Meeting state mandates for gifted and talented: a survey of Iowa undergraduate teacher preparation programs

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Meeting state mandates for gifted and talented: a survey of Iowa undergraduate teacher preparation programs

Abstract
The purpose of this study was to identify the methods through which undergraduate teacher education programs in the State of Iowa are meeting the competency requirement as related to the education of the gifted and talented. The instrument used to accomplish the assessment was a survey questionnaire that was distributed to each of the 30 Iowa colleges and universities that offer teacher preparation programs.
MEETING STATE MANDATES FOR GIFTED AND TALENTED:

A SURVEY OF IOWA UNDERGRADUATE TEACHER

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Judy Carol Davison

University of Northern Iowa

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And finally, I dedicate this work to my sons, Kevin and Joshua. I appreciate the patience and sacrifices they made in contributing to the completion of my M.A. in Ed. degree.
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CHAPTER I

STATEMENT OF PROBLEM

Background of and Need for the Study

During the 1980's and now, in the early 1990's, the national education reform movement has effected profound changes in education in the United States. A Nation at Risk (1983), the Carnegie Report (1987), John Goodlad's Teachers for Our Nation's Schools (1990), and America 2000 (1991), have addressed the need for the development of "world class" schools, for the development of the learning community, for national education goals and assessment, for the implementation of choice, and for national certification of teachers for systemic change involving all of the components that make up American public education as we know it.

These calls for national reform have also had a systemic impact on education in the State of Iowa. Among the major changes have been a major revision of the basis for state approval of teacher education programs (1988), the development and implementation of a teacher-centered Board of Educational Examiners appointed by the Legislature to oversee teacher licensure (1990), the development of a Department of Education Strategic Plan (1991), and the current development of exit outcomes and indicators for Iowa public school students (1991-1992).
Each of these instruments of change have greatly affected the field of gifted education. For example, the new school standards require every school district in the State of Iowa to make provisions for gifted and talented students. In addition, the new Board of Educational Examiners is in the process of approving rules for the implementation of a teaching endorsement for teachers/coordinators of the gifted. Also, the current development of exit outcomes and indicators will have profound effects upon curriculum for the gifted since it will provide for meeting the needs of the individual according to his or her potential.

The new standards for approved teacher preparation programs in Iowa also have addressed the education of the gifted. Within the requirement that pre-service teachers are prepared to meet the needs of the exceptional learner is the process that teacher preparation programs provide course work/experiences that "includes preparation that contributes to the education of the handicapped and the gifted and talented" (The Code of Iowa, 670--70.19). This action was commendable and gave new hope to advocates of gifted education that gifted children and youth would have their needs better addressed because of this preparation requirement.
Three years after the implementation of the teacher preparation standard, many of the same educators are beginning to question how well the mandated standard is being met. The Board of Iowa Talented and Gifted (ITAG), for example, has expressed concern that the preparation of beginning teachers to educate the gifted and talented may, in fact, be minimal in scope and emphasis within the various teacher preparation programs. As a result, in Fall of 1990, it began to seek ways in which to develop a collaborative effort with undergraduate teacher preparation institutions to insure quality of preparation for beginning classroom teachers in meeting the needs of the gifted and talented. However, before a plan could be designed and proposed, there was a need to know what methods presently are being used to satisfy the state requirement. It was to provide that information that this study was undertaken.

**Purpose of the Study**

As previously discussed, the Iowa Department of Education implemented its new requirements for teacher licensure in 1988. One of the professional education core requirements listed for an original teaching subject area endorsement relates to meeting the needs of the exceptional learner. It states that "the program must include preparation that contributes to the education of the
handicapped and the gifted and talented" (The Code of Iowa, 670—70.19).

The purpose of this study was to identify the methods through which undergraduate teacher education programs in the State of Iowa are meeting the competency requirement as related to the education of the gifted and talented. The instrument used to accomplish the assessment was a survey questionnaire that was distributed to each of the 30 Iowa colleges and universities that offer teacher preparation programs. The survey questionnaire sought answers to the following questions:

1. Is the state requirement partially or fully met by offering a required course in the education of the gifted and talented in the undergraduate teacher preparation program?

2. Is the state requirement partially or fully met by content contained in the required professional education core courses in the teacher preparation program?

3. Is the State of Iowa requirement partially or fully met by content contained in required content methods courses in the undergraduate teacher preparation programs?

4. Is the state requirement partially or fully met by a combination of the above areas in undergraduate teacher preparation training programs?
5. What is the approximate number of clock hours of classroom instruction devoted to meeting the specific competency related to the education of the gifted and talented in the undergraduate teacher preparation programs?

**Definition of Terms**

The following operational definitions are used within the context of this study:

**Gifted and Talented**

The definition of Gifted and Talented used in this paper is that delineated by the *Code of Iowa* (1989):

"Gifted and Talented children" are those identified as possessing outstanding abilities who are capable of high performance. Gifted and Talented children 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 demonstrating achievement or potential ability, or in any of the following areas or in combination:

1. General intellectual ability
2. Creative thinking
3. Leadership ability
4. Visual and performing arts
5. Specific academic aptitude (Code 602.7)

**Content Methods Courses**

For the purposes of this study, content methods courses refer to those required courses that cover strategies in
teaching specific subject areas and denote a specific subject area in the title of the course.

Undergraduate Teaching Major

For the purposes of this study undergraduate teaching major refers to a student enrolled at a college/university who is taking courses to satisfy the requirements for a Bachelor of Arts or a Bachelor of Science in Teaching degree.

Professional Education Core Courses

For the purposes of this study professional education core courses refer to the required courses/competencies identified by the State of Iowa, exclusive of content methods of teaching courses, required for the completion of a teaching degree.

Limitations

The findings of this study are subject to the following limitations:

1. The results are limited to the number of questionnaires returned by the contact persons in each college or university surveyed.

2. The results are limited to the extent that each contact person is knowledgable regarding the actual course
content being taught in teacher preparation classes across the individual college/university.

3. The results are applicable only to Iowa since only Iowa colleges and universities were surveyed concerning that state's requirements for licensure. Therefore, generalizations concerning this study should not be made to any other state.
Although very limited in scope, the importance of preparing classroom teachers to meet the needs of gifted and talented students does appear in the literature. Some of the references are general in character; that is, they refer to the individual needs of children and youth with differing potentials. Other references, particularly those combined by experts in the field of gifted education, directly address specific preservice preparation in the education of the gifted.

In order to organize these references according to specific issues for the teacher educator, the writer has categorized the sources under three major questions:

1. What preservice training in gifted education needs to be included in undergraduate teacher preparation programs?

2. What knowledge is needed to teach gifted students in the regular classroom?

3. Are there demonstrated differences between classroom teachers who are trained, and those who are not trained, to meet the needs of the gifted and talented?

To locate the related literature for this study, a search of the Educational Research Information Center (ERIC)
was conducted on the CD-ROM Silver-Platter system available at the University of Northern Iowa. Information was also obtained from various books/texts, from theses/master's research papers, and professional journals in the field of gifted education.

**What Preservice Training in Gifted Education Needs to Be Included in Undergraduate Teacher Preparation Programs?**

Even in school districts that have strong gifted education programs, gifted students still spend most of their time in the regular classroom. Thus, every teacher needs to be prepared to meet the needs of those students (Greenlaw, 1988; Milgram, 1979). It is the responsibility of education professionals to ensure that each student is receiving an education commensurate with his or her own ability.

Often, teachers have difficulty in designing their instructional practices to accommodate diversity among their students (Lyon, 1964). Parke (1991) stated that many teachers feel there are no gifted students in their school and do not realize that giftedness can be situationally specific—judged within the context of the environment. He also feels teachers need to understand the unique problems and needs of gifted students; they should not place them on pedestals for others to emulate. Furthermore, gifted
students need teachers who understand the costs and benefits of being exceptional. It is only with proper training that educators can achieve this.

The literature reinforces the acknowledgement that more training needs to be included in our teacher preparation programs. Professionals in gifted education agree that not only should instruction on the gifted be integrated into professional education core and content methods courses, but it should also be required as a separate class (Greenlaw, 1988; Milgram, 1979).

Greenlaw (1988) stated that teacher preparation institutions and colleges of education have a major influence on how gifted children are educated. He pointed out that professors can serve as catalysts for changing attitudes, developing understandings, and special strategies and programs for educating the gifted. However, he says, the college/university faculty must be prepared in gifted education themselves to ensure that they have the knowledge to share with the undergraduates in teacher preparation programs.

Rogers (1989) developed a model for the preparation of regular classroom teachers in the education of the gifted. She recommended that the suggested content be offered in a
separate course with 45 clock hours of contact time. The model includes the following content:

Knowledge & Understanding

1. Cognitive & affective differentiating characteristics of gifted learners
2. Education needs of GCT learners
3. Future studies
4. Creativity; creative thinking strategies
5. Specific instructional materials & curriculum already designed for basic content areas
6. Nature of giftedness, intelligence

Skills & Competencies

1. Instructional modification techniques
2. Instruction design strategies
3. Teaching strategy selection
4. High order questionning
5. Creative problem solving
6. Futuring
7. Group process
8. Parent conferencing

Rogers recommends that colleges and universities in each state collaborate to create effective gifted education training within the teacher preparation institutions.
What Knowledge is Needed to Teach Gifted Students in the Regular Classroom?

Literature in the field of gifted education seems to indicate that most beginning teachers have a lack of understanding and skills in dealing with the diversity of abilities and cultures within their classrooms (Feldhusen, 1991; Lyon, 1989; Wong, 1962). In a study completed by Pigge (1987), it was found that as undergraduate teacher education students went through their programming they were more concerned with survival skills of teaching--task and technique than about the major impact on pupils. In addition, Pigge stated that university and college instructors must be able to transmit to these undergraduate students how much of an impact they will have on their future students and how much they can affect the course of those students' lives. According to Pigge, teacher education should be much more than just how to get through the teaching day and get data assimilated. It should be about how to facilitate the development of each child to reach his or her full potential and become life-long learners.

Cutts and Mosely (1957) dispute the common conception that gifted students will succeed without special
programming or attention to their needs. Most never reach their full potential. Therefore, it is critical that all educators be trained to meet the needs of this special population of students as a part of their undergraduate teacher preparation program.

Rogers (1989) noted that the beginning teacher is typically given little time, once employed, to develop instructional materials for special needs students. Following is a list of the knowledge and skill competencies that she believes to be needed by beginning teachers to meet the needs of the gifted in the regular classroom:

1. Instructional modification techniques: This includes the development of strategies for differentiating curriculum to meet the needs of the diverse classroom population.

2. Instructional design strategies: This includes learning to present content in different sequence and assessing learning to meet the needs of various learning styles and abilities.

3. Teaching strategy selection: The teacher must know when to offer different styles of instruction to match individual needs and be given opportunities to practice those skills prior to graduation from the teacher preparation program.
4. Higher order questioning: Potential teachers need to be provided training and opportunities to practice those skills in the undergraduate teacher preparation program.

5. Creative problem solving: Teachers should have the ability to apply the process of creative problem-solving (Parnes, 1972).

6. Futuring: Teachers should have the ability to teach problem solving, trend analysis, and predictors of change.

7. Group process: The ability to structure the classroom to share resources and roles in learning situations is crucial in creating a positive learning environment for the gifted in the regular classroom.

8. Parent conferencing: Teachers need to know how to use parents for support and information regarding the gifted child.

According to many educators, potential teachers also need instruction in the nature of giftedness and intelligence. Wilson (1982) feels that teachers need to understand the affective needs of gifted students and how culture may not value those particular gifts or passions, and to learn how to recognize and guide those passions in a positive way. Furthermore, teacher education students should be provided opportunities to explore high quality current/new instructional materials before employment in
their first teaching position. Training in future studies is also considered important by Wilson (1982). Wong (1989) points out that diagnostic skills must be developed so teachers do not believe the myth that all gifted students are "perfect" scholars and will make themselves known. They also need to be able to recognize the various personality types of giftedness including the nonparticipatory student.

Are There Demonstrated Differences Between Classroom Teachers Who are Trained, and Those Who are Not Trained to Meet the Needs of the Gifted and Talented?

According to researchers, teachers who are trained and teachers who are not trained in education of the gifted demonstrate a substantial difference in the ways that they relate to their students. Teachers with training are more enthusiastic and supportive of each gifted child and gifted programs and also provide differentiated curriculum rather than just more content (Feldhusen, 1991; O'Shea, 1963; Shore, 1991; Sister Josephina, 1961; Wiener, 1960). It also has been found that teachers untrained in education of the gifted tend to be apathetic and even hostile toward gifted students (Hanninen, 1988; Jacobs, 1972). In addition, many researchers have found that untrained teachers are more apt to expect giftedness to manifest itself through high

The results of a study done by Gail Hanninen (1988) show the differences between the way teachers trained in gifted education related to their students as opposed to teachers who have not had any training. A summary of her findings follows:

**Trained Teacher**

a. Encourages students to develop a program to strengthen their abilities.
b. All children given time to pursue personal interest.
c. Interconnects curriculum.
d. Employs more techniques (mastery learning, acceleration, compacting, etc., to reduce boredom).
e. Goes farther in expectations creative, extending learning environment out of

**Untrained Teacher**

a. Teacher in charge of developing student's abilities.
b. Teacher just notes child interest as opposed to encouraging it.
c. Has the attitude that teachers should be sure each student spends time in all subjects.
d. Gives enough work -- more to reduce boredom in class.
professionals.
e. Expects academic success within the class.
f. Gives few recommendations.

e. More specific recommendations.

Hanninen's study seems to indicate that there is a substantial difference between teachers who are trained and those not trained in education of the gifted. Greenlaw (1988) states that the biggest hindrance to gifted education is lack of knowledge. It seems imperative, therefore, that beginning teachers receive effective training in their undergraduate teacher preparation programs.

Summary

The review of the literature indicates that there is a limited number of studies dealing with how and to what degree undergraduate teacher preparation programs meet the needs of gifted and talented children and youth. Also, little was found which suggests specific methods for preservice beginning classroom teachers in education of the gifted.

Second, the literature seems to demonstrate that teacher preparation programs need to instruct beginning classroom teachers regarding how to identify and accommodate the gifted child in their regular classroom. Such quality pre-service must include extensive instruction in content
related to education of gifted by college/university faculty that have also been prepared in education of the gifted.

Third, the literature points out that often students in teacher preparation programs lack understanding and skills in dealing with the diversity of abilities and cultures which will be represented in their future classrooms. If beginning teachers do not receive proper training in education of the gifted before being employed, it becomes very difficult for them to find time for inservice in the field of gifted education after entering employment. Meanwhile, gifted students needs may go unmet. Thus, future teachers need training which includes those competencies identified by Rogers: nature of giftedness, identification, affective skills, teaching strategies, and higher order questioning/thinking skill development.

Finally, the literature shows that there appears to be demonstrated differences between classroom teachers who are trained and those who are not trained to meet the needs of the gifted. These differences are reflected in teacher attitudes, as well as in their styles and strategies of teaching.
CHAPTER III

METHODOLOGY

The purpose of this study was to assess the methods through which the undergraduate teacher preparation programs in Iowa colleges/universities are meeting the Iowa Department of Education exceptional learner competency requirement as related to the education of the gifted and talented. This chapter includes a description of the population from which data were collected, an explanation of how the survey instrument was designed to obtain data, the time frame for collecting data, and what procedures were used to analyze the data.

Population

This study was conducted by obtaining information from designated contact persons for teacher preparation programs in each college or university in the State of Iowa as identified by the Iowa Department of Education directory. Although there were 30 separate colleges and universities, only 28 surveys were distributed since the organizational structure represented by one contact person was comprised of a consortium of three institutions under the supervision of one chairperson. Therefore, the finite population was
composed of 28 contact persons representing 30 colleges and universities. Appendix A contains a list of colleges and universities to which the surveys were sent.

Instrument

A survey was formulated to obtain data from the undergraduate teacher preparation institutions in the State of Iowa. A mail questionnaire format was used to allow respondents time to research their own departments/colleges for accurate answers regarding curriculum and course content. Obtaining initial data via telephone survey or personal interview would have been less efficient since accurate responses could not be made without personal research by each respondent. An initial telephone survey would also have been more expensive since frequently departmental chairpersons are difficult to contact in person.

The formulation of the questionnaire and collection of data took approximately seven months. The instrument was sent out in April, 1991, with the responses requested no later than May 8, 1991. Eighteen responses were received by the May 8th deadline. Telephone contact with those institutions not returning questionnaires was initiated during the summer months, but the researcher was unable to reach a single designated contact person. Therefore, a
second mailing was initiated in September, 1991, with a deadline date of October 31, 1991. In November a follow-up phone call was made to those not responding to the second mailing.

The survey questionnaire was composed of three sections that requested information about the courses and content offered by the individual institution. It was designed on legal-sized paper that could be folded to create its own mailing envelope and then refolded to become a return self-addressed and stamped mailing. A copy of the instrument is found in Appendix B. A sample of the follow-up letter mailed to institutional contact persons who had not responded by the initial deadline is included in Appendix C.

A brief introduction to the questionnaire was designed to include a reference to the state standard requiring undergraduate teacher education majors to complete course work or evidence of competency in teaching the exceptional learner including "preparation that contributes to the education of the handicapped and the gifted and talented" (Code 602.7). The purpose for inclusion of the state standard at this point was to clarify the standard and to focus the purpose of the survey for respondents. Contact persons were given directions to check single or multiple responses as appropriate. The choice among the possible
responses was based upon how the individual institutions met the requirement.

The first section of the questionnaire was composed of three parts. Section 1 inquired if the state requirement was partially or fully being met by offering a separate required undergraduate course in education of the gifted and talented. If this response was checked, the respondent was asked to name the title of the course and number of credit hours earned for the completion of such course. The second part of Section 1 requested identification of the subject content included in such a course if offered. Subject content topic areas identified were: identification/assessment, programming, differentiated curriculum, and counseling. A space was left to identify other topic inclusions.

Section 2 was designed to determine if teacher preparation institutions were partially or fully meeting the gifted and talented requirement through courses/experiences offered in the required professional education core, exclusive of content methods courses. Space was allowed to identify up to 10 separate course titles, as well as the corresponding number of clock hours devoted to instruction related to the education of the gifted and talented within the individual course. Identifying the number of clock
hours allowed the respondent to list all courses with gifted education content without making a determination as to the necessity of listing courses with a minimal coverage of content related to gifted and talented students.

Section 3 was designed to identify specific content methods classes that contained teaching strategies related to the instructional needs of gifted and talented students. As in Section 2, respondents were asked to identify a range of the approximate number of clock hours of instructional time given to meeting specific needs of gifted and talented students.

The purpose of the final section of the questionnaire was to offer the respondent an opportunity to make comments concerning issues/problems related to the state requirement in an unstructured format. Space was provided for a written response.

Data Collection

In April, 1991, the prestamped and self-addressed survey questionnaire was sent to the contact person representing each of the 30 Iowa colleges and universities that have teacher education programs. The requested return date was May 8, 1991, and, by that time, 18 (61%) completed surveys had been returned.
A follow-up mailing to non-respondents was initiated September 1, 1991, and resulted in four additional responses before the second deadline of October 31, 1991. The researcher subsequently obtained data from three institutions that did not return the questionnaire by making telephone contact in November, 1991. The questionnaire was read to the respondent and then the researcher noted responses on a survey form. These last three contacts brought the total number of responses to 23 (82%).

**Data Analysis**

In order to summarize the findings, the 23 questionnaire replies were hand tallied by the researcher and a frequency distribution of responses was determined. The researcher also charted how many institutions offered similar courses and the number of clock hours devoted to concerns relating to gifted and talented students in each course. Four tables were developed to assist in the organization and analysis of tallied data.

During the analysis process, the researcher determined that two institutions had listed three courses as professional core courses which, according to the descriptors provided by the Iowa Department of Education in its competency requirements, might be more appropriately designated as content methods courses. These courses were
moved to the content methods list. They included: Reading and Language Arts, Reading Diagnosis, and Teaching of Reading.
CHAPTER IV
FINDINGS OF THE STUDY

Introduction

The purpose of this study was to identify the methods through which the undergraduate teacher preparation programs in the State of Iowa are preparing beginning teachers to meet the needs of gifted and talented students as required by the Code of Iowa (602.7). To accomplish this assessment, a mail survey questionnaire was developed and sent to identified contact persons representing 30 Iowa colleges and universities that have teacher education programs. In one organizational structure, a single contact person represented a consortium of three institutions. The response from that institution represents programming in three undergraduate teacher preparation programs. Therefore, there were 28 possible responses representing 30 institutions. Twenty-three of the 28 questionnaires (82%) were returned and used in the data analysis. This chapter will summarize the findings of the returned data.

Required Course Offerings That Meet the State Requirement

The first section of the questionnaire was designed to determine if an institution required a separate course in education of the gifted and talented as well as what content was covered within that course. Not one of the respondents
indicated that a separate course in education of the gifted was required in his or her institution's undergraduate teaching preparation program.

Professional Core Courses That Include Content Related to Needs of Gifted and Talented Students

Section Two of the questionnaire sought to determine whether Iowa colleges/universities were partially or fully meeting the state requirement within their professional core components. Table One identifies the specific core courses, the number of institutions partially or fully meeting the state requirement by offering that course, and the approximate number of clock hours devoted to the education of the gifted and talented in that course. It is apparent from this data that the surveyed teacher preparation institutions are meeting the gifted and talented competency most frequently in required professional education core courses by offering an Exceptional Child component. This component includes courses identified by individual respondents as Exceptional Child, Exceptional Behaviors, Exceptional Persons, Special Learner, and Mainstreaming. All 23 respondents agreed that content specifically related to gifted education was covered within this component.
Table 1  
**Designated Required Professional Education Core Courses**

**Partially or Fully Meeting the Exceptional Learner (Gifted and Talented) Competency Requirement for Iowa Teacher Licensure**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>No. of Institutions Offering Each Course (n=23)</th>
<th>Range of Clock Hours Devoted to Gifted Education (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceptional Child Component</td>
<td>23 (100%)</td>
<td>6 12 2 3</td>
</tr>
<tr>
<td>Educational Psych.</td>
<td>4 (17%)</td>
<td>2 2 0 0</td>
</tr>
<tr>
<td>Intro. to Teaching</td>
<td>2 (8%)</td>
<td>0 2 0 0</td>
</tr>
<tr>
<td>Student Teaching</td>
<td>1 (4%)</td>
<td>0 1 0 0</td>
</tr>
<tr>
<td>Prin. of Elem. &amp; Secondary Ed.</td>
<td>1 (4%)</td>
<td>0 1 0 0</td>
</tr>
<tr>
<td>Curriculum I</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>Curriculum II</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>Instruc. Strategies</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
</tbody>
</table>

Note: The following course titles were listed as courses under the Exceptional Child Component: Exceptional Behaviors, Exceptional Persons, Special Learner, Mainstreaming.

The amount of emphasis placed on giftedness within the Exceptional Child Component ranged from one clock hour to twelve clock hours. Six respondents (26%) reported between
1 and 3 clock hours of instruction in gifted education. Twelve respondents (52%) stated that from 4 to 8 clock hours of instruction were related to meeting the needs of the gifted and talented. Two respondents (9%) estimated 9 to 11 clock hours of content emphasis. Three respondents (13%) reported over 12 clock hours of instruction related to the gifted and talented.

Contact persons from four teacher preparation institutions (17%) responded that content specifically related to gifted and talented students was being covered in an educational psychology course. Two of those respondents (8%) indicated that from 1 to 3 clock hours were dedicated to content concerning gifted and talented. The other two respondents (9%) estimated that from 4 to 8 clock hours of instruction were dedicated to gifted education.

One respondent (4%) listed Curriculum I, Curriculum II, and Instructional Strategies as the professional education core courses by which the state requirement was being partially or fully met. Student teaching was identified by one responding institution (4%) as partially meeting the gifted and talented competency. That respondent reported from 4 to 8 clock hours of instruction on content related to gifted and talented.
One respondent (4%) listed Principles of Elementary and Secondary Education as a professional core course partially meeting the gifted and talented competency. Four to eight clock hours of instruction were reported as containing content related to gifted education.

The final professional education core course identified by responding institutions was Introduction to Teaching. Two respondents (9%) listed this course and estimated from 4 to 8 clock hours of content related to the education of the gifted and talented.

**Content Methods Courses That Include Instruction Related to Meeting the Needs of Gifted and Talented Students**

Table 2 presents those content methods courses which respondents listed as partially or fully meeting the undergraduate teacher preparation competency as required by the state. Twelve separate course titles were identified.

When examining the table, it should be noted that two respondents listed course titles under "Professional Education Core Courses" that the researcher determined would be more accurately listed under "Content Methods Courses."

These three courses were: Reading and Language Arts, Reading Diagnosis, and Teaching of Reading.
Table 2
Designated Content Methods Courses Partially Meeting the Exceptional Learner (Gifted and Talented) Competency Requirement for Iowa Teacher Licensure

<table>
<thead>
<tr>
<th>Course Title</th>
<th>No. of Institutions Offering Each Course</th>
<th>Range of Clock Hours Concerning G/T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=23)</td>
<td>1-3</td>
</tr>
<tr>
<td>*Tchg. Reading</td>
<td>6 (26%)</td>
<td>3 2 0 1</td>
</tr>
<tr>
<td>Tchg. Math</td>
<td>5 (22%)</td>
<td>3 2 0 0</td>
</tr>
<tr>
<td>*Read. &amp; Lang. Arts</td>
<td>4 (17%)</td>
<td>3 1 0 0</td>
</tr>
<tr>
<td>Tchg. Soc. Studies</td>
<td>4 (17%)</td>
<td>3 1 0 0</td>
</tr>
<tr>
<td>Tchg. Science</td>
<td>4 (17%)</td>
<td>3 1 0 0</td>
</tr>
<tr>
<td>*Reading Diagnosis</td>
<td>1 (4%)</td>
<td>0 0 0 1</td>
</tr>
<tr>
<td>Child. &amp; Adol. Lit</td>
<td>1 (4%)</td>
<td>0 1 0 0</td>
</tr>
<tr>
<td>Inst. Methods-Sec.</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>Tchg. Speech</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>Tchg. Art</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>Tchg. Mod. Lang.</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>Tchg. Technology</td>
<td>1 (4%)</td>
<td>1 0 0 0</td>
</tr>
</tbody>
</table>

* Notes: These are courses listed by some institutions under the professional core category but transferred to the content methods category.

The determination to list those courses under the content methods component was made after consulting the Iowa Guide for Teacher Certification (1988) and determining that, for
purposes of this study, any course with specific subject content in its title should be identified as a content methods course.

Although 12 course titles were listed, the researcher noted that four of them were reported by one respondent and thus representative of but one institution. They were as follows: Teaching of Speech, Teaching of Art, Teaching Modern Language, and Teaching Technology.

The course most frequently identified was Teaching of Reading with 6 responses (26%). Three respondents estimated classroom instruction time of from 1 to 3 clock hours, and two other respondents listed from 4 to 8 clock hours of instruction as being related to gifted and talented in Teaching of Reading.

Five respondents (22%) listed Teaching of Mathematics as a course containing content related to the education of gifted and talented students. Three of those respondents estimated a range of from 1 to 3 clock hours of instruction in gifted and talented. The other two respondents estimated from 4 to 8 clock hours of instruction related to gifted and talented.

Four respondents (17%) identified Reading and Language Arts as providing content related to gifted and talented.
Three of the four respondents approximated that from 1 to 3 clock hours of instructional time was spent on content related to gifted and talented. The other respondent indicated a range of from 4 to 8 clock hours of content related to gifted and talented.

Teaching of Social Studies was listed by four (17%) respondents as including content related to education of gifted and talented. Three of those respondents indicated from 1 to 3 clock hours of instruction on education of the gifted and talented. One reported a range of from 4 to 8 clock hours of content related to gifted and talented.

Four respondents (17%) also listed Teaching of Science as a content methods course that contained instruction related to education of gifted and talented. Three of those respondents reported a range of from 1 to 3 clock hours of instruction in gifted and talented. The fourth respondent reported a range of from 4 to 8 clock hours of content related to the gifted and talented.

Each of the seven remaining courses (Reading Diagnosis, Children's and Adolescent Literature, Instructional Methods-Secondary, Teaching of Speech, Teaching of Art, Teaching of Modern Languages, and Teaching of Technology) were reported by a single institution. Children's and Adolescent Literature was identified as a course which devoted a range
of from 4 to 8 hours of emphasis on concerns of gifted students. Twelve or more hours of emphasis were placed on gifted education in the course titled Reading Diagnosis. The remaining courses (Instructional Methods-Secondary, Teaching of Speech, Teaching of Art, Teaching of Modern Language, and Teaching of Technology) were reported as devoting from 1 to 3 clock hours of instructional time to educational strategies related to gifted and talented students.

Institutions Satisfying the State Requirement with a Combination of Undergraduate Professional Education Core Courses and Content Methods Courses

The primary purpose of Table 3 was to consolidate data to discover which institutions satisfy the state requirement with a combination of undergraduate professional education core courses and content methods courses. In addition, it provided means for providing a total picture of the various methods used by institutions to meet the competency requirement.

If we examine Table 3 by individual institution, we discover the following information:

1. Not one respondent indicated that a separate course is required in education of the gifted and talented.
Table 3
Methods Through Which Individual Institutions Are Meeting the State Requirement of Competency in Education of the Gifted and Talented.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Required Course in Gifted Ed.</th>
<th>Professional Education Core Courses</th>
<th>Content Methods Courses</th>
<th>Comb. of Core Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
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<tr>
<td>5</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
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<tr>
<td>11</td>
<td>0</td>
<td>X</td>
<td>0</td>
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<tr>
<td>12</td>
<td>0</td>
<td>X</td>
<td>0</td>
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<tr>
<td>13</td>
<td>0</td>
<td>X</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>15</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>16</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>17</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>18</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>19</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>20</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>21</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>22</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>23</td>
<td>0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>0</strong></td>
<td><strong>23</strong></td>
<td><strong>9</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

Note: X=Course(s) offered  O=No Course(s) offered
2. Every respondent is partially or fully meeting the requirement through courses offered in the professional education core.

3. Not one responding institution is meeting the state requirement solely through content methods courses.

4. Nine (39%) responding institutions reported that the state requirement is met by offering a combination of courses in the professional education core and one or more content methods courses.

A further breakdown of courses identified as part of the professional education core revealed that nine (39%) of the respondents indicated that the state requirement is fully met by a single professional core course: the Exceptional Learner component. A summary of this information is to be found in Table 4.

In conclusion, the analysis of the data collected from this study presents pertinent information concerning the methods through which undergraduate teacher preparation programs are preparing beginning teachers to meet the needs of gifted and talented children.

First of all, a separate course in education of the gifted and talented is not required in any of the surveyed Iowa colleges and universities.
Table 4
Method Through Which Respondents are Meeting the State of Iowa Requirement of Competency in Education of the Gifted and Talented.

<table>
<thead>
<tr>
<th>Findings</th>
<th>No. of Responses (n=23)</th>
<th>Responses: percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A separate undergraduate course in education of the gifted &amp; talented is required.</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Undergraduate core professional education courses partially or fully meet the state requirement.</td>
<td>23</td>
<td>100%</td>
</tr>
<tr>
<td>Curriculum in content methods classes partially meet the state requirement.</td>
<td>9</td>
<td>39%</td>
</tr>
<tr>
<td>State requirement being met in combination of methods &amp; core courses</td>
<td>9</td>
<td>39%</td>
</tr>
<tr>
<td>State requirement being met fully by the Exceptional Learner Component.</td>
<td>9</td>
<td>39%</td>
</tr>
</tbody>
</table>

Second, surveyed institutions are partially meeting the gifted education competency most frequently by offering the Exceptional Learner component. Nine institutions use this component as a means of fully meeting the competency.
Third, 9 responding institutions offer some instruction within various content methods courses which relate to education of the gifted and partially meet the state requirement. Fourth, 9 responding institutions are meeting the requirement through a combination of undergraduate professional education core courses and content methods courses. Finally, Tables 1 and 2 reveal that, with the exception of the Exceptional Learner component, a majority of the responding institutions reported that the approximate clock hours of classroom instruction devoted to gifted and talented in the various identified courses lay within the 1 to 3 hour range.

The final section of the questionnaire offered space for respondents to make comments concerning issues/problems related to the state requirement. Not one provided a written response in that area.
CHAPTER V
SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS FOR FUTURE RESEARCH

Summary

This study was undertaken to determine the methods through which teacher preparation programs in Iowa colleges and universities are meeting the competency requirement as related to the education of the gifted and talented set forth by the State of Iowa (Code 670--70.19). A mail questionnaire was developed to survey individuals designated by the State of Iowa as contact persons representing each Iowa teacher preparation institution. Although there were 30 separate colleges and universities, only 28 surveys were distributed since the organizational structure represented by one contact person was comprised of a consortium of three institutions under the supervision of one chairperson. Therefore, the finite population was composed of 28 contact persons representing 30 colleges and universities.

The questionnaire requested a listing of each course offered or required in the institution's undergraduate teacher preparation program that contained content which partially or fully met the state requirement of competency.
in education of the gifted. Respondents listed any courses that include content related to education of the gifted in one of three sections of the questionnaire:

1. A separate undergraduate course in education of the gifted and talented is required.
2. The state requirement is met as part of undergraduate courses in the required professional education core.
3. The state requirement is met within content methods courses.

The amount of emphasis placed on gifted education in each of the identified courses was determined by requesting the respondent to indicate the range of clock hours spent on content related to the gifted in each course. The questionnaire replies were hand tallied by the researcher and a frequency distribution of responses was determined. Four tables were developed to assist the organization, initiate an analysis of data, and generate findings. The findings of the study may be summarized as follows:

1. A separate course in education of the gifted and talented is not required in any of the surveyed Iowa colleges and universities.
2. Surveyed institutions are partially or fully meeting the gifted education competency most frequently by offering the Exceptional Learner Component.

3. Nine institutions offer some instruction within content methods courses which relate to education of the gifted to partially meet the state requirement.

4. Nine institutions are meeting the state requirement through a combination of professional core courses and content methods courses.

5. A majority of the responding institutions reported that the approximate clock hours of classroom instruction devoted to gifted and talented in the various identified courses lay within the 1 to 3 hour range.

Conclusions

The findings of this study seem to point to a conclusion that Iowa teacher preparation programs are meeting only the minimum gifted and talented competency requirements as required by the State of Iowa. This is made somewhat apparent by the fact that there is no institution requiring a specific course offering in education of the gifted. Rather, the competency is being met by the inclusion of a component/section on gifted education within another course or courses.
Furthermore, an examination of the approximate amount of time spent on gifted education in the identified courses tends to confirm a lack of emphasis on the gifted and talented competency requirement. For example, with the exception of the Exceptional Child component, a majority of the responding institutions reported the amount of classroom instruction to be within the 1 to 3 clock hour range. It should also be pointed out that the survey questionnaire did not enable one to discern how many of the institutions were identifying 1 clock hour, 2 clock hours, or 3 clock hours of instruction. Thus, the question arises as to whether such a perceived marginal emphasis is successfully preparing the beginning teacher to meet the needs of this exceptional group of children and youth.

A second conclusion that may be drawn from the study is that, with the exception of the Exceptional Learner component, there seems to be little consensus among institutions as to how the gifted and talented competency is to be met, nor does there seem to be an organized attempt at infusion.

A third conclusion is that the requirement as stated in the Code of Iowa may be an indirect cause of the relatively small emphasis being placed on education of the gifted. Grouping the gifted and talented competency with the
Exceptional Learner component may pressure some teacher preparation institutions to include only the minimum information regarding all types of special learners, rather than providing a thorough knowledge base concerning each type of exceptional learner.

**Recommendations**

As a result of this study, the researcher has developed three recommendations related to the preparation of beginning teachers to meet the needs of the gifted and talented:

1. A separate required course in education of the gifted needs to be developed for undergraduate teaching majors. From the findings of this study, it is evident that undergraduate teaching majors in the State of Iowa are provided with minimal awareness of the needs of the gifted and talented. Such a required course would ensure that each beginning teacher would receive adequate preparation in this field of learning. Without this required class, teaching majors are limited to a skeletal knowledge of gifted education unless student program schedules provide opportunities for elective options.

2. If the required knowledge base in gifted education for pre-service teachers is to be infused into the total teacher preparation curriculum, that infusion must be
carefully organized and evidenced. For example, specific objectives/learner outcomes related to education of the gifted should be listed in course syllabi.

3. University and college faculty need professional development on issues related to giftedness. They need to have preparation which will increase their awareness of the needs of the gifted and talented and the importance of providing future teachers to meet those needs. After all, a great majority of these gifted and talented children will become the college/university students of the future.

Implications for Further Research

The information derived from this survey presents many avenues of related research which could be initiated. Some suggestions follow:

1. Implement a follow-up of this study in three to five years to ascertain what, if any, changes have been made in teacher preparation programs of Iowa colleges and universities to prepare their graduates to meet the needs of the gifted and talented.

2. Replicate this study on a national basis to ascertain the extent of training received by undergraduate teaching majors in preparing them to meet the needs of the gifted and talented.
3. Implement a statewide survey of graduates of teacher preparation institutions to discern their perceptions concerning the quality of preparation received in meeting the needs of the gifted and talented in the "real world" of the classroom.
REFERENCES


Appendices
Appendix A

Iowa Colleges and Universities Contacted
Briar Cliff College
3303 Rebecca Street
Sioux City, IA  51104

Buena Vista College
610 West Fourth Street
Storm Lake, IA  50588

Central College
812 University
Pella, IA  50219

Clarke College
1550 Clarke Drive
Dubuque, IA  52001

Coe College
1220 First Avenue NE
Cedar Rapids, IA  52402

Cornell College
Mount Vernon, IA  52314

Dordt College
498 Fourth Avenue NE
Sioux Center, IA  51250

Drake University
25th and University
Des Moines, IA  50311

Dubuque Tri-College DOE
2000 University Avenue
Dubuque, IA  52001

Faith Baptist Bible College
1900 NW Fourth Street
Ankeny, IA  50021

Graceland College
Lamoni, IA  50140

Grand View College
1200 Grandview Avenue
Des Moines, IA  50316

Grinnell College
Park Street
Grinnell, IA  50112-0806

Iowa State University
E105 Lagomarcino Hall
Ames, IA  50011

Iowa Wesleyan College
601 North Main Street
Mount Pleasant, IA  52641

Loras College
1450 Alta Vista
Dubuque, IA  52001

Luther College
700 College Drive
Decorah, IA  52101

Maharishi International University
Fairfield, IA  52556

Morningside College
1501 Morningside Avenue
Sioux City, IA  51006-1751

Mount Mercy College
1330 Elmhurst Drive NE
Cedar Rapids, IA  52402

Northwestern College
101 Seventh Street SW
Orange City, IA  51041
Saint Ambrose University
518 West Locust Street
Davenport, IA  52803

Simpson College
Indianola, IA  50125

Teikyo Marycrest University
1607 West 12th Street
Davenport, IA  52804

Teikyo Westmar University
1002 3rd Avenue SE
LeMars, IA  51031

University of Dubuque
2050 University Avenue
Dubuque, IA  52001

University of Iowa
N310 Lindquist Center
Iowa City, IA  52242

University of Northern Iowa
159A Schindler Education Center
Cedar Falls, IA  50614

Upper Iowa University
Fayette, IA  52142

Wartburg College
222 9th Street NW, Box 1003
Waverly, IA  50677

William Penn College
Trueblood Avenue
Oskaloosa, IA  52577
Appendix B

Questionnaire
Standards require that an undergraduate teacher education major complete coursework or evidence of competency in teaching the exceptional learner including "preparation that contributes to the education of the handicapped and the gifted and talented." How does your program meet the Gifted and Talented requirement? CHECK THE APPROPRIATE RESPONSE(S).

1. A separate undergraduate course in education of the gifted and talented is required. IF YOU HAVE CHECKED THIS ITEM, PROVIDE THE FOLLOWING INFORMATION:

   Title of Course
   Credit Hours

   What content concerning the field of gifted and talented education is covered in the required course? CHECK THE APPROPRIATE CONTENT.
   a. Identification/assessment
   b. Programming
   c. Differentiated curriculum
   d. Counseling
   e. Other (Please list) ____________

2. The requirement is met as part of undergraduate courses in the required professional education core. NOTE: DO NOT INCLUDE METHODS COURSES.

   Title of Course
   Circle the Approximate Number of Clock Hours Devoted To Instruction Concerning Gifted & Talented
   a. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   b. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   c. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   d. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   e. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   f. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   g. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   h. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   i. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   j. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more

3. The requirement is met by specifically addressing the needs of gifted and talented in methods courses. IF YOU HAVE CHECKED THIS ITEM, PLEASE PROVIDE THE FOLLOWING INFORMATION;

   Title of Course
   Circle the Approximate Number of Clock Hours Devoted To Instruction Concerning Gifted & Talented
   a. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   b. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   c. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   d. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more
   e. ___________________________ 1 2 3 4 5 6 7 8 9 10 11 12 or more

Please use this space for any additional comments concerning issues/problems related to this requirement:

Information gathered from this study will provide information about diverse ways in which the Gifted and Talented Standard is met in pre-service teacher education programs in Iowa. Information and comments will be kept confidential. If you wish to receive a copy of the survey results, please check. ☐
Appendix C

Follow-up Letter
Dear Department of Education Chairperson,

Last May you were asked to participate in a survey which identified how colleges and universities are preparing students in their teacher preparation programs to meet the needs of gifted students. Unfortunately, I have not received a response from all institutions including your own. I would appreciate your taking the time to complete the enclosed questionnaire. A high proportion of responses will enable me to draw meaningful conclusions concerning how our teacher education programs are preparing teachers in this specific area.

As noted on the questionnaire, all responses will be kept confidential. Thank you for your cooperation.

Sincerely,

Judy C. Davison
M.A.E. Candidate,
Education of the Gifted,
Un. of Northern Iowa

Enclosure