A comparison of learning styles between alternative and traditional educators in the state of Iowa

Rebecca Lynn Rosenquist

Iowa State University

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UMI®
A comparison of learning styles between alternative and traditional educators
in the state of Iowa

by

Rebecca Lynn Rosenquist

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Education (Educational Administration)
Major Professor: Richard P. Manatt

Iowa State University
Ames, Iowa
2000
Graduate College
Iowa State University

This is to certify that the doctoral dissertation of

Rebecca Lynn Rosenquist

has met the dissertation requirements of Iowa State University

Signature was redacted for privacy.

Major Professor

Signature was redacted for privacy.

For the Major Program

Signature was redacted for privacy.

For the Graduate College
To His glory not mine.

That I might learn to take care of those He has entrusted to me, especially Ryan and Reese.
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It's a lot harder to help kids redirect their lives in a positive manner. But that's what those who work in successful alternative schools do.

It's not easy.

It never will be.

(John Kellmayer, 1998)
CHAPTER I. INTRODUCTION

The National Dropout Prevention Center estimates that each year approximately one million students in the United States drop out of school. This is roughly one out of every four students or 25 percent of our K–12 student population. However, this percentage of dropouts alarmingly increases to 50 percent in many large cities where high numbers of at-risk students attend school (Barber & McClellan, 1987; Conant, 1992; Gall, Borg, & Gall, 1996; Gaustad, 1991; Kellmayer, 1998; Larrivee & Bourke, 1990). The Iowa Department of Employment Services determined that by 1990 approximately 20 percent of Iowa’s workforce had not graduated from high school and 14 percent of all ninth graders would not graduate four years later (Wilcynski, 1991).

Students who are not able to finish high school are 60 percent more likely to live in poverty as an adult (Spinner, 1992). This costs our nation approximately 240 billion dollars annually in lost earnings, foregone taxes, welfare, and incarceration (Donmoyer & Kos, 1993). Kellmayer (1998) states,

The American workforce is running out of qualified people. If current demographic and economic trends continue, American business will have to hire a million new workers a year who can’t read, write, or count. (p. 28)

Eighty percent of America’s one million convicts are high school dropouts and it is estimated to cost our society $20,000 per year to incarcerate one inmate (Conant, 1992).

According to these authors, this societal epidemic is only getting worse, and traditional methods of academic instruction are no longer working. There is a pressing need to investigate how educational systems can influence students to stay in school.

In one study conducted by Intercultural Development Research Associates, it is estimated the societal costs associated with students who drop out of school run into the billions, and for
every taxpayer dollar used for dropout prevention, nine dollars in potential tax revenues would be
gained (Wehlage, 1991). Table 1 is a summary of research on the costs of dropping out of school.

It is estimated that students who drop out of high school sustain over a lifetime a personal
income loss of about $350,000. They are also more likely to be unemployed, incarcerated, or
believe they do not control their own destiny as compared to high school graduates.

Table 1. A summary of research on costs of dropping out of school

<table>
<thead>
<tr>
<th>Researcher and year</th>
<th>Findings on high school dropouts</th>
</tr>
</thead>
<tbody>
<tr>
<td>McDill, Natriello, &amp; Pallas, 1987; Veale, 1990</td>
<td>Loss of $170,000 to $340,000 in personal income over a lifetime.</td>
</tr>
<tr>
<td>Veale, 1990</td>
<td>Loss of state revenue due to decreased tax payments because of lower wages. The loss is approximately 2.5 times what it would cost the state to educate students to the point of graduation.</td>
</tr>
<tr>
<td>U.S. Bureau of Census, 1989</td>
<td>The unemployment rate of dropouts is approximately double that of graduates resulting in increased welfare costs.</td>
</tr>
<tr>
<td>Veale, 1990</td>
<td>Dropping out increases the chances of incarceration three to nine times depending on the magnitude of dropping out and interaction with other social factors. Cost of incarceration is at least three times that of educating a student for a given year.</td>
</tr>
<tr>
<td>Veale, 1990</td>
<td>Projected external locus of control—feelings that things happen to them controlling their destiny (this affects all aspects of productive citizenship).</td>
</tr>
</tbody>
</table>
Goals 2000: Educate America Act, published by the Bush administration to outline the vision for schools in the new millennium, sets a standard of 90 percent national high school graduation rate by the year 2000. But since those goals were developed, dropout rates have not decreased to 10 percent, and students are becoming less prepared to be productive citizens (Davis, 1993; Donmoyer & Kos, 1993; Gall, Borg, & Gall, 1996; Kellmayer, 1998; Roderick, 1993). There are many reasons students drop out of school; however, two notable reasons are poor student-teacher relationships and a lack of effective communication (Kratzert & Kratzert, 1989; Wehlage, 1983).

Alarmingly, in conjunction with high dropout rates is the projection of a pronounced shortage of qualified teachers in the United States (Boe, 1996; "Capitol Report," 1998). There is also a decline in the number of college students entering the teaching profession which has precipitated an inadequate supply of qualified teachers (Haggstrom, Darling-Hammond, & Grissmer, 1988). These shortages are projected to be especially pronounced in large urban districts that serve high numbers of at-risk youth. Currently 25 percent of "central city schools had vacancies they could not fill with a qualified teacher" (Eubanks, 1996, p. i). In the state of Iowa there is a looming "critical shortage of teachers," as nearly one-third of all teachers will be eligible to retire within the next five years, and one-half of all teachers within the next 10 years (Coleman, Jischke, & Koob, 1998, p. 7A; Roos, 1998, p. 4M). It is imperative that schools

...adopt new and more effective strategies to recruit, select/hire, and induct its teacher workforce. Without improved teacher recruitment and development practices, this nation will fail to build qualified, diverse, and culturally sensitive teacher workforce that today's and tomorrow's classrooms demand. (Eubanks, 1996, p. i)

The United States is facing a critical juncture in education as more and more students are dropping out of school, fewer people are choosing to enter the teaching profession, and large numbers of seasoned teachers are now retiring.
The Students

The student population in this country has dramatically changed. Approximately 20 percent of middle schools and high schools in the United States reported at least one serious crime a year, and the last few years have been deadly with school violence. There have been at least three nationally reported incidents of student rampages of murder on school property. Children are increasingly being killed in their own schools and parents are increasingly worried about school safety (Cannon, 1999; Sanchez, 1998, p. 1AA). Schools located in cities and/or schools with high numbers of minority students were at least twice as likely to experience serious crime as compared to rural schools with low numbers of minority students ("Serious crime," 1998), and according to a USA Today analysis, rural juvenile homicide rates rose 56.5 percent between 1990 and 1996 (Blank, Vest, & Parker, 1998).

Combined with increasing rural and urban juvenile crime, there is also an "ever increasing percentage of students who are hard to teach" (Christensen, 1997, p. 138). Many students find school to be a daily frustration and are unable to learn. They are labeled academic failures (Keefe, 1988). Kellmayer (1998) believes alternative schools are seen as a possible solution to this problem.

In the vernacular of educators many students are now labeled "at-risk." The term "at-risk" refers to those students who are not succeeding in a traditional school for any reason, possibly experiencing academic, behavioral, or personal problems (DeHart, 1996; Dryfoos, 1997; Romanik & Blazer, 1990; Wright, 1996; Zinser, 1996). In 1983, A Nation At Risk: The Imperative for Educational Reform popularized the term "at-risk" for identifying students who were not succeeding in traditional schools.

Some educators, however, had been working with at-risk students for quite some time. By the 1960s, alternative schools were formally in place and by the 1970s were given their own
separate guidelines for accreditation by the North Central Association of Colleges (DeHart, 1996).

The number of students facing serious life crises is rising dramatically (Dunn & Griggs, 1995; Irmsher, 1997). This problem is compounded by a growing number of adolescents who do not know how to handle the stresses of life non-violently (Lewin, 1998). Learning cannot take place when students' basic needs of food, shelter, safety, love, affection, and esteem have not been met (Baker, 1994; Maslow, 1954).

Dryfoos (1990) summarized current findings about adolescents and estimated that one-third of 14- to 17-year-olds should be labeled highly at-risk for exhibiting the following behaviors:

- use of drugs or alcohol,
- sexual activity,
- violence or have been adjudicated,
- truancy from school,
- behind in grade level,
- depression or suicidal tendencies.

At-risk students have often experienced one or more of the following life circumstances: abuse/neglect, divorce, gang activity, personal or family substance abuse, or teen pregnancy/parenting (Baker, 1994). Table 2 outlines identified factors of at-risk populations. Although the table was created in 1987, it clearly summarizes the present condition of at-riskedness.

At-risk students in traditional schools may need an alternative education to complete their high school diploma if they are unwilling or unable to cope with the structure and expectations of the traditional school. Alternative education is represented by alternative schools or programs. Alternative programs are facilitated within the traditional school building and its overriding rules and expectations. Students are separated from the rest of the student body for all or part of the
Table 2. Definition of at-risk populations

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Those with limited English proficiency</td>
</tr>
<tr>
<td>2. Underachievers</td>
</tr>
<tr>
<td>3. The intellectually limited</td>
</tr>
<tr>
<td>4. The economically disadvantaged</td>
</tr>
<tr>
<td>5. The malnourished</td>
</tr>
<tr>
<td>6. Substance abusers</td>
</tr>
<tr>
<td>7. Dropouts and potential dropouts</td>
</tr>
<tr>
<td>8. Those retained for one or more years</td>
</tr>
<tr>
<td>9. Pregnant teens or teens with children</td>
</tr>
<tr>
<td>10. Those from unstable homes</td>
</tr>
<tr>
<td>11. The abused and neglected</td>
</tr>
<tr>
<td>12. The psychologically impaired</td>
</tr>
<tr>
<td>13. Those who threaten or attempt suicide</td>
</tr>
<tr>
<td>14. Juvenile delinquents</td>
</tr>
<tr>
<td>15. The &quot;silent ones&quot;</td>
</tr>
</tbody>
</table>

Social/Behavioral indicators of at-risk students

| 1. Low motivation |
| 2. Aggression |
| 3. Social withdrawal |
| 4. Substance abuse |
| 5. Early or promiscuous sex |
| 6. Hijacking, fighting, or vandalism |
| 7. Deviant behavior |
| 8. Police record |

Psychological indicators of at-risk students

| 1. Long-term depression |
| 2. High anxiety |
| 3. Eating disorders |
| 4. Alienation from the mainstream |
| 5. Exhaustion |
| 6. Poor self-concept |

*Source: Koki, 1987, pp. 3–4.*
Table 2. Continued

<table>
<thead>
<tr>
<th>Academic at-risk factors</th>
</tr>
</thead>
</table>

1. Poor school attendance  
2. Expulsion or suspension  
3. Apathy toward or fear of conventional instruction  
4. Inattentiveness or lack of concentration  
5. Low standardized test scores  
6. Non-certifiable learning problems
school day, but they still identify with the traditional school curriculum and climate. Alternative schools are separate from the traditional school in location, philosophy, discipline, and curriculum content and/or delivery. This is a separate high school with its own identity (Morley, 1991).

In the state of Iowa, there has been tremendous growth in alternative education. In 1980 there were just over 40 secondary alternative schools and programs in the state. In 1990 this total increased to just over 90, and as of 1999 there were 88 schools and 199 programs in the state, for a total of 287 secondary school education alternatives (McNabb & Kaufmann, 1997; Morley, 1999).

There is a tremendous need for alternative schools as more and more students are experiencing difficulty with personal and thus educational functioning. This is clearly evidenced with increasing student violence. The United States leads the developed world in youth violence (Haynes & Chalker, 1999).

In the state of Iowa, the student expulsion rate for weapons violations increased almost 100 percent between the 1995–96 and 1996–97 school years. Education officials state this may be due to better reporting of such incidents; however, Ed Nahas, a juvenile court officer for Polk County, Iowa, believes adolescents are becoming more aggressive (O'Donnell & Pins, 1998).

Adolescents are also using marijuana at an increased rate. Since 1993, use by high school juniors and seniors has increased from 29 to 48 percent ("On Drugs?", 1998). Rommel (1992) believes many causes of at-risk behavior lie within the students and their life outside of school. However, some at-risk behavior can be directly influenced or controlled by schools and the teachers who interact with these students.

There is a charisma to the classroom of the effective teacher that is noticeable, but difficult, if not impossible, to articulate. There must be ongoing research that will produce the results by which educators and administrators can more clearly define the teachers who will produce the
maximum effect toward advancing these students to productivity in their adult lives. (p. 188)

As the numbers of students exhibiting at-risk behaviors increase, schools, especially teachers, must adapt to successfully educate the future generation. Alternative schools are one answer to this problem. Students who drop out of a traditional school can re-enroll in an alternative school for a second chance. In the state of Iowa approximately 8,500 students have graduated from alternative schools in the last 30 years (Reisinger, 1999). These students very probably would not have returned to the traditional high school. By this measure alternative schools in the state of Iowa are very successful.

Statement of the Problem

Alternative programs in the state of Iowa are being created in school districts at a rapid rate (McNabb & Kaufman, 1997; Morley, 1999). This trend is due in part to compliance with state legislation mandating that each school district will provide an alternative educational program for at-risk students. It is also due to the increasing numbers of at-risk youth who are dropping out of traditional schools, and who are not functioning socially, behaviorally, or academically in appropriate ways in the traditional school setting (Alternative options, 1995; Morley, 1999).

These two influences, combined with fewer numbers of eligible teachers to fill upcoming vacancies, places school districts across the state of Iowa at a disadvantage in identifying suitable teachers to hire or to transfer into the numerous emerging alternative programs. There is a pressing need to find educators and potential educators who are willing and able to work with at-risk youth successfully. Alternative educators are successful with at-risk youth as documented by the number of former high school dropouts who are now high school graduates. But who are alternative educators, and what makes them different from educators who work in traditional
schools? How can schools identify, let alone foster, educators who are able to work with very
difficult students? The problem of this investigation is to determine the learning style of
alternative educators and create a demographic profile of this growing subset of educators.

Objectives of the Study

The purpose of this study was to use the information about alternative educators to help
schools determine who would be best suited to work with the growing number of at-risk students
in the state of Iowa. Who are these educators, what are they like, and how do they process
information? Why are they successful with at-risk students when other educators, who are
successful with traditional school students, fail? What is the difference? To narrow this vast
inquiry, this research focused on learning—how the teachers learn, and thus how they
predominantly teach and interact with at-risk students. Specific purposes of the study were to:

1. Identify learning styles of alternative educators and distinguish differences in learning
   style as compared to traditional educators.
2. Determine if there was a learning style profile of alternative educators in the literature
   and see if it accurately described practicing alternative educators.
3. Determine if there was a learning style that was more likely to be found in educators
   who prefer to work in alternative schools or programs and stay in alternative schools or
   programs for over five years.
4. Obtain demographic information about alternative educators.

To gather the aforementioned information, the following tasks were completed:

1. Conducted a thorough review of the literature identifying the need for alternative
   programs, the success of alternative programs, and a profile of alternative educators
   including learning styles of alternative educators.
2. Developed a teacher survey to identify demographic information on the research volunteers.

3. Received permission from the Iowa Association of Alternative Education (IAAE) to test volunteers at its state conference just prior to the annual business meeting.

4. Requested volunteers from the 1998-99 membership of the IAAE to complete the Gregorc Style Delineator and a demographic survey.

5. Analyzed data collected on the Gregorc Style Delineator and the demographic survey.

6. Created statistical tables and reported on data analysis.

7. Provided information about alternative educators that could be useful in hiring teachers for alternative programs or transferring teachers to alternative programs.

**Research Questions**

The problem of this study can be defined more clearly by the following research questions:

1. Are there differences in the learning style(s) of traditional educators compared with alternative educators?

2. Are there differences in the learning style(s) of traditional educators compared with alternative educators who prefer to work in alternative programs?

3. Are there differences in the learning style(s) of traditional educators compared with alternative educators who prefer to work in a traditional school?

4. Are there differences in the learning style(s) of traditional educators compared with alternative educators who have worked in an alternative program for five years or longer?
5. Are there differences in the learning style(s) of traditional educators compared with alternative educators who have worked in an alternative program for less than five years?

6. Are there differences in the learning style(s) of alternative educators who prefer to work in alternative programs compared to alternative educators who prefer to work in traditional programs?

7. Are there differences in the learning style(s) of alternative educators who have worked less than five years in an alternative program compared to alternative educators who have worked five years or longer in an alternative program?

8. Is there something about your life that gives you a special motivation to work with at-risk youth?

The specific null hypotheses tested were:

1. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators and traditional educators.

2. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who prefer to work in alternative programs and traditional educators.

3. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who would prefer to work in a traditional school and traditional educators.

4. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked in an alternative program for five years or longer and traditional educators.
5. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked in an alternative program for less than five years and traditional educators.

6. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who prefer to work in alternative schools or programs and alternative educators who would prefer to work in a traditional setting.

7. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked fewer than five years in an alternative program compared to those alternative educators who have worked five years or longer in an alternative program.

**Basic Assumptions**

The following assumptions were accepted in this study.

1. Alternative educators accurately and honestly completed the Gregorc Style Delineator and the demographic survey.

2. Learning styles are measurable and consistent.

3. There is a pressing need to identify educators who can and will work with at-risk youth.

4. Alternative educators are inherently different from traditional educators.

**Operational Definitions**

The following terms used in this study are defined as follows.

1. **Alternative education**: A theoretical perspective and not a program (Morley, 1991).
2. **Alternative educator:** Certificated educator working in an alternative school or program in the state of Iowa.

3. **Alternative program:** Facilitated within the traditional school and its overriding rules and expectations. This term is also used as a broad concept to encompass both alternative schools and programs.

4. **Alternative school:** A separate high school in location, philosophy, discipline, and curriculum content, and/or delivery.

5. **At-risk student:** A student who is not succeeding in a traditional school for any reason.

6. **Learning style:** "Learning style has cognitive, effective, and physiological dimensions that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (Kuerbis, 1988, p. 3). In this study learning style will be the term used to represent a self-identified learning style category derived from the *Gregorc Style Delineator* (GSD).

7. **Learning style bias:** A tendency for a teacher to teach the way he/she learns (Sheehy, 1996).

8. **Learning style inventories:** Valid and reliable tests which measure a person's preferred learning style.

9. **Teaching style:** Classroom behaviors and strategies carried out by the teacher.

10. **Traditional educator:** Certified educator working in a traditional school or traditional educational setting in the state of Iowa.

11. **Traditional high school:** Refers to the current paradigm of community secondary schools.
Delimitations or Scope of Investigation

The following delimitations were identified in this study.

1. A volunteer group from all alternative educators who are members of the Iowa Association of Alternative Education (IAAE) for the 1998–99 membership year was used for this study.

2. This study did not attempt to determine teacher effectiveness related to learning style.

The following procedures were used for this study:

1. Dissertation proposal approved.

2. Human subjects in research proposal was submitted to the Graduate College for approval.

3. Ordered Gregorc Style Delineator.

4. Alternative educators completed the Gregorc Style Delineator and the demographic survey at the annual state conference of the IAAE in Newton, Iowa, on April 16, 1998. Participants completed these forms prior to the annual business meeting and after the keynote address at this conference. This took place at approximately 10:00 a.m.

5. Data were obtained from Professor Richard Manatt’s research on traditional educators as measured on the Gregorc Style Delineator.

6. The chi-square statistic was used to determine if there were any statistical differences between alternative and traditional educators’ learning styles. This was analyzed with three degrees of freedom at the .05 level of statistical significance for all null hypotheses.

7. Analysis of data and logical conclusions were reported based on the results of statistical significance.
CHAPTER II. REVIEW OF LITERATURE

Pioneers on the Prairie
(The Iowa Association of Alternative Education [IAAE]
1999 state conference theme)

Traditional education is simply not meeting the needs of 25 percent of our students. "Some of our brightest kids, possessing enormous potential for improving our society" are dropping out of schools (Conant, 1992, p. 7). Ideally, alternative educational programs begin where traditional schools fall behind to help these youth, and placing at-risk students in alternative educational settings decreases the dropout rate (Dwyer, Osher, & Warger, 1998). Alternative education is:

- a means of ensuring that every young person may find a path to the educational goals of the community.
- a means of accommodating our cultural pluralism making available a multitude of options.
- a means of providing choices to enable each person to succeed and be productive.
- a means of recognizing the strengths and values of each individual by seeking and providing the best available options for all students.
- a sign of excellence in any public school system and community.
- a means for addressing the transformation of our schools. (Morley, 1991, p. 8)

"Researchers have estimated that the actual number of alternative schools is...5,000" (Kellmayer, 1998, p. 29). Some of the main differences which make alternative schools more progressive and successful with at-risk students are small class size, individualized attention, flexible scheduling, and an emphasis on student responsibility (DeHart, 1996). Most importantly, it is necessary to realize alternative education is a "perspective and not a program" (Morley, 1991, p. 10). Alternative programs are "whatever the provider wants it to be, depending on the varied needs of the students" (Chalker, 1996, p. 6). According to Young (1990), alternative schools are distinguished from traditional schools by the following characteristics:
• A greater responsiveness to a perceived educational need within the community.
• A more focused instructional program, usually featuring a particular emphasis, instructional method, or school climate.
• A shared sense of purpose. Common goals and a defined educational philosophy are held by students and staff.
• A more student-centered philosophy. Emphasis is on the whole student. Affective as well as cognitive needs are met.
• A noncompetitive environment. Students are not pitted against one another for grades and recognition. Student progress is measured in terms of self-improvement.
• A greater autonomy. Principals, teachers, and students have greater freedom from the central administration than their counterparts in traditional schools.
• A smaller school and a more personalized relationship between students and staff. (pp. 2–3)

According to the United States Department of Education, "research has shown that effective alternative programs can have long-term positive results" with at-risk students (Dwyer et al., 1998, p. 19). With the increasing dropout rates from traditional schools, more students are "re-entering school via alternative programs" (Baker, 1994, p. 28).

A great deal of research on alternative education is qualitative in design. Currently programs are considered successful because of endurance, growth, and recognition among researchers. The specific characteristics cited are:

Choice in environment, curriculum, and method of learning;
Individualization in curriculum and pace;
Teacher role is facilitator rather than dispenser of facts;
A challenge component;
Smaller size;
Consequences being the natural result of behavior instead of punitive in action; and
Students are held accountable for their actions. (Schweikert-Cattin, 1996, p. 45)

The following 10 alternative programs are often cited in the literature as examples of these characteristics:

Apollo High School, Simi Valley, California
Central Park East Secondary School, Manhattan, New York
Chatelech Secondary School, Sechelt, British Columbia
Chicago, METRO, Chicago, Illinois
Eagle Rock School, Estes Park, Colorado
Jefferson County Open School, Lakewood, Colorado
New City School, St. Louis, Missouri
The Urban Academy, New York City, New York
Vincent C. Scavo High School, Des Moines, Iowa
Vista Alternative High School, Fremont, California. (Schweikert-Cattin, 1996, p. 45)

Specifically, students in these programs have numerous choices and also special relationships with teachers. Students must be allowed to make as many choices as possible, ranging from when they attend, to what they learn, to with whom they work. The more choices give more ownership or personal responsibility.

Teachers in alternative schools play a vastly different role than in traditional schools...and have been given the authority to make decisions in their role at the school. One of their major roles is as an advisor. They often meet individually with a student to discuss progress and set new goals. They may also deal with personal issues with which the student needs help....They have a personal relationship with and a genuine and personal interest in the welfare of the student. Their role is sometimes to be a friend, sometimes to be one who confronts nonproductive behavior. Ultimately the teacher's role is to be whatever is necessary at the time. (Schweikert-Cattin, 1996, pp. 46-47).

Alternative schools attempt to provide whatever is necessary or lacking in students' lives, and for lack of a better word, it is at times simply parenting these students who need a little extra guidance. Pastor Laird Duran of Jonesboro, Arkansas, site of one of the violent school shootings in recent months, states it best:

In our isolationist society, we think that other people's children are none of our business. We must restore a sense of community and be parents to all children. (Duran, 1999, p. 31)

Alternative Educators

Each alternative program is unique, but what has been found to be consistent in successful alternative programs is that the characteristics of the teachers are paramount (Dryfoos, 1997;
Positive personal attention by school personnel is the key to student success in alternative schools. It is also important in preventing student violence (Dwyer et al., 1998). When educators accept a moral responsibility to be successful in educating at-risk students, schools are more successful with these students (Alderman, 1990; Wehlage, 1991). In an in-depth ethnographic study of at-risk females, one of the students’ greatest desires was to have teachers communicate with them in non-hurting ways (Taylor-Dunlop & Norton, 1994). Researchers have concluded that respectful, nurturing, flexible, supportive relationships with alternative teachers greatly influenced at-risk students to stay in school (Ayala, 1996; Baker, 1994; Bates, 1993; Brubaker, 1991; Cattin, 1996; Christensen, 1997; Denham, 1996; Downing et al., 1994; Holmgren-Hoeller, 1993; Weir, 1992).

McInerny (1995) further concluded that distinctive characteristics of teachers had an impact on the incidences of student/teacher behavioral referrals to administrators. Alternative teachers make the difference in at-risk students’ lives. But is there something different about alternative educators compared to traditional educators? There are numerous recommendations in the research literature to study the educators who work with at-risk youth (Ayala, 1996; Baker, 1994; DeHart, 1996; Rommel, 1992; Patterson, 1993; Sills, 1989). Table 3 is a summary of related research on at-risk students and alternative schools.

**Characteristics of Educators’ Learning Styles**

The personal characteristics of educators are closely tied to the educators' learning style (Gregorc, 1984c). Teaching style is significantly dependent on teacher learning style or learning style bias (Galbraith & Sanders, 1987; Lyons, 1984; Mehdikhani, 1983). Thus by understanding their own and their students’ learning styles, teachers can better assist students in the learning
Table 3. A summary of related research on at-risk students and alternative schools

<table>
<thead>
<tr>
<th>Year</th>
<th>Researcher</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>Christensen</td>
<td>At-risk students want individualized attention from teachers.</td>
</tr>
<tr>
<td>1996</td>
<td>Ayala</td>
<td>At-risk students value process over content in learning interactions with teachers. Identified seven common elements in alternative schools; student centered, collaborative, safe/nurturing, flexible, autonomous, external relationships, high expectations.</td>
</tr>
<tr>
<td>1996</td>
<td>Cattin</td>
<td>At-risk students respond more positively to teachers who are supportive.</td>
</tr>
<tr>
<td>1996</td>
<td>DeHart</td>
<td>Students in alternative schools are significantly different than students in traditional schools in spatial discrimination, auditory, and study skills.</td>
</tr>
<tr>
<td>1996</td>
<td>Denham</td>
<td>At-risk students need small class sizes and supportive relationships with teachers to be successful in school.</td>
</tr>
<tr>
<td>1996</td>
<td>Schweikert-Cattin</td>
<td>At-risk students have similar learning styles (random), and respond positively to supportive, facilitative teachers.</td>
</tr>
<tr>
<td>1994</td>
<td>Baker</td>
<td>Students need food, shelter, safety, and affection before they can learn. This is especially true for at-risk students.</td>
</tr>
<tr>
<td>1993</td>
<td>Holmgren-Hoeller</td>
<td>At-risk students need flexibility, individualization, positive adult relationships, and small class sizes to be successful.</td>
</tr>
<tr>
<td>1993</td>
<td>Patterson</td>
<td>There are significant differences in personality between alternative education graduates and traditional education graduates.</td>
</tr>
<tr>
<td>1992</td>
<td>Weir</td>
<td>At-risk students need extra help from positive, respectful teachers.</td>
</tr>
<tr>
<td>1992</td>
<td>Rommel</td>
<td>Certain personality types are more effective than others when working with at-risk students.</td>
</tr>
<tr>
<td>1989</td>
<td>Sills</td>
<td>At-risk students are more successful when they are given more time and are in smaller class sizes.</td>
</tr>
</tbody>
</table>
Learning style reveals how people "identify, judge, substantiate, confirm, and validate truth" (Gregorc, 1983, p. 5). Learning style also influences the selection of a person's chosen vocation (O'Neill, 1989). Theoretically, this style may indicate the type of educational setting in which a person may choose to work whether it be traditional or alternative. Learning styles are intricately tied to improving school climate and student achievement by recognizing that all educators are not the same, and that all students do not learn the same (Dunn & Griggs, 1989). Learning styles are also constant over time and measurable (Curry, 1990).

Many at-risk students who drop out of school often have similar learning styles and these styles are not compatible with traditional educational systems (Carbo, 1978, 1983a, 1983b; Della Valle, Dunn, Dunn, Geisert, Sinatra, & Zenhausern, 1986; Dunn, 1988; O'Neil, 1990;
Schweikert-Cattin, 1996). In one study by Schweikert-Cattin (1996), 75 percent of at-risk students were random orderers or persons who process information in non-sequential patterns.

The teacher, as both a medium for the content of the lesson and an environmental engineer, places demands upon the student for adaptation through his or her decisions. Some students will and can adapt. Some, however, won't or can't (to the degree needed) for a variety of reasons. (Gregorc, 1983, p. 5)

Teachers use the instructional methods with which they feel most comfortable, and a student who is not attuned to that instructional method can become rebellious (Bargar & Hoover, 1984). Also, mismatched learning styles may also contribute to a student thinking they are stupid or feel emotionally threatened, and this reduces the brain's capacity to learn (Butts, 1998). These students often require flexibility, nontraditional classroom furniture, soft lighting, and varied instructional delivery systems (Dunn & Griggs, 1995; Keefe, 1988; O'Neil, 1990).

In a 1988 survey of students, the quality students considered most important in teachers was for the teacher to be a mentor to students. The next important quality was for teachers to experiment with new techniques of teaching (Calderon, 1988).

Compared to achievers, at-risk youngsters also tend to be significantly less visual and auditory and have higher preferences for tactile/kinesthetic stimuli and greater needs for mobility and intake (food or drink). They tend to be unmotivated or strongly adult-motivated, can concentrate and learn best with an adult or with peers, are most alert during the late morning or early afternoon hours, and most important, they are global learners. (Carbo & Hodges, 1988, p. 55)

Learning styles describe how people take in and process information. When teachers and students have similar learning styles, there is a significant increase in student achievement in most curriculum areas, and there is a reduction in the number of students experiencing stress, discipline problems, and dropping out of school (Andrews, 1990; Brunner & Mejewski, 1990; Carbo & Hodges, 1988; Coleman, Jischke, & Koob, 1998; Dunn & Griggs, 1989; Dunn & Griggs, 1995; Gadwa & Griggs, 1985; Lemmon, 1985; Orsak, 1990; Stone, 1992). However, learning style
mismatch between teacher and student has been shown to raise mathematics achievement (Atkinson, 1988).

Teacher learning style also influences lesson design, assessment, and class climate (Flora, 1989; Sheehy, 1996). For example, educators characterized by a function of judgment in learning style (concrete) have a tendency to be disapproving, and spend a lot of time disciplining students. Educators whose learning styles lean to the abstract use more illustrations than those with concrete styles (Stuber, 1997).

Fogarty (1994) states learning styles also influence an educator's ability to teach using manipulatives. Educators whose styles encompass randomness are much better at implementing an active teaching style in math problem solving compared to educators with sequential styles.

Kirk and O’Neal (1988) found elementary teachers have more interpersonal learning styles (abstract random) compared to secondary teachers who have more competitive or authoritarian learning styles (concrete sequential). They also theorize this may be why at-risk students are usually able to cope better in elementary school as there are more teachers who have learning styles that are similar to their own. As these students progress into high school and are surrounded by concrete sequential instructors, they are no longer able to tolerate the educational environment.

Table 5 outlines further research on learning styles. These research data lean toward matching styles which will help students in schools; however, the research is not conclusive.

Public school systems often rely on the philosophical belief that all children are very much alike in their mental development and capabilities. When students do not fit into this mold, the system cannot tolerate such dissonance and alternatives to traditional schooling must be explored (Gregorc, 1983). Obviously, learning styles greatly affect how teachers and students interact. The literature recommends more research on potential learning style differences between alternative and traditional educators. It also recommends determining whether there is a relationship between
Table 5. A summary of further research on learning styles

<table>
<thead>
<tr>
<th>Year</th>
<th>Researcher</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Curry</td>
<td>Matching instruction to student's learning style will improve attitudes and academic achievement.</td>
</tr>
<tr>
<td>1988</td>
<td>Atkinson</td>
<td>Matching student/teacher learning styles does not raise fourth and fifth grade students' math scores.</td>
</tr>
<tr>
<td>1985</td>
<td>Charkens, O'Toole, &amp; Wetzel</td>
<td>Matching student/teacher styles raises student's achievement in economics and improves student's attitudes toward economics.</td>
</tr>
<tr>
<td>1983</td>
<td>Mehdikhani</td>
<td>Matching student learning style with teacher's teaching and learning style did not significantly raise student achievement.</td>
</tr>
<tr>
<td>1983</td>
<td>Shea</td>
<td>Matching student/teacher learning style significantly improved student reading scores.</td>
</tr>
<tr>
<td>1982</td>
<td>Krimsky</td>
<td>Students who preferred brighter lighting tested significantly better when given brighter lighting and tested significantly worse when given dim lighting.</td>
</tr>
<tr>
<td>1981</td>
<td>Lynch</td>
<td>Students significantly improved attendance when given their time of day preference to attend school.</td>
</tr>
<tr>
<td>1981</td>
<td>Mahlios</td>
<td>Cognitive similarities between teachers and students had an effect on classroom interactions.</td>
</tr>
<tr>
<td>1981</td>
<td>Pizzo</td>
<td>Students who were matched with learning style preference scored significantly higher in reading and in their attitude.</td>
</tr>
<tr>
<td>1980</td>
<td>Cafferty</td>
<td>The greater the match between student's and teacher's style, the higher the student's grade point average.</td>
</tr>
<tr>
<td>1980</td>
<td>Cupkie</td>
<td>Matching learning styles did not raise achievement.</td>
</tr>
<tr>
<td>1979</td>
<td>Copenhaver</td>
<td>Students' learning styles remained consistent regardless of subject. Students had significantly more positive attitudes when matched with teacher's learning style.</td>
</tr>
<tr>
<td>1974</td>
<td>Daniel &amp; Tacker</td>
<td>Matching student/teacher styles increases achievement.</td>
</tr>
<tr>
<td>Year</td>
<td>Researcher</td>
<td>Findings</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
<td>----------</td>
</tr>
<tr>
<td>1973</td>
<td>James</td>
<td>Matching student/teacher learning styles does not significantly raise achievement.</td>
</tr>
<tr>
<td>1971</td>
<td>Farr</td>
<td>Students can accurately predict the modality in which they will learn the best.</td>
</tr>
</tbody>
</table>
teacher learning style and the teacher's relationship with at-risk students (DeHart, 1996). Can a learning style profile of educators who work with at-risk youth be identified?

There have been numerous theorists who have developed models to assess an individual's style or styles. Table 6 outlines the major researchers and the elements of their learning style models.

Obviously, learning style has been explored in numerous ways by researchers. Both Kuerbis' (1988) research and learning style definition are often cited as points of reference in the literature. He states, "Learning style has cognitive, affective, and physiological dimensions that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (p. 3).

Since the early 1960s, numerous instruments have been developed to identify individual learning styles. The more popular instruments include: The Embedded Figures Test by Witkin, Lewis, Machover, Meissner, and Wapner (1954); the Myers-Briggs Type Indicator by I. B. Myers and K. C. Briggs (1975); the Learning Style Inventory by D. A. Kolb (1976); and the Gregorc Style Delineator by A. F. Gregorc (1982).

The phenomenological perspective on style offers the education profession a qualitatively different way of looking at the topic of style. It offers the proposition that stylistic characteristics are powerful indicators of deep underlying psychological forces that help guide a person's interactions with existential realities. It gives us a way, albeit limited, to gain knowledge about ourselves as complex, integrated, holistic, and meaning-seeking human beings. It also provides a means by which we can come to realize how we impact the world and how it impacts upon us.

Serious study of style must take place. And critical questions must be addressed before we charge into further action. The reason for not rushing onward is that we must begin to think differently about the nature and meaning of style. (Gregorc, 1984c, p. 54)
Table 6. A summary of researchers' elements in their respective learning style models

<table>
<thead>
<tr>
<th>Year</th>
<th>Theorist</th>
<th>Elements of model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>Ramirez</td>
<td>Bicognitive style, bicultural</td>
</tr>
<tr>
<td>1976</td>
<td>Hill</td>
<td>Qualitative/theoretical symbols, modalities of inference, cultural</td>
</tr>
<tr>
<td>1976</td>
<td>Kolb</td>
<td>Concrete experience versus reflective observation/abstract conceptualization versus active experimentation</td>
</tr>
<tr>
<td>1976</td>
<td>Reinert</td>
<td>Perceptual modalities</td>
</tr>
<tr>
<td>1977</td>
<td>Gregorc</td>
<td>Perception/ordering</td>
</tr>
<tr>
<td>1977</td>
<td>Schmeck</td>
<td>Cognitive processing, study methods, retention</td>
</tr>
<tr>
<td>1978</td>
<td>Dunn &amp; Dunn</td>
<td>Environmental, emotional, sociological, physical, psychological</td>
</tr>
<tr>
<td>1978</td>
<td>Hunt</td>
<td>Need for structure, need for authority dependent/independent</td>
</tr>
<tr>
<td>1979</td>
<td>McCarthy</td>
<td>Innovative/analytic/common sense/dynamic hemisphericity</td>
</tr>
<tr>
<td>1979</td>
<td>NASSP</td>
<td>Environmental, emotional, sociological, physical, psychological/cognitive, study skills</td>
</tr>
<tr>
<td>1980</td>
<td>Letteri</td>
<td>Cognitive style</td>
</tr>
</tbody>
</table>

**Gregorc Style Delineator**

The *Gregorc Style Delineator* was developed out of a concern for children and adults who were not learning in traditional educational formats. Theory and research on learning styles were combined to develop this instrument over an 11-year period. The instrument was chosen for the present investigation because its philosophical foundation is based on one educator's search for reasons as to why some (at-risk) students were not fitting into traditional schools. This instrument was specifically developed to understand people who are not successful in the
The educational mold society has created. This, in many ways, is also the goal of alternative education.

The *Gregorc Style Delineator* (GSD) is a self-analysis tool used to determine a person's learning style. It measures an individual's preference for receiving (perception) and processing (ordering) information. Each of these abilities is delineated into four categories:

1. **Perception:**
   - Abstractness
   - Concreteness
2. **Ordering:**
   - Sequence
   - Randomness

The GSD categorizes individuals into these four learning styles: Concrete Sequential (CS), Abstract Sequential (AS), Abstract Random (AR), and Concrete Random (CR). Individuals may have one learning style or a combination of learning styles. The following information outlines behaviors of learners and teachers associated with each of these styles:

**CONCRETE SEQUENTIAL (CS):**
- **Teacher:** Focus on practical information, presents information sequentially, exerts control over learning with specific objectives, has a low tolerance for distraction.
- **Teacher methods:** Uses concrete examples rather than abstract theories, hands on, field trips, Computer Assisted Instruction, immediate feedback, programmed instruction... concerned with perfection.
- **Learner:** Structured, practical, predictable, and thorough. Prefers programmed instruction, computer drill, and well-organized, step-by-step learning experiences.

**ABSTRACT SEQUENTIAL (AS):**
- **Teacher:** Verbal, abstract, structured, logical, low tolerance for distraction.
- **Teaching methods:** Uses reading assignments, lectures, facts, [letter] grades important, lectures, audiotapes, and individual guided studies.
- **Learner:** Logical, analytical, conceptual, and studious. Prefers lectures, quiet, controlled study, extended reading, and audiotapes.
ABSTRACT RANDOM (AR):
Teacher: Subjective, affective, abstract, empathetic, lets students control the direction of the class, high tolerance for distraction.
Teaching methods: Uses analogies, metaphors, student options, cross-age tutoring, essays, open discussion, personal interviews, reflective activities.
Learner: Sensitive, sociable, imaginative, and expressive in nature. Very intuitive, prefers unstructured learning environments, and multi-sensory in nature involving group discussion, music, media, and activities that permit time for reflection.

CONCRETE RANDOM (CR):
Teacher: Prefers the application of ideas through example and practice, has a moderate tolerance for distraction.
Teaching methods: Uses experimentation, independent study, intuition, problem solving/multi-dimensional approach, games, and experiential learning.
Learner: Intuitive, original, investigative, and able to solve problems. Prefers independent projects, games, simulations, and discovery learning. (Gregorc, 1984b)

The literature states alternative educators are different. It is this researcher’s belief that alternative educators will have a significant difference in learning style compared to traditional educators. This difference will be a higher percentage of alternative educators identifying abstract random or concrete random as their learning style or as a part of their learning style.

This information will help educators identify, place, and/or hire teachers to work in alternative school settings. As the numbers of high school dropouts increase, it is vitally important that as a society all children are given every possible opportunity to graduate. All citizens are financially affected by this national problem and hopefully personally concerned about those students who are trying to find their way during their, sometimes difficult, teen years. These students are the future of our country.
CHAPTER III. METHODS

_Whatever It Takes_
(IAAE 1998 conference theme)

The present research was primarily designed to investigate if there are differences in learning styles between alternative and traditional educators. The data were further analyzed to specifically compare alternative educators who do or do not prefer to work in alternative education settings. The data were also analyzed to compare alternative educators who have been in alternative education for more or less than five years. The five year mark gives a clear indication whether educators truly are committed to alternative education compared to possibly beginning, idealistic educators still finding their calling in the field of education. This research also collected qualitative data and demographic information about alternative educators to determine if there is a common profile of alternative educators.

The Subjects

Those attending the IAAE 1998-99 state convention were the group chosen to represent alternative educators in the state of Iowa. This is the only alternative education association in Iowa and has in its membership the vast majority of alternative educators in the state. The entire association of 375 members was invited to participate in this research at the 1998 annual state conference. Conference registration determines yearly membership, and out of the 375 members, 10 members did not arrive at the conference by the time the research was conducted.
The Gregorc Learning Styles Inventory, also called the Gregorc Style Delineator (GSD), and a demographic survey were distributed to the 365 attendees. The GSD was created by Anthony Gregorc to investigate why people were not learning in traditional public schools. It is a tool to help individuals recognize and identify how they receive and express information efficiently, economically, and effectively (Gregorc, 1984a). The demographic survey was constructed by the researcher to gain general information about alternative educators.

The GSD asks the individual to complete 10 items. Each item consists of ranking four words at a time on a one to four scale. These words correspond to how the individual views him/herself (One=Being not like you at all; to Four=Being a powerful descriptor of yourself). This information then categorizes individuals into a self-identified learning style(s) preference:

Concrete Sequential  Abstract Sequential
Abstract Random    Concrete Random.

Validity

Gregorc measured the validity of the instrument by using 110 adults to self-rate their personal characteristics. Participants chose characteristics attributed to the four learning style classifications that most accurately described themselves. Participants then completed the GSD. The results of these two self measures correlated at the p < .001 level. Eighty-nine percent of the participants also indicated that they agreed or strongly agreed with their learning style categorization attributed to them by the GSD.
Reliability

To measure the reliability of the instrument, Gregorc also used 110 adults. The participants completed the GSD and their responses had an internal consistency measured by a standardized alpha coefficient from 0.89 to 0.93. The test-retest correlation coefficients were significant at the p < .001 level, ranging from 0.85 to 0.88.

Demographic Survey

The demographic survey was developed by the researcher under the guidance of the Ph.D. program of study committee. This survey (see Appendix) asked for demographic information and also for personal reflection on why the subject is motivated to work with at-risk youth. This qualitative question strengthens the research by retrieving highly personal characteristics and experiences of alternative educators. This information is difficult, if not impossible, to collect using quantitative research alone.

Data Collection

The GSD and the demographic surveys were distributed at the annual business meeting of the IAAE. Most inventories/surveys were collected immediately after this meeting. However, some were returned to the researcher during the remainder of the conference either in person or through convenient data collection boxes.

The researcher hand tabulated the data for completeness and usability. Table 7 outlines the data collected.

A total of 296 packets of data were returned, giving this research a 81 percent return rate. After analyzing the data, a group size of 176 was determined by delimiting unsatisfactory data.
Table 7. Results of data collection

<table>
<thead>
<tr>
<th>GSD/Demographic survey</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usable data</strong></td>
<td></td>
</tr>
<tr>
<td>Complete</td>
<td>168</td>
</tr>
<tr>
<td>Complete except for teaching preference</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total group size</strong></td>
<td>176</td>
</tr>
<tr>
<td><strong>Unsatisfactory data</strong></td>
<td></td>
</tr>
<tr>
<td>Data included non-certified staff, no alternative education experience, and excessively incomplete data (Data had to be comparable to national group)</td>
<td>120</td>
</tr>
<tr>
<td><strong>Unreturned data</strong></td>
<td>69</td>
</tr>
<tr>
<td><strong>Total distributed</strong></td>
<td>365</td>
</tr>
</tbody>
</table>

The following n’s were used for each of the corresponding hypotheses:

- Hypothesis 1 \( n = 176 \)
- Hypothesis 2 \( n = 160 \)
- Hypothesis 3 \( n = 8 \)
- Hypothesis 4 \( n = 90 \)
- Hypothesis 5 \( n = 86 \)
- Hypothesis 6 \( n = 168 \)
- Hypothesis 7 \( n = 176 \)

The researcher, with the assistance of the Research Institute for Studies in Education (RISE), processed the data by hand and also by using the SPSS statistical software package. A frequency distribution of learning styles for alternative educators was first conducted to determine the number of cases within each learning style category.

Next, a chi-square test statistic for comparing observed and expected frequencies \( (\chi^2) \) was determined. Expected frequencies were the data from a national group compared to the observed data from the alternative educators.
As an integral part of staff development seminars conducted by Richard P. Manatt, director of School Improvement Model (SIM) at Iowa State University, over 10,000 teachers (K-12 general educators) were administered the GSD from the period of November 21, 1987, through September, 1998. These results were tabulated over a period of 10 years to display the percentages of teachers who exhibit the four learning styles CS, AS, AR, and CR and all of the various combinations possible. These data are on file in the SIM office.

The formula $\chi^2$ equals the summation from one to K (number of categories), observed frequencies minus expected frequencies quantity squared divided by expected frequencies was used:

$$\chi^2 = \sum_{i=1}^{k} \frac{(O-E)^2}{E}$$

where $O =$ observed frequency

$E =$ expected frequency

$k =$ number of categories, groupings, or possible outcomes.

(Hinkle et al., 1988, p. 551)

The expected value was determined by calculating the percentage in the national group to determine expected number of cases within each learning style. If the $\chi^2$ squared for traditional versus alternative learning styles was significant, then the test statistic for each type of learning style was then analyzed for significance for the following hypotheses:

1. There will be no differences ($p < .05$) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators and traditional educators.

2. There will be no differences ($p < .05$) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who prefer to work in alternative programs and traditional educators.
3. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who would prefer to work in a traditional school and traditional educators.

4. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked in an alternative program for five years or longer and traditional educators.

5. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked in an alternative program for less than five years and traditional educators.

Hypotheses 6 and 7 were analyzed by an SPSS Pearson crosstab with $\chi$ squared test statistic to compare the two groups of alternative educators: those educators with more or less than five years experience and those who preferred or did not prefer to work in an alternative setting. These hypotheses follow:

6. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who prefer to work in alternative schools or programs and alternative educators who would prefer to work in a traditional setting.

7. There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked fewer than five years in an alternative program compared to those alternative educators who have worked five years or longer in an alternative program.

These nonparametric tests were used as all the data were categorical. Critical values were then compared to the test statistics to determine if there were significant differences between the two groups.
CHAPTER IV. FINDINGS

One Student At A Time
(IAAE 1997 conference theme)

The data used to investigate Hypotheses 1-7 were analyzed using a chi-square test to discover significant differences, if any, in learning style distributions between alternative and traditional educators. Tables 8-16 describe these differences and the demographic data collected.

In many alternative schools all certified members of the staff (administrators, support personnel, and teachers) instruct students. Thus all certified personnel in alternative schools were used in comparison to the national group of teachers who work in traditional schools. Table 8 shows the number of certified respondents by position.

The respondents were comprised of approximately 75 percent teachers, 20 percent administrators, and 5 percent support staff. This study used data from these 176 respondents to

Table 8. Respondents

<table>
<thead>
<tr>
<th>Position</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>16</td>
<td>9.1</td>
</tr>
<tr>
<td>Counselor</td>
<td>15</td>
<td>8.5</td>
</tr>
<tr>
<td>Certified teacher</td>
<td>130</td>
<td>73.9</td>
</tr>
<tr>
<td>Certified support staff</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Combination</td>
<td>9</td>
<td>5.1</td>
</tr>
</tbody>
</table>
compare to the data collected from 10,000 traditional educators by the SIM office at Iowa State University. Table 9 illustrates the comparison of learning style distributions between alternative and traditional educators. The following key identifies the learning styles:

- **CS**: Concrete Sequential
- **AS**: Abstract Sequential
- **AR**: Abstract Random
- **CR**: Concrete Random
- **CSAS**: Concrete Sequential, Abstract Sequential
- **CSAR**: Concrete Sequential, Abstract Random
- **CSCR**: Concrete Sequential, Concrete Random
- **ASAR**: Abstract Sequential, Abstract Random
- **ASCR**: Abstract Sequential, Concrete Random
- **ARCR**: Abstract Random, Concrete Random
- **CSASCR**: Concrete Sequential, Abstract Sequential, Concrete Random
- **CSARCR**: Concrete Sequential, Abstract Random, Concrete Random

<table>
<thead>
<tr>
<th>Learning style</th>
<th>Percent of 10,000 traditional educators</th>
<th>Percent of 176 alternative educators</th>
<th>Percent of 188 alternative educators*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>33</td>
<td>12.5</td>
<td>11.7</td>
</tr>
<tr>
<td>AS</td>
<td>6</td>
<td>4.5</td>
<td>4.3</td>
</tr>
<tr>
<td>AR</td>
<td>8</td>
<td>6.8</td>
<td>6.4</td>
</tr>
<tr>
<td>CR</td>
<td>6</td>
<td>11.9</td>
<td>11.2</td>
</tr>
<tr>
<td>CSAS</td>
<td>25</td>
<td>9.7</td>
<td>9.0</td>
</tr>
<tr>
<td>CSAR</td>
<td>4</td>
<td>9.1</td>
<td>8.5</td>
</tr>
<tr>
<td>CSCR</td>
<td>3</td>
<td>7.4</td>
<td>6.9</td>
</tr>
<tr>
<td>ASAR</td>
<td>3</td>
<td>.6</td>
<td>.5</td>
</tr>
<tr>
<td>ASCR</td>
<td>8</td>
<td>4.0</td>
<td>3.7</td>
</tr>
<tr>
<td>ARCR</td>
<td>4</td>
<td>33.5</td>
<td>31.4</td>
</tr>
<tr>
<td>Any three categories</td>
<td>&lt;1</td>
<td>0.0</td>
<td>6.4</td>
</tr>
<tr>
<td>CSASCR</td>
<td></td>
<td></td>
<td>3.2</td>
</tr>
<tr>
<td>CSARCR</td>
<td></td>
<td></td>
<td>3.2</td>
</tr>
</tbody>
</table>

*Twelve Gregorc Style Delineators were originally eliminated from the final data set of 176 because they contained three learning styles which were statistically incomparable to the national data for traditional educators. If those 12 were included for a group size of 188, the following percents are derived.
Thirty-three percent of traditional educators are CS and 25 percent of them are CSAS. The other 42 percent of traditional educators are evenly dispersed among the eight other learning styles with an average of 5 percent per learning style with less than 1 percent of traditional educators having a combination of three learning styles.

Alternative educators' learning style distributions are 33 percent ARCR, with the rest of the respondents evenly distributed among eight other learning styles with an average of 8 percent per learning style. However, there was less than 1 percent of the group who responded ASAR. Alternative educators had approximately 6 percent of their respondents identify a combination of three learning styles.

Demographic information was also collected and gives a profile of alternative educators. Table 10 outlines this information for gender, race, and highest degree held.

In the state of Iowa, 28 percent of all teachers have advanced degrees. Sixty-nine percent of educators are women and almost 2 percent are minority. As indicated in Table 10, the

Table 10. Demographics for gender, race, highest degree

<table>
<thead>
<tr>
<th>Highest degree</th>
<th>White (Male/Female)</th>
<th>Black</th>
<th>Latino (Male/Female)</th>
<th>Asian</th>
<th>American Indian</th>
<th>Multiracial</th>
<th>Total degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>31/50</td>
<td>3/2</td>
<td>1/1</td>
<td>1/0</td>
<td>2/0</td>
<td>0/0</td>
<td>91 (52%)</td>
</tr>
<tr>
<td>Master's</td>
<td>35/40</td>
<td>2/1</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>2/0</td>
<td>80 (45%)</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0/3</td>
<td>0/1</td>
<td>0/0</td>
<td>0/0</td>
<td>0/0</td>
<td>1/0</td>
<td>5 (3%)</td>
</tr>
<tr>
<td>Totals by race</td>
<td>159 (90%)</td>
<td>9 (5%)</td>
<td>2 (1%)</td>
<td>1 (1%)</td>
<td>2 (1%)</td>
<td>3 (2%)</td>
<td></td>
</tr>
<tr>
<td>Totals by gender</td>
<td>66/93</td>
<td>5/4</td>
<td>1/1</td>
<td>1/0</td>
<td>2/0</td>
<td>3/0</td>
<td>M 78 (44%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F 98 (56%)</td>
</tr>
</tbody>
</table>
subjects in this research were 10 percent minority and gender was almost represented half and half. Forty-five percent of the group participants held master's degrees and 3 percent had doctorates, for a total of 48 percent advanced degrees.

In Iowa the mean household income for all residents is $35,276.00 (Bureau of Census, 1999). The average age of teachers in the state is 42.3 years (Iowa Department of Education, 1998). Figures 1 and 2 show the age distribution of group participants and the average household income for alternative educators. The mode for this group was 41–50 years of age with an income of $61,000–$80,000.

In the state of Iowa, average years total experience for educators is 16 (Iowa Department of Education, 1998). Alternative educators on average have worked in alternative education seven years and eight years in traditional education for a total of 15 years total experience.

![Figure 1. Age of respondents](image-url)
In summary, alternative educators are better educated and are more likely to be male or a minority as compared to traditional educators. Alternative educators live in households that have a higher average income than the average Iowa household.

A personal question was included with the demographic survey (completed by 118 of the 176 group participants). "Is there something about your life that gives you a special motivation to work with at-risk youth? If yes, please explain." Answers to this question were multifaceted, but several patterns emerged within responses. Each respondent's answer was evaluated to place it into one or more categories as illustrated in Table II.

Almost 42 percent of respondents discussed their hope to make a difference in someone else's life or make the world a better place. They repeated the phrases, "everyone deserves a second chance," "empathy," "fairness," and "care for others." Religious beliefs and a moral duty to help someone less fortunate were also common themes. "My relationship to Jesus Christ" and "no one is indispensable" were striking quotes that framed this motivation.
Table 11. Alternative educators' motivations for working with at-risk youth

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Percent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make a difference/change the world</td>
<td>49</td>
<td>41.5</td>
</tr>
<tr>
<td>At-risk youth themselves</td>
<td>23</td>
<td>19.5</td>
</tr>
<tr>
<td>Flexibility/freedom in structure and approach</td>
<td>23</td>
<td>19.5</td>
</tr>
<tr>
<td>Family dynamics (divorce, abuse, illness, death)</td>
<td>15</td>
<td>12.7</td>
</tr>
<tr>
<td>Challenge/reward of the work</td>
<td>12</td>
<td>10.2</td>
</tr>
<tr>
<td>Past experiences/general</td>
<td>9</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Twenty percent of respondents identified themselves as at-risk youth, some of whom graduated from alternative schools and some who wished they could have, as expressed by this respondent: "I dropped out of high school in 1949, got my GED the year my son graduated from high school, graduated from college in 1990. If alternative schools had been around in 1949, I would have graduated then!" Other quotes included, "I was a throw away kid," "It was believed I would not succeed in life.... I had a few teachers who believed in me and who I can credit for my success," "There were some traditional school educators who believed in me when I didn’t believe much in myself," and "I was one" were all replies that reveal a deeper, more personal level of motivation to work with at-risk students.

Another 20 percent of respondents were frustrated with traditional education for themselves or for others and desire "flexibility" in teaching those who "learn differently." Many of these respondents classified themselves as "alternative learners" and repeated the theme "sometimes in life the regular setting doesn’t fit all people." Another prevalent theme was almost an outrage at
traditional schools, curriculum delivery, and teachers. "Watching teachers in conventional schools trim their classes of the undesirables" is one example of the emotional conviction in their responses.

Adult or childhood family dynamics were cited by almost 13 percent of respondents as a motivator to work with at-risk youth. Abuse, death, illness, and divorce were some themes that influenced these educators. "Divorced, single parent for eight years, two marriages to addicted males, survivor of physical violence" was a forthright example of personal struggles. Another personal quote frames this motivation to help others: "My family background was fragmented—this insecurity has motivated me to want to help young students overcome unfortunate circumstances. I want to give back to others what so many good people have given to me."

Ten percent of the respondents cited the challenges and rewards of working with at-risk youth to be their motivator. "Great satisfaction when kids overcome incredible problems—family, health, drugs, pregnancy, economic—and learn to stick it out. It is tremendously rewarding." "I enjoy the challenge of working with anyone who walks through the door.... It is crazy here, I love it."

Almost 8 percent cited past experiences or were general in their responses for motivation. One quote, however general, speaks volumes. "I came from the bottom up and I continuously point out to these young students that I did it [and] you can also. There is so much to do in life and the world is waiting for you, go out and work and find and fulfill your purpose in life. It is worth living."

The following research questions and hypotheses were further investigated to determine if there were significant differences between alternative and traditional educators’ learning styles:

1. Are there differences in the learning style(s) of traditional educators compared with alternative educators?
Hypotheses 1: There will be no differences (p<.05) in learning style(s), as measured by the *Gregorc Style Delineator*, between alternative educators and traditional educators.

A chi-square test was used to analyze if there was a difference between alternative and traditional educators' learning styles. Hypothesis 1 was rejected at the .001 level of significance. A $\chi^2$ squared of 463.45 allowed the analysis of each of the 10 learning styles independently to investigate specific differences. Table 12 outlines the findings regarding Hypothesis 1.

**Table 12. Hypothesis 1 comparison of alternative and traditional educators' learning styles**

<table>
<thead>
<tr>
<th>Style</th>
<th>Observed value alternative educators</th>
<th>Expected value traditional educators</th>
<th>$\chi^2$ squared</th>
<th>Difference from population and significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>22</td>
<td>58.08</td>
<td>22.41</td>
<td>fewer***</td>
</tr>
<tr>
<td>AS</td>
<td>8</td>
<td>10.56</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>12</td>
<td>14.08</td>
<td>.31</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>21</td>
<td>10.56</td>
<td>10.32</td>
<td>more**</td>
</tr>
<tr>
<td>CSAS</td>
<td>17</td>
<td>44.00</td>
<td>16.57</td>
<td>fewer***</td>
</tr>
<tr>
<td>CSAR</td>
<td>16</td>
<td>7.04</td>
<td>11.40</td>
<td>more***</td>
</tr>
<tr>
<td>CSCR</td>
<td>13</td>
<td>5.28</td>
<td>11.29</td>
<td>more***</td>
</tr>
<tr>
<td>ASAR</td>
<td>1</td>
<td>5.28</td>
<td>3.47</td>
<td></td>
</tr>
<tr>
<td>ASCR</td>
<td>7</td>
<td>14.08</td>
<td>3.56</td>
<td></td>
</tr>
<tr>
<td>ARCR</td>
<td>59</td>
<td>7.04</td>
<td>383.50</td>
<td>more***</td>
</tr>
</tbody>
</table>

** p<.01 critical value 6.635 df=1.
*** p<.001 critical value 10.827 df=1.
This table reveals a significantly higher level of alternative educators whose learning styles were whole or partially concrete random when compared to traditional educators. At the .01 level of significance, there were higher numbers of CR learning styles and at the .001 level there were higher numbers of CSCR and ARCR styles. Only when the CR style was combined with the AS style were there no significant differences.

There were also highly significant levels, at .001, of fewer alternative educators whose learning styles were CS or CSAS. However, when the CS learning style was combined with an AR or CR learning style, there were significantly more alternative educators identified at the .001 level.

The next part of this research investigated the possibility that some educators were working in an alternative educational setting but were dissatisfied in their current position and could have thus varied the aforementioned data. The following two questions were further studied:

2. Are there differences in the learning style(s) of traditional educators compared with alternative educators who prefer to work in alternative programs?

Hypothesis 2: There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who prefer to work in alternative programs and traditional educators.

3. Are there differences in the learning style(s) of traditional educators compared with alternative educators who prefer to work in a traditional school?

Hypothesis 3: There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who would prefer to work in a traditional school and traditional educators.

Out of the 176 group size, eight participants did not respond to this question. A total of 168 alternative educators were used, with 160 respondents preferring to teach in an alternative educational setting and eight respondents preferring to teach in a traditional educational setting.
Both hypotheses were rejected at the .001 level of significance. Tables 13 and 14 summarize the findings.

Table 13 is almost identical to Table 12 in summarizing significant differences in alternative and traditional educators’ learning styles. This indicates that learning styles did not vary by satisfaction with present job. Alternative educators who want to teach in alternative settings more

Table 13. Hypothesis 2 comparison of alternative educators who prefer to teach in alternative programs and traditional educators

<table>
<thead>
<tr>
<th>Style</th>
<th>Observed value alternative educators</th>
<th>Expected value traditional educators</th>
<th>χ squared</th>
<th>Difference from population and significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>21</td>
<td>52.8</td>
<td>19.15</td>
<td>fewer***</td>
</tr>
<tr>
<td>AS</td>
<td>8</td>
<td>9.6</td>
<td>.27</td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>12</td>
<td>12.8</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>20</td>
<td>9.6</td>
<td>11.27</td>
<td>more***</td>
</tr>
<tr>
<td>CSAS</td>
<td>12</td>
<td>40.0</td>
<td>19.60</td>
<td>fewer***</td>
</tr>
<tr>
<td>CSAR</td>
<td>15</td>
<td>6.4</td>
<td>11.56</td>
<td>more***</td>
</tr>
<tr>
<td>CSCR</td>
<td>10</td>
<td>4.8</td>
<td>5.63</td>
<td>more*</td>
</tr>
<tr>
<td>ASAR</td>
<td>1</td>
<td>4.8</td>
<td>3.01</td>
<td></td>
</tr>
<tr>
<td>ASCR</td>
<td>7</td>
<td>12.8</td>
<td>2.63</td>
<td></td>
</tr>
<tr>
<td>ARCR</td>
<td>54</td>
<td>6.4</td>
<td>354.02</td>
<td>more***</td>
</tr>
</tbody>
</table>

* p < .05 critical value 3.84 df = 1.
*** p < .001 critical value 10.827 df = 1.
often have CR, CSAR, CSCR, and ARCR learning styles and less CS and CSAS learning styles. Again, only when a partially CS learning style was paired with a random learning style were more alternative educators identified. CS learning styles paired with other sequential learning styles are descriptive of traditional educators.

Hypotheses 3 compares alternative educators who really would prefer to teach in a traditional setting with traditional educators. This hypothesis was also rejected at the .001 level of significance. However, when each learning style was individually analyzed, only CSCR learning styles were significantly prevalent in alternative educators compared to traditional educators at the .001 level. Table 14 outlines these data.

Alternative educators who would prefer to teach in traditional settings have learning style(s) that are nine times out of ten similar to traditional educators. It is not surprising that they would be more similar to traditional educators; there were, however, not enough of these individuals to affect the overall significant differences between the two groups.

Hypotheses 4 and 5 investigated whether there were differences between alternative educators who have taught in alternative settings for more or less than five years and traditional educators. This was investigated to determine if the data were varied by individuals in alternative settings who would eventually return to traditional schools and who were potentially in an alternative setting they would later prefer not to be in.

Five years was judged to be an adequate length of service in an alternative setting for educators to truly decide if this was their chosen venue in education and also a fair amount of time for an educator to find a more desirable position if they had accepted an alternative school position by default. Therefore, educators who were in alternative settings for five years or longer were identified as choosing to be there and having the time to be sure of this decision. The
Table 14. Hypothesis 3 comparison of alternative educators who would prefer to teach in a traditional setting compared to traditional educators

<table>
<thead>
<tr>
<th>Style</th>
<th>Observed value alternative educators</th>
<th>Expected value traditional educators</th>
<th>Chi-squared</th>
<th>Difference from population and significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>0</td>
<td>2.64</td>
<td>2.64</td>
<td></td>
</tr>
<tr>
<td>AS</td>
<td>0</td>
<td>.48</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>0</td>
<td>.64</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>1</td>
<td>.48</td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>CSAS</td>
<td>2</td>
<td>2.00</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>CSAR</td>
<td>1</td>
<td>.32</td>
<td>1.44</td>
<td></td>
</tr>
<tr>
<td>CSCR</td>
<td>3</td>
<td>.24</td>
<td>31.74</td>
<td>more***</td>
</tr>
<tr>
<td>ASAR</td>
<td>0</td>
<td>.24</td>
<td>.24</td>
<td></td>
</tr>
<tr>
<td>ASCR</td>
<td>0</td>
<td>.64</td>
<td>.64</td>
<td></td>
</tr>
<tr>
<td>ARCR</td>
<td>1</td>
<td>.32</td>
<td>1.44</td>
<td></td>
</tr>
</tbody>
</table>

***p < .001 critical value 10.827 df = 1.

following research questions and hypotheses were therefore investigated. Hypotheses 4 and 5 were both rejected at the .001 level of significance.

4. Are there differences in the learning style(s) of traditional educators compared with alternative educators who have worked in an alternative program for five years or longer?

Hypothesis 4: There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked in an alternative program for five years or longer and traditional educators.
5. Are there differences in the learning style(s) of traditional educators compared with alternative educators who have worked in an alternative program for less than five years?

Hypothesis 5: There will be no differences \( (p < .05) \) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked in an alternative program for less than five years and traditional educators.

Alternative educators have taught in alternative settings on the average of seven years.

Ninety educators had greater than or equal to five years alternative education experience and 86 educators had less than five years experience. In Table 15 the research results for Hypothesis 4

Table 15. Comparison of learning style distributions between alternative educators with five or more years experience in an alternative setting and traditional educators

<table>
<thead>
<tr>
<th>Style</th>
<th>Observed value alternative educators</th>
<th>Expected value traditional educators</th>
<th>( \chi ) squared</th>
<th>Difference from population and significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>11</td>
<td>29.7</td>
<td>11.77</td>
<td>fewer***</td>
</tr>
<tr>
<td>AS</td>
<td>6</td>
<td>5.4</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>8</td>
<td>7.2</td>
<td>0.09</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>9</td>
<td>5.4</td>
<td>2.40</td>
<td></td>
</tr>
<tr>
<td>CSAS</td>
<td>7</td>
<td>22.5</td>
<td>10.68</td>
<td>fewer**</td>
</tr>
<tr>
<td>CSAR</td>
<td>10</td>
<td>3.6</td>
<td>11.38</td>
<td>more***</td>
</tr>
<tr>
<td>CSCR</td>
<td>3</td>
<td>2.7</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>ASAR</td>
<td>0</td>
<td>5.4</td>
<td>5.40</td>
<td></td>
</tr>
<tr>
<td>ASCR</td>
<td>4</td>
<td>7.2</td>
<td>1.42</td>
<td></td>
</tr>
<tr>
<td>ARCR</td>
<td>32</td>
<td>3.6</td>
<td>224.04</td>
<td>more***</td>
</tr>
</tbody>
</table>

** \( p < .01 \) critical value 6.635 df=1.

*** \( p < .001 \) critical value 10.827 df=1.
comparing the 90 alternative educators who have worked more than five years in an alternative program and traditional educators are shown. There were fewer alternative educators with a CS learning style at the .001 level. There were also fewer identified with the CSAS learning style at the .01 level. Conversely, there were significantly more alternative educators at the .001 level that identified CSAR and ARCR learning styles. These data again show a high concentration of alternative educators with random components to their learning styles.

Hypothesis 5 compares the 86 alternative educators who have worked less than five years in an alternative setting to traditional educators. This information is displayed in Table 16, where it is shown that 40 percent of the learning style categories were significantly different when analyzing alternative educators with more than five years experience. However, this increases as 50 percent of the learning style categories in Table 16 were found to be significantly different when analyzing alternative educators with less than five years alternative education experience. There were significantly fewer alternative educators identifying a CS learning style at the .01 level and significantly fewer CSAS styles at the .05 level. There were significantly higher numbers of alternative educators identifying a CR style at the .01 level. CSCR and ARCR learning styles were also identified by alternative educators at the .001 level of significance.

Hypotheses 1–5 were all tested at the .05 level of significance when alternative educators were compared to traditional educators. The findings of all five hypotheses were significant not only at the .05 level, but also at the .001 level of significance. The learning styles of alternative educators are significantly different than the learning styles of traditional educators.

The research now focused on the alternative educators themselves to determine if there were differences within this group of educators distinguished by teaching preference and years of alternative education experience. The following two hypotheses analyzed differences within this
Table 16. Comparison of learning styles of alternative educators with less than five years experience in an alternative setting compared to traditional educators

<table>
<thead>
<tr>
<th>Style</th>
<th>Observed value alternative educators</th>
<th>Expected value traditional educators</th>
<th>$\chi^2$ squared</th>
<th>Difference from population and significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>11</td>
<td>28.38</td>
<td>10.64</td>
<td>fewer**</td>
</tr>
<tr>
<td>AS</td>
<td>2</td>
<td>5.16</td>
<td>1.94</td>
<td></td>
</tr>
<tr>
<td>AR</td>
<td>4</td>
<td>6.88</td>
<td>1.21</td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>12</td>
<td>5.60</td>
<td>7.31</td>
<td>more**</td>
</tr>
<tr>
<td>CSAS</td>
<td>10</td>
<td>21.50</td>
<td>6.15</td>
<td>fewer*</td>
</tr>
<tr>
<td>CSAR</td>
<td>6</td>
<td>3.44</td>
<td>1.91</td>
<td></td>
</tr>
<tr>
<td>CSCR</td>
<td>10</td>
<td>2.58</td>
<td>21.34</td>
<td>more***</td>
</tr>
<tr>
<td>ASAR</td>
<td>1</td>
<td>2.58</td>
<td>0.97</td>
<td></td>
</tr>
<tr>
<td>ASCR</td>
<td>3</td>
<td>6.88</td>
<td>2.19</td>
<td></td>
</tr>
<tr>
<td>ARCR</td>
<td>27</td>
<td>3.44</td>
<td>161.36</td>
<td>more***</td>
</tr>
</tbody>
</table>

* $p < .05$ critical value 3.84 df=1.
** $p < .01$ critical value 6.635 df=1.
*** $p < .001$ critical value 10.827 df=1.

The hypothesis that neither hypothesis could be rejected, and, therefore, no significant differences were distinguishable.

6. Are there differences in the learning style(s) of alternative educators who prefer to work in alternative programs compared to alternative educators who prefer to work in traditional programs?

Hypothesis 6: There will be no differences ($p < .05$) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who prefer to work in alternative
schools or programs and alternative educators who would prefer to work in a traditional setting.

7. Are there differences in the learning style(s) of alternative educators who have worked less than five years in an alternative program compared to alternative educators who have worked five years or longer in an alternative program?

Hypothesis 7: There will be no differences (p < .05) in learning style(s), as measured by the Gregorc Style Delineator, between alternative educators who have worked fewer than five years in an alternative program compared to those alternative educators who have worked more than five years in an alternative program.

Tables 17 and 18 summarize the Pearson chi-squares that were used. For Hypothesis 6, illustrated in Table 17, 55 percent of the cells had less than five cases, which can distort the results. The 15.99 value with 9 df had only a p = .067, which is not less than .05 and is, therefore, not significant.

Alternative educators with more or less than five years experience in an alternative setting were also compared for differences in the research investigating Hypothesis 7. The Pearson chi-square had a value of 10.54, with 9 df and a p = .3088. This again is not significant at the .05 level. Table 18 illustrates this analysis.

Alternative educators' learning styles were not significantly different depending on whether the alternative educator had worked in an alternative setting for more or less than five years.

Table 19 gives an overview of the statistically significant findings of this research. Hypotheses 1–5 were all statistically significant at the indicated levels. Overall, alternative educators' learning styles were significantly different than traditional educators' learning styles for up to 60 percent of the analyzed categories except when alternative educators preferred to work in a traditional setting.
Table 17. Comparison of alternative educators' learning styles and work setting preferences

<table>
<thead>
<tr>
<th>Style</th>
<th>Preference to work in alternative setting (observed/expected)</th>
<th>Preference to work in traditional setting (observed/expected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>21 / 20.0</td>
<td>0 / 1.0</td>
</tr>
<tr>
<td>AS</td>
<td>8 / 7.6</td>
<td>0 / 0.4</td>
</tr>
<tr>
<td>AR</td>
<td>12 / 11.4</td>
<td>0 / 0.6</td>
</tr>
<tr>
<td>CR</td>
<td>20 / 20.0</td>
<td>1 / 1.0</td>
</tr>
<tr>
<td>CSAS</td>
<td>12 / 13.3</td>
<td>2 / 0.7</td>
</tr>
<tr>
<td>CSAR</td>
<td>15 / 15.2</td>
<td>1 / 0.8</td>
</tr>
<tr>
<td>CSCR</td>
<td>10 / 12.4</td>
<td>3 / 0.6</td>
</tr>
<tr>
<td>ASAR</td>
<td>1 / 1.0</td>
<td>0 / 0.0</td>
</tr>
<tr>
<td>ASCR</td>
<td>7 / 6.7</td>
<td>0 / 0.3</td>
</tr>
<tr>
<td>ARCR</td>
<td>54 / 52.4</td>
<td>1 / 2.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chi-square</th>
<th>Value</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td>15.99</td>
<td>9</td>
<td>.067*</td>
</tr>
</tbody>
</table>

*p < .05.
Table 18. Comparison of alternative educators' learning styles with greater or less than five years experience in an alternative setting

<table>
<thead>
<tr>
<th>Style</th>
<th>Less than five years experience in an alternative setting (observed/expected)</th>
<th>Five years or more experience in an alternative setting (observed/expected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>11 / 10.8</td>
<td>11 / 11.3</td>
</tr>
<tr>
<td>AS</td>
<td>2 / 3.9</td>
<td>6 / 4.1</td>
</tr>
<tr>
<td>AR</td>
<td>4 / 5.9</td>
<td>8 / 6.1</td>
</tr>
<tr>
<td>CR</td>
<td>12 / 10.3</td>
<td>9 / 10.7</td>
</tr>
<tr>
<td>CSAS</td>
<td>10 / 8.3</td>
<td>7 / 8.7</td>
</tr>
<tr>
<td>CSAR</td>
<td>6 / 7.8</td>
<td>10 / 8.2</td>
</tr>
<tr>
<td>CSCR</td>
<td>10 / 6.4</td>
<td>3 / 6.6</td>
</tr>
<tr>
<td>ASAR</td>
<td>1 / 0.5</td>
<td>0 / 0.5</td>
</tr>
<tr>
<td>ASCR</td>
<td>3 / 3.4</td>
<td>4 / 3.6</td>
</tr>
<tr>
<td>ARCR</td>
<td>27 / 28.8</td>
<td>32 / 30.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chi-square Value</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson</td>
<td>10.54</td>
<td>9</td>
</tr>
</tbody>
</table>

*p < .05.
Table 19. Overview of Hypotheses 1-5, which were all rejected at the .05 level of significance comparing alternative to traditional educators' learning styles

<table>
<thead>
<tr>
<th>Style</th>
<th>Hypotheses</th>
<th>Alternative to traditional educator</th>
<th>Prefer alternative setting to traditional</th>
<th>Prefer traditional setting to traditional</th>
<th>Five years or more alternative education to traditional</th>
<th>Less than five years to traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>Hypotheses</td>
<td>fewer***</td>
<td>fewer***</td>
<td>fewer***</td>
<td>fewer**</td>
<td>fewer**</td>
</tr>
<tr>
<td>AS</td>
<td>Hypotheses</td>
<td>fewer***</td>
<td>fewer***</td>
<td>fewer***</td>
<td>fewer**</td>
<td>fewer**</td>
</tr>
<tr>
<td>AR</td>
<td>Hypotheses</td>
<td>more**</td>
<td>more***</td>
<td>more**</td>
<td>more**</td>
<td>more**</td>
</tr>
<tr>
<td>CR</td>
<td>Hypotheses</td>
<td>fewer***</td>
<td>fewer***</td>
<td>fewer**</td>
<td>fewer*</td>
<td>fewer*</td>
</tr>
<tr>
<td>CSAS</td>
<td>Hypotheses</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
</tr>
<tr>
<td>CSAR</td>
<td>Hypotheses</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
</tr>
<tr>
<td>CSCR</td>
<td>Hypotheses</td>
<td>more***</td>
<td>more*</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
</tr>
<tr>
<td>ASAR</td>
<td>Hypotheses</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
</tr>
<tr>
<td>ASCR</td>
<td>Hypotheses</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
</tr>
<tr>
<td>ARCR</td>
<td>Hypotheses</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
<td>more***</td>
</tr>
</tbody>
</table>

* p<.05.
** p<.01.
*** p<.001.
Alternative educators are significantly more likely to have a CS learning style combined with a random learning style compared to traditional educators. They are also significantly less likely to have only a CS learning style when compared to traditional educators. Alternative educators are also significantly more likely to have an ARCR learning style as compared to traditional educators.
CHAPTER V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

More Than One Right Answer
(IAAE 1996 conference theme)

The purpose of this investigation was to gain information about alternative educators and their learning style(s). This information will potentially help school district personnel determine who would be best suited to work with the growing number of at-risk students in the state of Iowa. Both quantitative and qualitative methods were used to investigate the profile of Iowa’s typical alternative educator.

Summary

The 1998–1999 membership of the Iowa Association of Alternative Education (IAAE) was the group chosen to represent alternative educators in the state of Iowa. The Gregorc Learning Styles Inventory, also called the Gregorc Style Delineator (GSD), and a demographic survey were distributed to 365 participants.

The GSD was created by Anthony Gregorc to investigate why people were not learning in traditional public schools. It is a tool to help individuals recognize and identify how they receive and express information efficiently, economically, and effectively (Gregorc, 1984a). The demographic survey was constructed by the researcher to gain general information about alternative educators.

The GSD asks the individual to complete 10 items. Each item consists of ranking four words at a time on a one to four scale. These words correspond to how the individual views him/herself (1 = Not like you at all, to 4 = Being a powerful descriptor of yourself). The GSD categorizes individuals into the following four learning styles: Concrete Sequential (CS), Abstract
Sequential (AS), Abstract Random (AR), and Concrete Random (CR). Individuals may have one learning style or a combination of learning styles. The following paragraphs outline the behaviors of learners and teachers associated with each of these styles.

Concrete Sequential (CS):

Teacher: Focuses on practical information, presents information sequentially, exerts control over learning with specific objectives, has a low tolerance for distraction.

Teaching methods: Uses concrete examples rather than abstract theories, hands-on, field trips, CAI, immediate feedback, programmed instruction...concerned with perfection.


Abstract Sequential (AS):

Teacher: Verbal, abstract, structured, logical, low tolerance for distraction.

Teaching methods: Uses reading assignments, lectures, facts, [letter] grades important, lectures, audiotapes, and individual guided studies.

Learner: Logical, analytical, conceptual, and studious. Prefers lectures, quiet, controlled study, extended reading, and audiotapes.

Abstract Random (AR):

Teacher: Subjective, affective, abstract, empathetic, lets students control the direction of the class, high tolerance for distraction.

Teaching methods: Uses analogies, metaphors, student options, cross-age tutoring, essays, open discussion, personal interviews, reflective activities.
Learner: Sensitive, sociable, imaginative, and expressive in nature. Very intuitive, prefers unstructured learning environments and multi-sensory in nature involving group discussion, music, media, and activities that permit time for reflection.

Concrete Random (CR):
Teacher: Prefers the application of ideas through example and practice, has a moderate tolerance for distraction.
Teaching methods: Uses experimentation, independent study, intuition, problem solving/multi-dimensional approach, games, and experiential learning.
Learner: Intuitive, original, investigate, and able to solve problems. Prefers independent projects, games, simulations, and discovery learning (Gregorc, 1984b).

These data obtained by the alternative educators were analyzed by conducting a chi-square test statistic for comparing observed and expected frequencies of educators' learning style(s) preferences. Expected frequencies were the data collected by Richard P. Manatt, director of SIM at Iowa State University, in his staff development seminars with traditional educators during the period of November 21, 1987, through September, 1998.

This quantitative investigation revealed alternative educators identify their learning style(s) as having significantly more random components as part of or as their total style as compared to traditional educators. It also was discovered that as a group, alternative educators have significantly less concrete sequential and concrete sequential, abstract sequential learning style(s) as compared to traditional educators.

The qualitative investigation revealed alternative educators are better educated, have higher household incomes, and more likely to be male or a minority when compared to educators
working in traditional schools. Alternative educators also express a moral motivation to work with at-risk students such as religion, altruism, or empathy.

The following research questions were asked in this study:

1. Are there differences in the learning style(s) of traditional educators compared with alternative educators?

2. Are there differences in the learning style(s) of traditional educators compared with alternative educators who prefer to work in alternative programs?

3. Are there differences in the learning style(s) of traditional educators compared with alternative educators who prefer to work in a traditional school?

4. Are there differences in the learning style(s) of traditional educators compared with alternative educators who have worked in an alternative program for five years or longer?

5. Are there differences in the learning style(s) of traditional educators compared with alternative educators who have worked in an alternative program for less than five years?

6. Are there differences in the learning style(s) of alternative educators who prefer to work in alternative programs compared to alternative educators who prefer to work in traditional programs?

7. Are there differences in the learning style(s) of alternative educators who have worked less than five years in an alternative program compared to alternative educators who have worked five years or longer in an alternative program?

8. Is there something about your life that gives you a special motivation to work with at-risk youth?
Conclusions

The following conclusions to the aforementioned research questions are warranted from the results obtained.

1. There is a difference in learning style(s). Fifty percent of alternative educators have an abstract random component in their learning style as compared to 19 percent of traditional educators. The profile of an educator who has an abstract random style is more subjective, empathetic, and open to students directing/controlling the classroom. Alternative educators tend to prefer unstructured learning environments and multisensory instructional lessons.

2. Fifty-six percent of alternative educators have a concrete random component in their learning style(s) as compared to 21 percent of traditional educators. Educators who have a concrete random style use teaching methods that rely on application, experimentation, problem solving, and independent learning experiences.

3. Alternative educators are 21 percent less likely to have a concrete sequential learning style as compared to traditional educators. They are less likely to want to control students, assign reading for knowledge, or precisely organize sequential instruction.

4. Alternative educators are 24 percent less likely to have abstract sequential component as part of their learning style(s) as compared to traditional educators. They are less likely to lecture, rely on logical thought analyses, or emphasize grades as a measure of learning.

5. There is a difference in learning style(s) between alternative and traditional educators whether or not alternative educators preferred to teach in an alternative setting. Learning style(s), as measured by preference indicated in qualitative questions, did not vary by satisfaction with participants' present job.
6. There is a difference in learning style(s) between alternative and traditional educators regardless of the number of years the alternative educators had taught in an alternative setting.

7. There was no difference in learning style(s) among alternative educators dependent on their preference of educational setting.

8. Differences in learning style(s) among alternative educators did not vary by years of teaching in an alternative setting.

In general, the following additional conclusions were identified after analyzing and synthesizing the research data:

9. Alternative educators care deeply about students and believe they are morally bound to teach all students.

10. Alternative educators believe the public schools’ traditional methods of instruction and climate alienate many students.

11. Alternative educators desire flexibility in academic delivery and school/student interactions, discipline, and expectations.

Limitations

This study had several limitations. They were:

1. The Gregorc Style Delineator (GSD) is a reliable instrument, but is possibly too short for good construct validity. However, it is and was this researcher’s opinion, from personal observation, that alternative educators often do not complete lengthy paper and pencil surveys. Therefore, the data collection tools were purposefully quick to complete in a controlled setting.
2. The group was drawn from the attendees of the 1998–99 IAAE convention, which limited the number of alternative educators in the state considered for participation.

3. The setting for participants to complete the GSD/demographic survey was a crowded auditorium with many distractions.

4. This research did not investigate how the alternative educators taught or how effective each participant actually was with at-risk students in the classroom.

Discussion

A person’s learning style(s) identifies how he/she perceives and stores information. The literature indicates superintendents, principals, and traditional teachers (along with prison correction officers) (Buehler, 1996) predominantly identify concrete sequential learning styles over abstract random styles. They perceive information through their physical senses rather than intuitively. They organize information in step-by-step categories rather than through a holistic analysis (Brown, 1994; Cox, 1994). Alternative educators, however, have predominantly random learning styles. They are intuitive, impulsive, independent, colorful, and at times ego-centric. They feel morally bound to help at-risk students in flexible, empathetic, student-centered learning environments.

There are fewer alternative educators who identify concrete sequential, abstract sequential, or just concrete sequential learning styles. However, alternative educators are significantly more likely to identify a concrete sequential learning style if they also identify this in conjunction with a random learning style such as concrete sequential, abstract random, or concrete sequential, concrete random as compared to traditional educators.

There are no statistical differences in the numbers of alternative and traditional educators who have identified the following learning styles:
Abstract Sequential
Abstract Random
Abstract Sequential, Abstract Random
Abstract Sequential, Concrete Random

There are statistical differences in the numbers of alternative and traditional educators who identify the abstract random, concrete random style. Alternative educators are significantly more likely to identify this style at the .001 level.

Coincidentally, at-risk students also tend to have random learning styles (DeHart, 1996; Schweikert-Cattin, 1996), and they too prefer an empathetic and flexible relationship with teachers while learning (Ayala, 1996; Baker, 1994; Cattin, 1996; Christensen, 1997; Denham, 1996; Holmgren-Hoeller, 1993; Schweikert-Cattin, 1996; Weir, 1992). Further research indicates matching the learning style(s) of teachers and students not only fosters positive attitudes in students, it also significantly raises student achievement (Cafferty, 1980; Charkens, O'Toole, & Wetzel, 1985; Copenhaver, 1979; Curry, 1990; Daniel & Tacker, 1974; Domino, 1979; Mahlios, 1981; Pizzo, 1981; Shea, 1983).

Why is this important? There is an increasing need for educators who can work with at-risk students in the state of Iowa and the nation. Society is facing more violent, troubled youth than ever before, and public schools must provide an education for this population.

Educators are overworked, underpaid, and underappreciated by society. Fewer and fewer college students see education as a viable career choice. What can this research provide? Colleges and universities, whose primary goal is to educate, need to look within their present student body to nurture the potential teachers of the future. They could screen students who are "undecided" in a major to identify potential alternative educators. Some people may ignore the field of education because they were frustrated with the traditional format of K–12 education. Realizing there is a
different way to teach and interact with students (i.e., alternative education) may open the door for more people to choose an education major.

Many persons in the humanistic disciplines may consider education as an option when they become aware that there is an ever increasing need for alternative educators as compared to traditional educators. Often these individuals also want to "make a difference in the lives of others."

School districts may begin by screening applicants or current employees who may be assigned to an alternative school placement. This would help identify those persons who would most likely have the characteristics needed to be an alternative school educator. These battery of tests, the Gregorc Style Delineator, the Wonderlic Personnel Test, and the Emotional Empathic Tendency Scale would provide school districts with a rounded profile of potential alternative educators.

Educators and potential educators should receive mandatory training on effective teaching strategies for all learning styles. Kathleen Butler's Style Differentiated Instruction outlines how educators may "cross over" learning styles to reach all types of learners. For example, to encompass all four of Gregorc's learning styles, educators should state learning objectives as: behavioral objectives for concrete sequential learners, personal understandings for abstract random learners, conceptual problems for abstract sequential learners, problems for concrete random learners.

Unfortunately, there is a large group of persons who become educators and then through frustration with the "system," burn out, or for lack of purpose, drop out of the field after teaching only a few years. Educational administrators in public schools across the state need to identify members of their own staffs who may prefer to work with at-risk students and direct them in those paths. Too often these teachers are considered problems for the "system," just like the at-
risk students. Not all students fit into one given norm and so not all teachers fit into one given type of school.

This research has the potential to help all educators better understand alternative educators and why they are able to work with the students who fail in traditional schools. One of the themes of the IAAE is that there is "more than one right answer." Alternative educators understand and respect the role traditional schools fill for a large segment of today’s youth. However, it is becoming increasingly apparent that this does not work for all youth in our society, and alternative methods, teachers, and schools are needed for our state and country to maintain an educated citizenry.

**Recommendations for Practice**

The United States is facing an overall shortage of certified teachers, and many current teachers are not even teaching within their certified areas. These two trends combined with growing numbers of hard to teach youth demand a change in our educational system. Colleges, universities, and even high school guidance counselors should actively recruit today’s high school and college students to be tomorrow’s teachers.

In light of these concerns and the results of this research, the following recommendations for practice are suggested:

1. School districts should screen potential educators who may be assigned to an alternative setting to enhance the probability of successfully placing an employee.
2. Current school administrators need to respect and nurture current employees who demonstrate skill in working with the at-risk populations in their districts.
3. School district inservice programs and colleges of education should teach the theory and methods of instruction for differing learning styles. This would be very beneficial to
traditional school educators who struggle teaching the students in their classes who are at-risk and/or have differing learning styles than the majority of traditional students. Kathleen Butler’s *Style Differentiated Instruction* is a useful tool in helping educators understand how to teach to all learning styles.

**Recommendations for Further Research**

This investigation has focused on alternative educators and their learning style(s). This is only the beginning of an area to be studied when analyzing and improving alternative education. The significant findings of this research suggest further study is warranted.

1. Identify personality traits of alternative educators to enhance the profile of this group that was begun in this study.

2. Study at-risk students’ learning styles and personality traits for a potential screening measure to prevent students from dropping out of high school.

3. Research analyzing the effectiveness of teachers with a concrete sequential learning style who have been trained to interact with students through abstract random and concrete random instructional methods. Can positive interactions with at-risk youth be taught or is the moral imperative accepted by alternative educators the true key to their ability to work with at-risk students?

4. Investigate the learning styles of traditional educators who drop out of the field of education and see if there is a standard profile, possibly more similar to the profile of an alternative educator.

5. Conduct similar research with a larger group of alternative educators, who would participate in data collection in a more quiet, relaxed setting.
6. Examine other alternative educators using a more in-depth learning styles test to rule out construct validity in the Gregorc Style Delineator. James Keefe’s *Learning Style Profile* gives a more detailed analysis of a person’s learning style(s) and can be effectively used in student advisement and placement in school.

7. Analyze the match of alternative educator learning style(s), teaching style(s), and individual effectiveness as a teacher in working with at-risk youth.

8. Conduct observational research to investigate if learning style matches teaching style.

9. Investigate if learning style(s) change over a person’s lifetime.
Demographic Survey

*WHATEVER IT TAKES...TO FINISH A Ph.D. AT ISU!!!!!*

This information will be held in the strictest confidence and your name and address are only being collected in case a follow-up to the data collection is necessary. Your identity will not be used in this study and will not be seen by anyone but the researcher, Rebecca Rosenquist. Results will be reported by groups of educators and will be published in an IAAE newsletter.

NAME: ____________________________

ADDRESS: ____________________________

CITY: ____________________________ STATE: __________ ZIP: __________

SCHOOL/PROGRAM NAME: ____________________________

WORK NUMBER: ( ______ ) __________ HOME NUMBER: ( ______ ) __________

Please answer the following items:

1. I have worked in an alternative school/program for ______ year(s).

2. I have worked in a traditional school/program for ______ year(s).

3. It is my preference to work in an alternative program as compared to working in a traditional school/program. Yes or No

Please check if applicable:

4. My current position is: ____________________________

   ____ Administrator
   ____ Counselor
   ____ Certified Teacher
   ____ Certified Support Staff
   ____ Non-Certified Staff
   ____ Other (please specify)

5. Highest degree completed/Major: ____________________________

   ____ Bachelors/__________
   ____ Masters/__________
   ____ Doctorate/__________

6. Gender: ____________________________

   ____ Male
   ____ Female

7. Race: ____________________________

   ____ American Indian
   ____ Asian
   ____ Black
   ____ Latino
   ____ White
   ____ Multi-racial


8. Age:
   _____ 20-30
   _____ 31-40
   _____ 41-50
   _____ 51-60
   _____ over 61

9. Household Income:
   _____ $0-$20,000
   _____ $21,000-$40,000
   _____ $41,000-$60,000
   _____ $61,000-$80,000
   _____ $81,000-$100,000
   _____ over $100,000

10. Is there something about your life that gives you a special motivation to work with at-risk youth? Yes or No

   If yes, please explain.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   (You may use the back of this page if additional space is needed.)

   Thank you very much for your help. If you have any questions, please see me after this meeting or any time during the remainder of the conference.

   Rebecca Rosenquist
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