet the needs of gifted students.
5. Gifted students are more likely exposed to activities which require higher level thinking skills.
6. They are given frequent opportunities for independent study.
7. Gifted and talented programming provides modifications in curriculum in the areas of content, process, and product.

Students did not support research that claimed that opportunities were limited for rural students. Table 4 (p. 37) shows that students



in the study were exposed to a diverse range of activities. The survey instrument's general findings revealed that nearly all areas of content, process, and product were altered to accommodate the needs of the gifted and talented students in this study.

The results of this survey would indicate support for the talented and gifted classroom modifications in terms of content, process, and product with two suggested areas for improvement. First, school districts should work to implement more opportunities for acceleration in subject areas and/or self-pacing in the regular classroom. With only a slight majority experiencing modifications in the curriculum content area of acceleration, student needs may be more easily satisfied if more students were offered acceleration and/or self-pacing.

Second, students would benefit from modifications in the regular classroom which allow for the elimination or revision of already mastered material. Only 26 percent of the students experienced this modification. Modification of already mastered material might enhance motivation to learn new material, reduce stress from repetitive assignments, and free up time for activities that enhance a learning experience that occurs beyond the regular school day or

the core curriculum.

Implementation of these two changes in programming could provide opportunities that would match the learner characteristic of accelerated pace of thought processes; high retention of information; ability to understand complex concepts; heightened capacity for seeing relationships among disparate data; and advanced level of language development and verbal ability. Borland (1989) encourages the concept of a true gifted program as being one which is made up of components that flow from the identified needs of gifted students.

Constant evaluation of key program elements is essential if schools are to continue to meet these learners' needs. A survey such as the one conducted as a part of this study addresses this concern. The curricular content areas that were found to be less descriptive of these needs are areas to be identified for improvement and growth. Some implications of this study include further research which might address similar issues: how students perceive activities which relate to the various content modifications; interconnectedness of activities (Table 4, pg. 37) and learner needs; more direct contact with students such as an interview format;

replication of the study in various rural areas of Iowa; or attempts to investigate the feasibility of a coordinated effort on the part of the schools in Iowa Area Education Agency 14. All of these might help to provide a brighter future in gifted programming, while addressing these key points.

### Recommendations

Callahan (1991) supports continual reassessment of gifted programming by schools because, too often, we find that teachers adapt their instruction according to their own sense of appropriateness rather than in ways that are likely to achieve the goals of the program. The process of continually observing, surveying, and interviewing students, teachers, and parents helps program administrators carry out their mission, according to the program design. Deciding on what to evaluate is instrumental in better program service. Curriculum is the vehicle to tailor-fit the needs of each child based on the assessment of that child's learner characteristics (Maker, 1995).

The absence of research that reports data from the viewpoint of the students involved in gifted education programs and their curriculum is unfortunate. It is the opinion of the writer that there

is a need for qualitative studies that will better define gifted education's role in providing appropriately differentiated curriculum. Research which defines the impact on gifted and talented students' learning needs and curricular modifications also will provide direction and validation for gifted and talented programming.

As new information is gathered and reported, the various insights and/or concerns should be addressed through necessary revision of (1) program goals, (2) instruction, and (3) evaluation. On-going evaluation of program goals should be used for the determination of the best practices of instruction with this population of students. Evaluation studies could specifically deal with each of the areas of curricular modification: content, process, and product. Narrowing the focus to one of the areas might better help better to define the most valuable curricular modifications for the gifted and talented learner. Research that assesses growth in each modified curricular area might address the significance of specific modification strategies. Continued research involving out of level achievement testing may help assess the significance of content modifications. Finally, one might ask students how they perceive that each of these

curricular modifications has impacted their learning environment and experience. Continued research in this area may strengthen the case for addressing the curricular needs of the gifted and talented students in rural Iowa.

### Summary

Jones and Southern (1994) agree that rural schools have a number of strengths that can enrich the school experience of gifted and talented students, but the story does not end there. Students in rural schools have the right to learn content when they are ready and motivated to learn it. They charge that rural districts must work to see that they do.

The purpose of this study was to determine to what degree student perceptions of a school district's gifted programming efforts can reveal a need for further curriculum modifications in terms of content, process, and product. The research revealed that Iowa's Area Education Agency rural school districts were making curriculum modifications in the areas of content, process, and product for identified gifted and talented students. However, the perceived weakest curriculum modifications dealt with content: (a) acceleration and (b) modifications in curriculum of already mastered

content.

A very large percentage of the 101 student volunteers participating in this study indicated that the gifted and talented coursework had provided them with content modifications in the areas of creative and critical thinking (98 percent); courses of study which were organized around general topics (85 percent); topics which were different or more in-depth (90 percent); provision for different methods of inquiry/research (80 percent); and famous people studies (61 percent). It should also be noted that approximately half of the students participating in this study (52 percent) had been provided with acceleration in subjects and/or self-pacing in the regular classroom, as a content modification.

A small percentage of students (26 percent) participating in this study felt that the regular classroom content had been altered to meet their needs when they were presented with already mastered material. However, almost half (47 percent) of students disagreed with this survey statement, indicating that classroom content had not been altered to meet their needs when they were presented with already mastered material.

Process modification received strong consideration in the

curricular design of activities with which survey participants had been involved. Group interaction was the strongest modification in process with 95 percent perceiving that they had been provided with opportunities for group interaction. Other process modifications that received a strong response included: variety of methods of instruction (86 percent); hands-on learning activities (83 percent); self-selection of topics, methods of study, and projects (83 percent); and activities with open-ended questions/answers (80 percent). Less common process modifications were: opportunities to develop opinions and hypothesis (70 percent); structured simulations and quicker paces in learning (68 percent); and opportunities to address real problems (65 percent), showing that process modifications were being well-handled in the curriculum being provided to the student volunteers in this study. The findings of this study revealed weaker process modification areas involving quicker paces in learning and opportunities to address real problems. Additional emphasis on this area will better help to address the needs of this population.

The most common product modification experienced by the respondents was opportunities to become a better producer of

knowledge or learner. Opportunities to develop products that generate new information or insights were noted by 75 percent of the participants, with 71 percent of the students learning self-evaluation skills. Receiving the least amount of attention in product modification was the opportunity to direct products and performances to real audiences (62 percent). There were no particularly weak or extremely strong areas in product modifications.

This study reveals that curricular modifications for the gifted and talented are being made in the rural school districts in this study, but there are two areas of significant concern in the area of content modification. The findings of this study show weak content modification in the areas of acceleration and modifications in already mastered material. These modifications are at the heart of the issue involving the placement of emphasis on the needs of gifted and talented learners who exhibit the following traits: accelerated pace of thought processes; high retention of information; ability to understand complex concepts; heightened capacity of seeing relationships among disparate data; advanced levels of language development and verbal ability; curiosity and a broad spectrum of



interest; and ability to generate original ideas and solutions (Ganapole, 1989).

Developing curriculum that is sufficiently rigorous, challenging, and coherent for students who are gifted is a challenging task (Berger, 1991). Are efforts in this area worthwhile? Many researchers suggest that it is well worth the effort. What might be the result? Berger (1991) envisions that providing appropriately differentiated curriculum will produce well-educated, knowledgeable students who have had to work very hard, have mastered a substantial body of knowledge, and can think clearly and critically about that knowledge.

It is the conclusion of this writer that gifted and talented programming in rural Southwest Iowa is alive and well in providing curriculum that meets the needs of its students. However, the study revealed the weaker areas in curriculum modifications which need to be addressed. With continual research in the areas defined in this study, curriculum for the gifted and talented in Iowa's Area Education Agency 14 school districts will be developed that provides an enhanced learning setting that matches the needs of the students identified for gifted and talented programming.

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## Appendix A

March 8, 1995

Dear Area 14 Talented and Gifted Teacher/Coordinator:

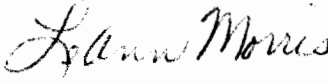
I am writing to you to ask for your help. I am collecting information about talented and gifted programs in southwest Iowa. I am asking you to distribute the enclosed materials to your students, ask that they complete the survey, and return the survey to me in the enclosed envelope.

Please have your students at the middle school, Jr. High, and/or high school levels complete the survey. You may also have students who have previously been in the gifted program complete the survey. No attempt will be made to identify the school or individual respondents. Additional comments by students may be written on the back of the questionnaire. Please return the survey by March 24, 1995. Additional copies may be made, if necessary. I will be glad to share the results with you, if you specifically ask that I do so by either writing or calling:

LeAnn Morris  
Corning Talented and Gifted Coordinator  
Corning Jr. High School  
10th and Washington  
Corning, Iowa 50841  
Phone: 515-322-3213

I thank you and your students for helping with this survey.

Sincerely,

A handwritten signature in cursive script that reads "LeAnn Morris".

LeAnn Morris

## Appendix B

April 5, 1995

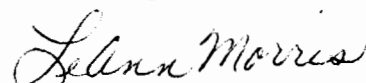
Dear Area 14 Talented and Gifted Teacher/Coordinator:

I am writing to you to remind you that there is still time to complete the student survey that I sent to you in early March. The information is still being collected and tabulated, so sending the surveys as soon as possible is welcomed.

Thank you for your participation in this project. If you have already sent the questionnaires to me, please disregard this follow-up letter. I'll be glad to supply you with a new questionnaire, if you have lost the original by writing or calling:

LeAnn Morris  
Corning Talented and Gifted Coordinator  
Corning Jr. High School Van #63  
10th and Washington  
Corning, Iowa 50841  
Phone: 515-322-3213 or Home: 515-333-4660

Sincerely,

A handwritten signature in cursive script that reads "LeAnn Morris".

LeAnn Morris



APPENDIX C  
Questionnaire

**Student Perceptions of Gifted Programming Questionnaire**

The following statements are opinions. Please show your attitude toward the opinions by circling the selected response below the statements that follow:

- a. I strongly agree.
- b. I agree.
- c. I am undecided.
- d. I disagree.
- e. I strongly disagree.

**Content Modifications:**

1. The talented and gifted coursework or program has provided me with opportunities to explore areas of study with creative and critical thinking subjects and/or activities.  
a.                      b.                      c.                      d.                      e.
2. My talented and gifted coursework has been organized around general topics or issues.  
a.                      b.                      c.                      d.                      e.
3. My school has helped provide acceleration in subjects and/or self-pacing in the regular classroom.  
a.                      b.                      c.                      d.                      e.
4. My regular classroom work has been altered to meet my needs when I was presented with already mastered material.  
a.                      b.                      c.                      d.                      e.
5. My talented and gifted coursework has provided opportunities for me to study famous people in various fields of expertise.  
a.                      b.                      c.                      d.                      e.
6. The talented and gifted program has allowed me to study areas that were different or more in-depth than the regular classroom.  
a.                      b.                      c.                      d.                      e.
7. The talented and gifted coursework has provided opportunities for me to explore different methods of inquiry and research, such as surveys, interviews, experimentation, computers, etc.  
a.                      b.                      c.                      d.                      e.

**Process Modifications:**

8. The talented and gifted coursework has provided me with activities which have open-ended questions and multiple answers.  
a.                      b.                      c.                      d.                      e.
9. The talented and gifted coursework has provided opportunities for me to discover new learning through hands-on activities.  
a.                      b.                      c.                      d.                      e.
10. The talented and gifted coursework has provided opportunities for me to develop opinions and hypothesis, asking that I provide reasons or evidence to support my opinion.  
a.                      b.                      c.                      d.                      e.
11. The talented and gifted program has allowed me to select topics, methods of study, and projects.  
a.                      b.                      c.                      d.                      e.

12. The talented and gifted program has provided me with opportunities for structured simulations (an artificial experience to better understand a real life situation) such as role plays, mock-trials, or acting out possible futuristic situations.

- a. b. c. d. e.

13. The talented and gifted program has provided opportunities for group interaction activities.

- a. b. c. d. e.

14. The talented and gifted program has provided quicker pacing in learning.

- a. b. c. d. e.

15. The teacher of the talented and gifted class has used a variety of methods of instruction such as group work, individual work, competitions, hands-on activities, simulations, problem solving, etc.

- a. b. c. d. e.

16. The talented and gifted program has provided opportunities for me to address real problems.

- a. b. c. d. e.

Product Modifications:

17. The talented and gifted program has provided situations in which I could direct my products or performances to real audiences.

- a. b. c. d. e.

18. The teacher of the talented and gifted class has provided opportunities for me to develop skills of self-evaluation for products and performances.

- a. b. c. d. e.

19. The talented and gifted program has encouraged me to develop products that generated new information or new insights for me.

- a. b. c. d. e.

20. The talented and gifted program and its opportunities have made me a better producer or learner.

- a. b. c. d. e.

General Questions: Please mark the activities which your have participated in.

21. I have been involved in the following projects or competitions:

- \_\_\_ Future Problem Solving \_\_\_ Gifted Summer Programs \_\_\_ College Coursework
\_\_\_ Mock-trials \_\_\_ Other Academic Competitions: Math, History, Brain Bowls, etc.
\_\_\_ Odyssey of the Mind \_\_\_ Writing/Essay Contests
\_\_\_ Independent Study \_\_\_ Leadership/Gifted Forums or Seminars

22. Please list the number of years that you participated in the following talented/gifted programs.

Elementary: \_\_\_yrs. Middle School: \_\_\_yrs. High School: \_\_\_yrs.

23. Please circle the correct response for the items below.

Gender: Male or Female

Current Grade Level: Middle School Jr. High High School

## Appendix D

Pool of Possible Iowa Schools Participating in the  
Research Study

1. Bedford Community Schools
2. Bridgewater-Fontanelle Community Schools
3. Central Decatur Community Schools
4. Clarke Community Schools
5. Corning Community Schools
6. Creston Community Schools
7. Diagonal Community School
8. East Union Community School
9. Grand Valley Community School
10. Greenfield Community Schools
11. Lamoni Community Schools
12. Lenox Community Schools
13. Mormon Trail Community Schools
14. Mount Ayr Community Schools
15. Murray Community Schools
16. New Market Community Schools
17. Orient-Macksburg Community Schools
18. Prescott Community School
19. Red Oak Community Schools
20. Stanton Community Schools
21. Villisca Community Schools