DOCUMENT RESUME

ED 386 835 EC 304 224

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TITLE Rural Gifted Adolescent Females: Perceptions of Curriculum at Elementary and Secondary Levels.
PUB DATE Apr 95
NOTE 29p.; Paper presented at the Annual National Convention of the Council for Exceptional Children (73rd, Indianapolis, IN, April 5-9, 1995).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Black Students; College Freshmen; *Curriculum Enrichment; Elementary Secondary Education; Enrichment Activities; *Females; *Gifted; Individual Development; Mentors; *Rural Education; Rural Youth; Special Education; *Student Attitudes; *Student Development; White Students
IDENTIFIERS African Americans; Georgia

ABSTRACT

This study of seven gifted female first-year college students (three African-American and four Euro-American) who had graduated from public high schools in rural south Georgia investigated their perceptions of their gifted programs in elementary and secondary school. Three data sources were used: a self-report participant questionnaire, follow-up interviews using structured open-ended questions, and a self-report skill assessment instrument. Findings indicated that influences regarded as most important occurred in students' elementary level gifted programs. Secondary programs were seen as minimal in influencing the decisions made about college programs and majors. Students also indicated that the most influential aspects of their secondary curriculum came not from gifted programming but rather from mentors through participation in informal educational opportunities. The study's implications suggest that gifted female students from rural backgrounds would benefit from such things as support of their interests in nontraditional subjects and careers, exposure to options using their perceived strengths, encouragement to reach out to experiences expanding their views of the world, assistance with broadening career and educational options, and help with continued development of personal identity. (Contains 21 references.) (DB)

Rural Gifted Adolescent Females: Perceptions of Curriculum at Elementary and Secondary Levels

Running Head: GIFTED CURRICULUM

Rural Gifted Adolescent Females: Perceptions of Curriculum at Elementary and Secondary Levels

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A version of this paper was presented in April, 1995 at the Council for Exceptional Children Annual National Convention, Indianapolis, Indiana.

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Abstract

Student perceptions of gifted curriculum at elementary and secondary levels were investigated using three data sources. Data were collected and analyzed from gifted, rural adolescent females who were enrolled in their first year of college. Findings indicated influences that were most important occurred in their gifted programs at elementary levels, while the secondary programs were seen as minimal in influencing the decisions made about college programs and majors. The students also indicated that the most influential aspects of their secondary curriculum came not from gifted programming but rather from mentors through participation in informal educational opportunities.

Key Words: Rural Adolescents, Gifted Females, Gifted Curriculum

Rural Gifted Adolescent Females: Perceptions of Curriculum at Elementary and Secondary Levels

There is increasing interest in those factors that influence adolescent females of extraordinary academic potential when they make decisions. These factors may include curriculum, teachers or mentors, and the environment in which they live, in this study, a rural environment. Which factors are most important: the curriculum — stated or hidden, the individuals responsible for delivering the curriculum, the environment, or a combination?

Individuals not directly involved in working with or teaching gifted individuals are often surprised to find that these students must still master the same curriculum as their peers. What separates gifted programs from others is emphasis on problem solving and problem finding, creativity and originality, as well as an increase in the content depth and sophistication (Gallagher & Gallagher, 1994; GA Dept. of Edu., 1986. 1991; Van Tassel-Baska, 1992). At least, this is what is stated in curricular guidelines (see GA Dept. of Edu., 1986. 1991). However, the reality of what occurs in secondary settings, as opposed to elementary programs which are usually stand-alone, is that differentiation is most frequently nonexistent, and supplanted by doing more and more of the same. The gifted who have an interest in and capacity to construct knowledge for themselves are often not only *not* encouraged but also not allowed to deviate from stated curriculums. As Van Tassel-Baska (1992) states, "At the secondary level, however, mild content acceleration and enrichment has been the point of departure in the scheme of program design, often thwarting further development beyond the established

honors concept in specific disciplines of study" (p. 2). She further makes the important distinction that whereas elementary gifted programs are more often patterned on the special education model with its emphasis on a continuum of services and emphasis on individual needs, secondary programs are patterned on the general education world with its emphasis on curriculum content knowledge and support structures. An ambiguous approach to gifted programming may also be a result of societal values, which either laud efforts to nurture gifted individuals or disregard their needs based on the belief that once gifted, always gifted (Gallagher & Gallagher, 1994).

Vallance (1986) stated that the notion of hidden curriculum can be used to identify factors or side effects of schooling that may be sensed but not adequately explained by examining the explicit or stated curriculum. This hidden curriculum credited variously as inculcating values, political socialization, as well as perpetuating traditional class structure may also function as a form of social control. In rural environments where such factors as traditional family values are held in high esteem and openly supported social control might be seen as acceptable or beneficial.

Expectations for these gifted adolescents are often in conflict between values for those who are bright and promising (Eccles, 1985) and expectations that females in rural environments will help maintain the stable, sometimes conservative, educational, religious, and social life of these communities (Kleinsasser, 1986). Females living in rural areas may also share some of the same problems and needs of other culturally diverse groups. When gifted adolescents are categorized as sharing many of the characteristics of other culturally diverse groups (Schlichter, 1981), who transmit their own knowledge, rules, attitudes, traditions, and values

that influence behavior (Betancourt & Lopez, 1993) the situation becomes even more complex.

Curriculum aspects of gifted programming at the elementary and secondary level in the Georgia rural schools are qualitatively different. The objective of this research was to identify aspects of gifted adolescent females as they made decisions about college programs and majors and to determine the effectiveness of the gifted curriculum as preparation for college work, particularly as perceived by the participants involved in gifted education.

The theoretical framework guiding this research evolved from the study of giftedness and adolescence. Adolescence is a complex time when gifted females experience personal conflict about sex roles, belonging and being different (Kramer, 1986) and attribute their success to diligence, effort and acquired skill rather than ability (Eccles, 1985). Thus, society's lower expectations of gifted adolescent females are manifested as they are reinforced for social achievement and conformity (Noble, 1987) rather than for being gifted as in mathematics and science (Fox, Benbow, & Perkins, 1983).

The hypothesis of this research was that regardless of setting, gifted programming strongly influenced decision making and increased educational options, even though living in a rural area might exacerbate conflict for gifted adolescent females. The objective of this research, therefore, was to identify factors in rural south Georgia that influenced the decision making processes of precollege gifted adolescent females living in this area, to understand those influences and to explore ways their rural environment may have contributed to their perceptions of gifted programming.

To gain a better understanding of human interaction within the social-

historical context, we used a case study approach to describe reflections of the lifelong learning experiences of gifted adolescent females and the influences that impacted those experiences. Using case study research as empirical inquiry provides the opportunity to view perceptions of events and influences in a detailed, concrete, and real life development context (Moon, 1991).

Method

Defining Rural

There are many ways that rural may be defined. Early research discussed rural "as simply being the opposite of urban" (Milne, 1976, p. 60). Current researchers would agree that rural includes such factors as population density or traditional family values. A rural area has fewer than 150 inhabitants per square mile or is located in a county where 60 percent or more of the population lives in towns of 5,000 people or less (National Rural Development Institute, 1986). The participants lived in rural south Georgia counties where there was an average of 65 individuals per square mile (Bachtel & Boatright, 1993). According to research literature rural women tend to be described as family oriented, marrying sooner, staying married, having more children and perceiving sex roles in very traditional ways (Kleinsasser, 1986).

Participants

The participants were three African-American and four Euro-American rural gifted females who graduated from public high schools in south Georgia. These females were chosen based on overall scholarship and leadership roles as high school students and were identified as gifted using eligibility criteria established by the Georgia Department of Education (1986). In grades K to 2, if a student's mental ability test score was the 99th percentile, achievement data were not required. For

grades 3 to 12, if a student's minimum mental ability score was the 96th percentile, the score had to be accompanied by achievement test scores at the 85th percentile or higher on a total achievement test battery or at the 90th percentile on either total reading comprehension or total mathematics using national norms.

School Setting

At the elementary level, the program for the gifted was a pull-out program. In these programs, the students received most of their instruction in regular heterogeneous classes while receiving their "gifted" instruction for approximately one day per week in a homogeneous class. Students were responsible for class work missed in regular classes. In this special setting, students engaged in "both group and individual learning experiences to develop cognitive skills, leadership potential, research skills, thinking/reasoning abilities and creative abilities (Georgia Department of Education, 1986, p. 1). Student-teacher ratios in these classes were approximately 15 to 1.

At the secondary level, students participated in honors and advanced placement (AP) courses. Some of them were enrolled in dual-credit programs between high schools and colleges. Secondary level students participate in volunteer experiences, extracurricular activities, and competition – academic and non-academic.

The State of Georgia's curriculum for gifted learners in secondary classrooms is based on a curriculum development model that integrates content, process, product, and enabling skills. Content is both simple (facts, details, rules, concepts, generalizations) and complex (issues, problems, themes). Process involves cognitive learning that is both basic (know, understand, use) and abstract (creative, critical, problem solving) as well as affective learning (receive, respond, value,

organize, characterize). Products are vehicles by which students consolidate learning and communicated ideas. Students create kinesthetic, verbal, visual or written products that are presented to others. Enabling skills allow students to pursue and understand knowledge — dependently and independently. Enabling skills include basic school skills, research skills and personal study skills (GA Dept. of Education, 1991).

Design, Data Sources and Analysis

In our descriptive, developmental holistic, multiple-case study design (Yin, 1989) over a one year period, data were collected from three principal sources: a self-report participant questionnaire, follow-up interviews using structured open-ended questions, and s self-report skill assessment instrument. The questionnaire focused on nine demographic variables and ten questions on educational background. The response to the questionnaire guided the development of 22 interview questions designed to explore current issues affecting gifted females and to capture the complexities of individual perceptions of high school academics, extracurricular activities, achievement, and role identity. Face-to-face interviews were conducted with the participants in university offices of the interviewers and lasted less than two hours each. There were same-gender pairs for the seven interviews with five same-ethnicity pairs to reduce interviewer bias. The skill assessment identified specific attributes, talents, and personal qualities in twelve cluster areas: management, communication, research, financial, manual, service, clerical, technical, public relations, agriculture, selling and maintenance skills (Battle, Grant, & Heggoy, 1994).

Seven case studies were synthesized and integrated into case histories by individual researchers who interviewed each participant. Data collected were

classified for content analysis to facilitate the search for patterns and trends.

Individual Case Studies

Written narrative of seven case histories are included in this study. The participants were all identified in the elementary grades, and participated in gifted programs for an average of six years. All indicated that their early involvement in gifted programming prepared them for their eventual choice of major and college. All of them were involved in advanced placement (AP) or Challenge courses, and half of them were involved in joint enrollment with their local colleges.

Although these seven young women are not easily described in a few words, they might be remembered according to these characteristics and attributes: Cassandra, the debater; Ann, the tri-athlete; Lisa, the business woman; Rose, the feminist; Tye, the cheerleader; Kay, the UN representative; and Beth, the musician.

Case Study #1: Cassandra, the debater

Cassandra is a 19-year-old African-American who was born and reared in south Georgia. Her brother is 26 years old, and she has a sister who is 30. Cassandra's mother is a retired public school educator. Her father is a brick mason/contractor. She decided to major in the area of secondary education. She attends a small college located in the Southeast, where 40% of the students are females and where she was awarded a scholarship.

Case Study #2: Ann, the tri-athlete

Ann, an 18 year-old Euro-American, lived with her parents and one older brother. Her mother is a professor and her father is an administrator at a university. Ann entered the gifted program in third grade and remained in the program for eight years. She was an honor graduate from high school and attends the university in her home town. She is interested in athletics and nutrition and has considered

careers in teaching, coaching, or medicine.

Case Study #3: Lisa, the business woman

Lisa, an 18 year-old Euro-American, and the oldest of three children, lived with her parents until 10th grade. when her parents separated. She entered the gifted program in 4th grade. Lisa attends her hometown university, majoring in business, and plans to work for a major corporation so that she can reenter the business world after she has a family.

Case Study #4: Rose, the feminist

Rose, an 18 year-old Euro-American, lived with both parents and one older brother. Her mother is a high school teacher, and her father is a school system administrator. Rose was identified in the first grade. As an honor graduate and scholarship recipient, she attends a prestigious women's college in the Northeast where she majors in chemistry as a premed student.

Case Study #5: Tye, the cheerleader

Tye, an 18-year-old African-American, lived in the South for 11 years. Tye has an 11-year-old brother and a 15-year-old sister. She entered the gifted program in the third grade. Her parents are faculty at a university. Living in housing on a university campus in south Georgia. She attends her hometown university where she was awarded a tuition scholarship and is majoring in engineering — biomedical or genetic.

Case Study #6: Kay, the UN representative

Kay, an African-American, lived with both parents, one older and one younger sister, and one younger brother. She entered the gifted program in third grade. Kay attends a historically black institution in the Southeast, where she majors in biology as a premed student.

Case Study #7: Beth, the musician

Beth, an 18 year-old Euro-American, lived with her parents and is two years older than her only sister. She entered the gifted program in the 5th grade. Her mother is a secretary and father is a physician's assistant. She received a scholarship into an honors' program at a regional southeastern university, approximately 100 mile from her hometown. She is majoring in elementary education.

Case Study Themes

Factors influencing these adolescent gifted females emerged from the data sources, and included perceptions of elementary and high school curricula — stated and hidden, and extra curricular events.

Elementary Curriculum

Ann, Rose and **Tye** attributed the development of research skills to their elementary gifted program. In the early grades, **Beth** thought she was not as pretty as her peers, but could shine in academics.

Lisa's first eight years of school, in a laboratory school attached to the local university, provided her with much of the academic background that helped her sail through high school. During this time she was involved in the gifted program and credits much of her later academic success to this early training which taught her problem solving and research skills.

High School Curriculum

Cassandra's interview responses revealed the following data about her high school experiences. The drama and speech course was her favorite because she got a chance to speak on topics that she enjoyed, e.g., illiteracy. Cassandra was really motivated in the class because there were no limitations on available topics. Cassandra's least favorite class during her senior year was actually her favorite

subject, mathematics. She said:

> The teacher was extremely difficult and hard. I was not the greatest math student, but my love for math motivated me to keep at it. I was one of the top math students in the school, but I was probably mediocre in this class.

She eventually withdrew from the class because she did not really need to take the class and because it might hurt her GPA.

> I don't think my academic performance in high school is really a reflection of my abilities. I was capable of more. Since I was a high achiever, I would sometimes just do enough to get a low A. Those low As lowered my GPA and I missed graduating as an honor student by a tenth of a point. So I think that if I had applied myself a little bit more, I would have graduated as an honor student.

Ann completed the college prep curriculum. In the ninth grade, the most difficult in high school, she took some hard classes, which forced her to "figure-out where she needed to be." In high school, "if you listened in class and took notes, you knew enough to take the kind of test you had to take." She got her work done in high school, but she didn't do "more" than was necessary for the desired grade. "If I had taken an hour every day, it would have probably made a world of difference." However, she does attribute the development of research and technical skills to the formal curriculum.

Regarding the high school curriculum, **Rose** says "I wasn't challenged enough and I had to strive for outside things . . ." In her favorite classes, she was an active participant. In her least favorite classes, she wrote letters, wrote stories and read books. There were times when she didn't feel involved or that she was

contributing. She says that in her first two years of math in high school, "I felt very much like I was not considered someone who was contributing to the class."

From Roses' point of view, since teachers had to determine "what was right and wrong so that grades could be assigned because that's how a school that is based on grades is run . . . a lot of creativity was turned off." Because her confidence in her ability and enjoyment of reading, Rose would challenge ". . . if only in my own head," the ideas presented by the teacher. Rose would change her high school experience in such a way that her teachers would have been "able to give (her) all these ideas that (she) had to go to other places to get." She wishes her teachers could have been more personable; the teachers of the challenge classes treated the students the same way as they treated students in the lower level college prep classes and according to Rose, "it wasn't necessary." If she could redo her high school experience, she would have been more outspoken in all classes, especially math and she would have demanded more.

Rose attributes the development of time management to her high school challenge courses because there were situations "where all the work couldn't be done and one had to make choices." Math and science high school challenge classes developed her higher order thinking skills.

Tye's least favorite class was senior calculus. She said,

> I hated that class. I didn't study; so I dropped it after the first semester because if I had kept the class, I would have flunked it miserably because I didn't do anything.

She got along well with her calculus instructor. "He was a good teacher." Tye was in his trigonometry class the previous year, and he was the instructor who recommended that she take the class. He did inform her that he thought the class

might be difficult for her, because she had not taken the pre-calculus; however, she was convinced, enrolled in the course, decided that she did not feel like completing the assignments and therefore, she didn't. Her peers would have described her as "struggling" in the class.

Tye's response to the question of "how would you compare your academic performance in high school with your perception of your abilities" is summed up in the following statements.

> I'm sure that I could have done a lot better academically. For most of my courses, I did not study. The only classes that I actually probably studied for were my senior English and my AP biology. I didn't study for any of my classes my freshman year. When we had a test, I would read over the material before the test. When we had final exams, I usually exempted them or didn't study and never did terribly bad. If I had applied myself more, I'm sure that I would have done a lot better. Tye did feel that research and manual skills were developed in high school by completing course assignments.

Kay was enrolled in challenge classes and the college level courses in high school. Regarding the changes she would make in her high school courses, Kay said that she would change the challenge courses because she didn't get any credit for them. She began to make decisions about what she would do–she didn't do everything. Her senior year, she wasn't serious about her calculus course so she changed. She decided that she needed to concentrate on one course, her AP biology.

When **Beth** was younger, she said "I had a really low self-esteem in school and the one thing I could do was academic things. I could kind of show off. That was my talent. I know that was what it was in high school . . ." Always enrolled in

advanced groups, and in the college prep curriculum, Beth found school work easy – with the exception of calculus. She attributed some of the ease of schoolwork to the fact that she read extensively on her own, citing her world history class in which she already knew much of the content and she even tutored classmates who were having difficulty in that class.

Beth was also bothered because just as she had to do in elementary school when they were pulled out for their gifted program, she and other gifted students in high school AP classes had to "turn in our grades for gifted even though the other AP students didn't."

Hidden Curriculum

Cassandra stated that all the students were very close in her speech and drama class–they would support each other by sharing ideas about topics and practicing their speeches together.

Regarding success, **Ann** said "I guess making As is pretty successful but . . . that wasn't as much to me"--in sports, determining success was easy--you won the game or had a lower time, got the target number of baskets . . . my As in high school, I didn't work hard for them . . . . Working hard and reaching you goal is success. Ann with input from her parents made decisions regarding her course of study in high school because of her parents knowledge about what she would need for college preparation and her abilities. Good teachers motivated Ann to work. They were organized, knew what they were doing, and controlled the class.

When asked to describe major influences in her life, and in making her choice of a major, **Lisa** stated "Strong women in my life." Her high school Business teacher, and FBLA Advisor, ". . . pushed me to do well." Her mother taught her to identify her goals, and what to do to achieve them by advising her to "Decide what

you need and want to do, then make a list, and do it." She also credits her mother with being able to redirect her priorities without making her "feel like I can't do anything right."

For **Tye** during her senior year, her English course was her favorite because the teacher was nice to her. This teacher influenced her, and they developed a great teacher-student relationship even though Tye was "not really a big fan of English." She completed all assignments and activities in this course. Tye stated the following about the class.

> It was probably the only English class in which I actually read the books . . . did the homework, just because I liked the teacher. I felt like I would be letter her down if I didn't do the assignments. Of course, that never bothered me before.

She stated that she was probably one of the favorite students of the English teacher and even participated in the academic decathlon the teacher sponsored. Her peers would describe her as "the teacher's pet" in this class because she really did well on the examination.

Kay's parents influenced her high school academic decisions. For Kay, it did not matter where you were from, "it's your parents that really give the structure and the foundation to what you want to do."

For her favorite course, she had an enthusiastic female teacher and that was the course in which she was an active participant and worked hard. Kay shared an experience with one of her teachers. She said that she got the same grades on her papers whether or not she did them the night before or spent weeks preparing; everyone in her group tended to get the same grades as she did. When she attempted to find out what she needed to do to improve her teacher responded "you

have to work on it." She wanted more, she wanted to know what was wrong with the introduction, what was wrong with the conclusion.

For **Beth**, significant influences were her love of reading and music, and teachers who encouraged her. Her goal of becoming an elementary teacher has been a strong, influential factor in her choice of a major, supported by her experiences in school and church activities, particularly those related to music. Beth is a young woman who stated that she is happy all her efforts in school paid off. According to Beth, her peers, not in the same gifted classes, would describe her as "strange, nerd . . ." Beth, and her best friend decided that "being strange is good!"

Beth stated that her gifted teacher - 10th grade - tried very hard to work with all her students, but was not supported by the administration. "We were basically ignored because we were doing fine and not having any problems . . . weren't getting anything extra like the at-risk (sic). I wish the administration would move into . . . their high level program.

Extracurriculum

If reliving her high school experience, **Cassandra** would do more volunteer work prior to her junior year. She volunteered with the American Red Cross even though she could not give blood because of being under weight. She had this to say about her community center after school program experience.

> I tutored elementary school students every day for an hour after school. Many of these children would have been characterized as underprivileged, but they were bright and just needed a little extra help. I learned a lot from helping them and loved working with them.

Cassandra developed her management, communication and research skills by being involved in extracurricular activities, working with others, and completing

assignments for courses. She also "participated in several math competitions in which our team did place first and second two consecutive years, and I placed fifth one year in the individual competition."

Ann was active in church sponsored activities and groups starting at the elementary level. Although she participated in a variety of activities, much of her involvement in extra curriculum activities at the high school level was as a tri-athlete in basketball, softball, and track. She coached sports teams and was involved in a number of other sports related tasks. As Ann assessed her skills in a number of areas to include management, communication, research, financed, manual service, clerical, technical, public relations, agriculture, selling, and maintenance, she attributed learning these skills through extra curriculum activities and part-time work.

During **Lisa's** elementary/middle school years she was engaged in many extracurricular activities, several of which eventually influenced her career aspirations. In the 7th grade she was FHA District President, and "for a timid girl to openly speak to 2,000 people...ad lib!...at first, I was shaky, then you get used to it. Then, no matter who they are, you can speak to them." From then on, she felt she was able to talk to anyone in any setting. Lisa's communication and leadership skills were further developed in high school by participating in the Student Council, Youth Leadership, the Y-Club, International Club, becoming Secretary of the FBLA (Future Business Leaders of America) in the 11th grade, and State President her senior year.

Tye said, "Cheerleading helped me to make friends throughout the state, the nation, and the world." Tye developed her management and communication skills in high school by being involved in sports, clubs, and leadership positions. "They

helped me to manage time and energy." Technical, public relations, and agricultural skills are developed by working in an office and working outdoors.

Beth's perception of her academic performance as compared to her perception of her abilities seemed well grounded. "Involvement in all these extracurricular activities . . . helps you to become a leader and that's where you learn some of the things you need that aren't academics." She felt she was aware of her strengths and weaknesses, and learned how to deal with less than ideal grades. Even in her least favorite class, calculus, she thought that both her peers and teacher would describe her as being "on top of the situation, knowing when to ask for help." Early experiences in church as well as extensive baby sitting whetted Beth's appetite for working with young children, eventually leading to her career choice, being an elementary school teacher.

Findings

Analysis revealed the following trends and patterns. The participants credited mentors, particularly teachers who supported them and took an interest in them as being one of the greater influences on their choice of college, major, and eventual career choice. Gifted teachers at the secondary level were not mentioned as being helpful, with one exception. In general these young women acquired a specific set of skills in a diverse number of categories. (See Table 1). Although there were some individual differences, the categories most frequently represented were: management and public relations, with "working with people" under both categories which were checked by all seven participants. Clerical, service and communication skills are skill categories are traditionally associated with female dominated occupations, yet the individuals in this group reflected attainment of all

skills but did not attribute them to curriculum. The least frequently represented were: agricultural, maintenance and technical skills which are conversely, traditionally associated with male educational and occupational choices.

Insert Table One Here

The students in this study indicated that they acquired many of their skills through their involvement in extracurricular activities and work experiences. The only skills attributed to educational, curricular experiences were in the research area which they acquired through the gifted program starting at elementary and completed in course work in high school.

> Curriculum planners for the gifted need to be mindful of the optimal match between learner capacity and level of experiences provided. Consequently, the best curriculum intervention may occur when both personal skill level an challenge level are correspondingly high, as found in recent studies of both gifted and non gifted adolescents (Csikszentmihalyi, 1987, p. 7).

Seemingly, there is a direct link between the participants' involvement in extracurricular activities, their assessment of their skills, and their career aspirations. For example, Lisa, who has declared her major as International Business, indicated that she had all skills listed under public relations, clerical and selling, with limited skills indicated in other categories, agriculture, technical, and maintenance. This skill assessment is consistent with the fact that in high school, her favorite courses were the business ones, and that she rose to both a state and national leadership position in Future Business Leaders of America (FBLA). Lisa's

business teacher and FBLA advisor was a mentor, and she is currently working part-time in retail.

The development of her current career aspiration is matched with her interest in business related courses in high school, her active participation in business related extracurricular activities, and her employment in a retail business, not in her involvement in her gifted programming in high school. She credits only the completion of work (e.g., papers for her high school AP program) to training from the gifted program.

Although Ann is currently undecided regarding her career aspirations, two of the career options that she is currently considering , being an athletic coach or nutritionist are consistent with her extracurricular activities, and the assessment of her skills. All members of this group reflect attainment of all skills but did not attribute them to curriculum with research skills being the exception.

The findings from this study support our hypothesis that gifted curriculum at the elementary level is most influential in shaping academic choices. In high school gifted students participate in the regular curriculum which is not differentiated for them.

Implications and Conclusion

Gifted female students from rural backgrounds would benefit from:

- support of their interests in non-traditional subjects and non-traditional careers in addition to the more traditional choices.
- exposure to options using the strengths they perceive that they have and allowing them to interact with others in a variety of settings.
- encouragement to reach out to experiences that expand their perceptions of the world.

- assistance with broadening career and educational options.
- help with continued development of identity including opportunity to develop problem solving skills.

These seven case studies enhance our knowledge and appreciation of curricular influences on gifted young women in a rural setting and contribute to the foundations for our continuing developmental, longitudinal study.

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Table 1

Skills Shared by Participants

Management Skills		Communication Skills		Research Skills	
2 3 4 5 7	Planning	2 3 4 6 7	Reasoning	2 4	Recognizing problems
2 3 4 5	Organizing	2 3 4 5	Organizing	3	Interviewing
3 4 5 7	Scheduling	4 7	Defining	1 4 6	Developing questions
3	Assigning/Delegating	1 3 4	Writing	4	Synthesizing
3 4	Directing	1 2 4 5 6 7	Listening	1 3 4 5 6	Writing
3	Hiring	2 3 4 5 7	Explaining	4	Diagnosing
	Measuring production	4 6	Interpreting Ideas	1 2 3 4 5 7	Collecting data
4 6	Setting Standards	3 4 5 7	Reading		Extrapolating
1 2 3 5 6	Working under stress	4	Handling precise work	7	Reviewing
1 2 3 4 5 6 7	Working with people•	3	Working with committees	3 6	Working without direction
1 3	Traveling frequently	1 3	Public speaking	3	Working very long hours
3 4 6	Negotiating strategies	3 4 5 6	Correct English usage	3 4	Research design
	Personnel practices	3 6 7	Subject knowledge	3	Statistics
1 4	Time management	6	Good sense of timing	1 2 4 5 6	Algebra
1 2 3 5 6 7	Working as a team member	3	Operating communication systems	1 2 3 6 7	Working on long-term projects

Financial Skills		Manual Skills		Service Skills	
1 2 3 4 6	Calculating	2 3 6	Operating	2 3 4 5 6	Counseling
	Projecting	3 6	Monitoring	2 3 4 5 6	Guiding
3 4	Budgeting	2 3	Controlling	2 3 4 6	Leading
2 4 6	Recognizing problems	2 3	Setting up	2 4 5 6 7	Listening
1 2 3 4 6	Solving problems	2 3 4 6 7	Driving	3 4 6	Coordinating
3 4	Finger dexterity	2 6	Cutting	2 3 5 6	Working under stress
2 4	Concentrating	2	Doing heavy work	2 3 4 6	Responding to emergencies
4	Handling detail work	6	Knowledge of tools	3	Agencies' policies
3 5	Working under stress		Working on assembly line	3 6	Working on weekends
2 3 4 5 7	Orderly thinking	2 3 4 5 6	Working independently	2 6	Working nightshifts
1 3	Accounting procedures	5	Electronic principles	2 3 4 6	Knowledge of a subject
1 3 4 7	Data processing	2 3 4	Safety rules	3 4 6	Human behavior principles
6	Investment principles		Basic mechanics	3 6	Community resources
6	Financial concepts		Basic plumbing		Working under hazardous conditions
1 3 4	Operating business machines		Doing previse machine work		

NOTE: The numbers indicated match the order that each case study was presented in the paper. #1 = Cassandra (education), #2 = Ann (undecided), #3 = Lisa (international business), #4 = Rose (chemistry), #5 = Tye (engineering), 6 = Kim (biology), #7 = Beth (education).

•indicates two categories checked by all seven participants.

Table 1 (continued)

Skills Shared by Participants

Clerical Skills		Technical Skills		Public Relations Skills	
2 3	Examining	3 6	Financing	1 2 3	Planning
2 3	Evaluating	3 4	Evaluating data	2 3	Conducting
2 3 4 6	Filing	2 3 4 6	Calculating	2 3 5 6	Human relations
2 3 4 6	Developing methods	2 4	Adjusting controls	3 6	Informing the public
3 4 6	Improving methods	4	Aligning fixtures	3 4 6	Consulting
2 3 6	Recording	2 4 6	Following specifications	3	Writing news releases
1 3 4 6 7	Computing		Observing indicators	1 2 3 4	Researching
2 3 6	Recommending	4 6	Verifying	2 3	Representing
1 2 3 5 6	Working as a team member		Drafting	1 2 3 4 5 6 7	Working with people•
2 3 5 6	Working in office	2 4 6	Designing	2 3 5 6	Working under stress
1 2 3 5 6 7	Following directions	2	Balancing principles	2 3	Working very long hours
1 3	Doing routine office work		Working in small studios	2 3 4 5 6	Working odd hours
3 4	Basic clerical skills	4 6	Odd hours	3 6	Negotiating principles
3	Bookkeeping	3 6	Economics	3	Media process
3 4	Data-entry operations	4 6	Investigation principles	3 6	Maintaining favorable image
3 4 5 6	Telephone protocol	3 4 5	Working in an office/outdoors		

Agricultural Skills		Selling Skills		Maintenance Skills	
4	Diagnosing malfunctions	2 3 6 7	Contacting	6	Repairing equipment
	Repairing engines	3 5 6	Persuading	2	Maintaining equipment
2	Maintaining machinery	2 3 6	Reviewing products	2	Operating tools
2 4	Packing	2 3	Inspecting products	6	Dismantling
1 2 3 4 6	Replacing defective parts	3	Determining value	6	Removing parts
	Woodworking	2 3	Informing buyers	2 6	Adjusting functional parts
	Constructing buildings	2 3	Promoting sales	2	Lubricating/clearing parts
	Hitching	2 3 5 6	Working outdoors/indoors	2	Purchasing/ordering parts
3 5 6	Working outdoors	2 3 4 5 6	Working with people	2	Climbing
3 6	Working in varied climate	2 3 5 6	Working under stress	2 4 5	Working outdoors/indoors
2 4	Manual work	2 3 5	Electronic long hours		Lifting heavy equipment
2	Doing heavy work	3	Knowledge of products		Plumbing principles
2	Operating basic machinery	2 3 5 6	Human relations	2	Basic mechanics
2 4	Safety rules	2 3	Financing	2	Electrical principles
	Welding	2 3	Budgeting	3 5 7	Working as a team member
4 6	Horticultural procedures				

NOTE: Skill clusters listed are from Skills Assessment in, *The Career Fitness Program: Exercising Your Options* (3rd ed., pp. 65-66) by D. Sukiennik, L. Raufman, and W. Bendat, 1992, Scottsdale, AZ: Gorsuch Scarisbrick Publishers. Copyright 1992 by the publishers.

•indicates two categories checked by all seven participants.