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PERCEPTIONS OF EFFICACY

OF

GIFTED YOUNG WOMEN

IN

DIFFERENT LEARNING ENVIRONMENTS

BY

JOY L. NAVAN

UNIVERSITY OF OTTAWA
1998

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JOY L. NAVAN

Thesis submitted to the School of Graduate Studies
of the University of Ottawa
in partial fulfillment of the requirements for
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ABSTRACT

The primary purpose of this study was to determine perceptions of academic efficacy of gifted young women in three different learning environments – a public high school, an early college entrance program and a private high school affiliated with the Coalition for Essential Schools. The second purpose of the study was to ascertain which factors in the learning environments influenced the students' perceptions of academic efficacy. The participants in the study were twenty gifted high school females in Grades 11 or 12, and, in the case of the early entrance program, in their first year of college. All were studying in the northeastern United States.

The qualitative design of the study entailed an emerging analysis of data gathered through separate focus groups in each environment, close observation of the students in the environments, and reconvening the participants in a follow-up focus group. In addition, individual reflective assessments completed by participants and interviews with the directors of the programs provided triangulation data. A computer-assisted analysis of the data for each site was followed with analysis across-sites, from which emerged significant themes and constructs regarding efficacy and learning environments.

Results of the study indicated that gifted young women have perceptions of academic efficacy that differed in the different learning environments. All students reported perceptions of strong academic efficacy. Students in the public high school perceived themselves strongest in specific subject matter efficacy. Young women in the

early entrance program revealed strong global self-efficacy as well as an emerging sense of self-agency. Gifted young women in the private high school demonstrated significant metacognitive efficacy. Consistent with social learning theory, students' perceptions, behaviors and environments were reciprocally influenced in each of the learning climates. In addition, analysis revealed significant findings regarding early perceptions of intelligence and placement in the family constellation. The concluding chapters examine major themes and constructs that emerged regarding the psychosocial development of gifted young women and how learning environments can assist their development more effectively.

ACKNOWLEDGMENTS

I most gratefully acknowledge the honesty, the commitment, and the courage of the twenty young women who participated in this collaborative research. Their voices resound throughout the pages to follow as a testimony to their belief that their labors will ameliorate the educational passage of other gifted girls that follow them.

It is with honor and humble gratitude that I acknowledge the support, the guidance and the inspiration of my thesis supervisor, Janice A. Leroux. Her spirit, her own research in the field of giftedness and women, her ethic of caring, and her modeling are the wellspring of this study.

I am immensely indebted to each of the members of my committee. Dr. Jan Ahola-Sidaway was a dedicated reader and a wise editor. Her sound advice in the area of feminist methodology is reflected in the study. Dr. Cynthia Morawski was a constant and gentle support throughout the process. The serendipity of the findings regarding family constellations and early recollections occurred as a result of her encouragement and guidance.

Dr. James Shuman, a true mentor and friend, began this journey with me many years ago. His belief in me was a calm and constant sustenance throughout the journey. I am most grateful to him for the silver threads of his wisdom that are woven within.

To my family -- Robert, David and Michael -- I am most grateful that they encouraged my inquiry to take root and grow. They are my most faithful friends. They nourish me and sustain my spirit.

DEDICATION

TO BOB, MY ROCK, MY SOUL'S MIRROR.

WHEN I LOSE EFFICACY,
YOU LEAD ME BACK.

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CHAPTER ONE

Introduction

Emily and Crystal were inseparable friends from fifth grade on. Both girls were bright, enthusiastic and expressive members of the enrichment program at their school. They had been identified as gifted, a term that implied that they showed above average ability, creativity, task commitment, and the potential for creative productivity (Renzulli & Reis, 1985). When the resource teacher for the gifted learner visited the classroom or met with them in other settings, she was most impressed with their hungry minds.

Through the remaining years of middle school, Emily and Crystal demonstrated high ability and creativity in their different ways. Emily was always highly organized and motivated. Crystal began to show signs of procrastination and difficulty with bringing closure to a project. While Emily was the "steady wins the race" plodder, Crystal most often raced at the last minute to study for a test or to complete a paper. Both girls continued to show outstanding potential, although Crystal often doubted that reality, suggesting that maybe she was just fooling people.

Beginning high school was an abrupt and exhilarating change for both girls and they loved the challenges of a new environment, new ideas and subjects. As the second year of high school began, the resource teacher sensed in both students a leveling off of motivation and challenges. She suggested that they apply to a foreign exchange program for the opportunity to spend a year abroad. They were both chosen as finalists by a local

service club and sponsored by the club's district council for an exchange experience in Australia. The two young women spent their third year of high school on opposite sides of the Australian continent. During their last year of high school they busied themselves completing their graduation requirements and searching for colleges. In the end, the two decided to attend the same small college in the Midwestern United States.

Both women thrived in the university environment. Crystal thrived on the expanded social opportunities and friendships, and Emily on the academics, welcoming the chance to continue – unimpeded – toward her goals. Emily recently graduated Phi Beta Kappa and is enrolled in a Master's program in Physical Therapy. Crystal has not yet graduated, is now working in the Midwest, and plans to return to college in the near future.

The resource teacher, now reflective researcher, ponders the paths these gifted young women created. They are two students with similar abilities and educational experiences, yet very differing beliefs in their abilities. What role did their self-belief play in their journey? What factors in their learning environment reinforced or improved the journey? These are two major questions that motivated the present study.

Inasmuch as the literature indicates that the gifted young woman is a learner who is at risk of not achieving to her potential (Callahan, 1986; Hollinger & Fleming, 1988; Hollinger, 1991), it is essential that educators investigate and apply to their pedagogy interventions designed to empower the learning choices of this learner. Studies indicate that a perception of self-agency and a sense of personal efficacy can benefit the development and achievement of the gifted learner (Bandura, 1982, 1989, 1995; Mone, 1994; Pajares & Miller, 1994; Schack, 1986a, 1986b, 1989; Schunk, 1985, 1993b;

Shucard & Hillman, 1990; Williams, 1994; Zimmerman, 1995). Therefore, an investigation of the students' perceptions as they are influenced contextually in the learning environment will assist educators in designing effective learning experiences for the gifted female.

This qualitative study recounts the stories of twenty able young women, all previously identified as gifted, who were students in three different learning environments. Eight were members of an enrichment program for gifted and talented students in a co-educational public high school in northern New York. Eight were students who were completing high school requirements while at the same time studying their first year of university courses in a co-educational bridging year academy located on a university campus in the Northeast. The remaining four were students of a small, co-educational private high school in Vermont. In each environment the students were asked to report on their perceptions of self-efficacy and to indicate what factors in the learning environment affected those perceptions. The study describes how the reciprocally determining Social Cognitive Learning factors of *cognitive and personal characteristics*, *environment,* and *behavior* (Bandura, 1977, 1986) interact to influence perceptions of efficacy of the gifted young women.

Figure 1 illustrates the interactive and reciprocal influences of Cognitive and Personal Factors, Behavior and Environment in the three educational settings used in this study. The figure represents how self-efficacy is influenced by the factors, each of which is correspondingly influenced by the others as they occur in each of the three educational settings. Through the exploration of the unique interactions of each environment with the females' cognitive and behavioral factors researchers may discover ways in which

educators can modify learning settings to better serve gifted young women as well as other able students.

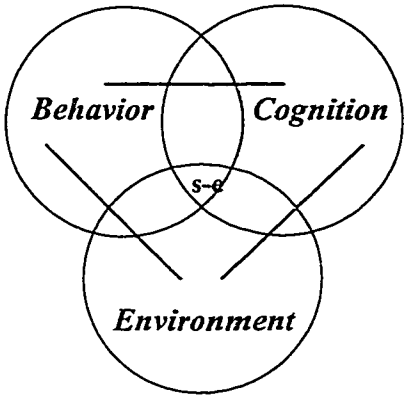
The second chapter explores the theoretical underpinnings of the research; specifically self-efficacy, female cognitive development, and gifted females. The qualitative methodology is presented in Chapter Three. Chapters Four through Seven display the analyses of the findings. Due to the extensive nature of the data and the distinct differences in the learning environments, it is appropriate that three chapters with separate, within-site analyses be presented before attempting to synthesize common constructs and other findings across-sites. Chapters Four, Five and Six address the public school environment, the bridging year academy and the private school, respectively. The findings across-sites are discussed in Chapter Seven. The final chapter discusses future research implications regarding influences on the perceptions of efficacy of gifted young women.

In summary, this study examined the self-perceptions of ability of gifted females in particular educational settings with the purpose of discovering how perceptions, behaviors and environment interacted to influence those perceptions. The research questions that motivated the study were as follows:

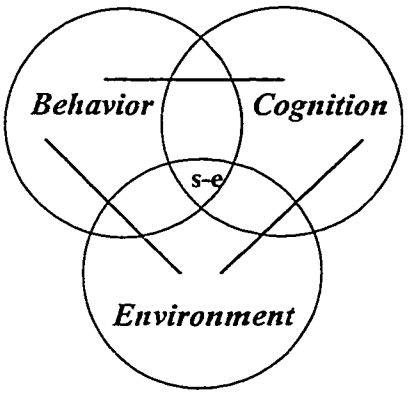
In what ways do gifted young women perceive themselves as academically efficacious in particular educational settings?

What are the factors in the educational setting that they perceive as influencing their academic self-efficacy?

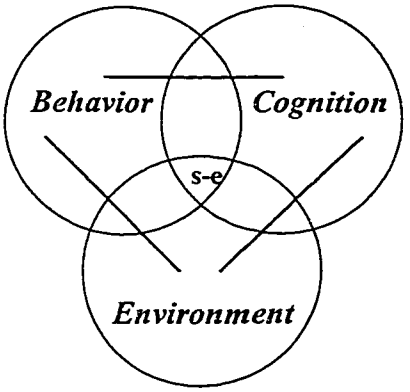
The following chapter will explore the theoretical underpinnings of the study, namely, Bandura's construct of self-efficacy, female social-cognitive development, and the gifted female.



Public School Environment



Bridging Year Academy



Private School Environment

Note: s-e = self-efficacy

Figure 1: Reciprocal interactions of cognitive and personal, behavioral and environmental factors in different learning environments

CHAPTER TWO

CONCEPTUAL FOUNDATIONS

Introduction

"I think that, well, most of the way I feel about myself comes from interactions with other people. I think that the way I do, like the things that I create, the things that I just do, are all just forms of that interaction."

Gifted Young Woman in Private School

These words of a gifted adolescent female clearly reflect the thoughts of Jarvis (1992) in tracing the development of self when he stated that, "The self is learned and formed in the context of social interaction" (p. 42). Bruner (1990) described the individual's entry into meaning, autobiography, and developing self by highlighting the importance of the interactive dynamic of various meanings, created by humans through their engagement with their world. He asserted that it is through our participation and finding meaning through culture and context that we organize meaning-making.

This chapter traces the development of a theoretical framework through the examination of relevant findings in the literature regarding the construct of self-efficacy, women's psychosocial development, and the gifted female. A common thread that weaves through these specialties – and that is reflected in the research design and the findings – is the importance of contextual phenomena as influential factors that interact and blend with cognitive and other environmental factors to weave the fabric that is the self-narrative of the gifted female learner.

Our cultural context provides the grounding necessary for us to exercise our capacity for narrating our experiences in a dominant form of meaning-making – telling our story. Duranti and Goodwin (1992) describe dimensions of context as the setting, the behavioral environment, language, and the extra-situational context. In this view, individuals interact in a multidimensional context that includes the physical, social, behavioral, linguistic, and background phenomena. These assist the individual in understanding and sharing understandings with others. With regard to the educational setting, it is the totality of this contextual circumstance that becomes the environment in which one learns and grows.

Bruner (1990) traced the individual's development of a concept of self as that of a contextual participant in culture. We are not – as learners and actors – an essential self, a conceptual self, a merely transactional self, or a self that can be measured solely through instruments of measurement. We are rather a transactional, contextualized, storytelling self in which our reflexivity and our individual psychological capacity to envision and construct alternatives allow our continuous narrative to achieve, in Bruner's words, "external and internal coherence, livability, and adequacy" (p. 112) in our actions and interaction within our cultural context. Applying this conceptualization of self to educational research, the researcher thus infers that the focus of inquiry must be the transactional, contextualized, storytelling self.

Tracing the development of self in women, Josselson (1987) asserted that "the configuration of a woman's identity at the close of adolescence forms the template for her adulthood" (p. 168). Given the importance of the template to her future womanhood, researchers have a pressing need to understand the constellation of factors that affect the psychosocial development of the gifted adolescent female. She is a learner with unique

abilities who demonstrates exhilarating cognitive and creative potential. She is also vulnerable to significant underachievement due to special educational needs that may be unmet by her society and her educational milieu (Callahan, 1986; Hollinger, 1991; Hollinger & Fleming, 1988; Leroux, 1988; Reis & Callahan, 1996).

Josselson (1987) identified the factors of communion, connection, relational embeddedness, spirituality, and affiliation as relevant to the development of identity in women in general. The literature echoes these findings (Belenky, Clinchy, Goldberger & Tarule, 1986; Brown & Gilligan, 1992; Gilligan, 1982; Gilligan, Lyons & Hanmer, 1990; Leroux, 1994; Miller, 1986). These factors underscore the importance of context and the need to understand the interrelationships that exist within the cognitive, behavioral, and social realities of gifted young women. Accordingly, the theoretical underpinnings of this inquiry examine social learning theory – with a focus on the construct of self-efficacy, female cognitive development, and female giftedness.

The remainder of the chapter presents a focused review of the literature regarding social learning theory, women's psychosocial development and the gifted female. From these domains a theoretical framework is induced that weaves together Bandura's (1977, 1986, 1995) Social Cognitive Learning theory – with a particular explanation of its construct of self-efficacy – and pertinent theories that address women's ways of knowing, as they relate to this present inquiry into the perceptions of gifted young females. The following section offers a brief overview of Social Cognitive Learning and a presentation of pertinent literature regarding educational self-efficacy.

Social Cognitive Learning: Self-efficacy

Bandura's Social Cognitive Learning theory is a descriptive paradigm that captures the dynamics of reciprocal interactions among the individual's cognitive and other personal factors, his or her behavior, and the human environment. In Bandura's model, there is a reciprocity in which the three elements – cognitive/personal (P), behavioral (B), and environmental (E) – reciprocally influence one another in a successive fashion (Bandura, 1977, 1986, 1995). In social cognitive learning, as Bandura stated, "psychological functioning is a continuous reciprocal interaction between personal, behavioral and environmental determinants" (Bandura, 1977, p. 194).

The individual brings various capabilities to a learning activity. Bandura (1977) describes these cognitive attributes as symbolizing, forethought, and our self-regulatory and self-reflective capabilities. Our symbolizing capability "enables people to create ideas that transcend their sensory experience" (p. 18). With forethought capability, we can envision "intentional and purposive action" (p. 19). Vicariously, we learn from observing others. Considering people's self-regulatory capabilities, Bandura states that much "behavior is motivated and regulated by internal standards and self-evaluative reactions to their own actions" (p. 19). Finally, through our self-reflective capability, we evaluate and modify our thinking. Because of the importance of contextual, environmental factors and the interaction of the individual's self-reflective thought with the environment and behavior, such conceptual understandings can enhance our knowledge of women's development of self through affiliation and connectedness.

Central to our self-referent capabilities is the construct of self-efficacy. This perception is an important mediating factor in our learning process and concomitant behavior. Bandura

defined perceived self-efficacy as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). The construct does not measure the skills that an individual has; rather it is the estimation by the individual of what can be done with the skills that she possesses. The belief in the capacity to perform necessary activities or behaviors influences cognitive, behavioral and emotional components of psychological functioning. Attributes of efficacious behavior include coping behaviors, stress reactions, reactions to failure experiences, achievement motivation, interest motivation, goal setting, and career choices (Bandura, 1982). These are behaviors that are of particular interest in the study of the gifted female and which appear often in the literature regarding this learner (Callahan, Cunningham & Plucker, 1991; Leroux, 1994; Reis & Callahan, 1996).

In the cognitive domain, perceived self-efficacy influences and interacts in a reciprocal manner with one's analytical thinking and the anticipatory cognitive stimulation of motivational goal-setting and cognitive perception. Consequently, the learner is more able to remain task-committed to visualized, goal-oriented success (Bandura, 1989). Accomplishments verify one's perceptions of competency, which in turn increases incentive to attempt other skill-related activities. Achievement gives motivational incentives and guides future action through the formation of proximal sub-goals. It also aids in the development of self-efficacy beliefs and enhances the interest in activities through mastery satisfaction (Bandura, 1986, 1995). The intent of the present study is to discover ways in which the gifted young female perceives herself efficacious and how the learning context influences efficacy perceptions. Such knowledge will inform researchers with respect to appropriate learning environments that can ensure her success.

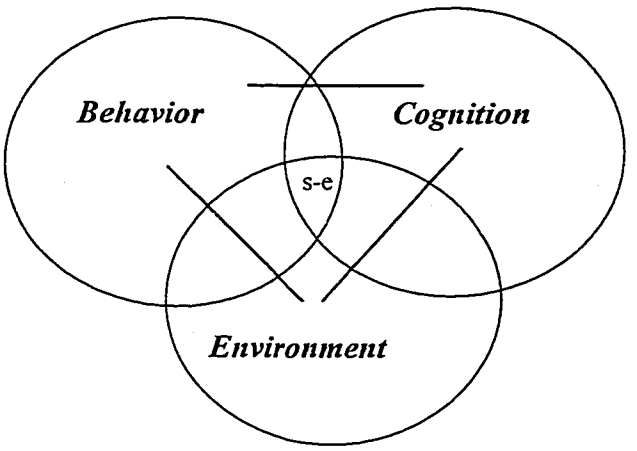
Zimmerman (1995) has reviewed some unique features of academic self-efficacy. According to Zimmerman, self-efficacy relates to perceptions of the ability to perform activities rather than an individual's judgment of personal characteristics or traits. Furthermore, efficacy beliefs are associated with different domains – such as mathematics or language arts – and can differ with context. Moreover, perceptions of efficacy are dependent on one's mastery criterion, and not on one's performance in relation to others. Insofar as ways in which perceptions of efficacy can be measured, Zimmerman explained,

> "Self-efficacy *level* refers to variations across different levels of tasks, such as increasingly complex math problems; *generality* pertains to the transfer of self-efficacy beliefs across activities, such as different academic subject matters; *strength* of perceived efficacy is measured by degrees of certainty that one can perform given tasks" (p. 203) [emphasis in original].

There is a need to comprehend the level, generality and strength of self-perceptions of efficacy among gifted female students in order to design strategies that will promote their continued growth (Reis & Callahan, 1996; Silverman, 1995a).

The remainder of this section examines the literature as it pertains to self-efficacy and learners. The organization reflects the theoretical framework that grounds this study. Therefore, the literature is presented as it concerns the reciprocally determining areas of cognitive factors, behavior, and environment. Subsequently, an examination of the literature in the areas of female psychosocial development and the gifted female learner informs the theoretical framework regarding the cognitive, behavioral, and environmental factors that influence the learning and development of gifted young women. These factors will finally be reflected in the theoretical framework that forms the foundation of the research.

Figure 2.1 illustrates the salient components – as reflected in the literature – of the cognitive/personal, behavioral and environmental factors that act to reciprocally influence one another in the area of academic self-efficacy (Bandura, 1995). Following the figure is a discussion of each of these components that inform the present study as potential phenomena in the perceptions of efficacy of gifted females.



Cognitive and Personal Factors

Self-reflective capabilities
Cognitive analysis and perception
Cognitive evaluation
Cognitive choice and modification
Motivation
Mastery satisfaction

Behavioral Factors

Proximal goal-setting
Performance accomplishments

Environmental Factors

Competence information
Modeling
Strategy and skill training
Creative products

Figure 2.1: Salient components of cognitive/personal, behavioral, and environmental factors in academic self-efficacy (s-e).

Adapted from Bandura, 1986.

Cognitive and Personal Factors

Self-reflective ability is the individual's awareness of the capacity to cognitively review existing knowledge and recombine and synthesize it in light of new knowledge or thinking. In the cognitive realm self-efficacy interacts with the individual's *self-reflective*

capabilities, facilitating the learner's evaluation and self-regulation of knowledge acquisition. For example, Zimmerman and Bandura (1994) found that self-efficacy positively influenced first year university students' writing achievement. The enhancement of their perceptions of efficacy improved their perceived academic self-efficacy as well as their personal (self-reflective) standards regarding the quality of their writing. The authors concluded that efficacy beliefs substantially influenced the level of writing achievement both directly and indirectly.

Another cognitive process that is integrally related to self-efficacy beliefs is the individual's ability to analyze one's thinking and perceive ways in which thinking can be adapted or improved in a cognitive domain or skill. Reflecting the importance of *cognitive analysis and perception*, Zimmerman (1995) reported on studies that examined strategy training and concluded that monitoring strategy application and receiving feedback had a positive effect on both writing efficacy and achievement. Additionally, efficacy beliefs significantly affected concept learning. This metacognitive type of analysis and strategy application – and the need to facilitate its development in the learning environment – speaks to the astute cognitive abilities of the gifted female (Reis & Callahan, 1996).

Two other measures of cognitive analysis as regards self-efficacy are outcome self-efficacy and process self-efficacy. The first is the perception of the individual of how capable he or she is of achieving a desired outcome. The second is the belief in one's capability to perform the task at hand. In a study of these two measures Mone (1994) found that repeated measures of both outcome and process self-efficacy with 252 college management students over a three month period indicated that outcome self-efficacy is a better predictor of successful performance. Achieving the aforementioned reflective and metacognitive strategies

(i.e., self-evaluation and self-regulation, cognitive analysis and outcome efficacy) is crucial in the educational development of gifted girls (Hollinger, 1991, Reis & Callahan, 1996).

Cognitive evaluation is the ability to assess and determine the value of thoughts and is a reflective skill that enables higher level problem solving. Vallerand, Gagné, Senécal and Pelletier (1994) found in a study of 135 elementary French-Canadian students, that the gifted students considered themselves to be more competent and intrinsically more motivated than their non-gifted peers. Zimmerman and Martinez-Pons (1990) also found that gifted students demonstrated higher verbal efficacy, mathematical efficacy and use of self-regulated learning strategies than regular students. Such studies indicate students' evaluation of their cognitive competencies and ability to modify their cognitive strategies through self-regulation. Given Gilligan's (1982, 1994) and Pipher's (1994) research that indicated that the bright adolescent female may elect to cognitively withdraw, rather than risk standing out as a capable student, the necessity of providing the opportunity for this at-risk learner to develop self-regulated learning strategies is all the more apparent.

Regarding cognitive *choice and modification*, which indicates the ability to choose from a variety of thoughts and modify one's cognitive schema to suit the cognitive problem at hand, Cross and Markus (1994) studied college students' self-schemata and how they relate to students' competence. Their research revealed that the student who has formed a self-schema in an academic domain can more accurately predict future behavior in the domain. This allows the student to organize knowledge through cognition and motivation, encoding, memory, and self-knowledge. It also aids the processing of pertinent information within and across domains. These findings further highlight the need for learning environments that respond to the unique educational needs of gifted females and allow for the development of

cognitive strategies that will enhance their motivation as well as their ability to predict academic success in their field of choice.

Educationally, self-efficacy beliefs are instrumental in predicting student *motivation*. Motivation is defined herein as "a theoretical construct used to explain the initiation, direction, intensity and persistence of behavior, especially goal-directed behavior" (Brophy, 1998, p. 3). The literature indicates that the construct is positively associated with rate of performance, expenditure of energy and persistence with a given task. For example, Pintrich, Roeser, and DeGroot (1994) established in a study with seventh graders in a midwestern middle school that positive motivational beliefs and self-regulated learning (cognitive strategy use and self-regulation) were positively interrelated. In another study of seventh grade students in science and English classes, Pintrich and DeGroot (1990) found that self-efficacy and belief in the intrinsic value of the task (interest and importance of the task) were positively related to cognitive engagement and performance. Such findings inform this study of the need to devise

learning contexts that allow for tasks that are of intrinsic value to the gifted female learner and which encourage positive efficacy beliefs.

Self-efficacy was a strong predictor of performance accomplishments, which led to *mastery satisfaction* (the feeling of accomplishment that follows a successful performance), in a number of studies (Pajares & Miller, 1994; Mone, 1994; Williams, 1994). Schack (1986a, 1986b, 1989) researched perceptions of creative self-efficacy in students of grades four through eight who participated in enrichment programs for the gifted. Her findings supported Bandura's (1986) hypothesis of the reciprocal interaction of performance accomplishment and self-efficacy. She reported that self-perceptions of capability positively

influenced successful performance in an enriched environment; and successful accomplishments in an enriched environment positively influenced self-perceptions of efficacy. There is clearly a need to examine the third social cognitive domain – environment – and to explore the ways that gifted females perceive themselves as efficacious in those settings. Similarly, what environmental factors promote those perceptions and allow for creative productivity and other performance accomplishments?

Through the reciprocal interaction of cognitive and personal factors as discussed above, the learner's cognitive development influences and interacts with behavioral and environmental factors. The section of this chapter that addresses the literature regarding gifted females will further establish the necessity for the metacognitive training and the development of self-agencies in this learner. The next section explores behavioral factors.

Behavioral Factors

The literature indicates that goal setting affects the efficacy beliefs and goal achievement of students; and *proximal goal setting*, which is the action of setting one's sights on the achievement of the next step, strengthens both self-efficacy and skills more than *distal goal setting* (Zimmerman, 1995). Conversely, performance is also a powerful indicator of personal goals, with both performance and self-efficacy providing goal incentives (Mone, 1994). The student who is a high achiever and believes herself capable in mathematics will probably set higher, proximal goals. Blustein's (1989) research in the area of career exploration and career efficacy demonstrated that there is a direct association between self-efficacy beliefs, career choice and goal-directedness. This finding speaks directly to the gifted female learner, who is at risk of lowering her goals and career expectation due to poor self-efficacy (Garrison, 1993; Hollinger & Fleming, 1992; Reis & Callahan, 1996). Environments

in which educators facilitate career exploration where students are allowed to work as practicing professionals allow students to build efficacy beliefs.

Particular to the present research are studies that reveal female career efficacy perceptions and goal setting. Branch and Lichtenberg (1987) found, in a study of 115 male and female undergraduates enrolled in a career exploration class, that beliefs regarding personal efficacy were important in predicting career consideration. The traditional nature of the career (e.g., teacher, nurse) was an important determinant of career efficacy and subsequent career choice in women. Stickel and Bonnett (1989) reported similar findings with African-American middle and secondary students. Additionally, they found that besides considering traditional occupations more frequently, females were more confident than males of ability to combine home, family and work.

Conversely, Nevill and Schlecker (1988) reported that strong self-efficacy expectations, combined with assertiveness, resulted in women's willingness to take on nontraditional occupations. More recently, Gillespie and Hillman (1993) reported that a study of 132 male and 92 female high school students in general education, special education and an alternative high school program, revealed that males reported lower career self-efficacy perceptions and were restricted in their consideration of cross-gender possibilities. Females were less restrained by sexual stereotyping and considered cross-gender careers. The general education students also had stronger self-efficacy expectations than the alternative and special education students. Additionally, Hall and Kelly (1995) indicated that, in a study of adolescent high achievers, high achieving females had the strongest career decision efficacy. These findings are indicative of a recent positive change in efficacy beliefs among female

students and are supported in the present study. Gifted females are showing gains in efficacy beliefs, less restrictive career choices, and more assertiveness.

In the area of performance *accomplishment* – successful completion of a task, Kelly (1993) found that achievement was a meaningful predictor of career self-efficacy among ninth and eleventh grade male and female students who rated self-efficacy and interest in twenty occupations. Gender was substantially less an influence than academic achievement. Gillespie and Hillman (1993) found that increases in career self-efficacy resulted in decreases in career indecision.

Other studies reflected similar findings in research concerning the effects of achievement, feedback and goal conditions on perceptions of efficacy (Junge & Dretzke, 1995; Pajares & Johnson, 1995; Pajares & Miller, 1994; Torkzadeh & Koufteros, 1994; Williams, 1994). Shucard and Hillman (1990) studied forty gifted girls and forty gifted boys in grades six through eight. Their findings determined that a successful result with a task was a critical factor in determining efficacy, satisfaction and reward. Girls reported diminished efficacy with competitive conditions. Navan (1993) reported that gifted high school females who participated in a collaborative conference for creative young writers experienced a higher perception of self-efficacy as writer and set higher proximal goals subsequent to the conference.

To conclude, this section illustrates the ways in which proximal goal setting and performance accomplishment play an influential and interactive role in the creation and sustaining of self-efficacy beliefs. Furthermore, it highlights the need to provide capable gifted learners with educational activities that allow her to set goals, to feel the efficacy that

comes from successful accomplishment, and to develop the persistence needed to achieve lofty career goals. The next section will examine the importance of environmental factors.

Environmental Factors

Competence information is knowledge that indicates the individual's ability to complete a certain task. Such information not only positively influences self-efficacy beliefs, but also assists in the students' choice of problem solving tasks (Zimmerman, 1995). To illustrate, Zimmerman described how *modeling* arithmetic operations while articulating the problem solving strategies aloud and teaching students to do *verbal problem solving* increased students' efficacy beliefs as problem solvers. He concluded,

"Clearly, social and evaluative feedback accompanying formal instruction influences self-efficacy beliefs, which in turn enhance the development of academic competencies" (p. 208). These educational approaches have particular importance for female learners, who learn best in contexts that provide for affinity and affiliation (Gilligan, 1982; Miller, 1986). .

Pertaining to the importance of *modeling* – demonstrating attributes of goal behaviors and assisting in the understanding of the cognitive attributes of the performance – Betz (1992) discussed the implications of self-efficacy theory in counseling. Behavioral consequences of perceived self-efficacy are choice, performance and persistence. Thus, counselors can assist women to determine personal areas of weak efficacy perceptions. Betz emphasized, "This is especially true for intellectually gifted women who seem to be underestimating their abilities in their career choices or underusing their abilities in their current jobs" (p. 25). Counselors and educators can then, according to Betz, begin to design effective efficacy enhancing interventions, which would include the opportunity for successful performance

accomplishments, vicarious role models, anxiety management and verbal persuasion and encouragement.

Locke and colleagues found strong relational effects of *strategy and skill training* on self-efficacy, goals, task strategies and task performance. Their results indicated that training in task strategies (e.g., creativity training) affected self-perceptions of efficacy (Locke, Frederick, Lee & Bobko, 1984). Schunk (1985, 1993a, 1993b) found similar results with modeling, skill training and achievement. He proposed a model of academic self-regulation that stressed goals, self-efficacy beliefs and learning strategies (Schunk, 1993). As regards *creative products*, Starko (1988) found in a study that compared students involved in an enrichment program with others who were not, that creative productivity – regardless of whether or not the student was involved in an enrichment program – was a strong predictor of self-efficacy.

To conclude this review of the literature regarding the construct of self-efficacy, research has illuminated the many facets of the construct as it reciprocally interacts with other phenomena in the cognitive, behavioral and environmental domain. The literature highlights the necessity of continuing to investigate the self-perceptions of women, and determining in what ways learning environments may be better designed to facilitate their development of strong academic and career efficacies.

Women's Psychosocial Development

The writings of Jean Baker Miller are fundamental to an understanding of the cultural, historical and social issues that influence the development of the female psyche.
In her essential work, **Toward** a New Psychology of Women (1986) – originally published in 1976, *Miller* wrote that, through a process of ascription, women are defined at birth as

members of a subordinate group. Our social and cultural histories have been shaped through the authority of the dominant male group. But in doing so, she stated, "male-led society may also have simultaneously, and unwittingly, delegated to women, not humanity's 'lowest needs' but its 'highest necessities', that is, the intense, emotionally connected cooperation and creativity necessary for human life and growth" (p. 25).

Miller explained that, because of empathic concern for others, which social norms may lead people to perceive as weakness, women can develop an understanding of their empathy and transform it by (1) acknowledging it and moving on, (2) developing the strength that we learn from life experiences, (3) participating in the growth and transformation of others, (4) forging collaborative experiences in a human culture that are based on our cooperative nature, and (5) developing our creative vision of a new conception of personhood as we live change on a daily basis. Writing of the development of a unique inner person, Miller alluded to the voice and connectedness that Gilligan and others would later describe and celebrate.

Miller also stated that the integrating element in the psychology of women is the translation of their own motivation into serving others. The ability to respond to others need not detract from sense of self, a sense that is "organized around being able to maintain affiliations and relationships" (p. 83). Society's recognition of the value of the connected self would open the possibility of new and more efficacious ways of living and functioning in the human context where we are social and connected beings. Current leadership and management styles that emphasize consensus-building, shared decision-making and other collaborative styles indicate the veracity of Miller's concepts.

Gilligan (1982) continued and built upon the work of Miller and Kohlberg in her studies on the moral choices of women. Demonstrating the responses of women when

confronted with values-laden decisions, she shoed how women, through their caring and connectedness with others, exhibit a kind of moral sense of human responsibility that has not been well-articulated by philosophers and social scientists. She affirmed that, "the moral imperative that emerges repeatedly in interviews with women is an injunction to care, a responsibility to discern and alleviate the 'real and recognizable trouble' of this world" (Gilligan, 1982, p. 100).

In further describing the psychological development of self as observed in young adult women, Gilligan elucidated the "fusion of identity and intimacy" through which "intimacy and truth converge in the discovery of the connection between integrity and care" (pp. 160, 157-158). Women come to see self as a caring and responsible entity which, when forced to choose between care of others and survival of self – such as in some areas of reproductive choice – have no other recourse than a morally nihilistic attitude of oppressing feelings of care and connection.

In a study of adolescent girls in a private, all female, preparatory school environment, Gilligan, Lyons and Hanmer (1990) concluded that a primary way that female adolescents learn about self is through relationships. It is through friendships with others – where they see themselves as well as the other – that these young women were able to identify, name and articulate blocks to their understanding of themselves. Without these communicative relationships, girls withdrew into silence. In trusting relationships with other adolescent females they found that they could acknowledge and vent their legitimate feelings.

In more recent research, Brown and Gilligan (1992) traced the loss of voice during adolescence by girls who feel the pressure to conform to socially defined roles. During this time of disconnection – neither are they connected to girlhood, to womanhood, nor to the

voice of their psyches – they lose touch with the earlier self when they are pressured to adopt a socially (not self) determined pattern of what it is to be a woman. Rather than confront the society that overwhelms them with expectations for "selflessness," they are silenced. "Paradoxically, girls are taking themselves out of relationships for the sake of relationships and self-consciously letting go of themselves" (Gilligan, 1994, p. 100). In almost identical terms, Miller (1994) arrived independently at the same conclusion, "This paradox occurs in a particularly profound way at adolescence when girls find that in order to be allowed into relationships, they have to keep large parts of themselves out of the relationship" (p. 93).

In the same vein, Pipher (1994) wrote, "Adolescent girls discover that it is impossible to be both feminine and adult" (p. 39). The adolescent girls in her study were conflicted with the dichotomy of socially learned behaviors – passivity, dependence and lack of logic, and their own self-impetus to actualize as active, autonomous, logical adults. For all too many of her participants their struggle led to a variety of psychological disorders. It is the purpose of this research to discover factors in the learning environment that impact the dichotomy that Pipher describes as they relate to self-efficacy perceptions.

The theme that Brown and Gilligan employed and the title of their book, Meeting at the Crossroads (1992), is a suggestion that through healthy, connected relationships between women and girls, both benefit. Women become acutely aware of disconnection, false voices and lack of authentic relationships in their adult world. Girls benefit from the connection with women who have made the journey to voice and connectedness and want to facilitate the journeys of others. There is a need to explore in what ways different learning contexts provide the gifted female with the opportunity to develop healthy, connected relationships with peers and adults.

The present study investigated gifted females in their transition between adolescence and adulthood. There is a need to understand more of what the literature indicates regarding this specific psychological passage. Mercer and colleagues (Mercer, Nichols, & Doyle, 1989) identify the transition in women's lives from ages sixteen through twenty-five years as Launching into Adulthood/Breaking Away. During this transition, a major developmental period, there is movement toward increased individuation and autonomy. They found, however, that during the launching into adulthood stage many women in their study did not address all of the developmental tasks (i.e., establishing future goals, career preparation and launching, marriage and family). Some of the tasks were not accomplished until later, due in part to environmental factors. The authors underscore the importance of contextual influences in the accomplishment of successful transitions throughout life, explaining that, "Psychological development is an interactive process between self and the environment in which a more complex, highly differentiated system of beliefs and expectations emerge to be assimilated and integrated by the individual" (p. 2). The present study of gifted females at this important developmental bridge seeks to understand the interactive processes between self and environment in the area of efficacy beliefs.

Additionally, the literature informs us regarding the cognitive transitions in women's psychosocial development. Belenky, Clinchy, Goldberger and Tarule (1986) described five levels of knowing for women. In the first – Silence – one feels a sense of disconnection and finds that words which should enable the building of relationships are used instead by others as abusive weapons, assuring "silence" as a cognitive/emotional response in the affected individual. In the Received Knowledge stage, books and teachers are seen as the only source of truth and knowledge. As the woman develops through experiencing her own reality as

legitimate and valuable, she passes into the Subjective Knowledge phase in which her inner voice is heard and acted upon. She sees that she herself can be a source of knowledge. When this knowledge becomes conscious, deliberate and reasoned, it becomes Procedural Knowledge. And finally the individual sees in herself and in her knowing the potential to integrate the voices into Constructed Knowledge. Belenky and colleagues conclude,

> To see that all knowledge is construction and that truth is a matter of the context in which it is embedded is to greatly expand the possibilities of how to think about anything, even those things we consider to be the most elementary and obvious. Theories become not truth, but models for approximating experience... (p. 138).

Contextually, educational environments can either facilitate or make more difficult the various psychosocial transitions mentioned above. Gallos (1995) wrote of her experiences in teaching women who were trapped in the Silence to which Belenky and colleagues referred. In her experience – as echoed in other studies – (AAUW, 1990; AAUW, 1992; Belenky, et. al., 1986; Light, 1990) the themes of fear and self-doubt were prevalent. The participants in Gallos' study feared that they would not understand new content, doubted their abilities, and believed that the women's studies course in which they were enrolled would be a totally new experience for them. The source of the fear and self-doubt lies in a social reality constructed by males, in which men's ways of knowing were dominant. Gallos asserted,

> Women have been asked to learn the experience of men and accept it as representative of all human experience. When women cannot match this (masculine) knowledge to their own lives or see it as relevant, the women – not the facts, theories, and curricula – have been termed deficient. (p. 103)

Gallos described the traditional college classroom of "debates, devil's advocacy, confrontations and individual testing" (p. 103) and reflected findings in her classrooms and in the literature that demonstrate that this reality is juxtaposed to women's need for supportive, caring and ethical environments. She elaborated that educational implications of research in this area are that academic learning environments should reflect the following: no negative or deficient gender messages, materials that are inclusive, more discussions and use of women's experiences and accomplishments as examples, teacher as learning model, use of learning groups, and providing support and encouragement. In what ways do the learning contexts in which gifted females learn reflect these needs?

Figure 2.2 summarizes major characteristics of women's development as reflected in the literature. As well, it illustrates salient attributes of educational environments and women's behaviors that reinforce the cognitive and personal factors necessary for on-going female development. In summary, these factors add to the considerations that have a vital role in the development of the theoretical framework that grounds the present study.

Cognitive and Personal Factors

Ways of knowing:
- Silence, Received, Subjective,
- Procedural, and Constructed Knowledge
- Voice, Communion, Connection, and
- Relational Knowing

Spirituality and Ethic of Caring

Behavioral Factors

Collaboration
Social responsibility
Learning through voice
Learning through relationships
Empathic caring

Environmental Factors

Supportive
Ethical
Collaborative and experiential
Inclusive
Teacher as model of inquiry

Figure 2.2: Salient cognitive, behavioral, and environmental factors in women's psychosocial development.

The Gifted Female

> *"'Where are all the women?' is a question that has often been asked with regard to the paucity of female accomplishments in every field of endeavor. Why do the accomplishments of gifted women appear to be unknown, overlooked, dismissed or forgotten? Much of this has been the result of unequal opportunity for achievement, sex role stereotyping and lowered aspirations for gifted girls as they reach ages when young men are starting on the paths to eminence."* (Lovecky, 1996, p. 5)

What are notable characteristics of the gifted young female that warrant the attention of researchers? Salient themes that emerge in the literature regarding gifted young women as learners are their metacognitive abilities; their need for early career education; the important influence of parents, mentors and role models; underachievement; and the need to assist in their affective development (Callahan, 1986; Callahan, Cunningham & Plucker, 1991; Handel, 1994; Kerr, 1994; Reis & Callahan, 1996; Silverman, 1991). Among other important essential factors in developing the potential of gifted girls are the education of parents regarding the cognitive and affective needs of their daughters; early identification of gifted potential; opportunity to learn and interact with like peers; career and other counseling; mentor opportunities; and special conferences for gifted girls at the junior and senior high levels (Callahan, Cunningham & Plucker, 1991; Noble, 1989; Reis, Callahan & Goldsmith, 1994; Silverman, 1991). This section of the review explores the major issues of the literature regarding the gifted female as they impact the present study, and leads to an examination of how the study of self-efficacy in the gifted young woman might assist in further understanding of the issues.

The gifted young woman of the late twentieth century requires a repertoire of coping skills as she confronts the stresses of changing social and career milieus. Despite societal changes, the need persists due to the fact that she is heiress to a history of underachievement among a large number of the gifted women who precede her. In a longitudinal study spanning a 40-year period both gifted men and women reported harmony in the family of origin as the important predictor of personal adjustment in adulthood (Strip, Swassing & Kidder, 1991). The same researchers found that parents' education and the individual's intellectual determination were positive predictors; and childhood sociability was negatively associated with intellectual attainment for both males and females. Gender differences were found in the areas of educational attainment and occupational attainment. Nearly 40 percent of men pursued postgraduate education, while only 22 percent of the women did so. Those women who did study at the postgraduate level did so on a more limited scope than men. Additionally, the correlation between educational attainment and occupational attainment was twice as strong for men as for women.

In another longitudinal study of four birth cohorts (1910-1940) of gifted women at mid-life, Schuster (1990) concluded that:

> Gifted women have long struggled to find recognition for their talents and to be rewarded appropriately for their work. . . [they] have encountered barriers to professional advancement; many have experienced ambivalence about career commitment and have felt underprepared to compete in the marketplace. (p. 476)

Other results of her comparative study suggest that the latest cohort of women that she studied (1940's) has benefited from what appears to be "a changing social and economic climate for women" (p. 476). This change began when their mothers left the home to work in greater

numbers. The raising of societal awareness in the sixties and seventies regarding gender inequities and the important contributions of women prepared the way for this cohort to be able to enter an adulthood that offered more opportunities to realize their potential.

Unfortunately, these last findings are not echoed by Walker and Mehr (1992) who interviewed several cohorts of past graduates of The Hunter School from the decade of 1910-1920 to graduates from the 1980's. Their subjects attended a school where a major mission was to provide an environment where highly capable girls can learn and achieve to their potential. In spite of their learning environment, the vast majority of the women – representing all age cohorts from 1910 through the eighties – stated that they felt they had failed to realize that potential. Those who had made careers for themselves for the most part followed the socially ascribed model of service careers. Almost half became teachers, 28 percent were social workers, only five percent entered medicine, and five percent entered engineering. There was no significant change in these findings over time.

What are some characteristics that contribute to the success of gifted women? Kerr (1994) analyzed the lives of a number of historically eminent women, including a renowned artist, a distinguished musician, a Nobel Peace Prize winner, and others whose work and contributions to society are invaluable. Themes that emerged from her study indicated commonalties that were contributing factors in the development of eminence. They included time alone, voracious reading, a feeling of being different or special, individualized instruction, same-sex education, a difficult adolescence that underscored their sense of separateness, the ability to "avoid confluence" (p. 83), taking responsibility for oneself, love through work, the refusal to acknowledge limitations of gender, mentors, and "thorns and shells" (p. 86). Additionally the women were able to integrate their diverse roles, and most

importantly, "to fall in love with an idea" (87). Kerr's analysis reveals the duress and stamina required for women to fulfill one's potential and reach the level of eminence. As well, it provides a prescription for educators of what needs one must address in the gifted female.

There is clearly a need to understand why so many of our gifted women fail to achieve their potential. Moreover, it is imperative that educators address the subject of the learning needs of the gifted female to determine how to best facilitate her growth and development. As recently as 1993, Garrison determined that a fundamental issue is that the gifted female is still at risk of not being identified and/or not receiving services in gifted programs. Crombie, Bouffard-Bouchard, and Schneider (1992) found similar results in enrollment, but not in referrals for gifted programs. Additionally, Reis and Callahan (1996) reported a tendency for gifted girls to drop out of participation in gifted programs as they progress through the grades. Beyond identification there exists a multitude of other factors that become determinants of either success or underachievement of gifted girls (Callahan, Cunningham, & Plucker, 1991; Noble, 1989; Sliverman, 1995). For example, a study of societal and emotional balance in gifted girls in grades one through twelve found that self-perception of ability and self-confidence declined throughout schooling, with girls disguising their abilities and feelings (Kline & Short, 1991). Feldhusen and Willard-Holt (1996) found that gifted boys are more aware of gender differences in the classroom than their female peers. The authors surmised that this finding "may be another indication of the differential treatment to which girls have become accustomed" (p. 39).

Research regarding gifted females indicates the need to recognize their learning and affective styles as paths leading to an articulated curriculum that will address the styles and strengths of the gifted young woman. Citing the critical need for appropriate counseling,

Smyth (1992), in an analysis of the literature, identified fallacious arguments from the past regarding the failure of gifted girls to actualize their potential. Girls were considered as biologically lacking the ability to achieve, and were taught in a familial environment that discouraged their achievement, and possessing personality attributes that inhibit achievement.

Some research findings suggest that through socialization gifted girls learn verbal and physical self-restraint, which leads to modest, self-deprecating activities. This leads the young female to doubt her ability, creativity and importance (Callahan, Cunningham, & Plucker, 1991; Ellis, 1993; Lovecky, 1996). According to several researchers (Adams, 1996; Bell, 1989; Gallagher, 1996; Hollinger, 1991; Noble, 1989), by adolescence today's gifted females most likely have developed or confronted some or all of the following obstacles: fear of success, avoidance of math or sciences, lack of assertiveness, lowered academic and career expectations, failure to attribute success to ability, a lacking in the perception of self-agencies necessary for choice and development of self-destiny. Emotionally, indications are that gifted female students are highly at risk of developing depressive disorders (Callahan, Cunningham, & Plucker, 1991; Cornell, Callahan, & Lloyd, 1991). Additionally, in a comparative study of able young university women and prominent Canadian women, Leroux (1994) identified three common threads. Both groups reported the pressure to conform to societal expectations, a spiral, connected path rather than the vertical, individualistic male model, and the value of female connectedness and other relationships. Such findings underscore the need for educators to understand and teach in a manner that recognizes and enhances the learning and affective styles of the gifted female student.

In an analysis of the literature on the gifted female, Callahan (1986) stated the need to understand the gifted female and make efforts to comprehend her vulnerability to significant

underachievement. Cognitive and personality traits show definite relationships between achievement and the individual's explanation of success or failure at a task. While gifted males tend to attribute success to ability and failure to bad luck, gifted girls tend to explain success as a result of good luck or chance and failure to a personality flaw. She concluded that there is a need for general environmental change toward educational settings that provide girls with the same opportunities for exploration, equal instruction and success in the family and in the schools.

Regarding goals and future career efficacy, a study by Reis, Callahan and Goldsmith (1994) that examined perceptions of gifted early adolescent boys and girls regarding future goals and achievement, reported significant differences between the sexes. Whereas boys were more definite about future career plans, girls indicated plans that combined career and family. Most revealing were the data indicating that even though three quarters of the gifted girls planned to work after having children, a majority of the boys thought that girls should stop working after children were born. Such findings are distressing. Reflecting on the previously stated need of the gifted female to develop through relationships as well as to set high academic and career goals, one realizes that those very relationships put her at risk of not developing her potential gifts. Silverman (1995a) reported that from childhood until age twelve an equal number of gifted boys and girls are found in the general population, including the exceptionally gifted children with IQ's beyond 180. Yet, males comprise 98 percent of pre-eminent adults.

Career expectations are considered as indicators of efficacy perceptions by researchers. Given the above reported lack of career directedness on the part of gifted girls, this research proposes to investigate the link between learning environments, perceptions of efficacy and

goal setting. Arnold (1992) reported in a longitudinal study of female high school valedictorians that a prime determinant of career expectations and post-college achievement is the student's plans for marriage and family. A consequential factor in career success is the decision to postpone childbearing. Are there ways that gifted female students are being assisted in developing positive perceptions and abilities while at the same time being given the opportunity to ponder the importance of their career and personal decisions in a supportive, caring environment?

An effective curriculum contributing to the career success of female learners would include counseling interventions for the study population as well as career exploration and leadership training. Harrison and Monroe (1986) suggested the need to counsel the gifted female in such a way as to raise career aspirations by resolving envisioned conflicts between family and career. In addition, it is crucial that the gifted female adolescent have the opportunity to shadow and have successful female mentors and role models (Harrison & Monroe, 1986; Leroux, 1992; Leroux, in press; Reilly, J.M. & Welch, D.B., 1995).

Regarding the issue of career counseling, research demonstrates the vital need for educators to address the needs of the study population. In a longitudinal study of former participants in a career exploration program specifically for gifted female adolescents, Hollinger and Fleming (1993) found that "at 27-29 years of age, only 9.6 percent of the young women had not pursued post-secondary education. Over 45 percent had continued beyond the bachelor's degree with 11 percent having completed doctoral or professional degrees" (p. 157). A significant number – 19.9 percent – had reached career attainment at a level that included lawyers, physicians and corporate managers. Informants also reported a high level of life satisfaction. Conclusions of the study indicate the importance of the construct of self-

efficacy in the development of coping strategies and subsequent adaptation to new roles and life choices. The authors indicated that self-perception of ability of the participants played an important role in career development, regardless of actual ability. From these results one clearly sees the effectiveness of designing curricula that address the learning needs of gifted girls when such programs increase girls' perceptions of efficacy, and raise their goals and their performance accomplishments.

Other findings regarding self-efficacy that inform this study are those of Noble and Smith (1995). They reported that the majority of female students enrolled in the University of Washington's Early Entrance Program between 1988 and 1992 experienced an increase in confidence in their intellectual and social skills. Taylor (1996) reported similar results regarding an increase of perceptions of ability as leaders among gifted adolescent females, a result of their participation in a female leadership institute. These findings contrast with those of Klein and Zehms (1996), which indicated a decline in self-concept scores among eighth grade gifted girls when compared with the scores of gifted girls in Grades 5. The participants were enrolled in public schools and participated in the gifted and talented program. Differences in findings such as those reviewed indicate the need to examine what factors in the educational settings influence self-perceptions.

Regarding predicting future self-efficacy, Englert and Tomlinson-Keasey (1987) employed longitudinal data from the original and subsequent studies of Terman's cohort. They found the highest correlation to be between adult self-efficacy/competence and childhood self-esteem/early adjustment, achievement motivation, educational attainment and career orientation. Rodenstein and Glickauf-Hughes (1977) studied the career and lifestyle determinants of 201 gifted women and found similar results. They underscored the need for

assisting personal growth and developing autonomy as important factors in career and lifestyle integration. These emphasize the importance of understanding how different educational contexts affect the self-perceptions of efficacy of our learners. Other classroom activities that will encourage giftedness in the classroom include promoting self-expression, integrating special interests into topical assignments, dispelling gender myths, and encouraging dialogue between male and female students in class discussion and mixed-sex small groups (Ellis, 1993).

Figure 2.3 displays the synthesis of findings reflected in the literature as they may affect the gifted young female. As with the preceding figures in this chapter, this figure further builds upon the literature that leads toward the construction of the theoretical framework for the study.

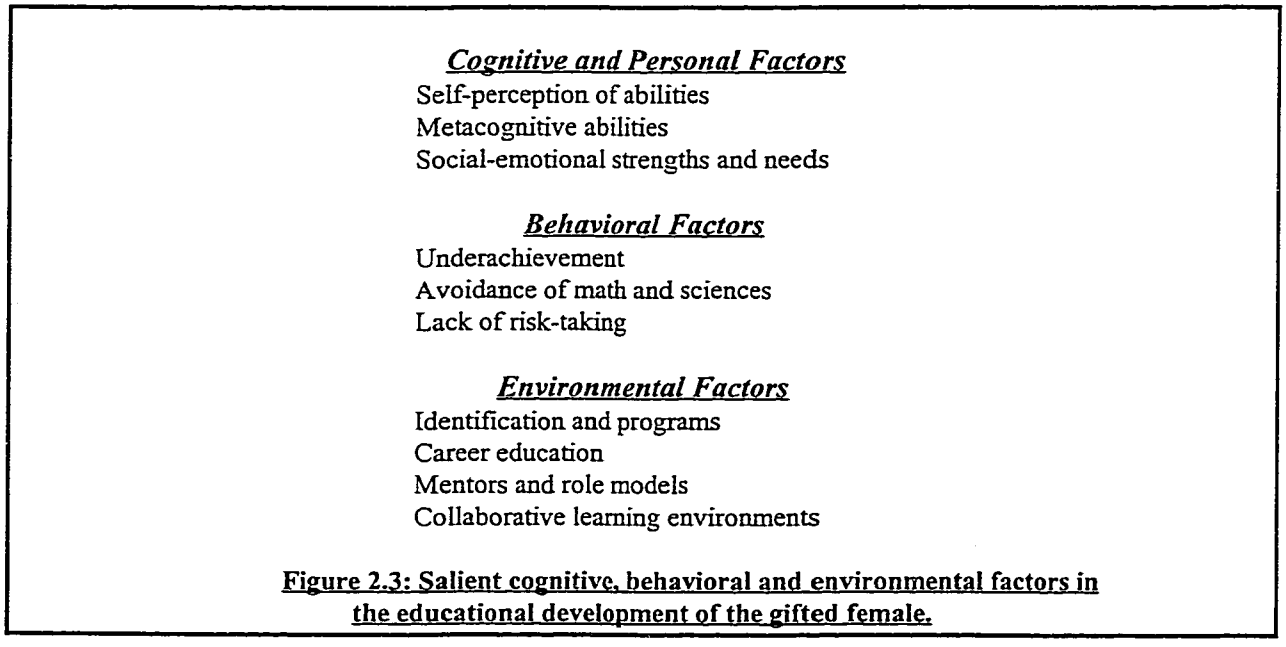


Figure 2.3: Salient cognitive, behavioral and environmental factors in the educational development of the gifted female.

Operational Definitions

The following definitions of key terms serve to anchor the study within the body of conceptual literature that frames the research. They will be used throughout the subsequent chapters of the study.

Self-efficacy is defined as "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). In this study the intent was to discover the students' perceptions of academic efficacy, what influences in the environment affect those perceptions, and how both self-perceptions and environment interact to affect behaviors such as achievement and proximal goal setting.

The term ***young women*** connotes female students between the ages of sixteen and eighteen, who were, at the time of the research, enrolled in their last or penultimate year in secondary school. In the case of the bridging year school, the young women were simultaneously matriculated as first year college students. The term ***gifted*** is accepted in the field to indicate a student with above average ability who shows the ***potential for creative productivity*** (Treffinger & Renzulli, 1986). The constellation of characteristics that contribute to giftedness (i.e., task commitment, creativity, intelligence) is not static and one dimensional, but dynamic and multifaceted. For this reason different educational systems will identify a student ***gifted*** in somewhat different ways. Schools use a combination of intelligence assessments, achievement indicators, and talent or creativity indicators in their screening processes. Participants in this study have been identified as gifted in their present or previous school environment.

The use of the phrases ***educational setting, learning environment or educational environment*** indicates a range of characteristic elements of the institution within which the participants study. This includes – but is not limited to – curriculum, faculty, peers, learning resources and materials, psychosocial factors, levels of expectations and difficulty.

Public school indicates a school that is supported by the citizens of the community through taxation and is an inclusive educational setting for students of all levels of achievement and abilities. ***Private school*** indicates a school which has been chosen by the student or her family in lieu of public school and which charges tuition in the form of payment or scholarship. ***Bridging year academy*** is an early college entrance program – in the university setting – within which the students complete the academic requirements of the last year of high school while at the same time completing the first year of university courses. Students and/or their families choose this option and pay tuition in the form of payment or the financial aid that they receive.

Familial and social contexts are those contexts in which the student interacts in a manner that is not directly academic. Influences of a mentor outside of the academic environment, relationships with peers, and parental support are some examples of familial and social elements.

Theoretical Framework

The literature establishes the need to further investigate perceptions of efficacy and how these perceptions affect achievement and goals in the gifted female learner. Research thus far also indicates the need for studies that focus on the interactions among cognitive and personal factors, student behavior, and the contextual environment in which the gifted female learns; and for subsequent exploration of the contextual factors and how they influence

perceptions. Given the knowledge regarding self-efficacy theory, women's psychosocial development, and the needs of the gifted female, the theoretical framework that grounds this research is one which blends these diverse factors within the structure of social learning theory. Figure 3 demonstrates the blending of these constructs into a research model which allows for the qualitative inquiry into the perceptions of efficacy of the gifted female learner in three different educational contexts.

The research questions as they arise from the literature and the subsequent theoretical framework are as follows:

In what ways do gifted young women perceive themselves as academically efficacious in particular educational settings?

What are the factors in the educational setting that gifted young women perceive as influencing their academic self-efficacy?

Conclusion

Through the examination of the literature pertaining to the theoretical constructs that ground the study, Chapter Two has established the need to investigate the self-perceptions of ability of the study population of gifted females. The cognitive, behavioral and environmental factors of academic self-efficacy, women's cognitive development, and the gifted female were explored. It is through the examination of their perceptions in different educational contexts that researchers and educators can glean important new knowledge suggesting ways in which educators can design future environments that better enhance the efficacy of the gifted female.

The uniqueness of this particular study is that it studies – in a parallel fashion and through qualitative, focus group interviews – the contributions the three different educational

environments make to the construct of academic self-efficacy. The following chapter presents the research methodology used to conduct the research.

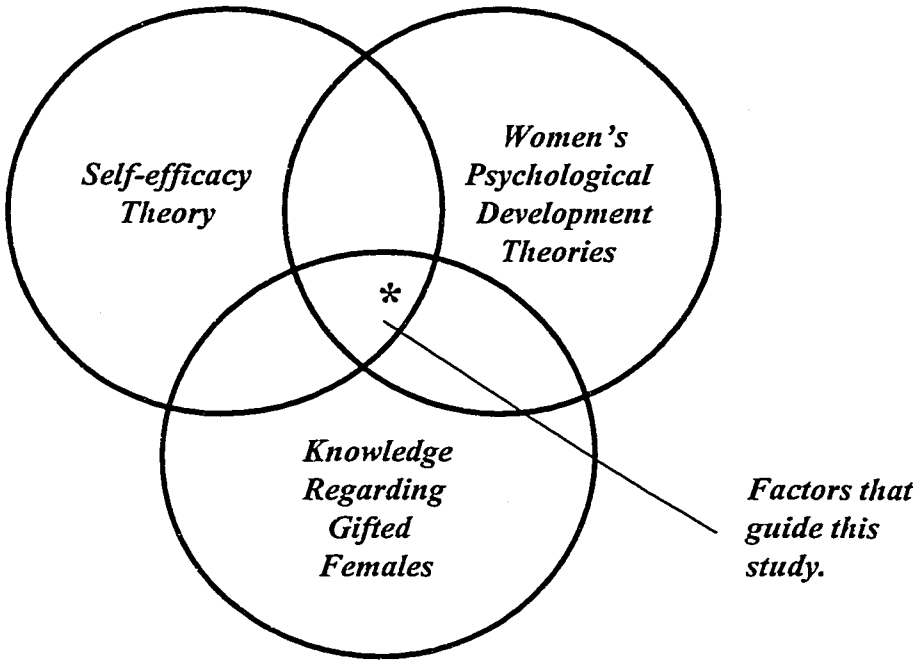


Figure 3: Theoretical Framework: Perceptions of Efficacy of Gifted Young Women in Different Learning Environments

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

Like the choreographer, the researcher must find the most effective way to tell the story, to convince the audience. Staying close to the data is the most powerful means of telling the story, just as in dance, the story is told through the body itself. (Janesick, 1994, p. 215)

The previous chapter explored and established the need to investigate the perceptions of efficacy of the gifted young women in context and to observe how they manifested those perceptions in behavior. Findings from such investigations can make a significant contribution to gifted education as well as aid in our understanding of the dynamic interplay of various social cognitive learning factors. This understanding can advance the knowledge of the construct of self-efficacy in educational settings.

The present chapter begins by establishing the rationale for the use of a qualitative research design in the investigation of perceptions of efficacy and continues by identifying the epistemological perspective guiding the inquiry. The chapter also describes the feminist inquiry methodology used in the study and the multifaceted research design that was induced from it. Finally, the research procedures, data gathering, analysis and reporting are considered. As Social Cognitive Learning and theories of women's cognitive development emphasized the interactive importance of cognition, behavior, and environment, so the reader will note that the research design resonates the theoretical framework through its weaving of perception, actions and context. This resonance of method and material of inquiry enriches the character of naturalistic research.

Qualitative Inquiry

This study closely reflected the characteristics of naturalistic inquiry as described by Lincoln and Guba (1985). The research was conducted in the educational setting – the environment in which the gifted females study and interact. The study, although psychological in nature, attempted to contextualize through on-site contact. The rationale for this decision was that it is *in context*, rather than in isolation, that the interdynamic influences of environmental elements that affect our learner occur and are more easily observed.

The human-as-instrument characteristic of naturalistic inquiry (i.e., engaged interviewer) was applied to this study because, as explained by Lincoln and Guba (1985), "of the understanding that all instruments interact with respondents and objects but that only the human instrument is capable of grasping and evaluating the meaning of that differential interaction" (p. 39). Furthermore, there is value in the intuitive, felt, tacit knowledge – which becomes another rich source of data (Bateson, 1994), and that the study of this type of knowledge was fundamental to a study that aimed at discovering self-perceptions.

Qualitative methods allowed me more easily to encounter and probe the multiple realities that composed the data of the study. The research was designed to be implicitly emergent (see Figure 4), and relied on the interaction of the participants and myself to determine the composition of subsequent components in the design. The design involved the visiting and revisiting of the environments, and the convening and reconvening of the groups of participants. This procedure resulted in a series of negotiated outcomes and means, important characteristics of naturalistic inquiry. The case study reporting mode, with a composite

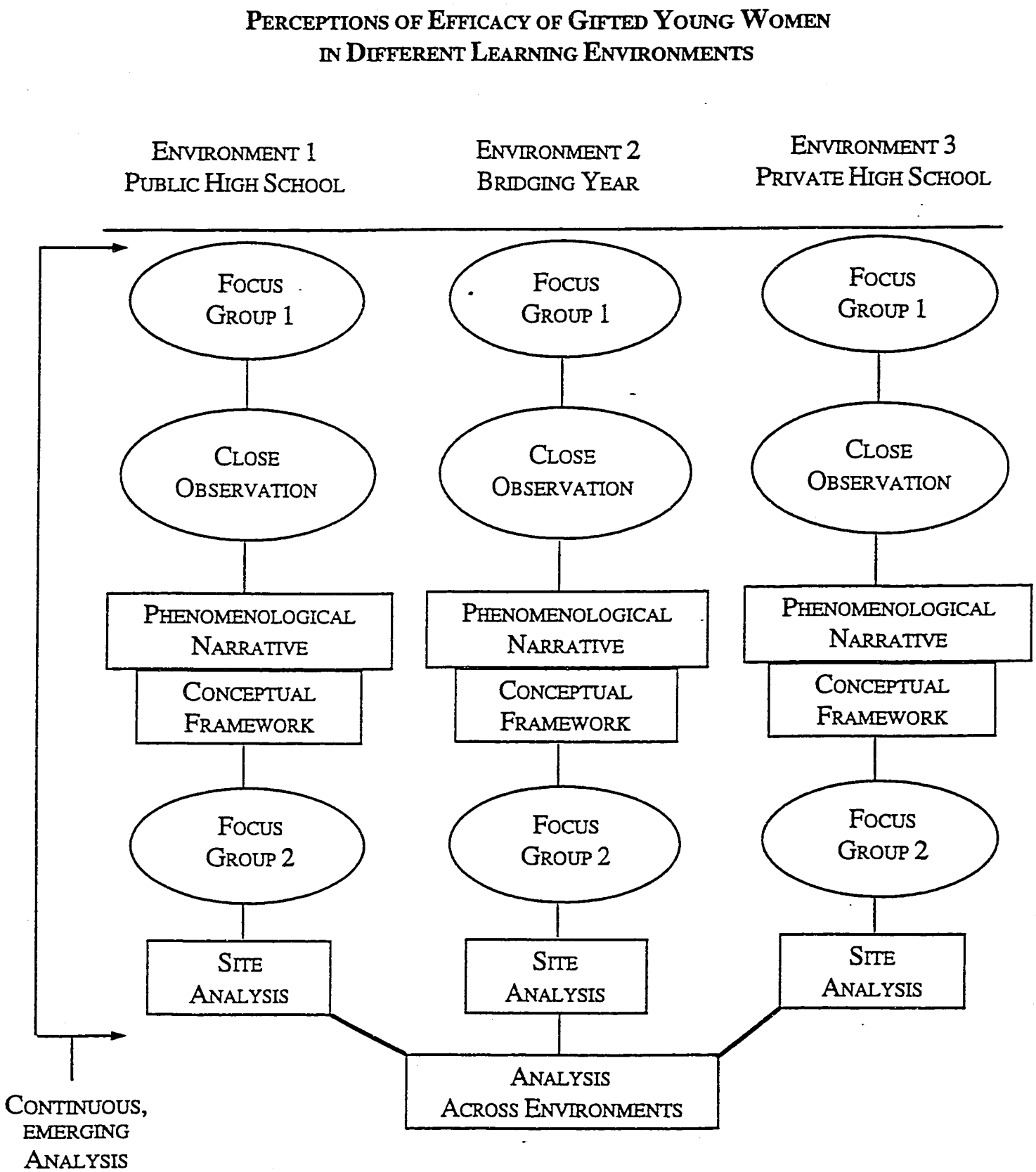


FIGURE 4: RESEARCH DESIGN J NAVAN (1996)

narrative of the data from each site, facilitated individual site analyses as well as the potential transferability to other sites.

The analysis of the data was inductive, emerging and on-going because "this process is more likely to describe fully the setting, to make decisions about the transferability to the other settings easier" (Lincoln & Guba, 1985, p. 40). Other characteristics of naturalistic inquiry embedded in the study are the idiographic interpretation of the data which was predicated on specific contextual factors and perceptions in each setting, the focus-determined boundaries of each setting, and the interaction between me and the participants. The criteria of credibility, transferability and dependability that determined the trustworthiness of the conclusions are those of the naturalistic inquiry paradigm.

In summary, the research used techniques of naturalistic inquiry such as investigation in the natural setting, human instrument, emerging data and on-going analysis of data. Furthermore, the involvement of participants in the study facilitated the inductive analysis and assisted in confirming the dependability of the interpretation.

Epistemological Perspective

The study was realized within the encompassing framework of naturalistic inquiry as detailed by Lincoln and Guba (1985), among others. The research reflects the phenomenological perspective that searches for deeper layers of essences or meanings. Phenomenology is the study of the essences of experience. As such, "all problems amount to finding definitions of essences; the essence of perception, or the essence of consciousness" (Merleau-Ponty, 1962, p. vii). The phenomenological researcher assumes the role of one who uncovers the essences of the lifeworld and correspondingly restores the essences to existence through phenomenological hermeneutic narrative (Merleau-Ponty, 1962; van Manen, 1990).

In this study I attempted to uncover the perceptions of the gifted female participants and, through the revelation of those perceptions, to tell their story – to put their essences back into existence.

I openly acknowledge the presence of self in the inquiry. It is impossible, given the nature of qualitative research, to remain a distant, detached and neutral inquirer. In addition, it is incumbent on the researcher who studies data as they emerge out of contexts to continually investigate the relationships between self, the contexts, and our informants (Fine, 1994). Moreover, the educator's qualities of reflective insight and inferential expertise which I brought to this inquiry were indispensable in the construction and narration of the meanings encountered in the learning environments (Greene, 1994).

I examined the *essences* – uncovering the meaning of self-perceptions of efficacy, their effects on behavior, and the phenomenologically experienced factors in the environment that influenced those perceptions. This qualitative revealing of cognitive and behavioral phenomena presupposed the critical need for me to be open to phenomena *as they emanated from the environment.* To impose predetermined and extraneous hypotheses on the environments would be to conjecture that the three learning environments were similar to the extent that a single set of hypotheses would conform to three different realities. Such an assumption would negate the unique richness of each of the microcultures that influenced the participants and were in turn influenced by them. Likewise, there was no predetermined belief that the three environments would be found to be so divergent as not to allow the emergence of common themes and constructs.

In the words of van Manen (1990), "phenomenology is the study of the lifeworld – the world as we immediately experience it pre-reflectively rather than as we conceptualize,

categorize, or reflect on it" (p. 9). Thus I maintained no concrete suppositions about eventual analysis and findings other than the phenomenological relationships that already existed among researcher as reflective practitioner, her epistemological position, and the research questions. I kept vital my openness to experience as interviewer and as participant observer; both stances are essential to phenomenological methodology.

To summarize my epistemological stance, in the present inquiry I sought to uncover the essences of perceptions of self-efficacy of the young women participants as they were lived in the three different educational microcultures. Through this uncovering I sought to interpret them *as experienced* through hermeneutic narratives.

Feminist Inquiry

There is yet a deeper layer of essences present in the study – that of feminist inquiry. Reinharz (1992), in her study of feminist research, concluded with a summary of its defining characteristics. In this section I have explained some of those characteristics as they demonstrate the various facets of the methodology of the present study.

Phenomenologically, I investigated as an engaged feminist inquirer who both actively listened and responded to the informants. *Feminist* in this study is a perspective – not a method – and connotes admitting more than one manner of thinking (i.e., masculine *and* feminine) as well as realizing that this construction of meaning can best be understood through collaboration and relationship (Lovecky, 1996; Lorraine, 1990; Reinharz, 1992). It recognizes that in much of our psychopedagogy of the past, the voice of the female student was silent. It asserts the need to bring that voice to the ears of educators in order to create a more complete educational environment, where the needs of all are perceived and satisfied. As Reinharz (1992) asserted, "By listening to women speak, understanding women's

membership in particular social systems, and establishing the distribution of phenomena accessible only through sensitive interviewing, feminist interview researchers have uncovered previously neglected or misunderstood worlds of experience" (p. 45).

A salient aspect of feminist phenomenological inquiry is that it is reflective, collaborative, and relational. As Leroux (1996) asserted,

> We are both changed as a result of [the feminist inquiry]. We learn. In feminist research analysis we are no longer subjective or objective. We are entering into a combined, empathetic relationship, a negotiated position. They agree to let me into their lives for this little time and, in fact, change as a result. And *I* – because of my relationship with them – change, because *they* are changing me and I am learning from them at the same time. And that's where feminist analysis differs from the old paradigm that attempted to not get anywhere near any change or any kind of empathy. (J.A. Leroux, personal communication, February 24, 1996)

In the preparation of the methodology, several disciplines were researched and applied. The reader will note the interdisciplinary blending of philosophy, psychopedagogy, sociology, and anthropology along with subdisciplines of these. Additionally, I found cause to invoke my literary muse in the rendering of the narratives, which describe the extremely articulate and able informants.

As with other feminist researchers, I availed myself of various research methods in an effort to "coax" out the essences of the participants' experiences and interpret their perceptions as reported. Focus groups, close observation, computer-assisted qualitative analysis, hermeneutically interpreted thematic construction, phenomenological narratives, and

case studies are some of the methods applied to the problem. These methods will be further detailed in the sections dealing with procedures and analysis.

Ethically the feminist researcher – precisely because of the relational nature of feminist inquiry – promotes reflective identification and a building of trust and empathy (Reinharz, 1992; Olesen, 1994; Spradley, 1980). In this nonexploitive posture, I empowered the participants through a relationship that advocated personal commitment on the part of all involved (Punch, 1994). In effect, the gifted young women in this study expressed at various times their wishes that the findings of the study would be used to enhance the learning of those gifted females who were to follow them.

Just as, in Reinharz' (1992) words, "feminism acknowledges the paradox that women are all alike in some ways and dissimilar in others" (p. 252), so the participants in this study represented gifted females as well as a diversity of backgrounds. The extent of diversity within the groups ranged from a homogeneous group of Euro-Americans in the public high school setting; to a blend of African-Americans, Euro-Americans, with one Asian-American in the bridging year academy; and a blend of Euro-Americans with an Indonesian in the private school. In addition, there was a rich diversity of perceptions and abilities within each individual young woman.

It is precisely their diversity that enhances the value of the study for late twentieth century educators. We are a society that is growing more pluralistic, on the cusp of a global and multicultural new century. The lived experiences of all students – regardless of gender, class or ethnicity – are vital ingredients in our understanding of the educational environment. As Andersen (1993) stated, "Feminist scholarship has shown that

moving previously excluded groups to the center of our research and teaching produces more representative accounts of society and culture" (p. 43).

Through the inclusion of the various voices of the young women in this study, I allowed for the diversity of the participants, both as gifted females and as ethnically diverse individuals. Students were given a variety of opportunities to contribute their perceptions – through independently written data and in-group and individual interviews. The "minority reports" that reflected any nonconsensual thinking on the part of any of the members – regardless of ethnicity – are also a part of the analysis.

When Reinharz (1992) wrote of the involvement of research participants, she referred to a researcher's interaction and involvement with the subjects beyond a traditional posture of objectivity. One might also consider the amount of involvement the participants had in the study itself as part of this subtheme of feminist research. Both kinds of involvement emerged during the course of the research, one planned and the other serendipitous.

Insofar as the involvement of participants in the study is concerned, the research design accommodated their involvement at different stages. The students contributed their perceptions regarding efficacy and learning environment in the first round of focus groups, several students were shadowed and interviewed during the close observation segment of the study, and they responded to the preliminary analysis narrative both individually – in writing – and in a second group interview.

As regards the involvement of the participants beyond the confines of the study, I began with a traditional belief in the need for complete objectivity, therefore *distance*, on my part. As I progressed and began to see the students on a number of occasions, they developed a range of involvement, from relatively passive on the part of some of the students, to curiosity

about me and my work, and – in the case of all of them – active interest in receiving the findings. One of the girls continued to communicate (and to act as an intermediary in scheduling visits, etc.) via e-mail for the duration of the research. She planned to study Psychology at university and her interest sparked the need in me to respond to her authentically – as educator and collaborator. Moreover, I attempted to respond genuinely to all the students while at the same time being respectful of the ethical bounds of our relationships. Of great benefit to me throughout the period of my research were the close support and conversations with the Headmasters of two of the schools and with the Director of the Gifted Program at the other.

In effect, neither the passive interest nor the active involvement of students was problematic in communicative, qualitative research that relied on the relational characteristics of the participants as a focus for data collection. The consequence of establishing the collaborative relationship that arose out of the communication and connections between researcher and subjects enhanced the quality of the data.

The twenty-one (eventually twenty) bright and creative young women revealed themselves as capable, courageous and committed during the course of the months we spent working together. They were all – without exception – hopeful that their participation would benefit other young women. They entrusted me with their thoughts, emotions, goals and hopes and therefore I feel an imposing responsibility to *tell their story*. It is to this end that I invite the reader to join in their narrative – a reconstruction of their construction of meaning.

To synthesize, feminist research reiterates the ways in which the research reflected the perspectives and procedural stance of feminist inquiry. Within the bounds of a phenomenological epistemology, I was grounded in a feminist paradigm that acknowledged a

multiplicity of disciplines, methods, and research techniques, and was ethically committed to influencing educational change through the continued involvement of a diverse group of participants in researching their lived experience.

Communicative and Phenomenological Hermeneutics

As researcher *and* participant in the acts of meaning construction I found my interpretive stance that of a phenomenological hermeneutic. The interpretation was phenomenological in the manner that the students tried to make sense of their world and also in the sense that I then attempted to interpret their constructions of meanings. As regards the hermeneutic interpretation of the data, I was also a participant in the construction of meaning and subsequently an interpreter of that meaning (van Manen, 1990).

To reconstruct a construction of meaning is a complex undertaking. The process of *verstehen* (understanding social phenomena) becomes the process through which the individual – an integral part of the everyday world – attempts to find meaning in everyday phenomena which one experiences in that world (Schwandt, 1994). Van Manen (1990) described the task as "[constructing] a full interpretive description of some aspect of the lifeworld, and yet [remaining] aware that lived life is always more complex than any explication of meaning can reveal" (p. 18). Because of the richness of the experiences, it was necessary to limit the interpretive construction of meaning articulated in this thesis to answering the questions that guided the present study.

Social cognitive learning posits the communicative interaction of cognitive, behavioral, and environmental facets as reciprocal determinants of one's learning and acting in the world (Bandura, 1986). Women's cognitive and affective development evolves through the growth of communicative relationships in supportive contexts (Belenky et al., 1986; Brown &

Gilligan, 1992; Gilligan, 1982; Gilligan et al., 1990; Miller, 1986). The use of a communicative hermeneutic, grounded in the verbal and behavioral phenomena, as gathered and observed in the learning environments, reverberated through the epistemological stance of the research and the theoretical framework that grounded the study. Clearly, a central tenet of social phenomenology postulates that language and social interaction construct and transmit meaning (Holstein & Gubrium, 1994). The same interpretive stance also reflects the feminist posture toward the lived experience (Personal Narratives Group, 1989).

I observed the reciprocal interactions of personal, behavioral and environmental factors through the words and actions of the students during interviews and observations. I, in turn, verified those observations through subsequent communication with the participants. Therefore, it is through the young women's communicative meaning-making in focus group interviews and their communicated meanings and behaviors as observed in the learning environments, that they revealed the essences of their perceptions. I then analyzed the collaboratively reported data using a communicative hermeneutic, through the thematic interpretation of transcriptions of verbal protocols. The data were not reduced to previously stated objective categories and quantitatively analyzed, which would thus relinquish the richness and understanding of context. Rather, the phenomenological interaction analysis drew upon all the observed aspects as they emerged from the interaction of perceptions, behaviors, and contexts (Psathas, 1995).

Procedures

Gifted young women study in a variety of educational environments. They may enroll in public schools, private schools, early entrance programs in college, or they may study at home with a privately designed or correspondence curriculum. Many able and gifted students also

opt to spend a high school year studying in another country, often learning a new language and culture in the process.

Within each of the environments mentioned there exists a wide range of teaching strategies and learning activities. For example, their public school may or may not differentiate the general curriculum to provide for the needs of the gifted learner. Their schools may offer Honors or Advanced Placement courses, or the opportunity to pursue some of their courses at a nearby college. The other learning environments also offer a plethora of possibilities for our learners. In the private school environment the curriculum may closely resemble that of the public school or it may offer alternative forms of curriculum and scheduling. Finally, the bridging year environment more closely resembles the university environment.

This study was not intended to encompass all of the options mentioned above. Rather, the intention is to offer a portrait of gifted young women in three distinct environments: a public school, a private school and an early entrance program. At the same time, each setting is not representative of its type and it is not the intention of the study to generalize to other settings of the same type. As will be shown, however, there are conclusions and implications that researchers can extend to enrich the learning of the general population of gifted females. In fact, the knowledge that emerges from one or more of the settings may very well be transferable (Lincoln & Guba, 1985).

Figure 4 illustrates the research design for the study. Data were collected in the three educational settings during three separate field visits to each school – first focus group, close observation and second focus group – spaced approximately six weeks apart. The continuing, emerging analysis that I accomplished at each stage of the design provided efficacy

information at each phase of the research. The data rendered knowledge regarding efficacy perceptions, behavior and environment within each site. Finally, themes and constructs that emerged from all sites were examined and presented with a particular view to how they reflected the previous literature or displayed new points of inquiry.

Sites

The selected sites were (a) a small, co-educational public high school in a rural area of northern New York; (b) a co-educational bridging year academy located on the campus of a small college of Science and Engineering in a small town in the northeastern United States; and (c) a small, co-educational, non-residential, private school in a small college town in Vermont. More specific demographic information and descriptions of the sites are included in subsequent chapters.

Participants

The criteria for the selection of the participants were (a) that they had been identified as gifted by either their previous or present school; (b) that they be enrolled in their last or penultimate year of high school; and (c) that they be female students in a co-educational high-school or early entrance to university program. The small pool of potential participants in both the public school and the private school necessitated the inclusion of both eleventh and twelfth grade students in those settings. In the case of the bridging year academy the students were completing their last year of secondary school while concurrently studying their first year of a four-year university program.

It was not within the confines of the research to screen and identify gifted students. Giftedness was not a constant variable in the quantitative sense. Rather, the students' knowledge of having been previously identified by educators as being "gifted" learners was a

personal and cognitive phenomenon that became one of many such phenomena contributing to the richness of the data. In each of the environments the headmasters or director of the gifted program confirmed that these gifted students were all well above average in intelligence and either had demonstrated or showed the potential for creative productivity. These are the criteria included in the operational definition of the construct.

Students who met the selection criteria were informed as to the nature of the research and then invited to participate. Eight students in the public school responded to the initial invitation, twelve responded in the bridging year and seven in the much smaller private school. From those numbers the final number of participants was eight in the public school, nine in the bridging year school, and four in the private school. Students and their parents or guardians read and signed explicit informed consent letters, a copy of which is found in Appendix A.

Focus Group 1

During the first phase of the research the student participants in each environment met with me as a group for focus group interviews. The use of focus groups was chosen as one of the data collection methods because it was through the dynamic interactions of relationship that those who are enmeshed in the environment revealed their story and their perceptions (Brown & Gilligan, 1992). Morgan (1988) distinguished the hallmark of focus groups as, "the explicit use of the group interaction to produce data and insights that would be less accessible without the interaction found in a group" (p. 12). It was to the advantage of the phenomenological study, grounded in female ways of knowing, that students have the opportunity to probe their own and each others' thinking in this manner and thus negotiate meaning among themselves.

Reinharz (1992) praised this type of phenomenological interviewing because it is investigation – guided by the participants – of lived experience and allows the participants to take on roles of co-researchers, thereby avoiding over control on the part of the researcher. Furthermore, she stated:

> Interviewing offers researchers access to people's ideas, thoughts, and memories in their own words rather than in the words of the researcher. This asset is particularly important for the study of women because in this way learning from women is an antidote to centuries of ignoring women's ideas altogether or having men speak for women. (p. 19)

Van Manen (1992) explained the "hermeneutic thrust" of conversation that aims to make sense of the phenomenon under consideration. He further supported the collaborative attributes of conversation as especially useful in examining themes that arise in the course of meaning making.

Before the interview students filled out a Gifted Female Study Information Sheet (see Appendix B) that requested basic information as well as early recollections of abilities and place within the family constellation, as tools for mining current perceptions and behaviors (Adler, 1980; Morawski, 1993). Allowing for the potential congruence of individual psychology, feminist research methodology, and social cognitive learning provided another opportunity for individual perspectives and voice to surface. The overlapping of personal perceptions of efficacy as revealed in early recollections, focus group meaning making and observations of behavior afforded the emergence of deeper layers of richness to the findings.

The interviews were semi-structured to allow for perceptions and concepts to emerge and for the students to contemplate their responses to the research questions. At the beginning of

each group interview students received a brief introduction to the construct of self-efficacy, information about focus groups, and procedural instructions. Details of the instructions are included as Appendix C.

During the first part of the interview the students discussed the ways in which they felt (and at times did not feel) academically efficacious. In order to elicit as much information in this regard as possible, at times I suggested certain thinking skills and asked that they comment on their perceptions of efficacy in achieving them. A list of these cognitive and affective thinking skills is included as Appendix D. In the second phase of the first focus group the students discussed what factors they perceived in the learning environment as influencing their perceptions of efficacy.

I recorded and transcribed all of the interviews. They were then coded for anonymity and converted into FOLIO Views 3.0 (1993) infobases for subsequent analysis. Folio VIEWS is an electronic software program that allows a researcher to query and search a hypertext information base. By assigning categories, levels and fields to parts of the information or by grouping data found in different segments of the information base, it assists in the analysis of the data and subsequent reporting of the findings (Weitzman & Miles, 1995).

Close Observation/Field Notes

The next stage of the study consisted of observing students in the learning environment. As van Manen (1992) clarified, close observation is not a modification of participant observation. Rather, van Manen explained that this focused, hermeneutic inspection,

> . . . requires that one be a participant and an observer at the same time, that one maintain a certain orientation of reflectivity while guarding against the more

manipulative and artificial attitude that a reflective attitude tends to insert in a social situation and relation. (p. 69)

Since the students were participants in the same microculture within each site (gifted program, first year university study, small private school classes), the opportunity to observe the interactions of several members of each group was implicit in the design. The objective was to see the ideas and perceptions that they had shared in the focus groups as manifested in behavior. The choice of which student to shadow depended on their schedules. The aim was to view as many of the girls as possible during my visit and therefore I chose the student or students whose schedule best allowed for observation of others as well.

To employ self-reports by the students within the focus group format followed by observation adds a new dimension to the study of self-efficacy. The value of such a design became more apparent as the study progressed. The phenomenological understanding acquired through the observations was crucial in the preparation of the descriptive, analytical narratives.

In total, I visited each learning environment four times – to explain the research and invite the participation of the students, to conduct the first focus group, to shadow one or more of the students, and to conduct the second focus group. During and after each of the field visits I kept focused field notes that provided me with additional efficacy information.

The field notes were transcribed into approximately 30 typed pages and, along with the focus group transcriptions and materials gathered in the schools, became data for the emerging analysis. The first three focus group interviews ranged from two to two and one-half hours in length and resulted in 152 typed, double-spaced pages of transcriptions. The second focus groups, that lasted approximately one hour each, resulted in some additional 62

pages of transcriptions. The six transcriptions, field notes, the individual reflective assessments, and other documents collected at the sites amounted to a total of over 350 pages of data.

Descriptive Narratives and Conceptual Frameworks

> *"A good phenomenological description is collected by lived experience and recollects lived experience – it is validated by lived experience and it validates lived experience"* (van Manen, 1990, p. 27).

Clifford and Marcus (1986) summarize the determinants of ethnographic writing as contextuality; rhetoric, institutionality; and its generic, political, and historical qualities. Likewise, this study employed narrative as its reporting genre, which situated it contextually within the discipline of educational research; it is written in an expressive, rhetorical form, and obeys the generic, political and historical determinants of educational inquiry.

Narrative in this sense can be defined as a descriptive reporting of lived experience. Generically, this study is a narrative that describes identified factors within a microculture. Politically, the authority to represent this microculture has been granted to me by the various institutions. Historically, the study appears at a time when new paradigms are required and sought for the representation of different realities, such as the psychoeducational milieu of the gifted female in her last years of secondary school. Thus, the use of ethnographic narrative as an analytical and reporting tool mirrored the constituent pieces of ethnographic writing as detailed by Clifford and Marcus (1986).

The stories of these young women are best communicated through narrative. They created stories among themselves in the focus groups, then embellished their stories through their actions and words in the classrooms and in the second focus group. This method of approaching and interpreting their reality through the elaborate process of narrative

composition allows the reader to enter into and cognitively engage in what is not a direct experience of the reality. Rather, it is a reflective and informed re-*construct*-ion of the focus constructs of the study. It is precisely the rigorous reflection, grounded in established theory and literature, which situates the findings as credible and transferable within the discipline of educational pedagogy. The writer of ethnographic narrative is "poised between intimacy and discourse" (Atkinson, 1990, p. 19). As a participant, the writer experiences the nearness of the collaborative meaning search. As observer, she carries with her the dictum of fairness in depicting what she observed.

As author, I was present in the text of this study in a multifaceted role – as researcher, as participant in collaborative inquiry, and as narrator. The demands of these roles led me to implicate myself in first person. This was necessary in order to describe more accurately the nature and the dynamics of the collaboration into which the students invited me. At other times I remained the authoritative observer and recorder (Atkinson, 1990). Such is the nature of feminist research that requires both the intimate conversation in the dance of meaning and the objective interpretation and mediation of data (Brown & Gilligan, 1992; Reinharz, 1992; van Manen, 1992; Warren, 1988).

The transcriptions of focus group interviews and field notes yielded students' perceptions about ways that they felt academically efficacious and how each learning environment affected those perceptions. Through qualitative, computer-assisted analysis of concepts as they emerged from the reading of field notes and the infobases, students' ideas and concepts were highlighted and grouped. Further analysis enabled the writing of a composite narrative for each group. These narratives acted as preliminary case study reports, which were submitted to the students for further individual and group clarification and enrichment.

The narratives served as a qualitative synthesis of all naturalistic data collected thus far in the environments. Preparing them as case study synopses allowed key ideas, words and themes to emerge from the data. The compacting of the verbal protocol data into a synopsis format facilitated the identification of a vocabulary and structure that reflected the dynamics and relationships between constructs (J.P. Dionne, personal communication, March, 1995). Each synopsis detailed the students' efficacious behavior and the effects of self-efficacy on their goals and achievement as well as their perceptions of environmental factors that influence their self-efficacy.

After composing each of the narratives, the information was further distilled into conceptual frameworks (Appendices E, F, and G) that reflected the structure of the Theoretical Framework, as previously displayed in Figure 3. In addition to their utility as an additional display of the preliminary analyses, the conceptual frameworks provided another instrument, a graphic representation of the narratives, which assisted in their understanding of the constructs.

Focus Group 2

The original groups were reconvened a second time following the completion of the preliminary analysis, narrative, and conceptual framework for each site. Before conducting the second focus group, each student received a copy of the narrative that synthesized the transcript of her group's first focus group and a reflective assessment sheet that she completed individually before the group discussion. Appendix H is a copy of the reflective assessment form. After completing their written assessment, the students then discussed – in focus group format – the findings as reflected in the narrative. Again, I used a semi-structured focus group format. This was their opportunity to agree or disagree with the findings, to suggest additions

or changes, and to add any other information that they felt enriched the study. As van Manen (1992) indicated:

> Once the researcher has identified transcript themes, then these themes may become objects of reflection in follow-up hermeneutic conversations in which both the research and the interviewee collaborate. In other words, both the interviewer and the interviewee attempt to interpret the significance of the preliminary themes in the light of the original phenomenological question. *Is this what the experience is really like?* (p. 99)

During the final part of the discussion the students looked at the preliminary conceptual framework, which was a synthesis of the elements in the narrative for their particular environment (see Appendices E, F, and G). They commented on any interrelationships that they perceived among the factors and whether they agreed that the framework reflected the findings as expressed in the narrative and the second focus group. They also had the opportunity to add any additional factors that would improve the framework.

Exit Interviews

The final facet of the data collection involved meeting with the headmasters at the bridging year academy and the private high school and with the director of the gifted program at the public high school. At those meetings, administrators read the narrative of their particular institution and commented on how well they believed the narrative reflected their experience with gifted young women at their schools. The headmasters and director also had the opportunity to add any relevant information and answered specific questions that I had regarding the school and the study participants. These interviews served the purposes of

enriching and enhancing my understanding of the phenomena, as well as providing for the triangulation of the findings.

Qualitative Tool - FOLIO Views

As with all qualitative data, a continuous and emerging analysis depends upon the nature of the data. Therefore, the data reduction and display were framed by the research questions as well as the new relationships among the constructs that arose through the course of the naturalistic inquiry (Miles & Huberman, 1994).

FOLIO Views (1993) is a qualitative research tool that enabled the highlighting of themes as they responded to the research questions (Weitzman & Miles, 1995). After reading and re-reading as necessary, categories were designated as they responded to the unique qualities of the specific transcription under consideration. For example, if students spoke about feeling capable of writing creatively, then any phrases or sentences that pertained to that perception were highlighted as "creative writing." When the entire infobase had been read and highlighted as necessary, then all lines that pertained to creative writing were grouped and printed. This set the stage for the next step in the analysis, the identification and description of themes, subthemes and constructs.

FOLIO Views was also useful in grouping the protocols of individual students for examination and analysis. This enabled me to view the development of thinking of each of the students during the course of the interviews. The information from this type of reading of the data prompted additional follow-up and debriefing questions during the close observation and the second focus group stages of the research.

Themes and Constructs - the Experiential Essences

Each site composed a fundamental unit for analytical purposes. After computer-assisted reading, highlighting and grouping of data from the focus group interviews and field observations, themes that emerged afforded the beginnings of the hermeneutic interpretation of the students' perceptions and lived experiences. As van Manen (1992) stated, "Phenomenological themes may be understood as the *structures of experience*" (p. 78). Thus, I was not merely creating a conceptual framework to take the place of the phenomena; rather, I attempted to discover aspects or qualities within the experiential structure itself (van Manen, 1992).

Case Study of Each Site

Case study is defined as "a method of studying social phenomena through the thorough analysis of an individual case. The case may be a person, a group, an episode, a process, a community, a society, or any other unit of social life" (Theordorson & Theordorson, 1969, p. 38). As is the norm within the case study mode of reporting, the data are gathered and organized in terms of the case – in this study, the learning environment. Thus, the case study provides a unity to all the data by showing the interrelationships of a variety of facts (Theordorson & Theordorson, 1969). The within-site analyses display content analysis and figural displays. These conceptually structured syntheses permitted the comparison and contrasting of influences on efficacy within each educational setting.

The reporting mode for the case studies continues the use of narrative, supplemented with figural displays. Narrative gives meaning to the experience through imagery and dialogue. In the words of van Manen (1992), "Writing decontextualizes thought from practice and yet returns thought to praxis" (p. 128). Through the abstraction of students' lived experience the

researcher intends to make palpable their experience for the reader. Narrative is "re-thinking, re-flecting, re-cognizing" (van Manen, 1992, p. 131). Specifically, the case study narrative in this research was the use of a composite reporting of the process of group meaning making.

Across-site Analysis

To prepare an across-site synthesis I cycled continuously among original data, preliminary analyses and case studies, and across-site displays. This method ensures that the phenomena are best represented in the synthesis (Miles & Huberman, 1994). The analysis across environments re-examined the findings, and displayed the major themes and constructs that arose from all of the sites. Furthermore, ways in which the findings in each environment informed the others were revealed. The recollection of the data provided the opportunity for a hermeneutic phenomenological reflection (van Manen, 1990). At the same time it was imperative throughout the analysis to preserve the unique voices and ways of knowing of the individual participants in the study so that it be *her* story, which becomes the final test of validity (Fine, 1994; Oleson, 1994; Reinharz, 1992; Warren, 1988).

Limitations

The most salient limitation to the study is the extent to which the findings can be generalized. As in all phenomenologically gathered data, the findings are specific to each learner and environment. Therefore, causal relationships and applications to other educational environments can only be tentative as they are expressed as perceptions of the students and their educators and not measured psychometrically.

Nevertheless, many of the educational implications are couched in sound pedagogy. To this extent, the generalization of the findings to other educational environments may be rendered. This leads to what may be considered another limitation of the study; namely, the

personal involvement and commitment of the students to improving the future education of gifted females. Again, if such involvement leads to the improvement of educational environments to better meet the educational needs of gifted girls – and possibly those of all students – such a limitation will perhaps be acceptable.

Certain other limitations require identification and discussion. The first is the difference in age and year in school of the students. The students ranged in age between sixteen and eighteen years of age and were enrolled in their eleventh or twelfth year of high school, or in their first year of university. Given the fact that these were gifted students, with the concomitant, asychronous development of the gifted child (Silverman, 1993), this variable is common in studies of the gifted. However, it must be conceded that the data will reflect the phenomenological perspectives of the individual student – as a university student or as one who is anticipating university within one or two years.

Another limitation is the length of time that the research design – and the requirements of the schools – allowed for field visits in each environment. To combat this limitation, I had to use all my past experiences as an educator, as a supervisor of student teachers accustomed to observations in different classroom milieus, and as a reflective practitioner to focus on the essential needs of the study. Nevertheless, I believe I would have preferred a longer field experience in each of the sites.

An additional limitation is that, given the differences in the environments as well as the differences in the abilities to articulate perceptions among different participants in the study, there resulted different amounts of data for each environment. This particular limitation, like the one above, is a discouraging reality. Nevertheless, I was still able to coax out the essential data from each environment and therefore to respond to and explore the facets of the questions

that guided my inquiry. Additionally, the study's focus on perceptions of efficacy precludes other factors within the environment that would not emerge in the students' reports of their perceptions. Other contextual factors – staffing, leadership, climate and more – implicitly influenced perceptions, even if they were not explicitly revealed.

To summarize, this chapter presented the rationale for the qualitative, phenomenological and feminist inquiry that composed the study. The research design and procedures illustrated the various phases of data collection and demonstrated the process of continuous, emerging analysis of the findings. The use of narrative and composite case study was also explored. Due to the extensive nature of the data, it was appropriate that the findings from each site be presented as separate units. Therefore, Chapters Four, Five and Six display the case study analyses of each environment. Chapter Seven contains the across-site analysis, results, and implications of the study.

CHAPTER FOUR

THE PUBLIC SCHOOL

Introduction

The gifted high school female is most likely to be studying in a public school setting. Schools in New York State that offer programming or curricular differentiation for gifted students most often provide these services at the elementary and perhaps middle school levels. Gifted programming at the secondary level may take the form of honors or accelerated classes, gifted instruction within the regular classroom or pull-out enrichment instruction and activities. The latter is the case of the public school students who participated in this study. This chapter will display the environment of school, the perceptions of efficacy of some of its gifted females, and factors in the environment that they perceive as influencing their perceptions.

The organization of this and the subsequent chapters that deal with each unique environment follow the suggestion of Wolcott (1990) in the sense that a descriptive narrative of the study is blended with analysis, thus presenting a more coherent rendering of the data. For, as Wolcott states, "The nexus between description and analysis in the written account is also dialectic – each process informing the other, each helping with the important work of reducing the detail, maintaining the focus, and moving ahead with the story" (p. 50). In that vein, the chapters that address the different learning environments will begin with a brief description of the environment and the students who participated in the study. The remainder of the chapters will closely follow the process by which the phenomenological data emerged –

the narrative that displays the analysis of the first focus groups and the close observations, additional analysis including information gathered from the individual reflective assessments, the second focus groups, and the exit interviews with the enrichment coordinator and the headmasters of the other two environments. Finally, themes and constructs that are synthesized for the site are displayed in the concluding section.

Description

The public school is located in a rural, sparsely populated area of northern New York and serves several small, agricultural communities as the central, unified middle school-senior high school. Students attend kindergarten through sixth grade in their own local school and then are bused to the central high school for grades seven through twelve. The school building has recently been renovated and new technology (computers, networking, Internet access) has been installed. It is constructed mainly of red brick, with wide, pleasant hallways and traditional as well as more modern classrooms that offer lots of natural light. The new library, where the focus groups take place, is bright and cheery with large, tall windows overlooking a broad agricultural valley. Student artwork decorates the library and some of the hallways.

The school has a viable gifted enrichment program for secondary students, one of the few remaining in the northern sector of the state. The gifted coordinator and the program itself are well recognized throughout the state for quality and innovative use of limited resources. Students in the GAT – Gifted and Talented – program attend resource room (pull-out program) once a calendar week. Each year a theme is chosen for the year (i.e., *Air and Space, American History, Nations of the World*) and all instruction and activities revolve around and evolve from the theme. The culminating activity, a trip to places such as New York City or Washington, DC, includes enrichment excursions in the arts, science, history, etc.

Academically, the school is structured on the traditional high school model, with students attending classes in English, social studies, science, mathematics, foreign language, physical education, and various electives. Students may also choose to attend one half day of classes each day at the nearby technical school during their last two years of classes, where they study job-related skills such as auto mechanics, nursery education, nursing, and law enforcement.

The Gifted Female at the Public School

The following descriptions of the participants in the public school provide an overview of the students, their family constellations and their early recollections of ability.

Brenda, an eleventh grade student, has straight well-groomed brown hair, brown eyes that soften behind her glasses when she smiles, and is of medium height and frame. She is third in a family of three children. Her sister is the eldest and a brother is a year and a half older than she. She was first aware of her brightness in elementary school when she was "moved up in math in second grade." The enrichment coordinator at her school describes hers as a "natural giftedness." Her courses in eleventh grade were her core courses – English 11, Math (Course III), Economics/Government (a Grade 12 course), and Chemistry (with labs) – as well as Band, Chorus, Keyboarding, Health, and Physical Education.

Gail was in the twelfth grade and is the second child of four. She has an older sister, a younger sister, and a brother – the youngest. There is less than a year between her and her nearest sibling. Gail has almost black, long wavy hair and petite features. She spoke in animated tones and her facial features were also used quite expressively when she communicated ideas and feelings of importance to her. She remembered being accelerated in

reading in elementary school. She studied English 12, Economics, Anatomy, Math 12, Calculus, Band, Chorus, and Physical Education.

Gwen, an eleventh grade student, is thin and rather tall with curly brown hair and dark, expressive eyes. She remembered, "Just being able to understand what my parents would say or do, and picking up on things quickly when I was little." She is the second of three children. She has an older sister and a younger brother. There are three years between her and her nearest sibling. She studied English 11, U.S. History, Math, Chemistry, Spanish, Band/Chorus, and Physical Education.

Bridget is a tall, slim and energetic eleventh grader. She has light brown, curly hair, emerald green eyes and a healthy glow. The third of three children, she has an older brother who was described by the gifted resource teacher as "mentally perfect" and a sister who is twenty months older than her and very athletically talented. Bridget exhibits a combination of intellectual and athletic talents. She says an early recollection of being bright was, "I would have favorite books read to me, and I can remember reciting the words from the books before I went to school." She studied English 11, Math (Course III), U.S. History, Chemistry, Spanish, Driver Education and Physical Education.

Beth, a twelfth grader, is a short girl with long brown hair and dark eyes. She is amiable and expressive. She recalls being aware of being bright when she was in fourth grade, but does not elaborate. She is the third of four children. There is the eldest brother and an older and a younger sister. She wrote that there are sixteen months between her and her nearest sibling. At the time of the interviews, she studied English 12, Math 12, Calculus, Economics, Physics (with Lab), French, Chorus, and Physical Education.

Cheryl is a cousin of Gwen. She looks very similar, with long dark brown hair and the same physical features. She remembers early recollection of, "everyone being amazed by my memory skills." She is the second of two children. She has a brother who is eighteen months older than she is. In the eleventh grade, she studied English 12, Math (Course III), U.S. History, Chemistry, Computers, Spanish, and Physical Education.

Darcie is in the eleventh grade and is the third of three siblings. Plump, with curly light brown hair, she explains that she is studying Early Childhood Education at the local BOCES Technical School. She has an older brother and a sister who is three years older than she is. She does not write of any early recollection of being bright. She was studying English 11, Math (Course III), U.S. History, Chorus and Physical Education at the Middle School/Senior High School and then spent afternoons studying her program at BOCES.

Jackie is petite and perky. With long, dark brown hair and dark eyes, she spoke rarely, but when she did speak she was very expressive. In the eleventh grade, she is an only child. She remembers her grandfather teaching her to read before she started school. She studied Math (Course III), English, U.S. History, Chemistry, Spanish, Driver Education and Physical Education.

The courses available to the students are the usual for the public schools in the region. It is to the credit of the small school that they are able to offer a schedule that allows the twelfth grade students to take two Math courses at the same time so that they can take Calculus. Other than Cheryl, who was taking English twelve as an eleventh grader and Brenda, who was studying the twelfth grade Economics/Government course a year earlier, no other opportunities for acceleration are apparent and these gifted girls are in a lockstep

sequence of courses, in classes that were not grouped for ability, although some were informally grouped because they were college preparatory requirements.

The literature regarding birth order suggests that intellectual ability and educational achievement decline as family size increases. It is especially significant that firstborn females, who are invested with greater responsibilities with younger siblings, show intellectual growth that benefits from the tutoring effect (Nommay, 1988). Furthermore, firstborn siblings tend to be more achievement oriented and to participate more actively in order to achieve parental affirmation than younger siblings. In contrast, later-born children in the family constellation demonstrate a higher need for affiliation and sociability (Cohen, 1985). Additionally, the second child perceives the need to play "catch up" (Shulman & Mozak, 1988). The drive and educational achievement of this public school cohort contrasted distinctly with the students in the bridging year academy environment, who displayed significantly different family constellations.

In the public school cohort, there is one only child and, other than her, no firstborn child among the group. Neither did any of the later born students communicate in a way that indicated that they *perceived* themselves as firstborn children in the family constellation. In birth order literature, it is the perceived position in the family constellation that is significant and may indicate certain personality traits (Adler, 1980; Shulman, 1962). Firstborn children often are perceived as the most gifted by others and are more often than later born children to be included in Who's Who and other publications which recognize achievement. This preponderance of second and third born siblings (three second born, four third born, and one only child) was an unexpected finding, given that the students randomly volunteered to participate in the research. The students displayed characteristics referred to in birth order

literature representative of later born siblings. They were competitive, and were sensitive to mistreatment and unfairness. The only child displayed characteristics of that position in her congeniality and charm, social behavior that aimed at pleasing the group (Shulman & Mozak, 1988). She spoke much less than the others and when she did speak, she made humorous comments that elicited agreement and laughter from the others.

Early recollections were gathered when students were asked to recall and describe their memories of their first awareness of being bright. These recollections can serve as lenses to better understand the students' perceptions of abilities. The literature suggests that early recollections provide a selective, perceptual, and interpretive framework that can reveal present perspectives (Ansbacher, 1947; Barrett, 1980; Morawski & Brunhuber, 1993, Sweeney, 1989). Adler (1980) wrote of how the individual constructs a life story:

> Most illuminating of all is the way he begins his story, the earliest incident he can recall. The first memory will show the individual's fundamental view of life, his first satisfactory crystallization of his attitude. It offers us an opportunity to see at one glance what he has taken as the starting point of his development. (p. 75)

The early recollections of ability reported in this group indicated their awareness in elementary school of high ability in math and reading (accelerated), memorization skills (two participants), comprehension, "being bright in fourth grade," one with no early memory, and one pre-school reader. A number of these recollections are linked with school achievement, and subsequent focus interview statements dealt with school-related academic abilities. Clearly, the perceptual lenses of abilities with these students as reported in both focus interviews was that of academic efficacy, and early recollections provided a frame for those perceptions. This finding echoed the literature and supported the claims of Morawski and

Brunhuber (1993), as well as other researchers (Duchein & Mealey, 1993; Shulman & Mozak, 1988; Sweeney, 1989), that the use of early recollections could provide valuable information for educators regarding students' self-perceptions of abilities as well as other constructs such as locus of control and affective attitudes toward learning.

First Focus Group

The following narrative is a composite analysis of the perceptions and ideas expressed in the first focus group.

In what ways does the gifted female in the public school consider herself efficacious?

The gifted female at the public high school expresses her perceptions of efficacy in various academic subjects and thinking skills. She feels quite capable in Math, and enjoys problem solving. In the process of problem solving, for example, in Math or Chemistry, finding the solution is a fulfilling experience. "Like in Chemistry, we'll do this thing and I have no idea what to do, and then all of a sudden, I'll be sitting there doing my homework, and, 'That's how you do it!' You feel awesome!" Another cognitive skill in which she feels efficacious is independent inquiry that allows for creativity, such as term papers and projects.

In the sciences, she believes herself more capable in subjects such as Biology and Anatomy, which are hands-on and more observable, than in subjects such as Physics and Chemistry, where she finds more difficulty relating to the material. "With Chemistry you just have to take it on what somebody says, even if you don't believe it."

The need to be able to relate to the material carries over into other subject areas also. In English, for example, reading literature that is difficult to relate to, "It's like you're reading, it's just a bunch of words on a piece of paper. You can't understand it because they're totally different." When the student is expected to express her feelings, she feels an unfairness and confusion about the assignment when she is marked down for expressing ideas that don't conform to the teacher's

expectations. "I mean they'll say like, 'Well, what's your opinion?' Well, it doesn't match his, so it must be wrong."

This gifted student perceives herself as capable in the competitive atmosphere of the school. When she is successful in this competition, she sets higher goals. "And I feel if I can beat that person, or basically beat someone who has the same abilities as me, then I think, 'Well, if I can beat him, or I can beat her, then I can do, you know, I can go on and keep doing more." All is not competition though; she also feels capable when she can use her knowledge to teach and enrich others, whether in tutoring her peers or younger students, in performances, or in childcare. These activities give her more confidence, motivate her to try harder and to take risks.

Many of the goals of the gifted student are academic goals – to attain good grades, to make the Honor Roll, perhaps to attain Valedictorian or Salutatorian status, or National Honor Society. Many times what seem to be arbitrary grading policies frustrate her desire to achieve these goals.

What factors in the learning environment affect her perceptions of efficacy?

The gifted female feels efficacious when she is given reinforcement that she is capable by key teachers and peers. "I feel capable when I do something and I get recognition for it . . . and it makes me try harder the next time to do a lot better in a subject." She also responds to effective teaching in which students and teacher are involved collaboratively in problem solving. Teacher praise and positive comments are factors that increase self-efficacy. Also worthwhile are sincere compliments from friends.

Teachers who show an interest in the student beyond just academics are important to her sense of efficacy. "I really appreciate teachers that understand at this time of our lives and in our group and in truth, that things are always changing, that we are faced with new problems every day and that we don't always know how to solve them." She emphasizes the importance of caring and creative elementary teachers in her past formation and developing sense of capability.

The small school environment allows for closer relationships between students and teachers. In addition, the recent renovation creates a clean and pleasant environment and the update in technology makes the student feel that her school is on par with others in the region. Small classes allow for more attention from teachers and for teachers to know students and their abilities better. These all contribute to the sense of efficacy of the gifted female. At the same time, she feels that the small school environment may be detrimental to her success in a large college environment. Thus, she is considering attending a smaller college. "It will be so different because we have no different racial groups or anything . . . I think it'll be hard when we go to college to adjust." She perceives the need for different learning experiences and perspectives. "It's definitely sheltering. Almost like a mother hen protective kind of thing. Like they don't want us to realize there is an outside world because they only teach one way."

Other negative influences on her efficacy include what she perceives to be resentment on the part of some teachers and other students of her inclusion in the enrichment program, GAT. This is especially disturbing when she sees so much attention and praise given to athletics. She also finds it detrimental to her goals and motivation to have teachers who seem unfair, or who adjust their demands and expectations to be less challenging. "I was like the only person, like me and maybe one other person, that always had our homework done. Everyone else in class never did their homework. And he'd just like, well we'd go in, and he'd go like, 'Oh, OK. Well no one has it done? Well then it'll be due at the end of the week. What good, why did I bother doing all the homework for?"

To conclude, in the gifted female in the public school one observes a friendly, confident and capable young woman who looks forward to continued growth, as a student, as a member of a close and supportive school community, and as a future professional.

Individual Reflective Assessment

Seven of the eight students were present for the second focus group and completed Individual Reflective Assessment forms (see Appendix H). The eighth student was absent from school the day of the interview and failed to return a form by mail. A limitation to this part of the study was the small amount of written response, as well as the amount of time that passed (four months) between the first and second focus group interviews. This section details how students responded individually to the ideas expressed in the narrative synthesis of the first focus group.

In response to the first question, *To what extent does the narrative reflect the ideas shared in the Focus Group (and the on-site observation, if applicable)?*, one student replied *Exactly*, five students circled *Much*, and one student chose *Average*. This last student was Jackie, the least expressive in the focus group interview. The student who answered *Exactly*, was Brenda, one of the more talkative students in the interview, although the narrative is a balanced reflection of the views of all the students, based on their contributions during the interview. There were no written comments.

In response to the question, *To what extent does the narrative reflect your perceptions as a female student at the public school?*, one student responded *Average*, four students circled *Much*, and two selected *Exactly*. There were no written comments with this question. Darcie, the student who chose *Average*, wrote on the back of her form the following note:

> "Everything seems to look fine. I would just like to comment that even though going to this school is sometimes tough because I'm really not like all these people, I believe this school is mainly a non- "Christian" school, and me being a person who loves my religion, this school provides a major challenge. But I wouldn't change it, I enjoy going to _____."

Darcie had also commented earlier that she could not accept some of the concepts that were taught in science classes, because they conflicted with her religious beliefs. Christian – in her definition – was fundamentalist Christian belief. The more open nature of the led her to feel isolated from many teachers and peers.

The third question was, *Are there specific ideas or perceptions that you feel are not represented in the narrative?* One student (Gwen) wrote, "No. I can't really remember too many other specifics. You definitely got the general ideas." Gail noted, "Most ideas are in there." Darcie wrote that there was nothing regarding extracurricular activities and Brenda felt that information regarding male peers and coaches was missing. The students during the second focus group interview touched upon these areas.

Question four, *Do you feel the narrative reflects the dynamic of the focus group (and on-site observation, if applicable) as you remember it?*, elicited the following responses. Six students believed that it reflected the dynamic *Much*, and one selected *Exactly*. There were no written comments.

Finally, in response to the question, *Are there specific ideas or perceptions reflected in the dynamic of the focus group that you feel are not represented in the narrative?*, Gwen wrote, "No. I think the emphasis is placed pretty well. All the strongest points are written about." Darcie felt, "I think a little more could be on the attitude that other students may have against us." And in the space for other comments, three students added comments. Jackie wrote, "I'm not concerned with only school. I may do well in school but I also strive for excellence in the athletic field also." Cheryl and Gwen spoke regarding their feelings that the narrative was accurate. Cheryl wrote, " The assessment was a good summary of what we feel. It is very close to how I remembered our discussion."

In conclusion, the students' reflective assessments confirmed the findings and the synthesis as detailed in the narrative. In addition, there were some topics suggested for discussion in the second focus group interview.

Second Focus Group

In the second focus group interview students confirmed the findings of the narrative synthesis and provided new information about efficacy as well. Their ideas and feelings can best be explicated using the subthemes of *Most Capable Self, Positive Efficacy Factors and Negative Efficacy Factors.* Within each of these subthemes one finds a preponderance of conventional thinking about education. Not having seen any model other than the sequential, subject matter dominant, heterogeneous one that they have been a part of for all their academic lives, their thinking reflects that model. The students only started to leave the traditional pattern (i.e., subject matter, teacher effectiveness and fairness) when they spoke of their most capable self.

Toward the end of the focus group interview students had still not fully alluded to the archetypal subject matter perspective regarding their education and feelings of efficacy. In order to assist them to focus on their personal feelings of efficacy, I asked the following question. "Let's go around one at a time. How do you perceive your most capable self?" This question elicited certain information that had not yet appeared. For example, Gwen said that she felt she was capable of working hard and listening well. Beth, who arrived late to the interview and seemed very stressed that day, was still in the subject matter mode and stated,

> "I feel more capable when I have everything done and I know what I'm doing and everything's organized and I can find everything and a place for it. Most of the time I do not feel that way. Like today, I'm like doing Physics during Calculus, and then I

> have to make up Gym after school, cuz I missed a class, cuz I had to do something else. (*Gail: "Physics, probably." . . . laughter*). And then I was doing Calculus during French class and Physics during Lunch. Then English. I still have to do my Math homework, cuz, I didn't get that done. And I'm just confused. I just give up. I said before I got here I was just going to quit."

The need for autonomous learning was an important concept that was suggested by the responses of four students. For instance, Cheryl said, "When I like, in Chemistry, when I know how to do something and I actually sit there and do it, that's when I feel capable." And Gail spoke of being a practicing professional, working on her family farm or at the local veterinary clinic, "You know, if I know what I'm doing then I feel very capable because I know I did it right." Jackie spoke of feeling most capable on the athletic field, as a runner. Then Brenda commented,

> "I feel most capable when I can understand and I can do it on my own and I don't need anybody else to help me. I mean, I can take advice, but I don't want them giving me the answer. And probably most capable when I feel sensible and I feel strong enough that I can do it on my own and I don't need these people. Because like, I don't know, I think it's hard to explain but. . . (*"It's a self-belief?*) Yeah! It's when people say something even if it's something little like, 'Oh, you're going to do it that way?' It takes you down from a level of a hundred percent feeling great, like you know, even fifty, it takes you down more than that."

One of the first strengths that all of the students mentioned during the first several minutes of the first focus group session was their ability to do mathematical problem solving. They talked of enjoying working on math problems for extended periods of time. For example, Gail said, "Algebra was a lot of fun. You'd sit down with this great, big, huge, Algebra problem and then you'd solve it and you'd have one little answer, knowing that you did it yourself. Whoopee!!! And it's pretty!" The other students concurred, and this enthusiastic response led me to question why, in contrast with much of the literature regarding

gifted females, they were expressing such strong self-efficacy in mathematics. It wasn't until I had an opportunity to observe the students in a math class that the answer became clearer.

It was within the classroom that I observed the instructional strategies and classroom management of one teacher that elicited praise from all the gifted females that participated in the study. After shadowing Bridget in her Math 11 class, I commented on how she and the others in the group seemed to participate actively, smile, and demonstrate mastery of the material. She nodded, grinned, and said with enthusiasm, "It's my favorite class!"

Teacher effectiveness is a topic that emerged several times over the course of the two interviews. Students spoke of effective teachers as being caring, as being interested in them beyond the classroom. In both focus groups a teacher was mentioned who clips newspaper articles and other items that appear depicting the students' activities and puts them up on her bulletin board. Also, it made students feel worthwhile when teachers made a point of attending their athletic, musical and dramatic performances.

In the course of the observation of a mathematics class, Ms. V_____ included in her instruction many elements of effective teaching. For instance, she posted and announced the objectives of the lesson, had an anticipatory set that linked past knowledge with the new material to be deliberated in the lesson, introduced and efficiently explained the material, provided for guided practice, paused and gave the students an opportunity to question and respond, and gave the students assignments that allowed them to apply their new learning. In short, it was a model lesson.

In addition to the effective strategies outlined above, there were elements in the lesson and in the teacher's presentation that were particularly well received by the female students in the study. There was much care-giving on the part of the teacher. Students were seated in

pairs and began the class reviewing their homework assignments together. Mrs. V___ went from pair to pair, checking their work and offering comments and praise. Beginning the lesson, she said, "Today *we're* going to learn how to use a new button on *our* calculators." I emphasize the first person plural because this is the voice she used many times in the course of the lesson. She merged her role of teacher with the role of co-participant in the learning process.

During the instructional part of the lesson, she seated herself on a stool next to the overhead projector facing the students and proceeded to work on the problem along with the students. As they worked with their notebooks and calculators, she asked them questions, guiding them through the problem and writing along with them on the projector. Her language was liberally sprinkled with "we," "our," and other inclusive words and phrases. The class, in short, was a *collaborative* one. Along with this, she continued to speak in a caring, concerned manner with all. When Cheryl missed an answer, she responded, "Don't feel bad, you just didn't go far enough." It was a challenging class, yet students demonstrated no anxiety or frustration. At the end of the period she looked back to the objectives posted on the blackboard and said, "It looks like *we'll* stay with the second of these objectives another day or two." And as students left the class, she answered any questions that students had for her, and shared a few words with others.

In the second focus group interview, I asked the students how being in classes taught by that teacher made them feel capable. Gail responded,

> "She's a really good teacher, because you have things you do on a certain time. But you know if something happens, you know, like extra circumstances, she's understanding. She listens to the students, you know, if you have a problem, she understands it."

And later,

> "In Calculus sometimes we'll do a problem and she does about five steps in her head doing the Algebra. And she writes it down on paper. She'll say, 'OK. I'm doing two steps at the same time.' And then she'll stop and she'll say, 'Did anybody not understand that? I'll go and write it out if somebody didn't catch that.' And if just one person in the class has a problem with it and doesn't understand she goes back and writes it out and does it and explains it until that person says, 'OK. I get it now.' And then she goes on."

In the course of my one day of observation, there was only one other class—Chemistry – in which I was able to see a challenging learning environment taught by a young, competent educator, although the pedagogy was mainly the lecture/discussion style rather than the more interactive one that I observed in the math class. Some students spoke to the organization and capability of that teacher as well. On the other hand Bridget, whom I was shadowing, mentioned she wished he exercised a little more control because the extraneous conversations among the students distracted her. Again, a limitation of the study is the short time allowed for observation.

In addition to working collaboratively, students spoke of other ways that they found relational learning to be a positive factor in their environment. Gwen offered, "I think another factor . . . I think it helps to have a small, kind of close knit group of kids, because they look out for each other and help each other." Another facet of relational learning is the relationship the student perceives with the material. Chaucer was,

> "really hard to know what he's talking about. Like we're reading *A Tale of Two Cities* now. And that's a lot easier to understand because like the French Revolution is something I *know* a little about. Then the story is really interesting because I know what they're talking about."

There were mixed feelings as to the importance of the gifted and talented program as a factor influencing the students' perceptions of efficacy. Some students regarded the

enrichment classes as, "a reward for getting good grades," and felt that they didn't learn much doing the word puzzles or other thinking activities and viewing the cultural videos. Others felt that they always learned something new, and that the enrichment teacher always took time to explain new information. It was clear that the students lacked the metacognitive awareness (i.e., self-regulatory ability to think about and analyze their own thinking) that would facilitate their understanding of what it means to be gifted. They were not cognizant of how the enrichment activities might help their cognitive development. Perhaps because it was perceived as only a minor part of the overall environment, the GAT program did not significantly influence the females' perceptions of efficacy.

Three new factors emerged from the second focus group that students regarded as negatively influencing their self-perceptions of efficacy: lack of motivation on the part of some students, poor teaching and low expectations on the part of some teachers, and sexist behavior of some gifted males toward gifted females.

Regarding low motivation on the part of many students, Beth remarked,

> "Well, the teacher's a big part of it. But I think just the way the classrooms are and how the students act, are really important too. Because if you have a class with maybe three people that care what's going on and then the rest of them don't care what's going on, it kind of makes it harder because the teachers are frustrated."

The students were more concerned about the lack of motivation on the part of some students than they were the learning difficulties of others. As Gail explained,

> "The people who have trouble learning, they pay attention and they really try, most of them really care. And so that doesn't really pull you down because they're coming in for extra credit, and they're asking the people who do know what they're doing for help and. . . I don't think they should have really strict guidelines, separated into sections, but I think there should be a little bit more than there is now."

The students also suggested that different grouping would benefit their learning.

Another facet of the problem of lack of academic motivation is the subsequent lowering of standards. Students feel themselves the victims of poor teaching and lax standards. I asked, "So, it doesn't feel very good to do your work and do it so well, then everyone else isn't held to the same standard that you set for yourself?" And Gail responded,

> "Definitely. Like Anatomy. We were told at the beginning of the year, you know. 'If you're going to take this course, it's going to be a really hard course.' And basically, we do our labs and we'll do them in class and he says, 'OK. I want you to write a conclusion and then hand them in.' And I think I've maybe handed in four labs this year. I've got at least six sitting in my notebook that aren't finished because he never gives us a due date for them, he never checks to see if we have them done, he doesn't keep a book of marks."

All of the students had similar stories. Consequently, the less challenging classes, ones that students should feel more capable in, are precisely the ones in which they feel *less* efficacy because they don't feel themselves prepared for the state exams or college level classes in the same subject matter.

The final area which students perceive as a negative efficacy factor that had not appeared in the first focus group and the narrative, is the unequal treatment of gifted females by gifted males. As Brenda explained, "They make you feel like you don't know anything and *you* know if you do." Most often, male gifted students chose to work with other males, regardless of ability, rather than to work in groups with gifted females. One of the other girls said that she felt that, with a higher number of gifted females in the junior class, they were getting, "more respect." But Brenda replied,

> "I realize that there are more girls but sometimes I just feel intimidated. Because a guy would rather work with another guy even if he's not [smart] than being with another female. That bothers me. Or they think that they have all the answers."

Others added that in Physical Education classes and athletics, the girls are not allowed to participate in some activities that they feel perfectly capable of performing. In agreement, Brenda said,

> "I think a coach that supports you for what you're trying to do, but they don't put you down. They try to help you, but not so much that you feel that it's fake help. Like, 'Oh yeah, you did a good job.' And then you feel, 'Well, I didn't really so why are you telling me that.' It's like, 'You're just putting me on.' But someone who, you know, [Gwen: "Really makes a difference."] Yeah. They mean what they say but they're not too harsh about it. And it's not too hard to pick up clues that they think that you're good, like someone who's being sarcastic about it or someone that really says nothing at all."

Enrichment Coordinator Interview

The Enrichment Coordinator at the Public School felt that the narrative very much reflected his experience with and understanding of the gifted female in the public school. He indicated that he also felt that the extracurricular dimension of the students was an important aspect of their efficacy. As he said, "While perhaps not a part of your discussion, several of the gifted girls are also athletes, actors, and musicians."

He agreed that the students' perceptions of efficacy were based on subject matter efficacy, and that this fact limited their ability to develop a stronger sense of self-belief. He added that this lack of self-belief and the self-doubt expressed by the students about being able to cope with a larger, more diverse academic environment, led students to choose less-demanding colleges. In fact, the two girls who were seniors at the time of the interviews are presently studying at a two-year community college and hope to transfer to a four-year school later. One of the two is living at home. The coordinator suggested that many of the bright

students from the school that start out at a two-year college fail to achieve their academic or career goals.

Mr. G. spoke of a *perceived caste* system at the school which was an important factor influencing self-perceptions of efficacy. Jackie – who showed the weakest belief in her academic abilities (although she believed herself a very capable athlete), was, in the words of her gifted enrichment teacher, "faster than the wind, pliable, beautiful, smart, as intelligent as any in the group." Because she was the child of a single mother who had no higher education and no career status in the community, she was perceived by some of the other girls as not deserving of gifted status. The enrichment coordinator offered that both the perceived caste system and the small school environment serve as severe limitations on the achievement of the female enrichment students.

Conclusion

One will notice that the public school students, even though they were very willing to participate and to help the study, did not provide the quality of data that will be seen in the subsequent chapters dealing with the private school and the bridging year academy. As a researcher, I felt at times that the participants were merely intent on giving superficial information and made no attempt to organize their ideas or combine them with the ideas of others. Nor did they attempt to probe their own thinking for more profound concepts. After a topic or idea was mentioned, the students would then pile example upon example in a game of "one upmanship." Few attempts were made to branch out, to make connections, or to show a depth of thinking regarding their self-knowledge and educational process. Despite participation in the gifted enrichment pull-out program, students had not reached a level of thinking that allowed for elaboration and fluency of thinking.

Perceptions

One can conclude, however, that the gifted female young women in the public school perceived themselves as capable problem-solvers and capable students in specific subjects. Their self-perceptions of efficacy were strongest in the area of mathematics, and they specifically talk of the satisfaction they feel as autonomous learners when they solve a complex problem correctly by themselves. They also felt capable in sciences which are applied and to which they can relate, such as Biology and Anatomy. The students feel less capable in less-challenging classes, taught by less effective teachers in which the behaviors of less capable and less motivated students dominate the agenda.

The students also felt themselves capable as athletes and musicians. In fact, their prime sources of efficacy are the recognition they received as a result of their extracurricular activities. Finally, the students perceived themselves as able to compete academically for recognition from the school and community. Although they found that the gifted males in their classes did not acknowledge their abilities and giftedness, they continued to believe themselves to be capable competitors.

Behaviors

Behaviorally, the gifted females in the public school environment compete for academic recognition that comes in various forms – Honor Roll, National Honor Society, Valedictorian and Salutatorian. In class, they compete for recognition through grades and attention from teachers. They feel less capable in less challenging, heterogeneously grouped classes and demonstrate their lack of confidence by failing to take risks in those academic areas. They demonstrate their most capable behavior in collaborative and relational learning

environments, such as their Math class. At the same time, students are collaborators themselves outside of class, as they engage in peer-tutoring and team activities.

Environment

Recognition of her ability and achievement is one of the primary environmental factors that affect the perceptions of efficacy of this learner. Another positive factor was effective teaching in a challenging environment. The gifted females responded with efficacy beliefs in mathematics that they reported were a direct result of the classroom environment created by the teacher. Some were also advanced in social studies and had influenced their environment to the extent that an accelerated option in that subject was created to respond to their strengths.

Students felt more capable and worthy when the teacher showed an interest in them beyond the classroom and they believed that the small school environment facilitated those types of relationships. Improvements in access to technology at the school were also perceived as positively influencing their efficacy beliefs. Before the recent improvements, students believed themselves to be less prepared for entering the larger, technological society.

Environmental factors, which the gifted females found to be negatively affecting their self-beliefs of capability, included ineffective and inequitable practices on the part of some of their teachers. They also perceived resentment on the part of teachers and other students regarding their inclusion in the gifted program to be detrimental to their beliefs in their own abilities.

The present chapter examined the perceptions of efficacy of the gifted young woman in the public school environment. The following chapters will examine the self-beliefs of female students in the bridging year academy and the private school.

CHAPTER FIVE

THE BRIDGING YEAR ACADEMY

Introduction

One of the options available to the gifted female who finds her educational needs are not being satisfied in the public school environment is early enrollment in college. This option can take many forms. The student may live near a college and study part-time in the higher education environment and part-time in her high school concurrently. Or the student may be permitted to attend a community college as a special student. The student may accelerate her elementary, middle or high school education a year or more and enter the university early. This acceleration may be as a member of a special early entrance program or as an individual student. Or the student may have the opportunity to study in a bridging year environment, on the college campus, where her high school graduation requirements are completed at the same time that she is studying college level classes. Other forms of acceleration and enrichment for secondary gifted students who are searching for more challenging options are outlined by Brody and Stanley (1991), and include advanced placement courses, summer programs, correspondence courses or independent study, academic fairs or competitions, mentorships or internships, and study abroad.

Cornell, Callahan, Bassin and Ramsey (1991) referred to the Richardson Study that reported that "approximately 28% of responding school districts permit students to graduate one or two years earlier than usual, and approximately 11% (an overlapping group) permit students to graduate even sooner" (p. 85). The authors also cite a 1984 survey of 302 college institutions by Fluitt and Strickland that "found that 87% admit students prior to the usual age

of high school graduation" (p. 85). The literature strongly demonstrates that early entrants are academically successful in a number of ways. Their grades are higher than regular first year college students, they are more likely to complete college, to earn honors, to plan to enter graduate school, and to pursue and obtain concurrent Masters' degrees (Olszewksi-Kubilius, 1995).

Of concern to parents and educators is the fact that very few institutions perform assessments to determine what may be the potential success of the prospective early entrant and only about half of the colleges provide special services in the way of counselors or advisors. This is so despite other studies (e.g., Cornell, Callahan, & Lloyd, 1991) that report difficulties in adjustment, depression and suicidal behaviors as well as stress-related college withdrawals among a significant number of early entrants.

Characteristics of potential accelerants include their abstract and advanced cognitive abilities and performance, their need for academic stimulation to combat boredom and impatience, and their interest and motivation to be accelerated (Van Tassel-Baska, 1991; Brody &Stanley, 1991). Southern and Jones (1991) include as rationale for acceleration increased learning efficiency and effectiveness for the gifted student, recognition of their level of accomplishment, increased time for careers and increased productivity, more opportunity for academic exploration, and the chance to study with like peers. They also address the negative consequences of non-acceleration of the high potential student of advanced achievement. Students who are not sufficiently challenged are at risk of feeling frustrated and bored, may have difficulty remaining motivated, may reject stimulating and challenging career options, and may be in jeopardy of dropping out.

Because the bridging year offers a special link between high school and university, it is a unique learning environment in which some gifted females study. Along with public school and private school, it is one of the more common learning environments for gifted young women in the U.S. Each year a significant number of gifted students opt for this choice to fulfill their unique educational requirements. For that reason our understanding of gifted young women will benefit from continued research regarding early entrance programs and how gifted females in this environment perceive themselves and their academy.

Description

Housed on the campus of a college of Science and Engineering in a small town in the northeast, and a special division of that university, The Bridging Year Academy is directed by a member of the counseling staff and has its offices adjacent to the Counseling Center. The offices are adjacent to the dormitories where the Academy's students live. Housed with live-in house advisors in a residence separate from the normally matriculated college students, the thrust of the program is to create a sense of family among staff and students. The student complement of the academy consists of young men and women who are usually seventeen or eighteen years of age and would be entering their last year of study in their public high school. There have been a few exceptions to these statistics in that a very few younger students (sixteen years) or students in their penultimate year of high school have been admitted if they show exceptional promise and have exhausted their study options in their home schools.

The Academy staff focuses its efforts on providing support to the students in all areas – academic, financial, psychosocial and otherwise. These support services are a major factor in the success of the program. As matriculated college first year students they are eligible for student aid according to state and federal guidelines. The majority of the students receive at

least some financial aid. With regard to psychosocial support, the student is always aware that she is expected to develop as an autonomous learner, but also knows that help is available when needed. As one student describes it,

> "I think if more people in society worked collectively like we have done in the School, we've built up our own little community, we've built up our own family, we've built up friendships that hopefully will last a lifetime. I mean this society will come so much further if they just look and probe into the School."

Students are selected for the academy based on demonstrated academic achievement, especially in the mathematics and science areas. Although a large contingent of the academy's students plan careers in these and related fields, others plan to study liberal arts or business. An Academy brochure states that it is "essential to offer a curriculum that emphasizes increased proficiency with relevant technical skills, effective communication of ideas in both the written and spoken word, and the building and refining of analytical reasoning powers."

The school recruits motivated students from throughout the world and provides them the opportunity to pursue classes with University students while at the same time feeling supported by a staff that monitors academic progress. Individual tutoring, group study sessions and study skills development are available for those in need. Upon completion of the bridging year, students then continue college as second year students.

The Gifted Female at the Bridging Year Academy

The following descriptions of the bridging year students who participated in the study provide a glimpse of the student, her place in the family constellation and her early recollections of her ability.

Christine is an attractive, quiet spoken young woman whose earliest recollection of being bright is of being placed in enrichment programs in elementary school. She is the only daughter in her family, with an older half brother and a younger brother.

Maureen is petite, vivacious and expressive. Her dark hair and bright eyes frame a warm smile that flashes often. She is five years older than her sister, her only sibling. Her earliest recollection of being bright? She responds, "I don't remember. My parents always said so and my teacher said it in daycare. Music was a big part." She is the daughter of the Academy's headmaster.

Jacqueline is a pretty, petite and feminine young woman. Her earliest memories of being aware of her abilities are having her artistic talent recognized at age three. She also recalls that she was placed in her school's gifted and talented program in first grade. She is the second daughter of two siblings in the family. Her sister is fifteen months older than she is.

Malinda is a slight, perky, African-American who remembers reading, counting and doing arithmetic problems before entering elementary school. She was in the gifted and talented programs in her previous schools. She is the oldest of four siblings that include a sister and two brothers. During the interview she shared the knowledge that, of six living generations, she is of only the second generation to read and write.

Saundra is a slender and gentle young woman who speaks softly and hesitantly, searching to paint her self-picture with verbal images and metaphors. Of early recollections she wrote, "My first language was Lithuanian and I played the violin from a young age and because of this people were often impressed. My first recollection, however, was when we had a spelling test in kindergarten by identifying pictures, and I wrote "stag" instead of "deer"

because the animal had antlers." She is the second of three female siblings and was a member of the gifted and talented program of her previous school.

Elyssa first became aware of her abilities in second grade, "When I did really well on standardized tests and I took a test to be placed into a gifted learning program." She has penetrating blue eyes, framed in glasses, dark curly hair, and appears self-conscious. She is the eldest child in a family of six children that includes a biological sister, a male stepbrother and two female and one male half siblings. When not at the bridging year academy, she lives with foster parents who are teachers.

Malena is an African-American young woman with elegant facial features and a personality that exudes sociability. She was able to read before entering school, was first aware of her abilities around age seven or eight, and was identified as gifted. She is the first child of three siblings. She has a sister who is eight years younger and a brother who is the youngest.

Maki grew up speaking Japanese and English. She remembers being aware of her brightness in pre-school in Japan, where she was sent to live with her grandparents for several months. "I was made to do things like crafts and such and the teacher made some compliments. The memory is foggy. I could read Japanese at four." She is the first of two female siblings and is four years older than her younger sister.

Sarah has long reddish blonde hair, expressive eyes and a healthy glow. She is friendly, relaxed, and a dedicated athlete. Her early recollections of being bright are, "Reading with my mom before I went to school. Mom teaching me the different types of rocks (igneous, etc.), or being in the advanced reading group in kindergarten. Taking a test in

first grade and being picked out by a teacher as being special." She was in the gifted program at her previous school and is the older sister of one brother.

Adler (1980) described the effects of perceived birth order as significantly influencing the environment in which the child is born, and as affecting the child's psychological perceptions and feelings of competition. It is significant to note that in this sample, six of the nine students are the eldest children in their family constellations. One of the others has an older half-brother, and is the oldest of her biological family constellation. The remaining two come from families with all female children.

The literature regarding birth order indicates that firstborns attain higher educational achievement and intellectual ability and achievement tends to decrease as family size increases (Nommay, 1988). Furthermore, firstborns tended to be given more responsibility with younger siblings (parent-surrogate role), benefited from the teaching effect and subsequently had higher intelligence scores (Cohen, 1985; Nommay, 1988). These students demonstrated the highest educational achievement for their age of any of the participants in the study. They were early entrance, matriculated college first year students and had completed a semester of rigorous, college-level courses. They also, as has been corroborated in other research, showed strong internal attributions of success and failure (Phillips & Phillips, 1994).

Other firstborn characteristics described in the literature and reported by the bridging year academy students include their achievement motivation, in part a result of parents' high standards for mature behavior imposed at earlier ages. Firstborns also exhibit a stronger need for achievement, closer emotional ties with parent and greater social dependence and commitment to adult values such as independence. Firstborn females in particular show a

greater need for achievement than later born females (Cohen, 1985). All of these characteristics and factors were apparent in the bridging year students.

While not the focal point of this study, these findings do shed light on aspects that may be influencing the young women's perception of efficacy and why they opted for this particular educational environment in which to act out those perceptions through their behavior. The students in this cohort, without exception, demonstrated self-perceptions and characteristics that are aligned with Adler's (1980) descriptions of firstborn females. These differences, when compared to the public school students, may account in part for the strong sense of personal agency and autonomy that was reflected in the interviews and observations.

Early recollections of the bridging year students also differed in tone and content from those of the public school students. The memories are earlier (i.e., daycare, three years old, kindergarten, early primary) and they were early readers and creators. Their early abilities demonstrated higher cognitive and creative integration than the predominant memorization abilities of the public school cohort. Indeed, the early recollections of the bridging year student suggested themes and patterns, such as the importance of early familial support and self-regulation of learning, which would be echoed throughout the data gathering.

Also significant is the fact that all of the students had been identified early on as gifted, some as early as kindergarten, first and second grades. This early awareness on their part, and on the part of parents and teachers, gave them an early sense of efficacy that continued to develop over time. Finally, there were no reports of handicaps or learning difficulties or frustrations from any of the participants. There were ethnic differences, as noted. Later portions of the present chapter address the significance of ethnicity.

First Focus Group

The following narrative represents the synthesis of the ideas expressed in the first focus group.

In what ways does the Bridging Year Academy gifted female consider herself efficacious?

The gifted female student in the Bridging Year Academy (BYA) has a global sense of efficacy that touches all areas of her life, both in the field of academic skills and in the social arena. Her self-belief in her own capability is such that she feels that, with hard work, she can accomplish anything "that I set my heart into doing." In many ways she feels that she has not yet challenged herself to her limit. This belief in self is manifested in her behavior in the university classroom, where she not only volunteers often, but also is often the focus of higher level thinking questions by her professors.

This young woman sees herself as very efficacious in the area of social skills; and this is an area she prefers to emphasize, rather than just academics. Some of the tasks mentioned are connecting, nurturing, communicating, and everyday interaction. She feels that her best creative problem solving is done with her keen social abilities, in working and communicating with other people, whether in the public forum or among her family and peers. "I think that is important in feeling that you can communicate with people, touch other people, and basically relate to them." She has also been recognized for, and been able to practice, effective leadership.

Specific areas of academic efficacy may be in the fine and performing arts, sports, math, sciences and creative writing. When asked about cognitive skills, she responds that she prefers thinking tasks that involve her in a process – such as hands-on science labs and problem solving in engineering – as opposed to strict memorization. "I have to have more experience in sitting down and actually working with something before I can get the whole gist of what I'm supposed to be learning." On the other hand, she sees the need of some memorization of material before she attempts the hands

on research. This young woman also feels she is able to think with originality, flexibility and fluency, yet states that sometimes this puts her at risk of not being understood by others.

The importance of practical experiences is manifested in her preference for such cognitive activities as research skills, product development, self-direction, independent inquiry, and practicing as a professional. She speaks clearly to her self-belief in her abilities in these areas. "It puts it right there in front of you and you can grab hold of it, and it will always be there for you. And you always come back to that experience and say, 'OK, I know how to do this now. NO problem!'" She has had opportunities to practice as a professional in such arenas as enrichment camps, in other countries, in hospitals, and with summer jobs or volunteer experiences.

Risk taking plays a major role in her personal sense of self-efficacy, and the BYA gifted female takes risks in many ways. She takes the risk of breaking away from both threatening and secure home environments in an effort to individuate, to do what she needs to do in order to achieve her goals. Through taking the risk and through the process of separation, she comes to experience the exhilaration implicit in the discovery of self-agency; that is, self as capable of acting on, and affecting one's individual environment. Resource management for her takes on a very personal definition. She is aware of the need to manage, her multifaceted abilities, her energy and time, and works actively toward achieving a balance in these aspects of her life. She shows strengths in organization of materials and schedules, note taking, and study skills. She doesn't consider these as "have to" tasks, rather they come out of her intrinsic motivation to achieve to the best of her ability.

Another way that she takes risks is by setting her own high standards of achievement. This is accomplished through self-knowledge and through self-articulation of her own goals; although at times she has felt pressured by the goals that parents, teachers, or society in general have attempted to impress on her. Once again, her strong sense of self gives her this introspection and frees her from the need to constantly compare herself to others. "I just have this feeling within me that I really don't need to prove myself to anyone. So a lot of times, even if I'm capable of something, I won't show that

in achievement; I'll just feel capable of it." Or, when she does achieve, she feels no need to vaunt her accomplishments, rather the personal satisfaction of the achievement is enough reward.

These accomplishments increase her confidence, which in turn increase her goals and achievement. She has high career expectations – i.e., Medicine, International Relations, Architecture, Writing, Engineering, and more – and shows the perceptions of efficacy to meet those expectations. As with other facets of her life, she feels the freedom in this environment to search out and set her own short-term and long-term goals, without the unneeded pressure of family expectations and demands. The reality of having the world open to her and having so many gifts at times may cause her to ponder on which abilities she should focus. "Because there's so many things that I do like to do, and that I want to do, and that I see the possibility of being able to do." Nonetheless she is determined not to lose sight of her dreams and her idealism in spite of continuing to immerse herself in the process of crystallizing her abilities, her goals and her achievements into a model of self-efficacy. "If I can get a skill, then I'll practice it; and if I can perform that, then I mean my self-esteem is higher and I'll try more things."

As a bright young woman, the gifted female at the BYA has observed the social stereotypes at work that tend to marginalize smart girls. She celebrates being female and intelligent, and is not threatened by society's misunderstanding of her reality. "As far as emotions go, I don't see that they should be looked upon as a weakness at all. Emotions are what make us – instead of being only the scientist or only the technician – they're what make us human beings. And they're what make us relate to each other. And they a lot of times make us feel the greatest sense of self-efficacy when we relate to other people and when we help other people. Through the whole discussion, that's been something that we've all been talking about. That we felt good about ourselves when we felt love and when we felt other people loved us also."

What factors in the learning environment affect her perceptions of efficacy?

An important factor in the present learning environment that positively influences the female gifted student's perception of self-efficacy is the independence of being away from home, which allows for self-directed learning. "This is a big adjustment from high school to college. But when you were raised to raise other people, where there was pressure from everywhere, where you weren't getting the attention that you needed but always had to take care of things, it's definitely a lot harder. . .So like once I got here it was like, "Wow? This is [my] world!"

Being on her own also helps her to develop more responsibility for her own learning and achievement, a responsibility that she accepts willingly. "Because it's up to me. And if I don't do something, then that's a lost opportunity." Nevertheless, the school is challenging and at times the student may feel intimidated by the large number of capable and intelligent students, the difficulty of the work, or the fact that it is primarily directed toward science and engineering. Yet, "I think that something that helps all women and all people is just to be talked to as if you are an intelligent being." And being able to develop a relationship with a professor, based on her intellectual abilities, is reinforcing of her abilities.

Studying among competent peers is definitely a positive factor that helps this student to develop her stronger sense of efficacy. "I think just being surrounded by so many people who are intelligent. I guess it makes me feel more intelligent; and I can work harder, and I can do better." The challenge in the environment fills a need that was missing in the high school environment, where there were few bright students.

Besides studying in an environment that provides more opportunities and is more fun than high school, the BYA "family" plays a major role in the student's feeling of self-efficacy. Both peers and adults form a vital network that supports her academically and psychosocially. Behaviorally, the BYA student communicates effectively in her classes with professors, other students and her BYA peers.

Because she feels supported in the BYA environment, the sense of well-being and self-confidence carries over into the university setting as a whole, and also into the town where the college is located. "I mean we can be walking down Main Street or something and people will speak to you and I enjoy that and I appreciate that. . . It's another one of those positive reinforcement things. I think if more people in society worked collectively like we have done in the BYA – we've built up our own little community, we've built up our own family, we've built up friendships that hopefully will last a lifetime – I mean this society will come so much further if they just look and probe into the BYA."

Individual Reflective Assessment

Prior to the second focus group interview seven of the original nine students filled out the Reflective Assessment forms (Appendix H). One of the students (Sarah) was participating in a Lacrosse game and I was able to reach her by phone later and fill in the assessment during our phone conversation. Another of the students (Elyssa) had dropped out of the program and did not return after the spring vacation. Other students indicated that she was having personal problems unrelated to the BYA, and in my subsequent interview with the headmaster, he confirmed this and said that she had been considering leaving the BYA for some time. Since it was not within the scope of the research to inquire further, and since I noted that the headmaster – a counselor – did not indicate his ability to speak further about this, this was all the information I was able to gather regarding this student.

On the Reflective Assessment Form, in response to the first question, *To what extent does the narrative reflect the ideas shared in the Focus Group (and the on-campus observation, if applicable)?*, three of the girls circle *Exactly*, four indicated *Much*, and one indicated *Average*.

This last assessment, completed by the Asian-American student, differed greatly from the others in all the responses. Because of the responses and comments, I phoned her later to speak individually with her regarding her views. I also discussed her idiosyncratic responses with the headmaster during a later interview. Her specific cultural identity gives her a unique voice that will be considered later in the chapter.

In response to the questions, *To what extent does the narrative reflect your perceptions as a female student in the BYA?,* students responded *Much* (n. = 4), *Average* (n. = 3) and *Little* (n. = 1). Again, Maki was the one who felt that it reflected her perceptions little.

All but one of the students added comments in response to question three, *Are there specific ideas or perceptions that you feel are not represented in the narrative*? Those comments are as follows:

> Malena: "Unfortunately, I think that being a black female and being told that I won't make it far was the main motivating factor for me. But now I'm more secure in who I am, who I was and who I would like to be."
>
> Jacqueline: "One idea that is an issue for me is the amount of adversity an intelligent and creative woman faces at _____ University. Often I encounter much sexism and underappreciation of the Arts, which are extremely important to me. However, overcoming these factors and overcoming the specific environment at [the University] have strengthened my belief in my self-efficacy."
>
> Maureen: "I feel that the statement about no bright students in high school is false. I don't know how many of us feel that way."
>
> Sarah: "Yes. Fear of failure is the fuel of achievement. If you weren't afraid to fail, you probably wouldn't be motivated to work."
>
> Malinda: "The narrative should focus a little more on how we felt about our emotions and social backgrounds. I would like anyone who reads this narrative to know that, no matter what the odds are against you, you can be this intelligent young adult."
>
> Saundra: "I'm not sure it is possible to write on *The* Gifted Female. I felt that in the discussion we all had varying feelings and perspectives, that we each approach life in

> the best way we know how, but that our ways are INDEED distinct. Personally, I believe that creating a "cumulative" version of any study involving individuals somehow detracts from what the diversity has to offer. Include personal stories, rather than simple quotes?"
>
> Maki: "I don't belong. I'm not like most of them."

In response to the question, "*Do you feel the narrative reflects the dynamic of the focus group (and on-campus observation, if applicable) as you remember it*?" the responses were *Exactly* (n. = 1), *Much* (n. = 5), and *Average* (n. = 2). Maki responded *Much* to this question. The last question – *Are there specific ideas or perceptions reflected in the dynamic of the focus group that you feel are not represented in the narrative*? – elicited three responses. Saundra wrote that,

> "Everyone – even "gifted" women, men, children, etc. – encounters times and situations when they do need support or need to feel they are valuable. We all sometimes get down on ourselves despite general positive outlooks, and sometimes need mentors or people who care for us to guide us despite our inclinations of independence. We did speak some about difficulties we have had, and these along with whatever or whoever helped us overcome the obstacles may be interesting to include."

In that same vein, Malena wrote, "The fact that we sometimes become discouraged and too critical of ourselves. It's also hard to find that balance between academics and fun." Additionally, Maureen wrote, "Some areas were not as clear, which became absolute in the narrative." She spoke more directly to this in the second focus group and her ideas are reflected in that section of the chapter.

Finally, in the space for *Other Comments,* Jacqueline felt that, "The narrative was a very accurate assessment of the dialogue shared in the Focus Group. I can even remember the quotes used, and those quotes were ones that stuck out in my mind." Likewise, Christine

added, "The ideas in the narrative seemed to match fairly closely with what was said in the group."

Second Focus Group

In addition to confirming most concepts in the first focus groups (and modifying some), the students contributed much more information to further elucidate their perceptions and behaviors. The analysis of the second focus group transcription revealed a strong link between the constructs of self-belief, self-agency, social efficacy and the influences of these on the students' academic self-efficacy. To probe for the sources of self-belief, I asked, "Do you have early recollections of your belief in yourself?" Maureen replied,

> "Ever since I remember, I've been pretty confident about everything. . . I was always the first one to volunteer to do projects and stuff. . . It would be like, 'I'm going to take ballet.' And nobody in my family was into music or the arts, but I was like, 'I'm going to take ballet.' And so I did things like that all the time. My parents just got used to it."

Malena and Malinda communicated their need to go beyond the standards that had been set for them by others – teachers, parents, and society. Saundra spoke of her parents' encouragement and involvement in her learning, "And that, in general, just allowed me to feel like, I don't know, like the whole world is a kind of learning experience." Maki told of the influence of her grandparents, whom she spent several months with in Japan where she attended kindergarten. "I always did things on my own, because they leave you alone. So they put a lot of trust in me."

Another student who spoke of her feeling of autonomy as influencing her self-belief was Jacqueline. She spoke of how drawing, and the process itself, made her feel capable, happy and "completely satisfied." But she also realized that this was a process and a satisfaction that she couldn't share with anyone. "And so I guess it was that feeling that was

the first thing that I realized was my own. And I think that feeling led to a sense of self-belief."

This sense of self-belief and autonomy has given the students a feeling of self-agency that allows them to take risks and to act upon their environment. As Malinda said, "I just think a lot of it comes from, I guess, within myself. Just saying, 'OK. I have to do this.' And a lot of it is like Maureen said, risk-taking and just wanting to do something." The self-assurance that the students reported was portrayed in their behavior. During close observation, students were seen volunteering answers and participating actively in class discussions. They were organized, prepared and confident. Outside of class they are involved in athletic and other activities and communicated freely with students from the general college population.

Social efficacy was a theme that was very important to these girls. Maureen shared the following,

> "For me coming to the BYA wasn't, it wasn't really an academic, I mean it was an academic move, I did want more of a challenge, and I wanted to be challenged. But I would actually say it was more of a social move; just because I'd always kind of wanted to know, like, what would happen when I was out in the real world all of a sudden, and I wasn't with kids I'd grown up with my whole life, and I wasn't in the community. . . A lot of times I put a lot of my self-esteem into the relationships that I have with other people. Like if I can build a relationship where I feel like they can trust me and where I feel I can trust the person, then I generally feel a lot better about myself."

In this same vein, Saundra added, "Living with them [BYA students] in general, kind of brings the focus into who you are inside and outside the classroom, and I think that's a lot broader than just what you're learning in Biology or Calculus."

There was an awareness of the academic efficacy of BYA students on the part of the university faculty. During my observations I noted that professors called on the BYA

students much more often than the regular university students. The study participants concurred that it is common that professors are aware of their abilities and expect them to be high achievers. In addition, it is quite often the BYA student who volunteers answers more freely in class. As Saundra commented,

> "In general BYA students tend to be interested or intrinsically motivated or something more than if you just took out a group of regular students who are here from the University. Just because, I guess, we did make the decision to come to University rather than spend our senior year in high school."

The young women in the group felt that the type of academic competition found in the public school was not effective in influencing their belief in their capabilities. Saundra explained,

> "There was a lot of pressure of what people were good at, and what rank they were in the class. And it wasn't really who they were necessarily, but what they did, or what number they were kind of thing. And it really upset me because it was first, that you have to prove something in some way before you are anything."

Likewise, grouping in the public high school was an issue for the young women. The feeling was that, even with many bright students in her school, one or two weak students in a class pulled down the achievement and the instruction of the class. "Because in my high school, they pretty much taught to the lowest student's level in the class." In contrast, being with like peers is a very positive influence. "I think that this year, being with a bunch of intelligent people, I realize that everybody is intelligent in their own way." And, "I think that when people chose to come here, they kind of felt like other people who would choose to come here might have similar interests or feel similar things were important."

The students spoke to their feelings of efficacy insofar as risk-taking and leadership are concerned. "It makes sense to me that you don't feel, at least I don't feel any self-efficacy

if I haven't been successful at something, but in order to be successful, I would have to take a risk and I would have to take on leadership roles."

Students opted to attend the BYA because they felt they had exhausted their options at their public high school and at one time or another in the two focus group interviews all of the participants expressed the need to get away from either troublesome home or difficult school situations. I asked them, "Is there a relationship between your decision to come to the BYA and your strong belief in your abilities, as well as your ability to socialize and communicate?" A sample of the answers demonstrates the need the students felt to search for an environment that could better meet their educational and psychosocial needs.

> Malinda: "The work environment at school was not what I wanted it to be and I needed to be away from that."

> Christine: "When I sent in my application, I knew I was coming here. I don't know how I knew, but I just knew. And part of it for me was that I needed to get out of the situation I was in. And there really weren't any classes left, I only had one required class to graduate from high school. So, I needed to get on with that."

> Jacqueline: "For me I guess my perception of self-efficacy made the BYA a solution. . . Because of my perception of my abilities, I knew that I would be able to take on a challenge, whatever it would be."

Finally, I asked the students what part the BYA has played in their self-belief, self-esteem, or both. Malena summed up the feelings of the group when she said,

> "I was intimidated at first, it was like, 'Oh gosh! I don't belong here!' . . . And this year, I just took time out for Malena. And just worked on Malena and what Malena wanted. And I just noticed that I have a solid foundation of who I am and what I want to do."

Jacqueline, on the other hand, raised a negative point – that of lack of diversity and sexism on the campus.

> "I think something that affects my self-efficacy personally is the environment at the University. Specifically, just because it's so different. There are so many men

> and they're all in there for Engineering. And it's not a very diverse environment. I felt during my year here that it was something I had to overcome. I had this feeling of overcoming the environment, yet another environment, helped with self-efficacy. Just because, I think as a woman you face a lot of adversity and there's a lot of sexism and I don't think people here are generally used to intelligence."

To my follow-up question, *And so you're feeling is that was a challenge that you have overcome and you feel more efficacious. Are there other people that agree with Jacqueline?*, all of the students expressed their agreement.

To summarize, the gifted young women in the BYA expressed a strong sense of self-agency that affected many areas of self-efficacy. They felt academically efficacious and demonstrated their abilities in their classes and in their risk-taking. Their sense of self-agency was a critical factor in their decision to leave the public high school environment in favor of a more stimulating and challenging environment in which they could live and study with other capable and motivated students like themselves. Finally, crucial to their success in the university environment were their strong self-belief and social efficacy.

Headmaster Interview

The headmaster of the bridging academy agreed that the narrative synthesis of the first focus group reflected his knowledge and perceptions of the academy's gifted young women. When asked to describe the type of female student that is attracted to his program, he replied that, in general, they are adventurous and risk-taking. They value relationships but are more aloof in the sense that they are not as dependent as are other young women their age. He finds them to be quite adept at social skills and often have felt alienated in their previous environment because of their brightness. The students were chosen through interviews and recommendations that revealed their academic readiness, social and personal skills.

I inquired of the headmaster why, in the classes that I observed, professors tended to direct their questions more often to the "schoolies." He stated that many of the faculty have commented on the BYA students' active participation and achievement. This is another example of their risk-taking behavior. He additionally noted that the faculty was presently studying ways to better respond to the academic needs of the bridging year academy students, who demonstrate higher task commitment and individual efficacy than the regular first year student. The university was considering an honors program that would continue to challenge students from the academy.

I commented on the statements from the students regarding the supportive atmosphere afforded by the program. The headmaster described how the staff does much before the regular academic year and during the year to foster the feeling of community. There is a retreat before classes begin for academy students where there are activities that allow the students to socialize, along with team-building activities that develop a sense of trust among the group. Afterward, students participate in the regular college orientation program. During the year, there are weekly family dinners, which allow students and staff to gather as a group and share news and announcements. The residence staff members are trained by the academy directors to be sensitive to the particular needs of the younger bridging year student. And everyone, from the secretarial staff to the headmaster, truly enjoys the familiarity and camaraderie with the students. In summary, the bridging year academy – unlike mere early entrance to university without a complement of support services, staff and residential planning – provides a well-articulated and prepared curriculum to maximize the likelihood of success with its students.

When asked about the reports of the students regarding their choice of a university environment as a way of leaving problematic home or school environments, he replied that in his experience it is common for many students to come to the bridging year academy as an escape from home or school problems. Do many of these students display resilience? In his opinion as a counselor, "Yes. Worse families produce strongest kids, made strong by awful families."

Personality characteristics of resilient individuals include self-efficacy, learner resourcefulness, optimism and constructive thinking. Factors that enhance successful coping and therefore resilience to stress in the environment include the individual's perception of control in a stressful situation, the commitment to the situation and the challenge that the environment presents to the individual (Bland, Sowa, & Callahan, 1994). This leads to resilience, defined as the "capacity to recover from difficult emotional challenges and to establish a new foundation to adaptation" (Dixon, Hickey, & Dixon, 1992, p. 243). The bridging year gifted female displayed the characteristics, perceptions and behaviors as described in the literature.

In later correspondence I asked the headmaster to elaborate on the above comment regarding the difficult home or school environments of the students.

He replied,

> "We suspect that, like most early admission or acceleration options, [BYA] attracts kids of two major types (although we have no stats to back up this generalization): those from strong, stable backgrounds who are simply motivated to move on, and courageous enough to do so. In girls, these types do not always have a strong place in the social structure of their schools, but nevertheless are relatively happy there. The second type would be those who are motivated to get out of personal or academic circumstances that are more negative and unappealing."

> "It is surely true that there has been an increase in students from unstable family backgrounds – a sign of the times, I expect. And we do believe that those who are especially resilient may be particularly motivated to come to a program such as ours, which not only provides them with an opportunity for growth and development, but also a somewhat supportive, caring environment and student community. We try to foster feelings of belonging and specialness. I would be willing to bet that this type of young woman believes in her inherent worth and specialness and appreciates finding an environment that supports that belief" (G. K., personal communication, March 13, 1997).

I asked one of the participants in the research – a student who is planning to major in psychology – if she knew of students in the bridging year environment, other than the participants in the study, who experienced problems or isolation in their home or home school environment. She replied that my views on the resilience of the students were accurate and, of all the females at the school, she did not know one that was from what one might call a perfect home. She alluded to a song by the popular singer Alanis Morrissette as representative of the environmental contexts from which many of the students came. In the song, Morrissette sings of the confusion and maladjustment that an adolescent girl feels in an environment that purports to be sinless, yet does not fulfill her need for authenticity. (Malena, personal interview, February 1, 1997).

A Unique Voice

During the headmaster interview and through a phone interview with Maki, the Asian-American student, I had the opportunity to probe further into her views and behaviors, which differed from those of the other students in the second focus group interview. Of all the students who participated in the study, this was the only voice that differed significantly from the others in each separate learning environment. In order to consider all of the relevant phenomena as they arose in the course of the study, this section will examine those differences.

During the first focus group interview, Maki alluded to some family dynamics that suggested how her perspective was both alike and distinct from the others in the group. Regarding goal setting, she said,

> "I never really set my own goals because my parents always did that for me. They're [the goals] not reachable. I know that. Nothing's ever good enough, and I suppose that's how it is in the world. It's always like that. But it always, after a while, it sort of stifled my motivation and it's nice to be here away from them. Because I don't have to look to them for approval, which I'll never get. Because nothing's ever good enough for them. And everything's a matter of course. Diploma, Master's, Ph.D., it's a matter of course."

She continued by saying that because she felt such pressure, she doesn't feel she worked up to her potential. On more than one occasion she suggested that she doesn't know what she might be capable of if she applied herself. The only area she is sure of is Mathematics.

Kerr (1994) wrote of the special needs of gifted Asian-American women. Environmentally, they face stereotypes from a society that many times does not differentiate between different Asian-American peoples and cultural backgrounds. Additionally, at times, due to strong patriarchal families, "the girls in the family are expected to subordinate their goals to those of their brothers. A strong father may command obedience and allow little opportunity for gifted girls to be nonconforming or assertive" (p. 180). Maki's explanation that she was raised in a controlling family atmosphere confirms that similar dynamics were at work in her own family.

The bright point in her education appears to be a summer enrichment program for women in Engineering. This was a highly selective program, held on a university campus, that was offered to only twenty women from the state of Illinois. One of the main projects during the week was for groups of students to build a parachute that would fall at a certain

terminal velocity. Because of Maki's superior preparation in math at an advanced university high school, she was instrumental in her team's first place award in the competition.

> "And it was kind of nice to know that I had contributed to that first place, and because a lot of the math that was involved in the group was done by me, and that's what I consider myself fairly proficient at."

During the first focus group interview – during the early part of the spring semester – Maki was alert and involved in the group. She nodded agreement and reacted to humorous comments and, even though she spoke fewer times than the other students, she spoke at length. However, in the second focus group, which was held about two weeks before final exams, her demeanor was dramatically different. She seemed worried at the beginning of the interview and commented that her late semester stress was no one's fault but her own. During the course of the interview she made only one, perfunctory comment and actually dozed off while the others were talking spiritedly.

Because I was concerned about Maki's change of behavior, I mentioned it to the headmaster, who said that he would report it to the residence staff so that they could check in with her. During our conversation he ascribed her withdrawal to a characteristic he has noted in other female students of Asian ethnicity. He offered that they are usually reluctant to open up and reveal personal feelings and ideas.

In the Reflective Assessment, Maki indicated that she felt that the narrative reflected the ideas shared in the first focus group to an average extent and that it reflected *her* perceptions as a female student little. Insofar as specific ideas or perceptions that she felt were not represented in the narrative, she wrote, "A sense – indefinite – but there. (I don't belong.) I'm not like most of them." She did concede that the narrative reflected the dynamic of the focus group as she remembered it.

I contacted Maki by phone shortly after the interview and invited her to share some more of her ideas about her self-perspective as a gifted young woman at the bridging year academy. She was willing to speak with me and reported that one of the reasons that she felt she was different from most of the descriptions in the narrative is that she was, "Raised more like a guy." Because she was raised to act and think in a more independent and less collaborative style, she felt, therefore, more autonomous and worked more on her own terms. Her values (and learning preferences) are more similar to those of her parents than to other females. "Dad raised me on Leggos." Hers was definitely a unique voice among the group.

The College of Engineering Sciences was an all-male institution for eighty plus years of its hundred years of existence. Consequently, even though the bridging academy has more recently been a part of the university, Maki was the only female in the study group that found a better fit with the male engineering student than with the female bridging year academy student who was not planning on studying engineering.

In an attempt to integrate the different facets of this unique individual, I perceived that her ethnicity and personal characteristics are more attuned to a highly competitive math and engineering environment, and therefore she stands in clear contrast to the other females whose perceptions were more reflective of a female style of knowing and learning through connections and relationships.

Other Ethnic Considerations

With respect to other ethnic considerations, Kerr (1994) reported that the literature indicates that among all the ethnic minority groups, gifted African-American girls are demonstrating stronger self-esteem and are more likely to seek admission to prestigious colleges. She confirmed, "It appears that many of these gifted girls are gaining confidence

throughout childhood and putting that confidence to work in striving for ambitious goals" (p. 179). Taub and McEwen (1991) also found in a study measuring the development of autonomous characteristics (i.e., separation, self-sufficiency, risk taking, and problem solving) through the college years that there were no significant differences between the development of white and African-American females. The same authors found significant differences in the area of development of intimate one-on-one relationships, and reflected that because of a relatively small number of ethnic peers, the women feel a sense of social isolation and may defer the development of intimacy until after college. Interestingly, the authors indicated that the students demonstrated certain autonomous tasks – such as being willing to venture alone – through their relationships with others. They posited, "Perhaps women develop autonomy through their relationships with others" (p. 507). Their findings and statement support the conceptual foundations of this study, as reported in Chapter 2.

In this present study, the two African-American gifted women at the Bridging Academy demonstrated a high degree of autonomy, equal to the other participants in the environment. Furthermore, I noticed at the beginning of the research that the two were very close friends and relied on one another for support and encouragement. During the course of the study (and as a direct result of it), Malena reported to me that she also became a close friend to both Jacqueline – her roommate – and Saundra, another study participant. This reflects the feminist research paradigm, which offers the opportunity for women's growth and change through inquiry.

Concerning ethnicity, Kerr (1994) and others cautioned that several societal factors continue to be problematic for the gifted African-American young woman. Prominent among the concerns is the fact that being African American *and* female places a student at greater

risk of not being identified. Economic barriers, peer and social pressure not to achieve her potential, and conflicted identity are some of the salient issues that she often must meet and resolve (Ford, 1995; Ford, Harris, Webb & Jones, 1994; Grantham & Ford, 1996; Kerr, 1994; Taub & McEwen, 1991; Taub & McEwen, 1992). Ford, Harris, Webb and Jones (1994) commented, "Because they tend to be confused about who they are and feel pained by their dissimilarities, some gifted or high-achieving black students may feel guilty, alienated, and unsure of where – and if – they fit in" (p. 27).

I remember walking across the campus with Malena after observing the highly motivated Academy students participate in a Biology lecture/discussion. Malena had volunteered answers on a number of occasions; and her quality of attention, responses and participation echoed her previously expressed sense of efficacy. As we walked she said,

"Joy, could I ask you a question? You've studied Psychology, haven't you?"

"Yes. Why?" I responded, knowing from the tone of her voice that she had been thinking seriously about something and was trusting me to listen to her concerns and answer sincerely.

"It's just that, being here and from my experience, I always wonder, why is it that so many black students screw up? I mean, it just seems like they do, and they don't even seem to try." She continued that it was difficult for her to relate at times to other African-American students because she cared about her achievement and her goals.

I told Malena that I really could not answer her questions based on my experiences, but that I respected her feelings and was happy that she had asked for my opinion. As I think back on that and other experiences in the environment I realize that her intense feelings of social connection and her need for personal achievement sometimes put her in that difficult

and confusing position that Ford, Harris, Webb and Jones (1994) described. What was instrumental in helping her during those times was her strong sense of self-agency. Instead of dwelling on the negatives, she became pro-active as a responder on the local young adult hotline, as a member of the fledgling women's hockey team, and as a presenter at the annual women in leadership conference.

In conclusion, the gifted African-American students in the bridging year environment reflected some of the same issues that appeared in the literature. In particular, they showed confidence, initial autonomy, and the need to learn through relationships.

Conclusion

Southern and Jones (1991), researched acceleration in grades kindergarten through twelve, and Brody and Stanley (1991) explored possible negative consequences of academic acceleration at the secondary level. Academic outcomes may include too advanced a level of content; gaps in development of basic skills; physical, social or emotional immaturity; too early career decision-making; highly demanding courses of study which do not allow for creativity or divergent thinking. Additionally, they may not be able to attend a more selective college with less time to develop required credentials. Social adjustment outcomes may involve a lack of social activities and age-appropriate activities; the older students may reject or be inattentive to the younger ones (see also, Ingersoll and Cornell, 1995). Extra-curricular activities may be age-related and therefore not be available to the accelerated student. Emotionally, the accelerated student may experience frustration with the pressure and demands, feel isolated, not be as adjusted later, and may not have had the time or opportunity to develop personal interests. According to Southern and Jones (1991), few sources in the

literature or practitioners expected acceleration to be harmful to the student and the literature is inconclusive as to its effects.

As has been illustrated in the present chapter, the bridging academy students did not report any of these negative effects as a result of their early entrance to college. In fact, most of them felt that their college enrollment was a solution to academic and social problems that they experienced in their previous environments. They had exhausted options in their schools and needed the opportunities and challenges that a rigorous, more advanced environment offered. The chance to study with peers that also sought those challenges, and were their intellectual and psychosocial peers, provided them with a strong self-belief in their own abilities.

Possible positive effects of early entrance to college as reported by Brody and Stanley (1991) were that early entrants are more inclined to pursue graduate studies; may pursue several degrees in different fields because they have more time to do so; are more fulfilled, well-rounded, productive and motivated; and have better relationships with their intellectual peers. The students in this study displayed a high degree of motivation, were involved in athletic and other extracurricular activities, socialized well with each other and with others in the academic community and set high goals for themselves both academically and in their careers.

Perceptions

The gifted females at the BYA exhibited strong perceptions of self-efficacy that manifested itself as a highly developed sense of personal agency. These were young women who were aware of their abilities to impact and transform their realities. In actuality, they transformed reality to the extent that they chose to leave family and high school early and to

enroll in a highly demanding college of engineering sciences. They perceived themselves most capable of drawing on their inner resources to confront any demands – academic, social and emotional.

Behaviors

Behaviorally, the bridging year academy students displayed their self-belief in personal efficacy through their organizational skills, successful and frequent participation in their college classes and flourishing social efficacy. They were known and included often by their professors as well-prepared and capable members of the college classroom. They were active members of the college as a whole – participating in sports (i.e., women's hockey and rugby), social activities (dances and student organizations) and community service (crisis hotline).

Environment

The educational context contributed much to the students' perceptions of efficacy in that the successes encountered at the university level affirmed their risk-taking behavior. The prospect of learning in an environment that was academically challenging with other capable and academically motivated students provided the student with a stronger sense of efficacy as she met the challenge successfully. Additionally, the social milieu of the college community that afforded the students the occasion to develop close friendships with students who shared their unique psychosocial needs, as well as the opportunity to function socially in a more diverse and enriching environment, was a strong positive factor in their perceptions of efficacy and self-agency.

Finally, it must be noted that the students of the bridging academy of recent years influenced the environment as well to the extent that the university recently announced plans

to create an honors curriculum. Officials in charge of planning the honors program stated that one of the goals of the curriculum will be to provide challenging opportunities beyond the first year to the motivated and capable bridging year students. This reflects the faculty study that the headmaster mentioned in the exit interview.

This chapter explored the perceptions of efficacy of gifted young women in the environment of a bridging year academy and identified several behavioral and contextual factors that influence and reciprocally interact with those perceptions. The following chapter reports the findings regarding the efficacy of gifted female students in a private school.

CHAPTER SIX

THE PRIVATE SCHOOL ENVIRONMENT

Introduction

The previous two chapters presented views regarding the perceptions of efficacy of gifted young women in the public school and the bridging year academy environments. The chapters described the differences in the environments and subsequent effects on the students' perceptions and behaviors. This chapter displays and examines the findings in the third environment, that of a private school. As with the previous two chapters, it begins with a brief description of the environment and the students who participated in the study. The remainder of the chapter follows the procedures through which the phenomenological data emerged – the narrative that displays the analysis of the first focus group and the close observation, additional analysis including information gathered from the individual reflective assessments, the second focus group, and the exit interview with the school's headmaster. Finally, themes and constructs that are synthesized for the site are displayed in the concluding section.

Description

The school is located in a small New England village nestled between Vermont's Green Mountains and Lake Champlain. The focal point of the town is the hill campus of a well-known, private, liberal arts college. Just a block from the college campus, in a building that until recently housed the Catholic Church's parochial school, is the private school which served as the site for this phase of the study.

The floors of the interior are hardwood; the rooms have tall ceilings, radiators and long windows that provide breathtaking views of the mountains and the college. The old building has the flavor of a well-worn shoe, yet its hallways sing with the energy of creativity and the vibrancy of excited young learners. Student produced work is everywhere. There are drawings, poems, mobiles, maps, scientific drawings and more. In addition, I observed scientific equipment, classical sculptures, artifacts, art reproductions, computers, and other enrichment and instructional materials.

Anytime from early morning until late afternoon the school is filled with students and adults conversing, working together, laughing, or engaged in some creative pursuit. Many times the adults are not teachers or other staff members at the school, but community members who have taken a special interest in some aspect of learning and are sharing their knowledge.

The school is an independent, secondary level, day school that is approved by the Vermont State Department of Education. A Board of Trustees actively oversees and governs the school. It is a member of The Coalition of Essential Schools, sponsored by Brown University. The Coalition of Essential Schools is an outgrowth of *A Study of High Schools*, research conducted from 1979 to 1984, co-sponsored by the National Association of Secondary School Principals and the National Association of Independent Schools. Coalition schools strive to create environments in which learning is personalized, where students have the opportunity to develop their intellectual and imaginative powers, rather than achieving mere subject matter mastery.

Because of the fact that the school is unique in design and curriculum, and does not fit the model of either a private school or a public school, a closer view of some of the

components of the school are needed in order for the reader to understand more clearly the findings as they will be presented later in this chapter. An examination of the schedule of classes is the first indication that this is not a typical private, secondary school. From the terminology that is used, and from the scarcity of what is traditionally known as "subjects," the schedule is nontraditional in every sense. For students in grades eight through twelve, the class schedule for Monday, Tuesday, Thursday and Friday includes *Opening Seminar, DaVinci 1, Language or Math, DaVinci 2 and Closing Circle.* Wednesday morning is spent in *Inquiry* while Wednesday afternoon is *Community Service.* Also on Wednesday, the representatives to the Student Forum meet with faculty for an hour and a quarter preceding *Inquiry*. Finally, there is an hour each day dedicated to *Fitness or Sport*.

Opening Seminar is a time when students discuss and explore a topic or issue in depth. The theme might be a contemporary or a personal issue that affects the whole group, or another topic. The student who is responsible for preparing the day's seminar chooses the subject and does some background research beforehand. During Seminar the student presents his or her findings and then poses questions – which he or she has prepared – for the other students. The questions require critical thinking on the part of the participants. A discussion follows, which is facilitated by the student and the teacher, when necessary. In no way is the teacher the dominant figure during *Seminar*.

During one observation in the eleventh grade classroom, an Indonesian student had prepared a seminar on whether homosexuality was genetically or socially determined. She reported on readings that she had done that dealt with experiments with rats and with social psychology studies. After her presentation a conversation ensued in which all the students were involved. They discussed various aspects of homosexuality and shared other

knowledge that they had, and some expressed their personal beliefs or experiences. The discussion was mature, and – rather than skip from point to point, as many young people of that age might do – they probed each other's thinking and made efforts to think the topic through. The teacher just listened and gave nonverbal reinforcement and encouragement.

The sessions designated as *DaVinci 1* and *DaVinci 2* are the essence of the curriculum. These are interdisciplinary sessions in which students study the sciences, humanities and social sciences in one continuous stream, beginning with the origins of the universe in Grade Seven and concluding with the study of the global society in Grade Twelve. From the beginnings of the universe, through the course of ancient civilizations and the beginnings of the world religions, the age of discovery and growth of nations, and toward a global community, students trace the route of human knowledge through interwoven, experiential learning. Thus, when students study a particular period in human development, they create Art, conduct experiments, and write creatively – all in the style of the historical period.

Students at the school spend at least two hours weekly in an *Inquiry* activity that they have designed, organized, and sought out the resources to complete. The students involved in the study are using their *Inquiry* time to learn sign language, to study drawing and painting, or to do creative writing. One of the students in the focus group stated, "One reason that I like going to school here is the independent inquiries. Like, you can incorporate all the things that you really care about into what you're doing at school rather than being a separate thing."

Students are required to spend a minimum of sixty hours per year in service to the community. This is a vital component of the curriculum that is intended to teach students compassion and respect. The four young women in the study were performing service by

working in the public library, with the local Hospice organization, with the public television station, and painting a mural for the school.

During and after class sessions or discussions, students noted ideas and concepts as journal entries in their resource organizers. The organizers are distributed during each Macro, or evaluation period. The school year is divided into six Macros with evaluation or conferences at the end of each of the terms. Evaluations – ten in the course of the year – take the form of qualitative and quantitative assessment of student progress. There is an 80 percent mastery requirement and students who do not meet that standard in one or more areas are put on an Academic Plan, working closely with the teacher, until the requirement is satisfied. Evaluations chart the progress toward mastery of nine requisite skills deemed necessary for a student to succeed in college or a work environment. These skills are Communication, Mathematics, Science, Technological Literacy and Information Access, Cultural Fluency, Learning to Learn, Ethics, Teamwork and Leadership, Organization and Responsibility.

To summarize, the previous descriptions of the essential components of the environment are meant to give the reader an overview of an idiosyncratic learning environment. The thrust of the curriculum design of this school is that of providing students with opportunities for in-depth, self-selected inquiry, metacognitive thinking and self-directed learning.

The Gifted Female at the Private School

As with the other sites, before participating in the focus group, students filled out an information sheet (see Appendix B). The purpose of the form was to gather preliminary data regarding the students' year in school, their knowledge of their identification as gifted, earliest recollection of being bright, and their position among their siblings. This section

presents that information along with a brief description of each student in order to give the reader a mind picture of the participants. As with the other cohorts, the students' names have been changed to protect their anonymity.

Vanessa was a tall and large-boned young woman who was sixteen at the time of the study and in the eleventh grade, her first year at the school. The first time I met her she was wearing a retro-sixties rust and cream-colored, polyester pantsuit and dark, laced hiking boots that were mid-calf in length. Her face was framed with very fine and very curly long brown hair. She peered at me through wire-rimmed glasses with keen and observant eyes that I could see did not miss a detail. After the first focus group I wrote in the Field Notes journal that, "V. was always looking to me for acceptance. It was as if she knew that she was idiosyncratic in her words and thoughts and wanted to see if I was to reject her or her ideas."

Vanessa was identified as gifted before coming to the school. She is the only child of her biological parents and the middle child in the family between two older stepsiblings (stepbrother, 22 and stepsister, 20) and two half-brothers, age seven. Her earliest recollection of being bright is, "When I was younger, my parents used to spell things out that they didn't want us to know. Once we were going for I-C-E C-R-E-A-M and I knew right away what they meant, but I didn't ever tell them I knew."

Rebecca was an Indonesian student in her second year at the school. She was nineteen and in the twelfth grade. Petite and dressed in jeans and a T-shirt, she was a pretty young woman with chin length straight black hair and glasses. Her outstanding feature was a sweet and captivating smile. She wrote that, "I only remember being bright when I was in first grade. I was the first rank. My parents always said that I'm smart. Since then, I always feel that I'm bright."

Rebecca spoke English very well. The only difficulty that I noticed was that she sometimes mixed tenses. She didn't know if she was identified gifted previous to coming to this school. She has three siblings – older and younger sisters (twenty-one and sixteen), and a brother who was twelve.

Heidi was sixteen, in the eleventh grade and the oldest of three children in her family. Heidi looked like her name implies – very blond, healthy looking, with clear blue eyes that smiled in a rosy, friendly face. She dressed casually in jeans, a turtleneck and a lightweight anorak. Her sister is two years younger than she is, and her brother is five years younger. She did not indicate that she had been identified previously as gifted and wrote that, "In Kindergarten, we talked about how we could learn things 'by heart.' I realized how many songs, poems, and the Pledge of Allegiance, etc., I knew and I had learned by myself."

Eve was seventeen and in the twelfth grade. Tall and slim, with shoulder length straight red hair, she had a slow, shy smile. She wore jeans and a black turtleneck pullover. She has an older sister (25) and a younger brother (14). Her earliest recollection of being bright? "My parents always told me so, but mostly I assumed that was their job." This was an interesting comment and as I came to know Eve better, I was able to understand that she was the most reticent in this group to show her intellectual abilities, even though she was just as adept as the others.

Adlerian psychologists insist that even though there is strong research to support the family constellation constructs, each individual is a unique person who lives in a unique setting with unique social and emotional motives and factors. These phenomena may influence the individual to the extent that he or she does not display "typical" birth order characteristics. Such is the case in this private school cohort. Thus, Vanessa displayed

some only child characteristics (she is the only *biological* child of her parental dyad) with a very strong need for social affirmation during the interview – looking to me for agreement and understanding, and eliciting the same from her peers. Conversely, she also demonstrated a highly idiosyncratic personality that she displayed in her well-developed metacognitive awareness of her abilities and her thinking. . Additionally, cultural factors with both Vanessa (strong Greek heritage) and Rebecca contributed to their unique perceptions and traits. Heidi, an actual and perceived firstborn, indicated strong self-efficacy ("I can do anything!"). Yet her achievement motivation was more a calm and assured self-belief and security, rather than the strong achievement resilience demonstrated by the predominantly firstborn bridging year cohort. Eve (who perhaps was a perceived firstborn due the age gap of eight years between her and her older sister) did not demonstrate either clear firstborn achievement orientation or distinct second child need to "catch up."

The early recollections of this group gave clues to the students' perceptions of being nurtured in strong and supportive environments in which parents took an active role in their intellectual development. The recollections indicated the beginning of a metacognitive perspective of this group of students that was to emerge from the other data. The recollections of Vanessa and Heidi indicated their awareness of their own thinking, and Rebecca and Eve were aware of their parents' evaluation of their thinking. Educators' awareness of the need to develop metacognitive and reflective abilities in students is a relatively recent phenomenon. Additionally, educational environments that have a predominantly metacognitive focus in goals and instruction (rather than a content orientation) are rare. The implication from the students' early recollections is that their

present perspectives are that they were nurtured by parents who expected them to develop metacognitively and intellectually.

First Focus Group

How did the gifted female perceive herself and her environment in the school? The following is the composite narrative, which represents the synopsis of the transcription of the first focus group.

In what ways does the gifted female at the private school consider herself efficacious?

The gifted female at The School expresses her perceptions of efficacy in various academic subjects and thinking skills. "I can do everything!" This self-belief comes from no specific place. It's in herself, her successes, the environment, within, a lot of places. This female student feels most efficacious in the metacognitive awareness of her own individual learning process. "I have my own personal truths and my own explanations. And I believe in their [other people's] definitions. I just explain them to myself differently." She knows what works best for her and knows that she has to make the appropriate choices; and she is aware of the ways that her affective mood produces two separate perceptions. "I always know I'm perfectly capable, it's more of a stubborn thing. It's more trying to convince myself. . .that I can't do this."

In the realm of cognitive skills, this gifted young woman feels most comfortable with creating and understanding metaphors ("I like to create analogies with shapes"), using memory for understanding her own unique thinking, and elaborating through personal expression. "I think that any form of expression is elaboration because you can't, like, put it out exactly the way it is. It's in a different form." It is important to her discovery and achievement to conceptualize language in many different forms – visual, musical, mathematical ("I can write mathematically"), and expressive. She perceives herself as efficacious in all forms of expression.

In the Science area she does not feel as capable, either because she perceives it as a less expressive way of thinking – "It's very 'OK. Take this information and accept it"; or because there isn't enough emphasis on pure Science – "We want more 'Science' Science, and I think that's what the School is trying to do."

The gifted female student feels that if she likes or has an interest in an academic skill or area, then she relates and enjoys it more – "It's just more me." This may influence her perception of efficacy in that area, but not necessarily. "I don't know if liking something and being able to do it are directly related, though. I don't think it's the same thing." On the other hand, "For me, liking it is directly related to it, or I have to learn to like it . . . Like I just discovered this year that Math is a language . . . And once I figured that out then I was like, 'OK, I can deal with this,' because it wasn't completely vague."

Her perceptions of efficacy lead her to pursue goals in the areas of English, Science or Veterinary Medicine, the Arts, Cultural Studies, or Computer Science. The strong interests expressed in sciences and math-related fields signal a shift from the findings in the preponderance of the literature that suggest avoidance of mathematics and sciences on the part of the gifted female.

What factors in the learning environment affect her perceptions of efficacy?

The gifted female in the school finds several factors in her learning environment influence her perceptions of efficacy. In Seminar, for example, she feels that she has been able to develop her thinking and speaking skills due to the experience of exploring different topics and ideas in a seminar setting. "It's because that's the way I learn. I like to talk and communicate and I like language."

Inquiry gives the gifted female the chance to pursue self-selected topics or learning experiences in depth and gives her the efficacy to believe in her abilities to do so. "One reason that I like going to school here is the independent inquiries. Like, you can incorporate all the things that you really care about into what you're doing at school rather than it being a separate thing. So I think it's a

lot easier to like, make progress in what you want to do." Such cognitive affirmation is an important influence. "I think the fact that like they recognize that what you decide you want to learn about is really important, rather than giving you what it is you ***should*** *know,* ***they*** *think you should know, that makes me feel like I can accomplish something." In such an atmosphere the gifted female feels a strong sense of self-agency. "There's something very empowering about it. It helps me kind of come back to what I'm learning in DaVinci, too. Like it really is all up to me. Like if I don't want to learn something, then I don't have to. But it's all for my benefit."*

The interdisciplinary aspect of DaVinci, which provides a study of the humanities through readings and discussion, is an effective influence on the student's perception of efficacy. This class is a blending of the knowledge from different areas and disciplines, not separated into subjects as in public schools. "Really, they're not separated in real life. And so, I guess the connections that are made between things, I've gotten a much better idea of what the world is about. And so having a better idea makes me feel more like I can accomplish something during my life." In DaVinci the material is presented in clear, easy to understand ways and the teacher is always willing to help. The teacher never dictates, "She says, think about it with questions and tell me what your perception is." The gifted female student also notes that the classes emphasize hands-on learning in many different ways – talking, reading, connecting to others, plays, posters, projects.

The Community Service portion of the curriculum enables the student to use the skills of the practicing professional. The student finds her own project, finds the resources, and pulls all the resources together. "I learned what it is to be an artist. It gives me the motivation to go ahead and do it by myself." She also mentions that she feels more efficacious in working with people, in large part due to the Community Service experience.

The learning activities at The School take place in classes with a high level of reflective and collegial collaboration, which is a factor that promotes efficacy. "It is a very small environment and you feel more like an individual who can do things." Teachers and others who care about the

affective as well as cognitive needs of the student contribute to this feeling. "The teacher that we have this year is really, he's really good, in that he makes a connection with you and you know that he wants you to express yourself."

Both the support of peers "Being around people that care about what they're doing," and more recently the lack of interest on the part of some peers, are also factors that affect the student's perceptions of her abilities. "I saw like everybody else can do it, and I think, 'Well, if they can, I can too.'" On the other hand, when students lose interest, "This year more than any other year, there's like a lack of that (interest) in our class. And it definitely has affected me. We could do amazing things if everyone was engaged equally. It just doesn't happen."

In the end it is the student, making choices about what she – as an individual – needs to learn that gives her the strongest sense of efficacy. "The School has an ethic – Learning to learn. It makes learning unique to me."

In summary, the unique environment in this private school provided for a number of factors that influenced the metacognitive efficacy of these gifted young women. *Seminar* gave her the opportunity at the beginning of the day to forge connections with ideas and with others; *Inquiry* allowed for in-depth study of self-selected topics or skills; *DaVinci* furnished an interwoven understanding of her world; and through community service she continued to build connections at the same time as she was learning more about herself and her place in the community. Additionally, the close and nurturing milieu of the school and its personnel was vital in that it enabled her to take risks within a secure environment.

Individual Reflective Assessment

All four students responded in writing to the questions about the first focus group narrative – but not the preliminary conceptual framework – on the Reflective Assessment form (See Appendix H) with general agreement. Two students felt that the narrative

reflected the ideas shared in the Focus Group *exactly*, one felt *much*, and one chose both *average* and *much*. The narrative reflected their perceptions of the gifted female at their school *exactly* (1), *much* (2) and the same student chose *average* and *much* (1). Concerning how well the narrative represented the dynamic of the focus group and on-site observation, one student felt that it did so *exactly* and three responded by choosing *much*. None of the students offered any ideas or perceptions about the dynamic of the focus group that they felt were not represented.

Only one student felt that there were specific ideas or perceptions that she felt were not represented in the narrative. She wrote, "What makes people feel incapable." She and others spoke to this point during the second focus group interview when they spoke of the difference between their present school and the public schools they attended before. There was only one comment added to the assessment. One student wrote, "I'm very impressed! It seemed as though we students had said a lot, and I know that I wasn't always clear in explaining things (or my thoughts), but you seemed to have extracted the most meaningful parts and presented them clearly organized. I like it a lot!" Such positive reinforcement regarding the analysis and synopsis provided confirmation of the findings. This reflective assessment produced little new data. Nevertheless it was most helpful in confirming the analysis of the first focus group transcription and the contents of the narrative.

Second Focus Group

The Private School students were very interested in how the narrative had been synthesized and written. The first part of the interview was used to explain the FOLIO Views analysis and then how I had written the narrative as a composite person, trying to represent all of their views through the one composite "the gifted female." I also explained

how in the third paragraph, I felt the need to represent the two differing perceptions. The students concurred that the narrative was a thorough representation of what they had said during the first focus group.

Nevertheless, analysis of the second focus group yielded some new themes and issues that had not previously been addressed by the students. Firstly, the preceding explanation of the two points of view about the way the sciences were taught at the school led to a comment by Vanessa regarding a difficulty she was facing the following year, as a twelfth grader at the school, which she and the other students felt was a shortcoming of the school's curriculum.

"It's really weird to come here after being in a public school, cuz I need to take Biology and H___ said that there's not going to be Biology here next year. So, I have to figure out how to do that on my own time and not do it here. And I think that The School should have the flexibility to do those kind of classes and do the other kind . . . to talk about science on a historical basis *and* on a strictly chemical [scientific] basis."

Among the important constructs that arose during the second focus group is the concept of self-belief. Where does their self-belief come from? They believe it is from their accomplishments; from parents, teachers and peers; from feeling that they belong in the environment; from the things that they love; and most importantly from their interactions with others. "I think the way I do, like the things that I create, the things that I just do, are all just forms of that interaction."

Another area that the young women wanted to emphasize was the importance of physical activity to their happiness, energy and mental disposition. Additionally, they wanted to emphasize the importance of "escaping." Eve stated, "Like all these are about

interaction or about doing a specific project, but I think that some of my time is spent trying to like withdraw." Later she explained, "It's just like a state of mind that I go into when I want to escape from all . . ." Vanessa explained, "I have to really fight for that space in my life. Like if I want that I have to really think about it to find the time that it will fit in."

The importance of having time in their own room for reflection is a big part of their time alone. This provides the space for personal metacognition.

> "I'm always consciously evaluating every single thing I've done, and everything that I've thought and everything that I've said, and everything that I've written. I'm always thinking about it and asking myself if that was really right and if I really believed in that. And I'm always trying to find like the best morals for myself, and the best like, or not the best, but the situation that I'm most content with. No matter what it is, I'm always worrying about something. So definitely. My room is kind of like for editing my life."

Another student adds, "I don't really like people in my room without me being there. Because it's sacred."

The students also had many questions about how the conceptual framework was devised and was it different in each of the environments of this study. When thinking about what some of the differences might be, Eve chimed in with, "Definitely not thinking. That way of teaching would be done away with if we want people to really think. I mean you learn facts, but you don't learn how to think or like how to improve your life through the decisions you make, or what you do, or how to feel good about what you're doing." This was what was meant by her statement in the Reflective Assessment regarding that which makes people feel incapable.

An important point raised about the conceptual framework is that, while I had included *Individual Inquiry* as a behavior, the students felt it is more of a personal factor than a behavior. Vanessa stated, "I don't think that I behave any differently when I'm doing my

Inquiry. I don't think that's a different behavior in itself." The others adjoined that they would be pursuing those important areas – art or music – regardless. The difference is that in public school those activities were done outside of and separate from school, and in their present environment they become a more overt and vital part of the educational process and of the female's identity.

The students felt the environment was influential in their metacognition, "because I came to this environment because I needed to learn in a different way, and I wanted to learn different things, and more than what I was [learning]."

Headmaster Interview

The headmaster's interview took place immediately following the second focus group. He first read the narrative carefully. During the reading he commented several times with comments such as, "This is a very rich document," or, "This will be valuable information for us with the faculty." When asked how well it reflected his experience with the gifted female at the school, he commented that, even though it fit his own perspectives very well, he was recording fours rather than fives on some items of the Reflective Assessment because he did not have the specific focus group female experience. Thus, he ranked as "Much," that the narrative reflected the ideas and the dynamics shared in the focus group. In response to the question, "To what extent does the narrative reflect your perceptions of a gifted female student at The School?" he answered, "Exactly."

Dr. C. agreed with the students regarding the way that they felt that they were able to develop thinking and speaking skills in *Seminar* because they learn better through talking and communicating. As the designer of *Seminar* and other facets of the curriculum, he offered that this insight was potentially very important because,

> "Opening Seminar might both in form and in content potentially align more with female students' styles than with males. It's not only the relationships but the content could be more along those lines too, because students are invited to create the seminars and lead the seminars. So these are some of the things that I think women have traditionally been best at and most experienced with."

I asked the headmaster, as I had also asked the students, where did the students' self-belief originate? He replied that he believes it is a product of the interplay of parents, home environment and the girls themselves. He added that students come to the school as a result of family support of the aims of the school and the student's own self-selection of it being the best place for them to develop.

Key to the students' self-belief and their perception of efficacy is, according to Dr. C.,

> "Very, very sensitive faculty who hold each student in extraordinarily high regard. They have done what many schools aspire to do in daily practice, where the student is much more being drawn from, rather than the teacher playing the role of the great expert in front of the classroom. That transition is largely complete here and teachers very much see it as being their work to nurture the growth and development of every one of their students, whether boys or girls, and to hold in a very high regard. I guess that's what it really comes down to, I think."

To what does he attribute the gifted female student's strong perception of metacognitive efficacy? "That's what we're about. We think about thinking a lot." In other words, rather than content being an end in itself as it is in many schools (i.e., the public school in the present study), at this school content is often used for thinking about thinking. And as Dr. C. explains the quantity of the material learned can be greater because the students are better equipped to deliberate the material.

> "I think because this place is just dripping with metacognition. I think that it's all over the place. That when the students enter seventh grade, the first question they are asked is, 'How do we figure out what a truth is? And what one looks like? Is truth the same in the realm of sciences as in religion? Are there different rules to those games? If we have a scientific truth should it be reconcilable with a totally religious truth?' It lays an epistemological base right there in seventh grade that

> follows through the entire six years. So that students are always thinking about not just what they've learned but how they've learned it, what the nature of that knowledge is, and what's the base upon what that knowledge is built."

Why are the students drawn to that? Again, self-selection and school reinforcement, students and families' support highlight the way. As Dr. C. said,

> "I think that within each of these arrows [referring to the Conceptual Framework as seen in Appendix G] there's a factor that is called receptivity. In other words, in some schools, in some institutions, behavior would be as much as possible blocked from affecting environment. 'Go ahead and behave all you want, but we're not changing, we know what we're doing here.' In other schools there are mechanisms set up to allow this to be an open arrow, to encourage the impact, the reciprocity back and forth. I think that we've designed a school where these arrows [suggesting interaction] are institutionally supported."

Conclusion

Perceptions

In the private school environment, the gifted young women in this study displayed a strong sense of global efficacy. They perceive themselves as most capable in the areas of metacognitive choice and awareness of their own learning process as well as all forms of expression; and they feel that this sense of capability comes from their own accomplishments, and from the support of parents, teachers and peers. Most importantly they feel that they belong in their present learning environment, and this enhances their sense of efficacy.

It remains to be understood all the ways that the students' knowledge of their identification as gifted affected their perceptions of efficacy. What is clear is that these students had an early sense of efficacy in their familial environments and that they believe that they are best given the opportunity to express their efficacy in the private school environment.

Behaviors

The behaviors of the gifted women in the study reflected their feelings of efficacy. They demonstrated their feelings of comfort and ease of relationship with peers, teachers and other members of the school community. They either participated actively in verbal problem-solving activities or were attentive listeners. They manipulated with ease learning materials in their environment – art supplies, books, learning aids, computers. And they shared their perceptions and experiences openly and extensively with the researcher. All of their behaviors confirmed their belief in themselves and their abilities.

More specifically students expressed their efficacious perceptions through learning activities that they feel they personally relate to or enjoy doing not only as a school assignment, but as a practicing professional. Examples of these relational types of behaviors were observed in the small, seminar discussion groups and also in-depth inquiry activities such as art or music.

Environment

Among factors in the private school that contribute to developing and maintaining perceptions of academic efficacy is the small and focused learning environment that provides for personalized learning experiences. The students are aware of their ability to impact their own learning environment and they know that the environment will in turn respond to their individual needs. The trust created by sensitive faculty that look for and try to develop the best in each individual student is highly effective in assisting the learning of gifted young women. Learning arrangements such as *Seminar* and *DaVinci* respond to female ways of relational learning (Brown & Gilligan, 1992).

In addition, opportunities for metacognitive exploration and creative expression as well as *Inquiry* activities that allow students to incorporate what they love and care about into their school work, reinforce their feelings of efficacy regarding both school and their avocations. Finally, the *mutual receptivity* (of both individual and environment) that Dr. C. mentioned allows for the continual, reciprocal interplay of perceptions, behaviors and environment.

This and the previous two chapters have explored the perceptions of efficacy of gifted young women in three different learning environments. Chapter Seven will examine salient findings in all of the environments and how they impact on curriculum and instruction of the gifted female.

CHAPTER SEVEN

FACES OF EFFICACY

> "Sometimes the best anecdotes are *re*-collected as one tries to make sense of things that somehow seem interesting now, in hindsight. Such recollection occasionally makes it difficult to remember what precisely was being said or what exactly happened that makes a situation stand out. And yet it is important to try to recover those living phrases and incidents that give the anecdote a *cogent* power or *point*. Therefore it may be necessary to go back to retrieve the relevant 'trivia' that help to construct the anecdote." (van Manen, 1990, p. 69)

The three preceding chapters examined manifestations of cognitive, behavioral and environmental factors in three distinct learning environments – public school, bridging year academy and private school – and how those manifestations impacted the perceptions of efficacy of gifted young women who participated in this study. The present chapter seeks to re-collect the findings, re-examine them, and display the major themes and constructs that arise from all of the sites. Furthermore, through an inspection of the phenomena across environments, specific findings in each environment inform our pedagogical knowledge. The recollection of the data provides the opportunity for a hermeneutic phenomenological reflection (van Manen, 1990). It is phenomenological in that it is attentive to what is revealed in the phenomena; it is hermeneutic in that it attempts to interpret those phenomena.

Three Images of Efficacy

Before pursuing an examination of the specific constructs separately, portraits of one young woman in each of the environments provide a view of the constructs as manifested contextually. Such a holistic rendering returns to the phenomena as they presented

themselves, as they were dynamically interwoven, and as they were interpreted in the educational milieu. When I reconstruct the image of the gifted young female as an efficacious learner, the following are the memories that display themselves. I have chosen to use the narrative present in order to allow the reader to follow the scene in the mind's eye.

Public School Environment: Bridget and I walk toward the gymnasium and she explains that this is her first physical education class for some time because she had a serious medical problem that is now resolved. She goes to change into her gym clothes. When she returns she gives her medical release note from her doctor to her female gym teacher. Other students trickle into the gym in groups of two or three. When almost everyone is present, the teacher gives the signal to begin warm-ups. I notice that before this, Bridget stretched on her own, but the other students do not. To warm up the girls do sit-ups, pushups and then sprints from one end of the gymnasium to the other. Bridget and Gwen run at an easy pace and lead the others.

After warm-ups, the gym teacher goes to the center of the gym with a basketball. Bridget and another student jump for the tip off and the basketball scrimmage begins. As the game progresses, I see that Bridget displays skills superior to the others in the class. She not only plays well, she also directs the game strategy of her team in a very positive, supportive manner. Students take turns playing and sitting on the sidelines, but I note that Bridget – unlike the others – remains intent upon the play both on and off the court. She coaches, praises, and cheers on her teammates, always in an encouraging and helpful way. I observe that she is attentive to the game and wants her team to do well, but is not competitive in an overbearing sense. She even compliments the good plays performed by the other team. Even

considering the fact that she is the only one of the group who plays on the school's girls basketball team, she is a natural leader in the developmental tradition.

Bridging Year Environment: Malinda, Malena and I enter the Biology lecture hall in the science building and Malinda takes a seat in one of the semicircular rows close to the front of the amphitheater. Saundra enters and she and Malena sit nearby in the same section. Sarah arrives and sits a few rows further back. One of them indicates a section with eight students on the opposite end of the semicircle and tells me that the students seated in that group are all students of the bridging academy. I notice that as other students file in they sit further back, in the center section or on the sides.

I sit a few rows behind Malinda and observe as she opens her backpack and takes out her notebook, text, typed notes of the current chapter, her agenda, and writing materials. She efficiently organizes her things accessibly on her desk. After class she explained that she prepares and types vocabulary lists of words and terms in the chapters and refers to them during the lectures. From the lectures she infers which words and terms are important, highlights them, and studies them. When the professor enters and begins the lecture she opens her book and follows the lecture, taking notes and referring from time to time to her text or her text notes. She is very attentive and carefully draws diagrams and models to accompany her notes.

The professor begins to ask questions about the hormone system and I note that during the first fifteen minutes all of the answers are given – either solicited or unsolicited – by students from the bridging year academy. When Malinda either volunteers or is called upon, she answers questions with ease and assurance. Throughout the lecture and the questioning period, Malinda sits, poised and leaning slightly forward. She has a relaxed, yet alert

expression and does not talk with others or allow her eyes to wander. I think back to her words during the first focus group interview and remember that she described herself as one of six living generations, being of only the second generation to read and write. I marvel at the picture of efficacy that she portrays.

Private School Environment: Vanessa wears a polyester flowered shirt and rust colored polyester pants; definitely an outfit from the sixties that she may have found in an attic or a secondhand shop. She is in *Seminar* and is listening to a presentation on homosexuality prepared by one of the Indonesian students in the class. As the student finishes the report and begins to ask for opinions of the others in the class, Vanessa draws on her sketchpad.

During the ensuing discussion she looks up from her drawing from time to time to listen to other students and to contribute thoughts and opinions. Her remarks reflect her active cognitive engagement and I notice that the other students pay close attention to all of her observations. She takes the facts and the opinions of others and begins to make connections to social phenomena and related issues. In a very insightful manner she ties one peer's thoughts to another with her astute critical thinking and precise verbal expression.

The seminar ends and the teacher/facilitator takes some time to talk about her expectations for the next several weeks. After stating her points briefly, she then asks students to talk about their own expectations. Vanessa articulately speaks about her own need to do more creative writing. She gives ideas of how more writing could be integrated into the schedule. Once again, her teacher and peers are very attentive to her words and nod in agreement. I realize throughout the visit that many look to her for intellectual leadership.

These three young women display how the self-perceptions of efficacy as communicated in interviews manifest themselves in behavior. For example, in the public school the students

reported their belief in their abilities to achieve in a competitive environment such as athletics. Bridget's behavior during her gym class demonstrated her self-belief in the ability to engage successfully in this domain.

In the bridging year academy, students spoke of their efficacious ability to manage personal resources as needed to succeed academically. Malinda embodied this ability and through her behavior and the behavior of the other participants demonstrated their self-regulated learning. Finally, Vanessa expressed her belief in her metacognitive abilities – making new connections, posing problems, and problem solving – and the description of her cognitive engagement in *Seminar* portrays that ability. The next section will re-collect the theoretical base and the data as they reflect and extend the knowledge regarding self-perceptions of ability of gifted young women.

Level, Generality, and Strength of Efficacy

Returning to Zimmerman's (1995) explanation of the educational facets of self-efficacy as reviewed in Chapter Two of the present study, "Self-efficacy *level* refers to variations across different levels of tasks, such as increasingly complex math problems; *generality* pertains to the transfer of self-efficacy beliefs across activities, such as different academic subject matters; *strength* of perceived efficacy is measured by degrees of certainty that one can perform given tasks" (p. 203).

Insofar as *level* of efficacy in the gifted young women who participated in the study, the higher the metacognitive and self-reflective abilities of the students, the higher the level of academic efficacy that was reported. The students in the private school environment – who were immersed in metacognitive thinking and processes – displayed the strongest belief in their ability to be successful with higher levels of cognitive tasks. An example of this was

Vanessa's belief in her ability to do the problem-solving necessary to transfer her artistic skills, her conceptual skills, and her process skills, to a life-size, acrylic mural. The determinants of the learning environment – learning content through process, emphasis on thinking, and on thinking about thinking – positively influenced the metacognitive efficacy of the students.

The environment in which students showed the highest level of *generality* was that of the bridging year academy. Key to their ability to generalize their perception of academic efficacy to other areas is their growing sense of self-agency. Because these students were in a more independent, adult environment, their personal resources were used not only for achievement in an academically challenging environment, but for learning and growth in an environment that was emotionally and socially challenging as well. For example, Malinda and Malena both exemplify the ability to be the agent of their own efficacy when they shared their belief that they can do anything, despite the fact that they did not receive a lot of encouragement to achieve in their home environments. Malinda generalizes her efficacy in her expert organizational and study skills in a college academic milieu that expected more independence and self-regulation than that which I observed in the high school settings. Malena applies her sense of efficacy gained through academics to her social and leadership skills, as a volunteer for the college help line and as a student representative at the Women in Leadership conference. The bridging year environment, which allows a high degree of personal responsibility and autonomy, is a significant determinant of the generality of efficacy.

In the area of *strength*, it is again the incipient self-agency of the bridging academy students that nourishes their strong sense of efficacy. In the public school, the students

reported many areas in which they felt ill prepared (i.e., social sciences, self-expression) and therefore less strength of efficacy. In the private school environment, the students felt that their keen thinking skills and ability to personalize any learning task that they encountered gave them a strong sense of academic efficacy. In the bridging academy, students had separated from families and former friends to enter a strange new environment where they were the youngest and least experienced members. Having successfully negotiated this major social and academic transition, the students had developed a sense of personal agency. Revisiting the first focus group interview, every one of the students at one time or another during the interview expressed her belief in her ability to accomplish any goal that she sets for herself.

Not only do the learning environments influence the level, generality and strength of efficacy; it is essential to underscore the importance of personal determinants and their interaction with the learning environments. Different perceived needs of the students in each of the environments influenced which learning environment the students chose. The public school students chose to adopt the competitive paradigm that centers on subject matter efficacy. As has been demonstrated, potential personal determinants for this choice of remaining in a comfortable, small school environment that demanded no risk taking include lower metacognitive motivation and family constellation information. The students in the private school who thrived and showed high levels of metacognitive efficacy, self-selected an environment that afforded the development of their personal metacognition. Similarly, the student with the personal self-agency that supported separation from family and home was able to grow stronger in and generalize her self-agency in the bridging year environment. In this way the basic tenets of social cognitive learning and its interactive facets of cognitive and

personal determinants, behavioral factors, and environmental factors are underscored and clarified.

Self-Efficacy: Conceptual Foundation

Recalling the theoretical framework upon which this study is based, it remains to examine the areas of cognition, behavior, and environment to discover what were the reciprocal factors that interacted to influence the young women's perceptions of efficacy. This section will examine salient self-efficacy factors found in the conceptual foundation of the study (see Figure 2.1) that appeared in one or more of the environments.

With regard to cognitive and personal factors, all of the students *demonstrated self-reflective capabilities* as they spoke of their perceptions and thinking processes. It was clear in the analysis of the focus group interviews that the gifted female student in the private school environment demonstrated a sophisticated style of self-reflection – due to her refined metacognitive training. Students in the bridging year environment also displayed strong self-reflective abilities. The subtle differences in their thinking when compared to that of the private school student can be best explained as a reflection on *self* – psyche, personality, and efficacy, as opposed to the *cognitive* self-reflection of the private school gifted female. As mentioned previously, there was a shallow degree of self-reflection on the part of the gifted female in the public school environment, and only when asked to reflect on their thinking.

The degree and sophistication of self-reflective capabilities was strongly related to the utilization and success of other cognitive and personal factors in the gifted young women in the study. The more precise the self-reflective capabilities, the more successful the use of the metacognitive skills of *analysis, evaluation, cognitive choice and modification, and task strategies* as previously seen in the literature. And the application of these skills subsequently

influenced the level of *motivation and mastery satisfaction*. In the public school I witnessed the students' specific and effective display of cognitive skills with ensuing motivation and mastery satisfaction in the Mathematics class. The manifestation of collaborative training in these skills, as observed in this environment, was significant in actualizing the participants' cognitive processes and perceptions of efficacy. In contrast, in the other two environments it was the totality of the educational environment – as observed – that empowered the students to develop and apply their metacognitive skills that subsequently resulted in their increased motivation and mastery satisfaction.

Each of the environments presented gifted females who demonstrated academic efficacy. The extent of development and application of the cognitive and personal factors was significantly related to the extent of the behavioral manifestations – *proximal goal-setting and performance accomplishments* – that emerged. We can conclude that the student in the private school environment, who displayed the highest degree of metacognitive efficacy, demonstrated high metacognitive goal setting, performance and persistence. She spoke of her goals and performance in creative thinking and productivity. She explained how it is through her awareness and ability to articulate her personal truths that she is able to achieve her creativity. The bridging year student, who showed the highest degree of agential efficacy, demonstrated high personal goal setting, performance and persistence. Her college life demanded – and she expressed her ability for – personal time and resource management, managing resources, and social independence. Finally, the public school student is at risk of not accomplishing these behaviors due to fewer factors in her environment that foster those behaviors. She spoke at length of feeling disappointed with the low expectations in classes that were not challenging, where students were not held responsible for labs or homework.

And the gifted coordinator confirmed that often the gifted students opted for less challenging community colleges, rather than setting their sights on more competitive four-year colleges.

The *environmental* factors that were present in the bridging year and private school environment that reciprocally influence their cognitive and behavioral efficacies were: competence information, modeling, problem-solving and strategy training and the opportunity to produce creative products. Students in the bridging year received competence information regarding their high academic abilities through their participation in the challenging university environment. Their professors modeled higher level problem solving and instructed them in the strategies used by the experts in the various disciplines. To illustrate, in the psychology classes and biology classes the labs provided opportunities for problem solving and implementing specific strategies. In the business class that I observed, students used real problems and applied effective business strategies in solving them.

The private school environment was one of total immersion in meta-competence information and modeling of metacognitive strategies, as well as interdisciplinary and community problem posing and problem solving. Additionally, the goal of all instruction was to facilitate the students' creative production. While these factors were also present to a certain degree in the public school environment, I did not observe during any of my four field visits, nor did the students report, a commitment on the part of the institution as a whole to provide these to the gifted female at a level and in the style necessary to meet her particular learning needs. In effect, many of the students' perceptions of factors that negatively influence their perceived efficacy were the lack of the above factors in heterogeneously grouped, unchallenging classes.

Significant Themes and Constructs

Theme is an attempt to give focus and meaning to the encountered phenomenon through a process of insightful examination, discovery, and disclosure (van Manen, 1990). In the words of van Manen, "Theme describes an aspect of the structure of lived experience" (p. 87). In the course of the present study, certain thematic constructs appeared in all of the learning environments – albeit with differences in texture and semblance. It is precisely the emergence of those themes that suggests the need for a meta-analysis of the three environments and the efficacy information arising from them. Keeping in mind that to formulate themes, that is, to try to find meaning in this manner does not imply that the constructs can be reduced to a simplification or objectified as *found objects*. Rather, it is incumbent upon me to return once again to the data, to recollect them, and to describe the thematic threads *as they arise from those very data.*

Figure 5 illustrates significant concepts that emerged during the different phases of the study as they reflect the blending of elements implicit in self-efficacy, women's psychosocial development and the gifted female. Not all of the constructs were present in all environments and the constructs found in all of the environments presented themselves in differing degrees. Additionally, constructs contained different facets in different environments. Notwithstanding, it is significant to realize that this is a graphic simplification of a phenomenological complexity in which *all* constructs interact and influence one another in both mediating and moderating fashions. The following section examines the constructs and the cognitive, behavioral and environmental phenomena that interact within each of them.

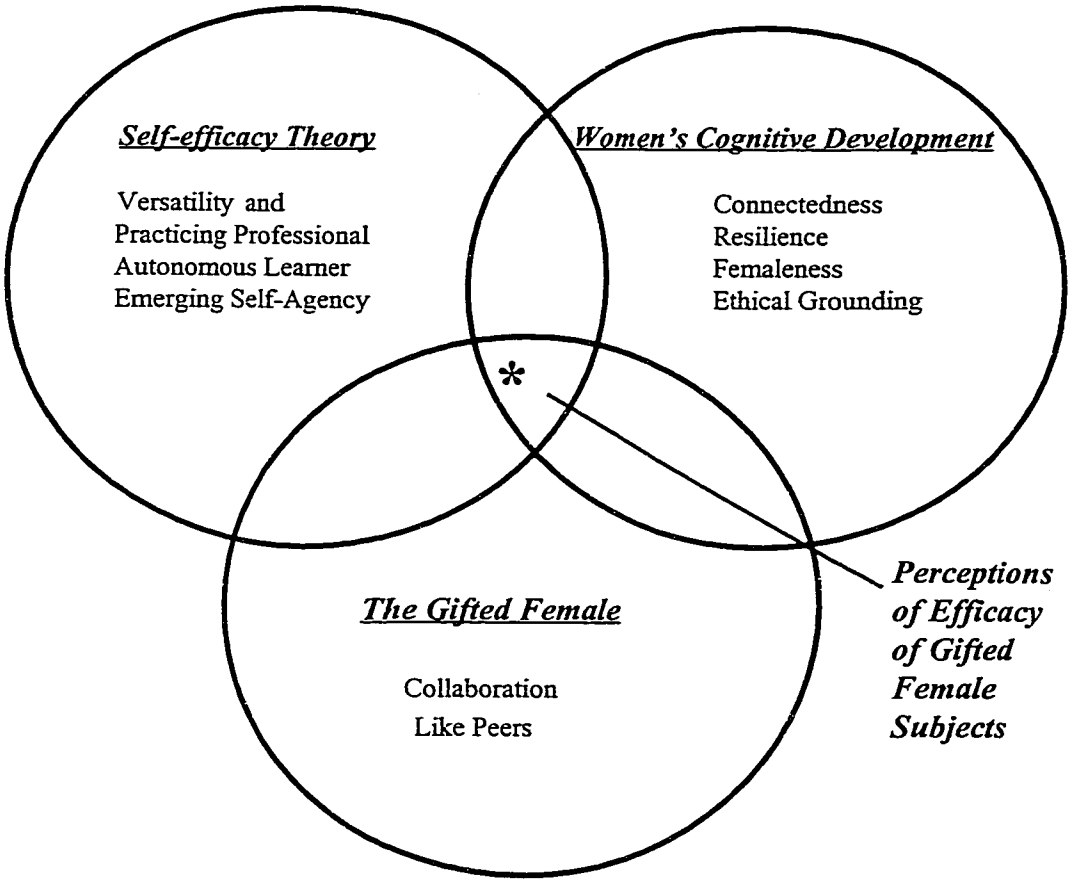


Figure 5: Significant Themes and Constructs

Self-Efficacy Theory

Versatility and Practicing Professional

The versatility of the students manifested itself in various ways. In the public school, the students presented themselves as not merely academic students; rather, they spoke of their involvement in athletics and extra-curricular activities. These, as well as their work experiences – on the family farm, at a veterinarian's office, and in a daycare center – provided them with life skills that enriched their repertoire of abilities.

In the bridging year academy and at the private school, most of the students had the opportunity to work as a practicing professional. Often this work involved authentic experiences in the field working with mentors who were experts in the field. For example, Malena (from the bridging year environment) worked during the summer as a volunteer in a hospital. She was part of the team of social workers and was supervised and assisted by experts. Eve (in the private school) spent time each week at the local public television station, as a member of the camera crew; and Heidi worked as a Hospice volunteer. Other students participated in summer enrichment camps on university campuses, performing research or enhancing their creativity through work in the fine and performing arts. All of these experiences, along with their experiences in the enriched university or private school environments, gave them a sense of versatility as practicing professional.

Autonomous Learner

The second chapter of this study established woman's psychological need to simultaneously develop her sense of self – also referred to as voice – while at the same time forging collaborative connections with others. This construct appears in the learning environments as a female autonomy. Miller (1986) described autonomy as becoming a

"separate and self-directed individual" (p. 95). Furthermore, she posited that "Women are quite validly seeking something more complete than autonomy as it is defined for men, a fuller not lesser ability to encompass relationships to others, simultaneous with the fullest development of oneself" (p. 95). These are the facets of the construct that were found in the young women in this study. They spoke of their need to feel autonomous, many times at the same time that they emphasized their need for close relationships with others. Their successes, indeed their abilities to function effectively in their environments, depended on their ability and their freedom to continually perform a dance of approach and distance. Miller remarked, "Personal creativity is a continuous process of bringing forth a changing vision of oneself, and of oneself in relation to the world" (p. 111). The students in the study were aware of their developing vision of self and for their need to personally create an autonomous self in relation with the world.

The perceived importance of being an autonomous learner appeared in all of the environments. In the public school Brenda expressed the concept as, "I feel most capable when I can understand and I can do it on my own; and I don't need anybody else to help me... when I feel sensible and I feel strong enough that I can do it on my own." Other students in this environment expressed the need to feel that their own efforts and abilities alone were a significant factor in their learning. For example, when Bridget solved a difficult math problem over several minutes and looked back on her work with satisfaction; when Darcie realized that she had demonstrated the expertise needed to affect the learning of one of her young charges at the daycare center; when Gail's responsibility and ability were recognized and she was left in charge of the farm, they all felt a sense of autonomous efficacy.

Autonomy in the bridging year academy manifested itself as an assiduous belief in self and a global sense of efficacy. Students were acutely aware of the autonomy and the self-agency they enjoyed in managing resources, in administering their energy and time, and in their efforts to achieve a balance between academics and connectedness. As autonomous learners, they separated themselves from their home and high school environments and set their own high standards of achievement. In Saundra's words,

> "I think a lot of it is that going to school in an environment where you're on your own, where you're living as well as going to school . . . it brings a focus on learning not only about classroom and about topics and stuff, but it's kind of just living in general."

Similarly, Malena affirmed, "It's up to me, and if I don't do something, then that's a lost opportunity." In related terms, Jacqueline spoke of the early realization that creating art is an intimate and private process that can't be totally shared with others.

The impulse toward autonomous learner manifested itself metacognitively in the private high school environment through the individual student learning about learning and about how she herself learned. Statements that reflected this self-awareness were like Vanessa's: "I learn the best when it's my language or when I can translate into my language. That's why I learn the best with a tutor or in a one-on-one situation, or a small class."

The public school student showed awareness of herself as an autonomous learner through her capabilities in different subject matters that were not integral to her self and psyche. The bridging year academy student was cognitively aware of self in relation to the world. The private school student was oriented more toward the mind and the way her mind knew, interpreted and developed.

Emerging Self-Agency

Assertiveness, instrumentality and interpersonal facility characterize the psychological construct of agency (Sollberg, Good, Fischer, Brown & Nord, 1995). Moreover, the individual who demonstrates capable human agency is self-protective, self-assertive and self-efficacious (Hawkins, 1983). As earlier reported, the gifted female in the bridging year environment had an incipient self-agency that reinforced her feelings of efficacy. She spoke of asserting herself and her needs to come to the bridging year school, often without support or understanding on the part of family members, friends or school personnel. She described having created a place and an environment that allows her to develop her abilities within a supportive network of friends and school staff. She demonstrated her personal instrumentality in her high quality of participation in classes and other activities at the school. This emergent self-agency merges with self-efficacy, and predictably will become the core around which the other constructs are clustered. It remains for more experience and hence individual maturity for this phenomenon to evolve, as displayed in the lives of eminent women (Leroux, 1997).

In the other two environments, the construct of self-agency is not as apparent. Even though in each of the environments the students indicated their belief in their academic abilities, any incipient self-agency that they might possess was still overshadowed by academic or metacognitive self-efficacy. While students in these two related their agential abilities as learners, they did not speak of themselves as agents that affected and had the potential to affect the more extensive community environment.

Women's Cognitive Development

Connectedness

The bridging year student celebrates being female and believes her emotions affirm her humanity and give her the greatest sense of efficacy when she uses her feelings to relate to others. Saundra said,

> "I don't think that women should feel like any of their qualities are weaknesses. It is often looked upon as women, you know, women should be soft and motherly and nurturing and caring and quiet . . . As far as emotions go, I don't think they should be looked upon as a weakness at all. Emotions are what make us, instead of being only the scientist or only the technician, they're what make us human beings . . . I mean, through the whole discussion that's been something that we've all been talking about. That we feel good about ourselves when we felt love and when we felt other people loved us also."

It was also in the bridging year environment that one of the findings of Brown and Gilligan (1992) – that of connected relationships between women and girls – emerged. Malena told me that she and Jacqueline were roommates who had very little in common and did not communicate much before their participation in the study. Since our collaboration she says that they and other students speak of how they have been changed by the opportunity to participate in the research. They even arrange reunions periodically, now that they are studying in separate universities. The questions and ideas that they pondered during the interviews and visits became the springboard for more growth and connectedness. As Brown and Gilligan (1992) reported, I also was changed and gained new perspectives on my own peers and choices through the experiences that the research offered.

In the private school the gifted young women related their need for connectedness to their metacognitive processes. When Eve spoke of her self-perceptions being grounded in her interactions with others, and her learning and behavior being forms of those interactions, all of

the students agreed eagerly. Heidi said, "I think that when something gets my attention, or I get interested in it, it will stay with me longer. Or I can relate it to some other thing and be able to think of that, it helps me remember things." Vanessa adds later, "I kind of use my own personal memories, like I always, I live in the past too much . . . But I kind of use what I'm learning and I apply it to what happened to me and kind of use the memory as the knowledge used for the future."

In all of the environments the students demonstrated their need for close, relational learning. The students in the bridging year and the private school environments felt supported in this need by the warm and supportive staff members in their environments. The public school students spoke of certain teachers who took a special interest in the students. This echoed Gallos' (1995) findings regarding the characteristics of ethical and caring environments. Without the special bridging year staff to support and nurture the students, the environment of the college of engineering and sciences where it was located would most likely have been overwhelming and difficult for the gifted female. As has been indicated in the literature the female gifted students learn best in an interactional and interpersonal way, as opposed to the need for mastery and competition that is norm and that mainly meets the needs of the male students.

Resilience

In the present study resilience is defined as the "capacity to recover from difficult emotional challenges and to establish a new foundation to adaptation" (Dixon, Hickey, & Dixon, 1992, p. 243). Baker (1996) wrote of the stress process of academically gifted adolescents, which entails an environmental event, a cognitive appraisal that the event was

beyond one's ability to cope, and a response – either physical or psychological. Jacqueline (in the bridging year environment) reflected this process when she explained,

> "There are so many men and they're all here for Engineering. And it's not a very diverse environment. I felt during my year here that it was something that I had to overcome. I had this feeling of overcoming the environment, yet another environment, helped with self-efficacy. Just because I think as a woman you face a lot of adversity and there's a lot of sexism."

In all of the environments I found the students to be resilient in varying degrees. The resilience demonstrated by the bridging year student was discussed in Chapter Five, and is reflected in Jacqueline's words in the previous paragraph. The students spoke of past coping with difficult home or school environments. Yet their self-belief was strong and they demonstrated their resilience in separating from that environment and forging a place for themselves in the sometimes difficult university environment.

In the private school, the students demonstrated resilience through their choice to leave public school educational environments that were detrimental to their individual growth and their adaptation to a new, metacognitive environment. In the public school, the students displayed incipient resilience in their refusal to feel less capable and less efficacious in the face of male peers and teachers who ignore their abilities and needs. They also showed that they continue to learn and to strive in an environment that is not necessarily designed to meet their needs as female learners.

Femaleness

Woman becomes self through creativity and authenticity (Miller, 1986). She finds authenticity through cooperation while at the same time risking the abandonment and condemnation of others. "Women often go on to create enhancing relationships, but if their goal is to secure the relationship *first* they often cannot find the beginning of the path" (p.

110). Thus women become acutely aware of their femaleness when they encounter autonomous self in relation to others. This construct becomes a metaphor for the blending of the previous two themes – autonomous learner and connectedness. The young women in the study had achieved the awareness of self as autonomous learner and it was through that strength that they were able to choose self in relation to others. To have sacrificed autonomous self for the sake of preserving connectedness would have meant their loss of voice, thus their loss of self. They would have remained trapped in the Silence of disconnection, as described by Belenky and colleagues (1986) and Brown and Gilligan (1992).

In the public school setting the participants were vexed by the unequal treatment of gifted females by the gifted males. They were resentful when their gifted male classmates chose to work with other boys who were not their intellectual peers instead of choosing to work with the gifted females in the class. They spoke of their need to both nurture and feel nurtured by relationships and the intellectual rejection they experienced was a rejection of an essential part of self.

The gifted women in the bridging year academy emphasized their femaleness as – at the very least – equal in importance to other characteristics. Saundra spoke earlier of the socially perceived weakness of emotions, and her belief that the empathic caring that sprang from emotions was what gave the students in that environment their greatest sense of efficacy. The bridging year students spoke about – and manifested in their actions – their belief in connecting, nurturing, communicating and interacting with others as females. They used their keen social skills for creative problem solving. Saundra said, "I think that is important in

feeling that you can communicate with people, touch other people, and basically relate to them."

The construct of femaleness as manifested in the gifted females in the private school took the form of their interest in learning through relationships – relationships with others in *Seminar*, with content through analogy, metaphor and their individual language, and with self in sacred, personal space. Toward the end of the second focus group interview Eve stated,

> "I think that there's a part of my conceptual framework that isn't in here and about like, escaping [Vanessa: "Yeah."] from areas. Like all these are about interaction or about doing a specific project, but I think that some of my time is spent trying to like, withdraw."

The need to connect, to withdraw, and to connect again is a theme found throughout the literature dealing with women's development (Gilligan, 1982; Heilbrun, 1988; Leroux & Butler-Por, 1996; Miller, 1986, 1994). As Miller (1986) described so clearly,

> Even a word like *autonomy*, which many of us have used and like, may need revamping for women. It carries the implication – and for women therefore the threat – that one should be able to pay the price of giving up affiliations in order to become a separate and self-directed individual. (p. 95)

The young women in this study have shown that they find their femaleness in relationships and find the strength to grow in autonomy by withdrawing into themselves and pondering the circumstances of their lives.

The present study furthers the understanding of women's development of these strengths that allow her to connect with self *and* with others. It is thus that she moves beyond received, subjective, and procedural knowledge and she constructs her personal knowledge of self-in-the-world (Belenky, Clinchy, Goldberger, & Tarule, 1986). Woman finds self through

authenticity and her authenticity through connection. Often this quest is achieved only through strong determination. Vanessa continued,

> "I have to really fight for that space in my life. Like if I want that, I have to really think about it to find the time that it will fit in. It's really hectic and I think that's one of the things that make me feel like I need that time more. When it feels like you don't have it at all. OK. I want some of my life for a little bit of time too."

Thus, an important part of the environment for our gifted young women is their own room – their private space. Rebecca adds, "I mean I don't really like people in my room without me being there. Because it's sacred." In order to find one's autonomy and to reflect on self and on one's connections, the female learner celebrates her female need to withdraw before re-entering the dance of self in relationship with others.

Ethical Grounding

Clarrissa Pinkola Estés (Wolfe, 1994) spoke of mystery in the Old Spanish definition of the word as "*that which can be seen when one's eyes and mouth are closed.* What startling images, sounds, ideas and motions can be detected with inner sight, inner hearing, and inner sensing. In this way *mystery* is not a description of an enigma. It is a description of a way of being" (p. 14). The way of being evoked by the students who participated in the study reflected their personal encounters with an innate sense of mystery that was apparent in a belief in their ethical responsibility toward others.

The gifted young women indirectly expressed a sensitivity that was manifested in their ethical grounding. They suggested their sense of awe of the mystery of life, of the connectedness they felt to each other and to their world, and of their commitment to make a significant contribution to their society. Their career goals – which demonstrate their femaleness as well as their commitment to social values – included (among others) medicine,

early childhood education, child psychology, research scientist, international relations, and social work. Additionally, the students reiterated throughout the study – and demonstrated through their intensity and the honesty of their words – their desire that this research benefit other gifted young women in the future.

There was little difference between environments in this regard. All of the students expressed a commitment to social justice. The only slight variation would be in the nuances of their sense of mystery. The most energized with the awesome nature of *mystery* were the bridging year students, who sensed more personal freedom than the students in the other two environments. As has been stated, each of the students in this environment expressed clearly that they believed themselves capable of accomplishing any of their goals. They explained that being in an environment where they had the freedom to self-actualize gave them a deep awareness of their ethical grounding.

The Gifted Female

Collaboration

Kanter (1983) described collaboration as, "a participative/collaborative style (that), in short, means that the leader interacts and listens . . .empowers team members" (p. 237). Harasim (1991) stated that "to collaborate is to co-labor. Learning theory and, in fact, business theory are recognizing that we are social animals and that we do things better when we work together . . . Collaborative learning means that we need a cooperative task structure, a shared object . . . emphasizing active participation" (p. 3).

In the public school environment the students perceived themselves as most efficacious in mathematics, and it was precisely in that class that I observed a participatory, collaborative

style of teaching and learning. The desks were arranged in pairs and students began the class by checking the assignment problems with their partners, with whom they had also solved some of the homework problems. Afterward, two students who had worked together demonstrated a sample problem on the blackboard and explained how they had arrived at the solution. During the class the instructor continued to nurture such collaboration and to include herself as a cooperative problem solver. Teaching and enriching others, positive reinforcement by teachers and peers (as I observed in the Gym class with Bridget), and the opportunity to develop close relationships in the small school environment, were all ways in which collaboration and connectedness formed an important part of the perceptions of efficacy of the public school gifted females.

In the bridging year environment the students spoke at length and often of the warm and supportive family environment created by the academy staff as an important part of their perception of capability. Malinda explained, "Here I have a lot of people to fall back on, like I have Malena, I have, you know, I have so many people here who are just willing to be there for me." Malena rejoined with her agreement as follows:

> "At home I didn't have a lot of emotional support or encouragement, and I was getting a lot of negative vibes and stuff. And it's like, I got here and it's really nice to have the emotional support here and I try to give that much back."

Like Peers

In each of the environments the need to study with like peers – students who were of similar abilities and motivation – appeared. In the public school, in heterogeneously grouped classes, participants spoke of the difficulty that they encountered with teachers who declined to carry through with challenging objectives when less capable or less motivated students ignored or failed to meet learning and homework expectations. The gifted young women in

that environment stated that they felt less capable in such classes, regardless of their high grades, believing that in the college environment they would be found lacking in those subjects. On the other hand, when a teacher set challenging expectations – as in their Mathematics and Chemistry classes – and worked with the class to ensure that all students applied themselves, they felt more efficacious. It must be noted that in the case of the upper-level math and science classes, there was a certain degree of homogeneous grouping of like peers. Due to the level of difficulty of the classes of this type, the more capable students chose to study them and the less able or less motivated students avoided them.

In the bridging academy environment, the students spoke of similar perceptions of their public school experiences. Their choice of the college environment was in large part made in order to study with more capable and more task-committed, motivated students. They commented that being in an environment with more able students reinforced their sense of efficacy. The private school students spoke of how the environment of like peers – especially its learning ethic, teachers and other students – enhanced their own feelings of self-efficacy. These students and their parents had selected this environment and its focus on thinking processes and therefore they found themselves in a setting in which all – teachers, students and staff – were invested in developing their metacognitive efficacy.

Revisiting the Literature

The present study reinforced many of the previous findings in the literature as characterized in the previous constructs. The study underscores the effectiveness of Bandura's construct of self-efficacy, and how gifted young women grow in their perception of academic and global self-efficacy through autonomous learning experiences that help them to grow in versatility as a practicing professional. These experiences promote the development of their

perceptions of self as agent, and agency has the potential of becoming the core construct in their future development and success.

In the area of women's psychosocial development, one finds that the study underscores the importance in the development of these young women of the many factors (see Figure 2.2) that have become descriptors of the especial ways that women develop their sense of self and create knowledge. These young women learn and grow through voice, communion, connection and relational knowing. This manner of learning has carried many of them beyond the phases of silence, received, subjective, and procedural knowledge. Behaviorally, they are self-constructors of knowledge, collaborative, socially responsible and grounded in and ethic of caring. They develop these qualities in inclusive environments that are supportive, ethical, collaborative, and experiential where their teachers and professors model these qualities and authentic inquiry.

With regard to the educational development of the gifted female (see Figure 2.3), these gifted young women contribute immensely to our knowledge of ways to assist their learning more efficaciously. They have a keen awareness of their abilities and refuse to attribute their success to luck, as is the case of many gifted females as reported in the literature. They show strong metacognitive awareness and social-emotional strength, reinforcing needs cited in the literature.

In contrast to much of the literature, these students did not indicate any tendency toward underachievement. Additionally, rather than avoiding math and sciences, they felt confident in their abilities in these disciplines. Above all these students were risk-takers, in contrast to the preponderance of findings in other studies.

Finally, this study underscores the importance of identification and programs for gifted students in general and gifted females in particular. The opportunities that many of the students had to work as practicing professionals were vital career exploration experiences. The mentors and role models in these experiences and in their learning environments also contributed to their sense of efficacy. Above all, they learned best in collaborative, supportive, learning environments that responded to their need for relational, connected, self-construction of knowledge.

Pedagogical Findings Across Environments

A factor in the public school that informs pedagogy is in the area of effective teaching. The subject at which the students in the public school felt most efficacious was Mathematics. As stated previously, the teacher combined all the traditional elements of effective teaching while at the same time creating a group of learners in which she became a collaborative learner with the others. She also cultivated the type of relational learning that the girls in all of the environments spoke of as being integral to their sense of efficacy. At the same time, there were several limitations at this site that inhibited the growth of self-efficacy among the girls. For example, even though the math teacher utilized a variety of collaborative techniques, she had not entirely abandoned the traditional, public school paradigm of teacher as deliverer of knowledge. The students reported that many of their classes were unchallenging, that teachers' methods and grading seemed arbitrary, and that they many times were the object of resentment or criticism from teachers and other students because of their participation in the gifted and talented program. In fact, the gifted coordinator said that often it was difficult for students to participate in GAT (gifted and talented program) activities due to the resistance of the math teacher whose class I visited.

The few classes that I observed in the bridging year environment, while well-delivered lectures sprinkled with questions to engage the learner, were of the traditional, lecture format in nature and did not reflect the research findings in the area of pedagogy of effective teaching. The students in the study spoke little regarding the effectiveness of the classes as being a factor that influenced their sense of efficacy, neither positively nor negatively. It would seem that their strong senses of efficacy and agency counteracted this limitation.

The private school informs the public school in the empowerment that is given to the students to choose and to authentically engage in their learning. Students spoke of bringing the real world into their studies, of being able to pursue what they really loved as a part of their curriculum at the school. They had a palpable sense of the power of educational choice that they enjoyed in that they could choose what to learn and that the choice to learn at all ultimately rested with them.

The in-depth, teacher as model of inquiry style of pedagogy that I observed in the private school responds to the constructive, collaborative seminars which Tarule (1996) described as a paradigm of teaching that directly responds to present day educational needs. She wrote,

> The emphasis in collaborative learning is on the social context of the classroom as a site for constructing knowledge. The accompanying pedagogical emphasis is on creating the conditions in which a particular kind of dialogue can flourish; a dialogue of definition, exploration, experimentation, and inquiry that constructs and reconstructs apprehension and understanding of the discipline(s) being studied. (p. 290)

The creative scheduling that allows this type of in-depth, individual inquiry is another way in which the private school may inform practice in the public school environment. The

private school students did not move from class to class on a forty to forty-five minute bell prompt. Unlike the public school students, they stayed within the same learning areas for most of the day, free to pick up on a thread from earlier discussions, to continue a debate or project that was in progress, and to study a subject in depth.

The students in the bridging academy were cognitive and affective risk takers and consequently were able to develop a strong sense of self-agency. The strength of self- agency observed in this cohort was not seen in either of the other two environments. Thus, the students in the other two schools could benefit from greater opportunity to individuate and to take risks. Such activities could take the form of college credit bearing courses, taught by university professors in the college environment when possible. More opportunities in the public school to work with mentors in authentic career situations would be beneficial to their sense of personal agency. As mentioned above, the opportunity to study with like peers, in a challenging environment that allows them a certain degree of cognitive choice and in-depth exploration has the potential for academic empowerment. Additionally, of all the environments, it was the bridging year that showed the most academic challenge. It responded to the fact that many gifted students show readiness for college level courses, taught by experts in the disciplines. It would behoove all of the environments to determine the need for challenge and enrichment in their gifted females and to plan and design their curricula accordingly.

Conclusion

This chapter presented a meta-analysis of the perceptions of efficacy of the gifted females, participants in the study, in three learning environments. Furthermore, it explored level, generality and strength of perceptions of efficacy among the participants. It investigated

the educational aspects of cognitive, behavioral, and environmental factors – as established in the literature – and how these interacted in the three learning settings. Finally, the chapter indicated and described the major themes that arose from the data and how these themes enhanced and otherwise affected students' perceptions of efficacy. Chapter Eight explores the implications of the study regarding education for efficacy of the gifted young female.

CHAPTER EIGHT

SUMMARY AND IMPLICATIONS

Introduction

> "Authenticity is an 'owning' of all experience, including emotions and thoughts that are not socially acceptable. Because self-esteem is based on the acceptance of all thoughts and feelings as one's own, girls lose confidence as they 'disown' themselves. They suffer enormous losses when they stop expressing certain thoughts and feelings." (Pipher, 1994, p. 38)

The above quote accentuates a major finding that emerged from the research – the gifted young females, participants in the study, find self through authenticity and their authenticity through connection with others. In their intimate conversations with friends, they express their emotions and perceptions. It is through this sharing of their authentic feelings that they see mirrored their own authenticity. If these connections are threatened, they risk losing touch with the authentic in themselves and in their relationships.

The previous chapters described and reported a study of twenty gifted young women and their perceptions. Through focus groups and observations in three environments – public high school, early college entrance program and private school – findings emerged that indicated that perceptions among the young women differed; and that the differences responded to cognitive and behavioral factors as well as to phenomena in the environments where they studied. Students in the public school reported efficacy perceptions of academic abilities. In the bridging year the students portrayed a global sense of self-efficacy as agent in their environment. The gifted young women in the private school indicated their self-perceptions of metacognitive efficacy. Furthermore, as reported earlier in this study, in each

of the environments the gifted females influenced significant changes in the educational setting. Schools created, modified or were planning new courses and programs that responded to the educational needs of these gifted learners. Additionally, significant themes and constructs appeared across environments. The students perceived themselves most efficacious as autonomous learners who nevertheless needed to feel connected to others (and to the material) in order to develop their abilities to the fullest. They were acutely aware of the need to blend autonomy with connection as fundamental elements in their ethical grounding as females. They demonstrated various levels of resilience in achieving that very femaleness, which led in some of the participants to a budding sense of self-agency. Finally, the opportunity to study with like peers and to work as a practicing professional reinforced their sense of efficacy. Other important findings were the significance of early recollections of brightness and the implications of the family constellation information.

All of the results as summarized above underscore the significant confluence of three distinct conceptual postures. Conclusions in the area of social cognitive learning are revealed through methodology that reflects a feminist and social construction of knowledge. And the application of facets of Individual Psychology – specifically the use of early recollections and information regarding positions in the family constellations – facilitate an understanding of cognitive and personal factors that reciprocally interact with environment and behaviors. In sum, the use of this posture assisted the qualitative rendering of the phenomena discovered in the environments.

This chapter will review and summarize the findings, explore their contribution to our understanding of gifted females, and highlight the educational implications of the study as well as of the methodology. The review reflects the three elements of the theoretical

framework – self-efficacy theory, theories of women's psychological development, and knowledge regarding gifted females. The chapter concludes with a section that addresses implications for research and pedagogy.

Contributions to Self-Efficacy Scholarship

Social Cognitive Learning theory posits that there is a constant, reciprocally determining, interaction among the cognitive/personal, behavioral and environmental factors in the individual's milieu. Bandura (1995) summarized the importance of self-efficacy – a central construct of Social Cognitive Learning – as follows:

> People make causal contributions to their own psychosocial functioning through mechanisms of personal agency. Among the mechanisms of agency none is more central or pervasive than people's beliefs or personal efficacy. Perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations. (p. 2)

All of the young women who participated in this study were knowledgeable of their high abilities prior to the study. They were all identified as gifted in either their present or previous school environments. All but one also reported early recollections of awareness of their intelligence. Thus, their awareness of ability became a determining personal factor that was behaviorally manifested in the form of academic achievement. The participants in the public high school displayed self-perceptions of efficacy predominantly in particular academic subjects. The students in the early college entrance program showed perceptions of self as a capable agent in their environment. The young women in the private school environment demonstrated strong perceptions of metacognitive efficacy. Furthermore, when considering the three environments together, the themes that were explored in the previous

chapter arose. The exploration of the themes led to a more accurate understanding of gifted young women's ways of knowing and developing.

Prior studies in the literature have indicated that, despite knowledge of their high abilities – as well as high academic achievement – gifted girls reported low perceptions of capability and low goals. For example, Callahan, Cunningham, and Plucker (1994) reported that of the five gifted adolescent females in their qualitative study, none attributed academic success to their ability. Kline and Short (1991), among others (Pipher, 1994, Reis & Callahan, 1996; Silverman, 1995), reported a decrease in able females' self-perceived abilities through adolescence. Inconsistent with these findings, the preponderance of the students in the present study indicated strong perceptions of ability, high academic achievement, and effective goal setting. In addition, many of the students reported strong perceptions of ability in math and sciences.

In effect, the learning environments in which the participants studied afforded key factors in reinforcing efficacious beliefs and behaviors. The effective, collaborative style of the math teacher in the public school elicited feelings of efficacy as reported by the gifted females in this study. The sense of challenge with support, which the bridging year students experienced, was influential in their self-belief. The private school student encountered an environment that responded to her learning styles and cognitive needs with small classes, tutors, and mentors.

Summarizing thus far, findings of the present study not only confirmed the importance of cognitive and personal influences on behavior and vice versa; they also emphasized the importance of the learning environment as a factor in the formation of self-perceptions. Different learning environments seemed to encourage different outcomes. Therefore, a

learning environment that gives importance to the division of knowledge into separate subjects promotes a perception of self as capable or incapable of being successful in those subjects. The young woman who studies in such an environment sets goals that are linked to subject domain; for example, child care in the case of the student in the early childhood program. An environment that provides the opportunity for students to learn at a challenging level in a supportive, nurturing environment on a university campus, influences the gifted young woman to develop a sense of self as an autonomous and caring individual, capable of acting on her environment. Finally, an environment that is designed to metacognitively empower the gifted female student to discover her own learning agenda in a small school environment that promotes trusting relationships among students, teachers, staff and community, encourages the development of metacognitive awareness of the individual's way of learning and relating to her world.

The importance of environments that respond to the learning needs of females is underscored in the literature (AAUW, 1992; Kolloff, 1996; Reis & Callahan, 1989; Silverman, 1995). Eccles' (1987) findings echo those described above. Her study reflects the need of gifted females for group experiences, hands-on problem solving and issues with which the learner can relate. Additionally, Manning, Glasner, and Smith (1996), reported the benefits of developing metacognitive process skills and strategies in the gifted learner. The advantages of modifying the educational environment to respond to the learning needs of the gifted female are evident in the findings of the present study.

The facets of efficacy as evidenced in this study are valuable to the development of the female gifted student. She needs to feel capable of learning subject matter. She needs to be aware of herself as capable of acting on her environment. She needs to become aware of how

she thinks, how she learns, and how she can develop her thinking to best suit her style of knowing. Implicit in these statements is the need for researchers to continue to explore learning contexts, with the aim of designing learning contexts in which gifted females can be academically, agentially, and metacognitively efficacious.

Another implication that arose from the findings of the present study is the construct of emergent self-agency. In a study of eminent Canadian women (Leroux, in press) the core psychological factor in the achievement of the women was a strong sense of self-agency. The women were assertive, they were instruments in their environments, and demonstrated keen interpersonal abilities, all characteristics of agency (Sollberg, Good, Fischer, Brown & Nord, 1995). Their strong, global self-efficacy was a contributing factor to their agency.

In the present study the core construct of self-efficacy is influenced by the other themes and constructs as discussed in Chapter Seven. In the bridging year environment the gifted female students displayed a strong, global sense of efficacy which was primarily influenced by their strength of agency. Self-agency did not appear as a strong construct in either of the other environments. An implication of this phenomenon for future research is to examine the development of self-agency in gifted young females in order to determine its importance in their future psychosocial development and achievement.

Women's Psychological Development

Chapter Two established the literature base regarding women's psychosocial development. Women come to know themselves and their world through collaboration, voice and relationships (Belenky, Clinchy, Goldberger & Tarule, 1986; Brown & Gilligan, 1992; Gilligan, 1982; Gilligan, Lyons & Hanmer, 1990; Miller, 1986; Pipher, 1994). Consequently, because they many times understand *self* through *others*, they develop an ethic

of caring that is manifested in their empathy and collaboration. The cited researchers emphasized that the adolescent female is at risk of delaying or not achieving her potential psychosocial development due to the perceived need to silence her voice in order to sustain connected relationships. The gifted young females who participated in this study celebrated their voice and their connections. They demonstrated in word and in behavior that to sacrifice voice would be to sacrifice their reflection, their authenticity and their development through relationships. In this sense, the students both confirmed previous findings in the literature and demonstrated that their firm perceptions of efficacy were crucial to their sustaining voice. This phenomenon also confirmed Mercer and colleagues (Mercer, Nichols & Doyle, 1989) recommendation that during this important Launching into Adulthood/Breaking Away transition toward autonomy and individuation the interaction with and affirmation that females experience from the contextual environment are crucial. Furthermore, the caring and collaborative environment that was observed in the private school and the familial, supportive environment of the bridging year academy speak to Gallos' (1995) call for college environments that are responsive to women's learning needs in which the teacher as model of inquiry creates an environment that is inclusive, supportive and collaborative.

The Gifted Female

The twenty young women who participated in this study appeared poised and ready to begin adulthood. The students in the public school reflected many of the risks of underachievement that were discussed in the literature (Callahan, 1986; Callahan, Cunningham & Plucker, 1991; Handel, 1994; Kerr, 1994; Reis & Callahan, 1996; Silverman, 1995). They were very dependent on subject matter efficacy, were not able to process metacognitively to the same degree as the students in the other two environments, showed

evidence of being stalled in Received Knowledge (Belenky, et. al., 1986), and were unable to perceive self as an agent who constructs knowledge and acts on that knowledge to affect change. For these reasons they are the most at risk of not achieving to their potential. It was the bridging academy student – and the student in the private school to some extent – who demonstrated many of the factors that Kerr (1994) described as meaningful for success in historically eminent women. The students cherished time alone, showed an awareness of their unique abilities, were responsible, were committed to hard work, and refused to acknowledge any limitations of gender. As was previously mentioned, most of the themes and constructs that Leroux (in press) found in her study of eminent Canadian women also appeared in the young gifted females in the present study (see Figure 5). They were versatile and collaborative, while at the same time they felt a deep sense of autonomy. They were resilient and also grounded in an ethic of caring. Above all they cherished their close relationships with others and celebrated their femaleness. A continued development of these factors over the college career and early professional years would lead to a growing awareness of their self-agency. It also would suggest that the students would not be as at risk for underachievement as has been found in much of the literature (Arnold, 1992; Reis, Callahan & Goldsmith, 1994; Walker & Mehr, 1992; Reis & Callahan, 1996).

To conclude this section, gifted females have long been identified as at risk for not realizing their academic and career potential. This study revolved around the following questions and findings:

- **In what ways do gifted young women perceive themselves as academically efficacious in particular educational settings?**

The perceptions of academic efficacy among gifted females differ. Some may report subject matter efficacy. Others perceive themselves as able in the realm of metacognitive, process efficacy. Others possess a sense of global efficacy that leads to a growing awareness of individual agency.

- **What are the factors in the educational setting that gifted females perceive as influencing their academic self-efficacy?**

Educational environments affect students' perceptions of efficacy in various ways. Settings that focus on subject matter may result in perceptions of subject matter efficacy. This type of efficacy does not address the gifted female's needs for metacognitive, process skills that will help her to make connections and relationships in her knowledge. An educational setting in which the focus is on subject matter may also delay the gifted females' cognitive growth from Received Knowledge to Procedural or Constructed Knowledge. Additionally, by continuing to believe that knowledge is received, rather than constructed, the gifted female may not develop a sense of self as agent in the world.

On the other hand, educational environments that are challenging, supportive and collaborative respond to the psychosocial needs of the gifted female in allowing her the opportunity to discover self in voice and in relationship with others and in allowing for the development of agency. Additionally, settings that provide for the development of metacognitive skills respond to the need of gifted learners – and all learners – to develop an awareness of one's thinking and how to refine and to improve one's thinking.

Methodology: Social Construction of Knowledge

The students in this study were articulate, sincere, and socially committed. They took great pains to deliver their meaning in a manner that I as researcher, and the other participants as collaborators in the process, could understand. They spoke often of the need for educators to understand the particular ways of learning and interacting in the educational context. The very last sentence I heard from one of the participants at the close of hours of group and individual interviews, observations and visits to the sites was, "I really do hope that this helps others like me." This was a desire that I heard many times during the study. The richness of their thoughts and voices resonates throughout the findings in large part due to the methodology process that gave them the opportunity to discover, refine, and affirm their meaning.

The research design for the study (see Figure 4) reflects what Goldberger (1996) called an "emphasis on *individuals-in-communities*" (p. 14, italics in original). The data gathering entailed convening focus groups, close observation, the construction of a narrative of the preliminary findings, which was then followed by another focus group in which the students responded to and clarified their thoughts and beliefs regarding the narrative. Thus the design afforded collaboration among members of each group of participants as well as between researcher and participant. Not only does the design permit the social cognitive researcher to investigate the interactions of cognition, behavior and environment, such a design is also a significant contribution to the social construction of knowledge. Goldberger explained,

> Knowing is not insular. How one knows is multiply determined within the array of relationships that define the self. Meaning making is not a solitary pursuit, but is interactional and negotiable; that it, knowledge is co-constructed. Persons are

"situated" in communities of knowers in which the dynamics of power and status are often controlling factors in how one knows and what one knows. (p. 14-15)

In the interest of improving the body of research related to the education of gifted females, Reis and Callahan (1996) sound the ongoing need for research on the effects and efficacy of curricula and programming for these learners. Specifically, they concluded that, "What is needed is more research on the impact and effectiveness of various types of interventions and programs for this population" (p. 443). The present study provides a method of soliciting this type of information from the learners themselves, empowering them as participants in the dance of inquiry.

Educational Implications of the Research

By empowering students both metacognitively and collaboratively educators will improve the likelihood that students will develop strong self-perceptions of academic efficacy. Gifted students – and the gifted female in particular – respond to environments in which they have an opportunity to work with challenging material with peers of similar interests and abilities. Educational environments should also respond to the need for the gifted females – and others – to enhance and develop an ethic of caring.

The gifted female will benefit from settings where she is free to develop a sense of autonomy as learner while at the same time feeling connected through relationships with peers and teachers who are models of inquiry. Inclusive classrooms that celebrate her femaleness and versatility, as well as the special attributes of all, will instill in all students a sense of worth and agency. Finally, the opportunity to work as a practicing professional with mentors and role models is a strong means of developing efficacy for the future beyond the classroom.

Two other implications for future research that arose from the data are the importance of early recollections and one's position in the family constellation. Educators can gain valuable insight into students' present perceptions of giftedness by asking them to share early recollections of their abilities. Such recollections can indicate to educators subtle nuances regarding students' self-perceptions that may not be apparent through observation.

Further research is needed regarding the gifted female's perceived position in the family constellation and what effect such perceptions may have on the construct of self-efficacy, on behavior, and on academic achievement. The predominantly later-born girls in the public school environment exhibited no indications of self-perception as firstborn children. Are there findings in that environment that reveal a more traditional, less achievement oriented perspective on the part of the students a result of birth order, other family constellation phenomena, the learning environment, individual characteristics? Or could the findings be a result of the interaction of some or all of these factors? Conversely, are the students in the bridging year environment who showed strong global self-efficacy and significant perceptions of self-agency demonstrating perceived firstborn perceptions and behaviors? The unexpected prevalence of either later-born females – as was the case in the public school, and firstborns in the bridging year academy lends strong support to the importance and influence of birth order information in the study.

Conclusion

The particular learning environments of gifted young women cogently influence their perceptions of efficacy. This study explored the perceptions of gifted young women, their efficacy behaviors, and the influences of their learning environments on those perceptions. The qualitative phenomenological methodology allowed for the emergence of common

themes and constructs across environments. It remains for future research to explore the psychosocial development as well as curricular programming for the gifted young female.

REFERENCES

Adams, C. M. (1996). Gifted girls and science: Revisiting the issues. Journal of Secondary Gifted Education, 7, 447-458.

Adler, A. (1980). What life should mean to you. New York: Perigree Books.

American Association of University Women. (1990). Shortchanging girls, shortchanging America. Washington, DC: American Association of University Women Educational Foundation.

American Association of University Women (1992). How schools shortchange girls. Washington, DC: American Association of University Women.

Anderson, M. L. (1993). Studying across difference: Race, class, and gender in qualitative research. In J. H. Stanfield II,& R. M. Dennis (Eds.), Race and ethnicity in research methods (pp. 39-52). Newbury Park, CA: Sage Publications.

Ansbacher, H. (1947). Adler's place in the psychology of memory. Journal of Personality, 15, 197-207.

Arnold, K. D. (1992). Undergraduate aspirations and career outcomes of academically talented women: A discriminant analysis. Roeper Review, 15, 169-175.

Atkinson, P. (1990). The Ethnographic imagination: Textual construction of reality. New York: Routledge.

Baker, J. A. (1996). Everyday stresses of academically gifted adolescents. Journal of Secondary Gifted Education, 7, 356-368.

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1982). Self-efficacy mechanism in human agency. American Psychologist, 37, 122-147.

Bandura, A. (1983). Temporal dynamics and decomposition of reciprocal determinism: a reply to Phillips and Orton. Psychological Review, 90, 156-160.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. Developmental Psychology, 25, 725-735.

Bandura, A. (Ed.). (1995). Self-efficacy in changing societies. New York: Cambridge University Press.

Bandura, A. & Cervone, D. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. Journal of Personality and Social Psychology, 45, 1017-1028.

Barrett, D. (1980). The first memory as a predictor of personality traits. Journal of Individual Psychology, 36, 136-149.

Bateson, M. C. (1994). Peripheral Vision: Learning along the way. New York: Harper Collins.

Belenky, M. F., Clinchy, B. M., Goldberger, N. R. & Tarule, J. M. (1986). Women's ways of knowing: The development of self, voice, and mind. New York: Basic Books.

Berger, M. B. (Ed.). (1994). Women beyond Freud: New concepts in feminine psychology. New York: Brunner/Mazel Publishers.

Betz, N. E. (1992). Counseling uses of career self-efficacy theory. Career Development Quarterly, 41, 22-26.

Bland, L. C., Sowa, C. J., Callahan, C. M. (1994). An Overview of resilience in gifted children. Roeper Review, 17, 77-80.

Blustein, D. L. (1989). The Role of goal instability and career self-efficacy in the career exploration process. Journal of vocational behavior, 35, 194-203.

Bouffard-Bouchard, T., Parent, S. & Larivée, S. (1993). Self-regulation on a concept-formation task among average and gifted students. Journal of Experimental Child Psychology, 56, 115-134.

Branch, L. E. & Lichtenberg, J. W. (1987). Self-efficacy and career choice. (ERIC Document Reproduction Service No. ED 289 106)

Brophy, J. (1998). Motivating students to learn. Boston, MA: McGraw Hill.

Brody, L. E. and Stanley, J. C. (1991). Young college students: assessing the factors that contribute to success. In W. T. Southern & E. D. Jones (Eds.), The Academic acceleration of gifted children (pp. 102-132). New York: Teachers College Press.

Brown, L. M. & Gilligan, C. (1992). Meeting at the crossroads: Women's psychology and girls' development. New York: Ballantine Books.

Brown University (1996, December). Coalition of Essential Schools. [On-line] Available: http://home.aisr.brown.edu/ces/.

Bruner, J. (1990). Acts of meaning. Cambridge, MA: Harvard University Press.

Bussey, K. & Bandura, A. (1992). Self-regulatory mechanisms governing gender development. Child Development, 63, 1236-1250.

Callahan, C. M. (1986). The special needs of gifted girls. Journal of Children in Contemporary Society, 18, 105-107.

Callahan, C. M., Cunningham, C. M., Plucker, J. A. (1991). Foundations for the future: The socio-emotional development of gifted, adolescent women. Roeper Review, 17, 99-105.

Clifford, J. & Marcus, G. E. (Eds.) (1986). Writing culture: The Poetics and politics of ethnography. Berkeley, CA: University of California Press.

Cohen, D. (1985). Do first and later borns agree with psychologists? (ERIC Document Reproduction Service No. ED 253 812)

Cornell, D. C., Callahan, C. M., Bassin, L. E. and Ramsay, S. G. (1991). "Affective development in accelerated students." In W. T. Southern & E.D. Jones (Eds.), The Academic acceleration of gifted children, pp. 74-101. New York: Teachers College Press.

Cornell, D. G., Callahan, C. M., & Lloyd, B. H. (1991). Socioemotional adjustment of adolescent girls enrolled in a residential acceleration program. Gifted Child Quarterly, 35, 58-66.

Crombie, G., Bouffard-Bouchard, T., & Schneider, B. (1992). Gifted programs: Gender differences in referral and enrollment. Gifted Child Quarterly, 36, 213-214.

Cross, S. E. & Markus, H. R. (1994). Self-schemas, possible selves and competent performance. Journal of Educational Psychology, 86, 423-438.

Diedrick, P. (1988). Male and female self-esteem: An investigation of worth and efficacy. (ERIC Document Reproduction Service No. ED 301 807)

Dixon, J. P., Hickey, M. & Dixon, J.K. (1992). A Causal model of the way emotions intervene between creative intelligence and conventional skills. New Ideas in Psychology, 10, 233-251.

Duchein, M. A. & Mealey, D. L. (1993). Remembrance of books past. . . long past: Glimpses into aliteracy. Reading Research and Instruction, 33, 13-28.

Duranti, A. & Goodwin, C. (Eds.). (1992). Rethinking context: Language as an interactive phenomenon. Cambridge, MA: Cambridge University Press.

Eccles, J. (1987). Gender roles and women's achievement-related decisions. Psychology of Women Quarterly, 11, 135-171.

Ellis, J. (1993). Supporting giftedness in girls in the classroom. (ERIC Document Reproduction Service No. ED 371 555)

Englert, A. M. & Tomlinson-Keasey, C. (1987). Competence and self-efficacy among the gifted. Gifted International, 4 (1), 8-13.

Feldhusen, J. F., & Willard-Holt, C. (1996). Gender differences in classroom interactions and career aspirations of gifted students. Mensa Research Journal, 37, 34-42.

Fine, M. (1994). Working the hyphens: Reinventing self and other in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.) Handbook of qualitative research (pp. 70-82). Thousand Oaks, CA: Sage Publications.

Folio VIEWS: Personal electronic publishing software. (1993). Provo, UT: Folio Corporation.

Ford, D.Y. (1995). Desegregating gifted education: A need unmet. Journal of Negro Education, 64 (1), 52-62.

Ford, D. Y., Harris, J. J., Webb, K. S. & Jones, D. L. (1994). Rejection or confirmation of racial identity: A dilemma for high-achieving blacks? The Journal of Educational Thought, 28, (1), 7-31.

Gallos, J. (1995). Gender and silence: Implications of women's ways of knowing. College Teaching, 43, 101-105.

Garcia, T., Lissi, M. R., Egan-Dowdy, K., Davila, C., Matula, J. S., Harris, C. L. (1995). Gender and ethnic differences in college students' academic possible selves. (ERIC Document Reproduction Service No. ED 383 253)

Garrison, L. (1993). Professionals of the future: Will they be female? Will they be ethnically diverse? Roeper Review, 15, 161-164.

Gianakos, I. (1995). The relation of sex role identity to career decision-making self efficacy. Journal of Vocational Behavior, 46, 131-143.

Gillespie, D., & Hillman, S. B. (1993). Impact of self-efficacy expectations on adolescent career choice. (ERIC Document Reproduction Service No. ED 360 572)

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

Gilligan, C. (1994). Joining the resistance: Psychology, politics, girls and women. In M. B. Berger (Ed.), Women beyond Freud: New concepts in feminine psychology (pp. 99-145). New York: Brunner/Mazel Publishers.

Gilligan, C., Lyons, N. P., & Hanmer, T. (1990). Making connections: the Relational worlds of adolescent girls at Emma Willard School. Cambridge, MA: Harvard University Press.

Goldberger, N. R. (1996). Looking backward, looking forward. In N. R. Goldberger, J. M. Tarule, B. V. Clinchy, & M. F. Belenky (Eds.), Knowledge, difference, and power: Essays inspired by *Women's ways of knowing*. New York: Basic Books.

Goldberger, N. R., Tarule, J. M., Clinchy, B. V.,& Belenky, M. F. (Eds.), Knowledge, difference, and power: Essays inspired by *Women's ways of knowing*. New York: Basic Books.

Grantham, T. C., & Ford, D. Y. (1996, November). Danisha: A case study of a gifted underachieving black female: Implications, recommendations, and conclusions. Paper presented at the annual meeting of the National Association for Gifted Children, Indianapolis, IN.

Greene, J.C. (1994). Qualitative program evaluation: Practice and promise. In N. K. Denzin & Y. S. Lincoln (Eds.) Handbook of qualitative research (pp. 530-534). Thousand Oaks, CA: Sage Publications.

Hall, A.S. & Kelly, K.R. (1995). Effects of academic achievement, sex, and community of residence on four types of career indecision. Journal of Secondary Gifted Education, 7, 293-302.

Handel, R. D. (1994). Gifted women scientists: voices of mothers and daughters. Gifted Education International, 9, 172-176.

Harasim, L. (1991). Collaborative learning in higher education. In Collaborative learning in higher education: Proceedings of the Teaching Conference. Bloomington, IN: Indiana University.

Harrison, T. R. & Monroe, N. L. (1986). Understanding gifted adolescents and meeting their cognitive and emotional needs through school counseling. (ERIC Document Reproduction Service No. ED 020 387)

Hawkins, B. (1983). Agency and communion: An alternative to masculinity and femininity. (ERIC Document Reproduction Service No. ED 243 051)

Heilbrun, C.G. (1988). Writing a woman's life. New York: Ballantine Books.

Hillman, S. J. (1986). Measuring self-efficacy: preliminary steps in the development of a multi-dimensional instrument. (ERIC Document Reproduction Service No. ED 271 505)

Hollinger, C. L. (1991). Facilitating the career development of gifted young women. Roeper Review, 13, 135-139.

Hollinger, C. L. & Fleming, E. S. (1988). Gifted and talented young women: Antecedents and correlates of life satisfaction. Gifted Child Quarterly, 32, 254-260.

Hollinger, C. L. & Fleming, E. S. (1992). A Longitudinal examination of life choices of gifted and talented young women. Gifted Child Quarterly, 35, 207-212.

Hollinger, C. L. & Fleming, E. S. (1993). The Emerging roles of careers of gifted women. Roeper Review, 15, 156-160.

Holstein, J. A. & Gubrium, J. F. (1994). Phenomenology, ethnomethodology, and interpretive practice. In N. K. Denzin & Y. S. Lincoln (Eds.) Handbook of qualitative research (pp. 262-272). Thousand Oaks, CA: Sage Publications.

Ingersoll, K. S. & Cornell, D. G., (1995). Social adjustment of female early college entrants in a residential program. Journal for the Education of the Gifted, 19, (1), 45-62.

Janesick, V. J. (1994). The dance of qualitative research design: Metaphor, methodolatry, and meaning. In N. K. Denzin & Y. S. Lincoln (Eds.) Handbook of qualitative research (pp. 209-219). Thousand Oaks, CA: Sage Publications.

Jarvis, P. (1992). Paradoxes of learning: On becoming an individual in society. San Francisco: Jossey-Bass.

Josselson, R. (1987). Finding herself: Pathways to identity development in women. San Francisco, CA: Jossey-Bass.

Junge, M. E. & Dretzke, B. J. (1995). Mathematical self-efficacy gender differences in gifted/talented adolescents. Gifted Child Quarterly, 39, 22-38.

Kanter, R. (1983). The change masters: Innovation and entrepreneurship in the American corporation. New York: Simon and Schuster.

Kelly, K. R. (1993). The relation of gender and academic achievement to career self efficacy and interests. Gifted Child Quarterly, 37, 59-63.

Kerr, B. A. (1994). Smart girls Two: A new psychology of girls, women and giftedness. Dayton, OH: Ohio Psychology Press.

Kirby, C. & Newlon, B.J. (1986). Career aspirations of gifted Canadian secondary school females. (ERIC Document Reproduction Service No. ED 322 406)

Klein, A. G. & Zehms, D. (1996). Self-concept and gifted girls: A cross sectional study of intellectually gifted females in grades 3, 5, 8. Roeper Review, 19, 30-33.

Kline, B.E., & Short, E.B. (1991). Changes in emotional resilience: Gifted adolescent females. Roeper Review, 13, 118-121.

Kolloff, P.B. (1996). Gifted girls and the humanities. Journal of Secondary Gifted Education, 7, 486-492.

Lent, R.W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. Journal of Vocational Behavior, 45, 79-122.

Leroux, J. A. (1988). Voices from the classroom: Academic and social self-concepts of gifted adolescents. Journal for the Education of the Gifted, 10, 3-18.

Leroux, J. A. (1992). Coping strategies of successful Canadian women. (ERIC Document Reproduction Service No. ED 303 134).

Leroux, J. A. (1994). A tapestry of values: Gifted women speak out. Gifted Education International, 9 , 167-171.

Leroux, J. A. & Butler-Por, N. (1996). Keeping faith in ourselves: A comparative study of Canadian and Israeli women's perceptions of their achievement. Gifted and Talented International, 11, 16-21.

Leroux, J. A. & Kolensinski, M. (1997, August). Solving problems with our hearts: Cross-cultural perceptions of gender at school and at home. Paper presented at the 12th World Conference of the World Council for Gifted and Talented Children, Seattle Washington.

Light, R. (1990). Explorations with students and faculty about teaching, learning, and student life: The first report. Cambridge, MA: The Harvard University Assessment Seminars.

Lincoln, Y. S. & Guba, E. G. (1985). Naturalistic Inquiry. Beverly Hills, CA: Sage Publications.

Locke, E. A., Frederick, E., Lee, C., & Bobko, P. (1984). Effect of self-efficacy, goals, and task strategies on task performance. Journal of Applied Psychology, 69, 241-251.

Lovecky, D.V. (1996). Creative connections: Perspectives on female giftedness. Mensa Research Journal, 37, 5-16.

Lorraine, T. E. (1990). Gender, identity, and the production of meaning. Boulder, CO: Westview Press.

Manning, B.H., Glasner, S. E., & Smith, E. R. (1996). The Self-regulated learning aspect of metacognition: A component of gifted education. Roeper Review, 18, 217-223

Mercer, R.T., Nichols, E.G., & Doyle, G. (1989). Transitions in a woman's life: Major life events in developmental context. New York: Springer.

Miller, J. B. (1986). Toward a new psychology of women (2nd ed.). Boston, MA: Beacon Press.

Miller, J.B. (1991). The development of women's sense of self. In J.V. Jordan, A.G. Kaplan, J.B. Miller, J. P. Stiver & J.L. Survey (Eds.), Women's growth and connection (pp. 11-26). NY: Guilford Press.

Miller, J. B. (1994). Women's psychological development: Connections, disconnections and violations. In M. B. Berger (Ed.), Women beyond Freud: New concepts in feminine psychology (pp. 79-97). New York: Brunner/Mazel Publishers.

Merleau-Ponty, M. (1962). Phenomenology of perception (C. Smith, Trans.) New York: Humanities Press. (Original work published in 1962).

Miles, M. B. & Huberman, A. M. (1994). Qualitative data analysis. (2nd ed.). Thousand Oaks, CA: Sage Publications.

Mone, M. A. (1994). Comparative validity of two measures of self-efficacy in predicting academic goals and performance. Educational and Psychological Measurement, 54, 516-529.

Morawski, C. M. (1993). Early recollections of learning to read: Implications for prevention and intervention of reading difficulties. Reading, Research and Instruction, 32, 35-48.

Morawski, C. & Brunhuber, B. (1993). Early recollections of learning to read: Implications for prevention and intervention of reading difficulties. Reading Research and Instruction, 32 (3), 35-48.

Morgan, D.L. (1988). Focus groups as qualitative research. Newbury Park, CA: Sage Publications.

Navan, J. L. (1993). A writers' collaborative: The effects of collaborative learning on perceived self-efficacy. Proceedings of the 1993 Conference of the Ontario Educational Research Council.

Nevill, D. D. & Schlecker, D. I. (1988). The relation of self-efficacy and assertiveness to willingness to engage in traditional/nontraditional career activities. Psychology of Women Quarterly, 12, 91-98.

Noble, K. D. (1987). The Dilemma of the gifted woman. Psychology of Women Quarterly, 11, 367-378.

Noble, K. D. (1989). Counseling gifted women: Becoming the heroes of our own stories. Journal for the Education of the Gifted, 12, 131-141.

Noble, K.D. & Smyth, R.K. (1995). Keeping their talents alive: Young women's assessment of radical, post-secondary acceleration. Roeper Review, 18, 49-53.

Nommay, D. E. (1988). The Effects of family structure on intelligence and academic achievement. (ERIC Document Reproduction Service No. ED 299 493).

Oleson, V. (1994). Feminism and models of qualitative research. In N.K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 158-174). Thousand Oaks, CA: Sage Publications.

Olson, C. B. (1988). The Influence of context on gender differences in performance attributions: Further evidence of a "Feminine Modesty" effect. (ERIC Document Reproduction Service No. ED 299 499).

Olszewski-Kubilius, P. (1995). A Summary of research regarding early entrance to college. Roeper Review, 18, 121-126.

Pajares, F. & Johnson, M.J. (1995) The role of self-efficacy beliefs in the writing performance of entering high school students: A path analysis. (ERIC Document Reproduction Service No. ED 384 049).

Pajares, F. & Miller, M. D. (1994). Role of self-efficacy and self-concept beliefs in mathematical problem solving: A path analysis. Journal of Educational Psychology, 86, 193-203.

Personal Narratives Group (Eds.). (1989). Interpreting women's lives. Bloomington, IN: Indiana University Press.

Phelps, C. E. (1991). Identity formation in career development for gifted women. Roeper Review, 13, 140-141.

Phillips, A.S. & Phillips, C.R. (1994). Birth order and achievement attributions. Individual Psychology, 50, 119-124.

Pintrich, P. R. & DeGroot, E. V.(1990). Motivational and self-regulated learning components of classroom academic performance. Journal of Educational Psychology, 83, 33-40.

Pintrich, P. R., Roeser, R. W., DeGroot, E. A. M. (1994). Classroom and individual differences in early adolescents' motivation and self-regulated learning. Journal of Early Adolescence, 14, 139-161.

Pipher, M. B.(1994). Reviving Ophelia: Saving the selves of adolescent girls. New York: Putnam.

Psathas, G. (1995). Conversation analysis: The Study of talk-in-interaction. Thousand Oaks, CA: Sage Publications.

Punch, M. (1994). Politics and ethics in qualitative research. In N.K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp. 83-97). Thousand Oaks, CA: Sage Publications.

Reilly, J. M. & Welch, D. M. (1995). Mentoring gifted young women: A call to action. Journal of Secondary Gifted Education, 6, 120-128.

Reinharz, S. (1992). Feminist methods in social research. New York: Oxford University Press.

Reis, S. M. & Callahan, C. M. (1996). My boyfriend, my girlfriend, or me: The dilemma of talented teenage girls. Journal of Secondary Gifted Education, 7, 434-446.

Reis, S. M., Callahan, C. M., & Goldsmith, D. (1994). Attitudes of adolescent gifted girls and boys toward education, achievement, and the future. Gifted Education International, 9, 144-151.

Renzulli, J. (1986). The three-ring conception of giftedness: A developmental model for creative productivity. In R. Sternberg & J. Davidson (Eds.). Conceptions of giftedness, (pp. 51-92). New York: Cambridge University Press.

Renzulli, J. S. & Reis, S. M. (1985). The Schoolwide enrichment model: A comprehensive plan for educational excellence. Mansfield Center, CT: Creative Learning Press, Inc.

Rodenstein, J. M. & Glickauf-Hughes, C. (1977). Career and lifestyle determinants of gifted women. (ERIC Document Reproduction Service No. ED 194 689)

Schack, G. (1986a). Self-efficacy for creative productivity. (ERIC Document Reproduction Service No. ED 271 494)

Schack, G. (1986b) Creative productivity and self-efficacy in gifted children. (ERIC Document Reproduction Service No. ED 307 732)

Schack, G. (1989). Self-efficacy as mediator in the creative productivity of gifted children. Journal for the Education of the Gifted, 12, 231-249.

Scheye, P.A. & Gilroy, F. D. (1994). College women's career self-efficacy and educational environments. Career Development Quarterly, 42, 244-251.

Schunk, D. E. (1985). Self-efficacy induction through modeling. (ERIC Document Reproduction Service No. ED 261 805)

Schunk, D. E. (1993a). Enhancing strategy use: Influences of strategy value and goal orientation. (ERIC Document Reproduction Service No. ED 359 217)

Schunk, D. E. (1993b). Goals and progress feedback: Effects on self-efficacy and writing achievement. (ERIC Document Reproduction Service No. ED 359 216)

Schuster, D. T. (1990). Fulfillment of potential, life satisfaction and competence: Comparing four cohorts of gifted women at mid-life. Journal of Education Psychology, 82, 471-478.

Schwandt, T. A. (1994). Constructionist, interpretivist approaches to human inquiry. In N.K. Denzin & Y. S. Lincoln (Eds.), Handbook of qualitative research (pp.118-137). Thousand Oaks, CA: Sage Publications.

Shucard, S. B. & Hillman, S. B. (1990). Feedback and goal condition: Effects on attributions of gifted adolescents. (ERIC Document Reproduction Service No. ED 327 046)

Shulman, B. H. (1962). The family constellation in personality diagnosis. Journal of Individual Psychology, 18, 35-47.

Shulman, B. H. & Mozak, H. H. (1988). Manual for Life Style Assessment. Muncie, IN: Accelerated Development, Inc. (ERIC Document Reproduction Service No. ED 345 131)

Silverman, L. K. (1991). Helping gifted girls reach their potential. Roeper Review, 13, 122-123.

Silverman, L. K. (Ed.) (1993). Counseling the gifted and talented. Denver, CO: Love Publishing.

Silverman, L. K. (1995a). To be gifted or feminine: The forced choice of adolescence. Journal of Secondary Gifted Education, 6, 141-157.

Silverman, L. K. (1995b). Why are there so few eminent women? Roeper Review, 18, 5 13.

Smyth, E. (1992). "Where are the wise women?" A reflection on the issues surrounding the educational experience of gifted girls. (ERIC Document Reproduction Service No. ED 303 139)

Solberg, V. S., Good, G. E., Fischer, A. R., Brown, S. D. & Nord, D. (1995). Career decision-making and career search activities: Relative effects of career search self-efficacy and human agency. Journal of Counseling Psychology, 42, 448-455.

Southern, W. T. & Jones, E. D., Eds. (1991) The Academic acceleration of gifted children. New York: Teachers College Press.

Spradley, J. P. (1980). Participant observation. New York: Holt, Rinehart and Winston.

Stanfield II, J.H. & Dennis, R.M. (Eds.) (1993). Race and ethnicity in research methods. Newbury Park, CA: Sage Publications.

Starko, A.J. (1988). Effects of the Revolving Door Identification Model on creative productivity and self-efficacy. Gifted Child Quarterly, 32, 291-297.

Starko, A.J. & Schack, G. (1989). Perceived need, teacher efficacy, and teaching strategies for the gifted and talented. Gifted Child Quarterly, 33, 118-122.

Stedtnitz, U. (1993). Research on self-efficacy: New directions for counseling the gifted and for developing suitable educational programs. International Journal of Educational Research, 19, 77-87.

Stickel, S. A. & Bonett, R. M. (1989). Sex differences in career self-efficacy. (ERIC Document Reproduction No. ED 308 340)

Strip, C. Swassing, R. & Kidder, R. (1991). Female adolescents counseling female adolescents: A first step in emotional crises intervention. Roeper Review, 13, 124-128.

Sweeney, T.J. (1989). Adlerian counseling: A Practical approach for a new decade. (ERIC Document Reproduction No. ED 345 129)

Taub, D. J. & McEwen, M. K. (1991). Patterns of development of autonomy and mature interpersonal relationships in black and white undergraduate women. Journal of College Student Development, 32, 502-508.

Taub, D. J. & McEwen, M. K. (1992). The relationship of racial identity attitudes to autonomy and mature interpersonal relationships in black and white undergraduate women. Journal of College Student Development, 33, 439-446.

Taylor, E. L. (1996, November). The Effects of a Leadership Program on Young Women. Paper presented at the 43rd annual meeting of the National Association of Gifted Children, Indianapolis, IN.

Theodorson, G. A. & Theodorson, A. G. (1969). A Modern dictionary of Sociology. New York: Thomas Y. Crowell.

Tomilson-Keasey, C. T. & Little, T. D. (1990) Predicting educational attainment, occupational achievement, intellectual skill, and personal adjustment among gifted men and women. Journal of Educational Psychology, 82, 442-455.

Torkzadeh, G. & Koufteros, X. (1994). Factorial validity of a computer self-efficacy scale and the impact of computer training. Educational and Psychological Measurement, 54, 813-821.

Treffinger, D. J. & Renzulli, J. S. (1986). Giftedness as potential for creative productivity: Transcending IQ Scores. Roeper Review, 8, 150-154.

Vallerand, R. J., Gagné, F., Senécal, C., & Pelletier, L. G. (1994). A comparison of the school intrinsic motivation and perceived competence of gifted and regular students. Gifted Child Quarterly, 38, 172-175.

van Manen, M. (1990). Researching lived experience: Human science for an action sensitive pedagogy. Albany, NY: State University of New York.

VanTassel-Baska, J. (1991) Identification of candidates for acceleration: issues and concerns. In W. T. Southern. & E. D. Jones (Eds.). The Academic acceleration of gifted children (pp. 148-161). New York: Teachers College Press

Walker, B. A. & Mehr, M. (1992). The Courage to achieve: Why America's brightest women struggle to fulfill their promise. New York: Simon and Schuster.

Walker, B. A., Reis, S. M. & Leonard, J. S. (1992). A Developmental investigation of the lives of gifted women. Gifted Child Quarterly, 36, 201-206.

Warren, C. A. B. (1988). Gender issues in field research. Newbury Park:, CA: Sage Publications.

Weitzman, E. A. & Miles, M. A. (1995). Computer programs for qualitative data analysis: A software sourcebook. Thousand Oaks, CA: Sage Publications.

Williams, J. E. (1994). Gender differences in high school students' efficacy expectation/performance discrepancies across four subject matter domains. Psychology in the Schools, 31, 232-237.

Williams, J. E. (1995). Use of learning and study skills among students differing in self regulated learning efficacy. (ERIC Document Reproduction Service No. ED 383 737).

Wolcott, H.F. (1990). Writing up qualitative research. Newbury Park, CA: Sage Publications.

Wolfe, K. (1994). Sweet mystery of life. An interview with Dr. Clarissa Pinkola Estés. Creation Spirituality, 10 (2), 14-21.

Zimmerman, B. J. (1995). Self-efficacy and educational development. In A. Bandura, (Ed.), Self-efficacy in changing societies. New York: Cambridge University Press.

Zimmerman, B. J. & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. American Educational Research Journal, 31, 845-862.

Zimmerman, B. J. & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex and giftedness to self-efficacy and strategy use. Journal of Educational Psychology, 82, 51-59.

APPENDIX A

Joy L. Navan
988 SH 310
Canton, NY 13617
(315) 386-4963
JNAV@MUSIC.STLAWU.edu

Dear Parent(s) and Student,

It is an exciting time to be an educator and a researcher! In the field of education we gain new insights almost daily regarding how students learn best. I am particularly interested in the effects of learning environments on gifted female students. I chose this area because I feel that we have much to discover that will help educators better meet the needs of this group in the future. That is why I am requesting your help.

I am currently a Ph.D. student in Educational Studies at the University of Ottawa. As part of my study in the area of gifted and talented, I will need to interview groups of female students in different learning environments. I would like very much for your daughter (you) to participate in this study.

The participating students in each of the schools will meet in a group of six to eight students and discuss their perceptions of academic efficacy and the influences of their learning environment on those perceptions. Each group interview will last approximately one hour. I will tape the interview; the tapes will be kept confidential, in a secure place, and erased or destroyed when the research is completed.

The second part of the study will involve "shadowing" some of the girls in the study to observe a student in the participants' learning environment. I will prepare a descriptive narrative of the interview and school visit and share it with the group in a second group session, which will last about an hour. Students will be asked to comment on how well the narrative reflects the concepts that they have shared with me previously. This session will again be taped, kept confidential and secure, and tapes destroyed when the research is completed.

In reporting the research, I will never use your real name or reveal who you are. Participation in the study is voluntary and you (or your parents) may withdraw at any time without prejudicing any services to which you are entitled as a student.

The study has met the guidelines and requirements of the New York State Board of Health, the St. Lawrence University Institutional Review Board, and the Ethics Committee at the University of Ottawa, as well as the approval of your school. These institutions have reviewed the study and have determined it appropriate with no risk to students.

The information I receive will be analyzed and used as data for a Ph.D. dissertation. I hope that the information will prove helpful in planning effective instruction for students like you in the future.

If you are willing to participate, please read the enclosed information and return the consent form to _____ as soon as possible. Please feel free to contact my supervisor, Dr. Janice Leroux or me at any time during the study. Thank you for your cooperation!

Sincerely,

APPENDIX B

Gifted Female Study

*Name:*_____ *Year in School:*_____

Identified as gifted in previous school? _____

*Earliest recollection of being bright:*_____

_____

_____

_____

_____

Birth order, yours, your brother, sisters. Circle the child that represents you.

1st child	M	F	4th child	M	F
2nd child	M	F	5th child	M	F
3rd child	M	F	6th child	M	F

*Number of years between you and your nearest sibling*_____

APPENDIX C

Focus Group Procedures and Instructions

1. Introduce self and review what the study is about.
2. Give information sheet to fill out.
3. Pass out self-efficacy definition.

   Definition of concept of self-efficacy:

   > Academic self-efficacy is the individual's perception of her ability to perform a specific academic task. Examples of academic tasks are: problem-solving, understanding and/or expressing relationships, expressing oneself creatively, and analyzing.

4. Read the following instructions.

Focus Group Instructions

A focus group interview, like the interview I will begin in a few minutes, is a group discussion that is focused on a particular topic. The interviewer in this case is looking for a range of interaction that provides insight into the attitudes and thoughts of the group members concerning the topic under discussion. Thus, this interview places great importance on your points of view, your opinions, and your feelings regarding self-efficacy.

The procedure for this interview will be as loosely structured as possible in order to provide you the opportunity to negotiate meaning among yourselves. Therefore, I will begin with a general, open-ended question and provide you with the opportunity to discuss it at length. I will only probe for more information when it may be necessary for my own understanding and to ask you to give other types of information related to the question. Then there will be a second general question with the same procedure.

The objective of the interview is not to reach a consensus on the subject; rather, it is important that each participant share her thoughts as openly and as frankly as possible. As with brainstorming, a diversity of ideas will help each of you to thoroughly explore and express your views. For that reason, at the beginning, during and at the end of the interview we will go around the table and ask each student to state her thoughts regarding the topic. During the rest of the interview the aim is free-flowing and productive conversation.

Remember that I am here to learn from you, so it is important to the study and to those who will learn from the study, that you state your honest opinions. We welcome and celebrate the diversity of backgrounds, cultures, and life experiences that are present. It is important that each of us recognize this as a secure environment where we can express our feelings without fear of criticism or other retributions.

Please help me to help other students like you. Professors and teachers have developed ways or thinking that may be substantially different from your views of your learning process. Our perceptions are not your perceptions and we have much to learn from bright, articulate students.

Are there any questions?

5. Remind students to speak clearly.
6. Go around the circle and ask for a brief, autobiographical statement from each one.

   Name

   Year in school

   Interests and goals

7. At the end of the interview, explain the observation and explain that it is important for students to be as natural as possible.

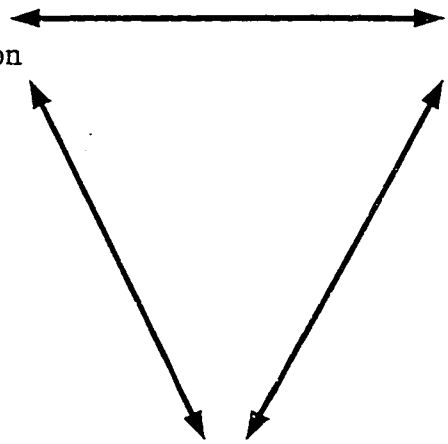
APPENDIX D

Focus Group

Cognitive Skills Checklist	*Affective Skills Checklist*
Cognition and memory	**Self-confidence**
Elaboration	**Tolerance for ambiguity**
Originality	**Problem sensitivity**
Flexibility	**Risk taking**
Fluency	**Openness to experience**
Metaphor and analogy	**Willingness to respond**
Transformations	**Curiosity**
Methodological and research skills	**Fantasy, imagery**
Evaluation	**Psychological safety in creating**
Synthesis	**Values development**
Analysis	**Relaxation, growth**
Application	**Open to complex feelings, conflict**
Product development	**Awareness development**
Resource management	**Toward self-actualization**
Self-direction	**Commitment to productive living**
Independent inquiry	**Internalization of values**
The practicing professional	

APPENDIX E

The Gifted Young Women at the Public School
Focus Group 1: Conceptual Framework



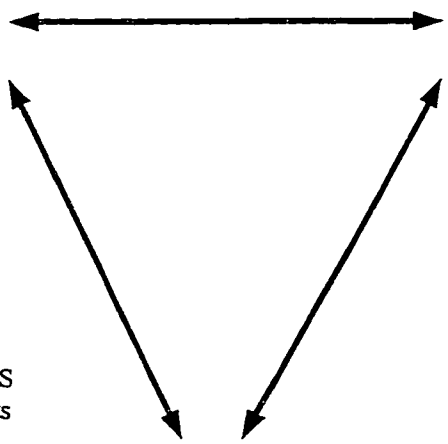
Behavior
Academic competition
Athletic competition
Risk-taking
Test taking
Tutoring
Goal-setting
Performances
Sporting events

Cognitive and Personal Factors
Academic efficacy:
Mathematics
Problem-solving
Research projects
Hands-on Sciences
Competition
General Academic
Other efficacies:
Music
Performing Arts

Environment
Academic recognition
Grading policies
Teacher reinforcement
Peer reinforcement
Collaborative problem-solving
Teacher understanding and interest
Small school environment
School renovations
Resentment of GAT students
Less challenging expectations (student and teacher)

APPENDIX F

The Gifted Young Woman at the Bridging Year Academy
Focus Group 1: Conceptual Framework



Behavior

Risk-taking
Active learning
Leadership roles
Creative activities
Athletics
Math/Science
Creative Writing
Inquiry
Practicing professional
Resource management
Communicating with CS staff and students
Individuation
Goal-setting
Achievement

Cognitive and Personal Factors

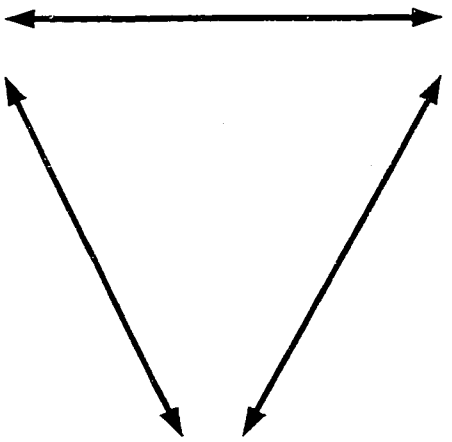
Global Self-efficacy
Social Self-efficacy
Academic Self-efficacy
Self-belief
Self-agency
Self-knowledge
Idealism
Femaleness

Environment

Challenge
Active involvement
Among like peers
Independence
Responsibility
Support system
Family atmosphere

APPENDIX G

The Gifted Young Woman at the Private School
Focus Group 1: Conceptual Framework



Behavior

Discussions
Creative projects
Individual inquiry
Practicing professional
Speaking skills
Interpersonal skills
Independent selection of topics, etc.

Cognitive and Personal Factors

General academic efficacy
Metacognitive efficacy
Self-expression
Cognitive choices
Elaboration
Analogy
Visual arts
Music
Self-agency

Environment

DaVinci Curriculum
Interdisciplinary study
Small, focused groups
Seminar
Inquiry
Community Service
Cognitive Empowerment

APPENDIX H

Name:_____

Reflective Assessment of the Narrative:
The Gifted Female
at the Public School

Please circle your response and write any comments:

1. **To what extent does the narrative reflect the ideas shared in the Focus Group (and the on-site observation, if applicable)?**

Not at all	Little	Average	Much	Exactly
1	2	3	4	5

2. **To what extent does the narrative reflect your perceptions as a female student at the Public High School?**

Not at all	Little	Average	Much	Exactly
1	2	3	4	5

3. **Are there specific ideas or perceptions that you feel are not represented in the narrative?**

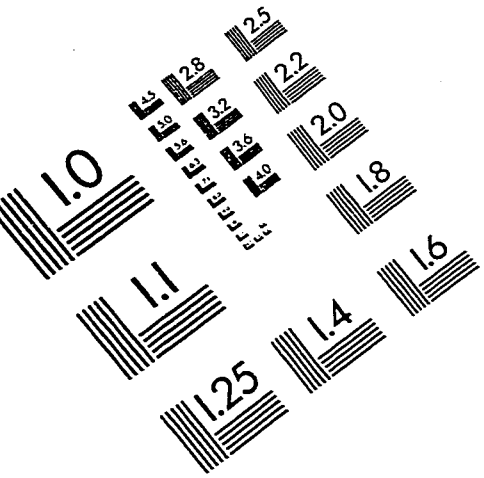
4. **Do you feel the narrative reflects the dynamic of the focus group (and on-site observation, if applicable) as you remember it?**
it?

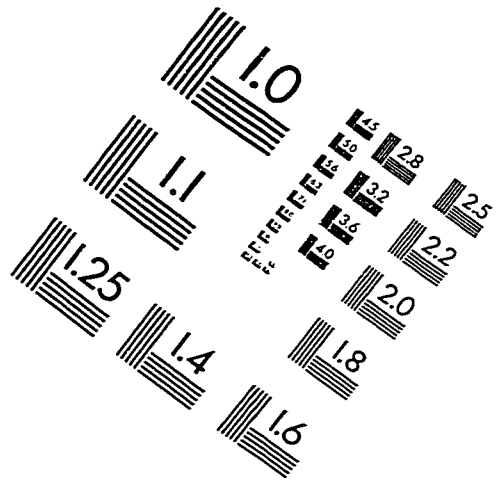
Not at all	Little	Average	Much	Exactly
1	2	3	4	5

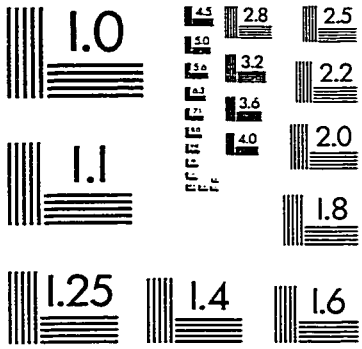
5. **Are there specific ideas or perceptions reflected in the dynamic of the focus group that you feel are not represented in the narrative?**

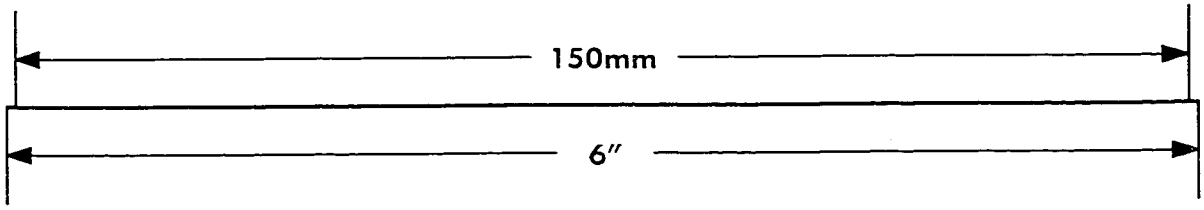
Other comments:

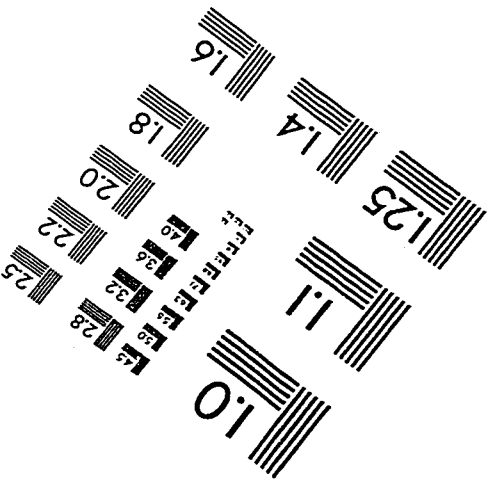
IMAGE EVALUATION
TEST TARGET (QA-3)

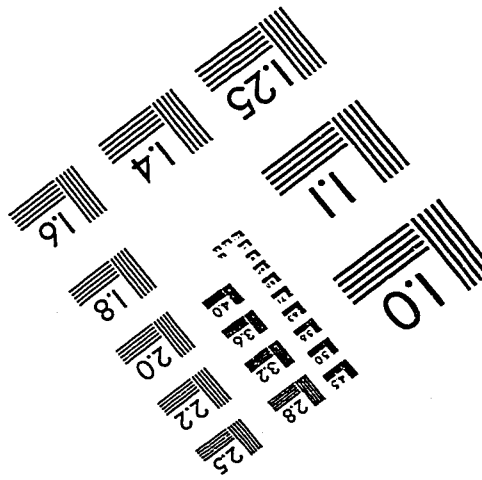












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