

A STUDY OF THE EFFECTS OF A CONGREGATED PROGRAM
ON THE SELF CONCEPTS OF GIFTED ADOLESCENTS.

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of the University of Ottawa
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Abstract

In an effort to more fully understand the gifted adolescents' self concept and any changes that occur due to the transition to a congregated classroom setting, this study employed a combination of a quantitative instrument, the Harter Self Perception Profile for Adolescents (SPPA), used over time, and a qualitative interview technique. The sample was composed of 25 gifted adolescent students from a grade nine congregated program offered by College catholique Samuel Genest.

The students showed significant changes in their Harter SPPA subscales over time. The self image of the students increased significantly in their SPPA subscales of romantic appeal and close friendship. There was also an interaction of time by gender on behavioral conduct with an increase for females, but a significantly larger decrease for males in the posttest.

Significant changes in importance ratings also occurred over time. There were significant interactions of time by gender on scholastic competence, behavioral conduct, and close friendship. When comparing subscale scores and importance ratings, a drop in discrepancy scores from the pre to posttest was consistent for both genders. These findings suggest that various domains of the students' self concept were affected differently during the program.

The interview and its assessment of the social, psychological, and coping selves highlighted the role the social environment played in the gifted adolescent's developing self concept. Gifted students enjoyed being with their gifted peers, establishing new social skills and opportunities while meeting their academic needs. They were, however, conscious of being labelled and didn't like to be singled out or treated differently. A fact reinforced by the correlation analysis which revealed that scholastic competence was strongly related to behavioral conduct and global self worth, but remained poorly related to social acceptance.

The process of social comparison within a congregated setting does have a variable affect on self perception. It is necessary to continue to strengthen the scholastic competence of the gifted students. To balance the strong influence of this scholastic domain on their global self worth, it is necessary to provide opportunities to cultivate social skills to counteract any sense of isolation.

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Chapter 1

Introduction

When special programming is provided, enhanced self concepts and positive self esteem for the gifted and talented learner is often claimed by its advocates. The debate over this assertion is not settled in the literature which often focuses on the academic to the exclusion of the social and emotional issues. The field is poorer for this oversight because the relatively few studies that have examined self esteem and the development of the self concept produce contradictory and confusing results. It is a daunting task to try to unravel the complexity involved in researching the multi-dimensional self concept. Therefore, in response to this challenge, the researcher has to use all the tools available, including both quantitative and qualitative, to illuminate the dynamic personality of the gifted learner.

This study employed just such a combination to study the effect of a congregated high school program on the self concept and self-esteem of gifted and talented adolescents. A quantitative instrument, the Harter (1988) Self Perception Profile for Adolescents (SPPA), was used in conjunction with in-depth, semi-structured interviews. (See Appendix A and B.) The 25 grade nine students were given the Harter SPPA at the beginning and end of their school year with six of

these students subsequently participating in the interviews. The standardized questionnaire and comprehensive interview dealt with the development of the multi-dimensional self concept in a congregated setting by splitting it into eight separate domains. These domains were evaluated based on how important they were in the gifted adolescent's self appraisal. In addition, the influence of significant others and their ability to change the gifted adolescent's perception about herself/himself was also factored into our understanding the gifted experience. Ultimately, the self concept became an indication of how the gifted coped with the challenges, both positive and negative, in their environment, in this case defined by the congregated program. It remains the goal of programming for the gifted and talented learner to remove obstacles to success for there is no greater tragedy in education than the loss of opportunity to excel, to be creative, and to achieve one's potential.

Rationale for the Study

For many gifted students, school is a source of anxiety because it places tremendous pressure on the interaction of cognitive, emotional and social spheres. (Dirkes, 1983; Kline & Short, 1992 a,b). The gifted child can be at risk because certain characteristics such as task commitment, perfectionist tendencies, feeling different, heightened sensitivity and creativity shape an emerging identity that often conflicts with the pressure to conform to others' expectations found in the school environment (Kline & Short, 1992 a,b; Leroux, 1988; Loeb & Jay, 1987; Lovecky, 1992).

One must be careful not to see the potential problems of the gifted learner as problems inherent with the gifted personality. Studies show that the gifted don't have any greater amount of psychosocial maladjustment than the general population (Buescher & Olszewski, 1987; Delisle, 1990; Gallucci, 1988). However, the gifted experience, especially during the transitional years of adolescence, is mediated by the school setting. It remains to be seen what role the school plays in reinforcing or challenging notions of giftedness in those that have been labelled. The relatively little domain-specific research that does exist suggests that the advantage the gifted learner enjoys over nongifted peers in the academic sphere doesn't necessarily

translate into a more positive social self concept (Schneider, 1987). As gifted learners try to integrate into a rather rigid cognitive and social environment, they may be frustrated in their attempts to cultivate their intellectual, motivational and creative talents. This frustration can often be expressed in the form of alienation and underachievement (Whitmore, 1980).

Educators believe they can, through programming and ability grouping, meet the academic and social needs of the gifted learner. It has been shown that gifted programs and ability grouping have a positive influence on the attitudes and self esteem of gifted students (Kulik & Kulik, 1990; Slavin, 1990; Rogne, 1993). However, the study of multi-dimensional gifted self concepts remains limited, inconclusive and often contradictory, leaving areas in need of further analysis, such as, age and gender differences in the self concepts of gifted learners (Schneider et al., 1989).

Purpose of the Study

The main purpose of this research study is to assess whether gifted adolescents' self concepts change due to their participation in a gifted, congregated setting; thereby providing an opportunity to explore the central role self concept plays in the coping ability of gifted males and females.

The complexity of the gifted experience in schools is far beyond any one study. Therefore, it is necessary to place this research in perspective as one piece of a larger body of work concerned with programming's impact on the self concept and self esteem of gifted learners.

Chapter 2

Review of the Literature

The preceding section laid the groundwork for the study to follow by establishing the needs and relevancy of the self concept to the gifted and talented learner in school. The psycho/social needs of the gifted learner often get overlooked in the educational experience offered to many gifted children through the regular classroom (Cox, Daniel & Boston, 1985).

The alternatives available in special programming and ability grouping continue to draw criticism in the face of a persistent effort to mainstream all students. Gifted children when left to the unsympathetic and unresponsive atmosphere of the regular class can be vulnerable to problems. Particular traits such as sensitivity, intensity, reactivity, and perfectionism can allow the gifted learner to deal with anxieties at a younger age, exposing the gifted to more complex and mature thinking on values, self-evaluation, and personal philosophy. Unfortunately, this uneven development leaves the young, gifted learner with a lack of resources necessary to resolve the conflicts, contradictions, and self doubts which often accompany their advanced cognitive abilities. (Manaster & Powell, 1983; Powell & Haden, 1984; Dauber & Benbow, 1990; Cross, et al, 1993).

For better or worse, schools influence the social environment in which adolescents define their self concepts (Gambino & Rejskind, 1990). Since many consider a positive self concept as the driving force behind the expression of exceptional talent, there is a need to study programming and gauge its effectiveness in developing the socio/emotional as well as the cognitive potential of the gifted learner (Feldhusen, 1986). The fragmented educational experience available to the gifted learner, in the regular classroom, only promises to exacerbate the conflicts, contradictions, and self doubt (Archambault, F., Jr., Westberg, K., Brown, S., Hallmark, B., Zhang, W., & Emmons, C., 1992). Strategies and practices that have proven effective, such as acceleration, enrichment, independent study and other curriculum modifications are used infrequently and haphazardly (Archambault et al., 1992; Westberg, Archambault, Dobyns & Salvin, 1993).

Despite the weight of evidence confirming the need for special educational programs for the gifted learner, the services delivered across Canada continue to represent a patchwork of policies and supporting legislation (Frame, 1991). Unfortunately, this state of affairs promises to only worsen in the future as budgetary cutbacks threaten gifted programming's tenuous foothold in mainstream

education (Archambault et al., 1992; Meade, 1991; Schneider, 1987; Westberg et al., 1993).

At this crucial time in the education system, it is more important than ever that researchers continue to assess the various programs in existence. Through this systematic evaluation, educators will be armed with the knowledge to optimize the benefits of a gifted program, and, in so doing, counter the critics who question the effectiveness, indeed, the very existence of gifted programming.

The literature review is divided into 6 sections. The first section reviews the historical background of self concept research. The second section examines the experiences of being gifted and establishes the basis for further study into the socio-emotional adjustment of gifted children. The third section outlines the implications of adolescence as a transitional period in self concept development. The fourth section describes the multi-dimensional self concept, and its ability to grasp the complexities of human development, including determinants of global self worth, internal comparisons of actual versus ideal competencies, and the influence of significant others. The gifted adolescent self concept, and the effect of age and gender on its development is discussed in the fifth section. The final section deals with the influence of

gifted programming, particularly grouping practices, on the gifted adolescent self concept.

Historical Perspective

This emphasis on the importance of the self concept can trace its origins to the efforts of personality theorists, who felt this psychological construct was the key in our understanding of human development and potential (Schneider, 1987). Under their influence, educators naturally redoubled their efforts to create curriculum and a school culture that counted a positive self concept as one of its outcomes. Inevitably, with the emergence of gifted education as an area worth developing and studying, the relationship between self concept and giftedness has proven to be an important source of understanding (Schneider, 1987).

The number of articles dedicated to the investigation of the self concept is a testimony to the prominent position it holds in our attempts to understand human nature, yet the results are disappointing. According to Savin-Williams and Demo (1983), "despite 1,500 articles on adolescent self-esteem published since 1967, we know relatively little of its correlates, determinants or predictors". However, researchers remain undaunted by the challenge and continue to refine their instruments and procedures.

In order to tackle the obvious complexity of a concept that embraces an individual's introspective self-portrait, including thoughts and feelings about abilities, skills, appearance, and social acceptability, researchers have, recently, developed a number of multi-dimensional models (Byrne, 1984; Harter, 1990; Winne & Marx, 1981). This development is particularly important to the study of the gifted self concept due to the fact that a positive academic self concept often overshadows other aspects of social and emotional development (Schneider, Clegg, Byrne, Ledingham, & Crombie, 1989). By separating the self concept into various facets, the investigator has the tools to pin-point hidden areas of maladjustment.

This is not to suggest that the gifted are more prone to maladjustment, but they have traits that can lead to severe self evaluation. These traits can often have either a positive or negative influence based on their reception in the social environment. Heightened sensitivity, perfectionism, and intellectual precocity can engender a thirst for learning, thereby motivating a learner to reach full potential or alternately, withdrawal, excessive self consciousness, and underachievement (Dixon, Meyer, & Hardy, 1986; Emerick, 1990; Leroux, 1988).

The alternatives available for the education of the gifted (acceleration, enrichment, and special classes or

schools) all entail consequences for psychosocial development. Ability grouping has the potential to free the gifted learner from the constraints imposed by the regular school culture, encouraging those that are like-minded to achieve in a safe environment. Unfortunately, isolation can foster misconceptions among the gifted about others' perceptions about them or lead to an obsessive emphasis on the academic sphere to the exclusion of a social life (Schneider, 1987).

Studies that have investigated existing programming in the regular classroom have concluded that they provide the gifted learner with limited opportunities to develop their unique abilities and interests (Archambault et al., 1992; Westberg et al., 1993). When the curriculum is modified significantly and delivered through acceleration or enrichment, it often lacks adequate consideration of the socio/emotional development of the gifted learner (Kolloff & Feldhusen, 1984; Mulcahy, R., Wilgosh, L. & Peat, D. 1991; Schneider, 1987). These programs are used in studies to bolster the argument that programming has little effect on the self concept, despite the fact that adolescent populations and their peer relationships have not received sufficient attention (Kolloff & Feldhusen, 1984; Kulik & Kulik, 1990; Rogers, 1991; Schneider et al, 1989). It becomes apparent that when determining the gifted learner's

level of social and psychological adjustment a variety of other environmental, interpersonal and academic variables must be considered (Rogers, 1991).

A paucity of research on age and gender differences, methodological limitations and limited domain-specific self concept studies have hampered the debate over the value of special programming for the gifted. This has left the controversy concerning how to educate gifted children to the reformist agenda which is bent on eliminating ability grouping because of political considerations surrounding equity versus excellence (Meade, 1991; Schneider, 1987). In an effort to eliminate tracking for other students which is perceived as discriminatory, the reformers are willing to sacrifice the needs of the gifted learner, characterizing them as elitist (Feldhusen, 1991).

This condemnation of all ability grouping is not justified considering the research available clearly showing academic benefits for the gifted learner when grouped according to ability (Allen, 1991; Feldhusen, 1991; Kulik, 1991). There is still a need for further research to more fully explore the effects of age and gender on the psychological and social functioning of the gifted learner when they are grouped by ability.

Limitations inherent in many of the studies can be seen as a justification for negative conclusions about ability

grouping, yet this interpretation can, in turn, be seen as suspect. By jumping to conclusions, critics of ability grouping for the gifted learner leave themselves open to the charge that they are rather hastily throwing the baby out with the bath water (Cocking, 1990). It is only through the acquisition of a fuller picture of the impact of ability grouping that the focus can return to what is best for the gifted learner.

In an effort to shed some light on the issues, the following review will establish the basis for the gifted experience in adolescent males and females; and, it will outline the consequences of a lack of programming to meet their unique needs in establishing a positive self concept.

The Gifted Experience

Independent, intrinsically motivated, flexible, self-accepting and psychologically well-adjusted, a portrait has emerged from the research on the gifted which stands in stark contrast to that of their normative peers (Mulcahy, Wilgosh, & Peat, 1990, 1991; Olszewski-Kubilius, Kulieke, & Krasney, 1988). Yet, other research finds no differences between gifted and nongifted, or, more strikingly, a result which portrays the gifted in a negative light and at risk for psychological and social problems (Dirkes, 1983; Whalen & Csikszentmihalyi, 1989; Whitmore, 1990).

Methodological problems can account for some of the confusing studies occupying prominent positions in the literature on the gifted (Hansford & Hattie, 1982; Olszewski-Kubilius et al., 1988). Over the years, many researchers have seen the operational definition of giftedness change, and this is reflected in their studies (Whalen & Csikszentmihalyi, 1989). By focusing on a narrow definition of giftedness as defined by discrete measures of academic aptitude, researchers have limited the scope of investigations of the gifted, and, therefore, the relevance of the outcomes to the lives of the gifted who function in a broader social and psychological world (Loeb & Jay, 1987).

Upon further investigation of a broader cross-section of the literature, it becomes apparent that certain socio/emotional traits held in common, such as, divergent thinking ability, heightened sensitivity, emotional intensity and reactivity, feeling different, perfectionism, and uneven development of emotional versus intellectual areas all contribute to the development of a complex portrait of gifted adolescents' personality and their early and rapid development (Frey, 1991; Kundel, Chapa, Patterson, Walling, 1992; Piechowski, 1991; Whitmore, 1990). In the final analysis, the early and rapid development engenders a level of maturity in certain aspects of the gifted adolescent's personality which is significantly

different than their same aged peers. This is a fact reinforced by studies that compared gifted children to older adults across five measures of psychic overexcitability (psychological, sensual, intellectual, emotional, and imaginal), showing a greater maturity in the gifted group on the measures of intellectual, imaginal and emotional overexcitability (Gallucci, 1988; Piechowski & Colangelo, 1984).

Often, these personality traits can be a source of stress in the psychosocial functioning of gifted adolescents, leaving them with a heightened level of awareness about themselves and the world around them. For example, advanced cognitive functioning and an older peer group expose gifted children to mature thinking on values, self-evaluation, and personal philosophy. Unfortunately, advanced cognitive functioning also allows gifted children to deal with anxieties at a younger age, often overwhelming them with adult problems and concerns without the resources to effect a satisfactory resolution of conflicts that might arise (Cross, Colman, & Stewart, 1993; Dauber & Benbow, 1990; Manaster & Powell, 1983; Powell & Haden, 1984).

A contributing factor to this complex and sometimes troubling picture of the gifted child can be found in a lack of social skill. Either the gifted child has learned only too well how to manipulate others and becomes a bossy

character, or the child engages in solitary behaviour because peers do not share similar interests or skills (Butler-Por, 1987; Rimm, 1988, 1993; Whitmore, 1980; Whitmore, 1988). All in all, it is the feeling of being different, labelled, and stigmatized that impacts self concept, behaviour and peer relations (Cornell, 1990; Hayes & Sloat, 1990; Silverman, 1990).

Given that giftedness is this volatile mixture of different factors, it is not surprising that its expression often changes as an individual quickly navigates a normal developmental process which Erikson (1963) envisaged as encompassing eight stages over the human life span (see Appendix C). Indeed, adolescence itself is composed of numerous substages with unique challenges which, depending on how they are resolved, can have profound effects on further development (Erikson, 1968; Marcia, 1991; Offer & Church, 1991; Stern & Zevon, 1990).

The gifted, in particular, approach each stage with an increased intensity (Buescher & Higham, 1989; Clark, 1992; Lewis, Kitano, & Lynch, 1992). It is particularly important during the transitional period of adolescence to provide a non-threatening, unconditional, predictable, non-judgemental environment that encourages risk taking so conflicts can be resolved in favour of ego identity, intimacy, generativity and integrity (Clark, 1992).

All too often the gifted learner must operate in a social environment that is far from non-threatening, unconditional, predictable and non-judgemental. The very act of labelling someone "gifted" invites closer and often unwanted scrutiny. Gifted adolescents have stated that they do not want to be labelled and being gifted actually hurt their popularity (Rimm, 1988). Labelling theory has its roots in Becker's (1963) social deviance theory, and, together, they help outline the social environment within which gifted learners must operate.

According to labelling theory, gifted learners may deviate, although in a positive direction, from many of society's conventional practices and remain vulnerable to the sanctions society holds for those who are considered outsiders (Robinson, 1986). Deviance, in this case, is defined by social groups which punish or reward behaviour based on how closely it conforms to society's rules (Becker, 1963). Unfortunately, mistrust and envy often motivate social groups to punish the gifted learner through a lack of acceptance which necessarily impacts their self concept and behaviour (Weis & Gallagher, 1980).

Adolescence and the Self Concept

It is during adolescence that identity formation takes on increased importance, moving to the forefront in social-emotional development. Working intimately in this process

and often determining its outcome whether positive or negative is self esteem. Unfortunately, adolescence, especially early adolescence, often sees self esteem at a very low ebb (Petersen, Schulenberg, Abramowitz, Offer & Jarcho, 1984; Kwan, 1992).

Surprisingly, few studies have addressed the concerns of adolescents when compared to those of middle childhood (Austin & Draper, 1981). Adolescents are such a highly diverse group employing an equally diverse repertoire to cope with the challenges of identity formulation. For example, Stern & Zevon (1990) found that young adolescents often use detachment and denial to deal with the issues surrounding their dependent status in the family, whereas, older adolescents focus on conflict brought about by academic issues, employing problem-based strategies to cope.

This turbulent time is played out on a developmental continuum marked by cognitive shifts which are signposts signifying important steps toward a fully integrated identity. The major developmental shift from childhood to early adolescence is characterized by a departure from the exclusive focus on the social and behavioral exterior to a more inward emphasis on the psychological interior (Goldis & Blasi, 1993). Accompanying this shift is the development of an expanding personal inventory of abstract generalizations with which to construct a self-portrait (Harter, 1990).

Piaget's (1983) stage of formal operational thought corresponds to the emergence of abstract generalizations that integrate the concrete descriptions of childhood (Fischer, 1980). This cognitive development marks the emergence of the self as a "continuous, distinct, volitional, and reflective object" (Harter, 1990; Harter & Monsour, 1992).

Gifted adolescents, by virtue of their accelerated development, move through this transition period faster than their nongifted peers. There is a price to pay, however, as the gifted may succumb to premature identity formation as a result of societal pressure to bring about early identity closure and early entry into adulthood (Buescher & Higham, 1989; Delisle, 1985). Passivity in the face of these pressures can lead the gifted adolescent to close doors of opportunity for full identity achievement (Frey, 1991). Early closure risks the emergence of 'patchwork selves' by psychologically and socially restricting the adolescent's progress through the later stages of adolescence and into adulthood (Elkind, 1980).

Later adolescence sees the emergence of differentiated and hierarchically ordered modes of thought which form the basic beliefs and moral standards of a personal philosophy. Healthy identity achievement sees the rich inner life dominating the perception of the true self. Thoughts,

feelings and desires gain prominent positions in self-descriptions, influencing interpersonal relations as adolescents become aware of their feelings toward others, and others' feeling toward them. A greater sense of internal unity compresses the adolescent self concept, destroying earlier identity modes and creating pressure to manage the identity (Loevinger, 1979). The key to progressive identity formation is found in the ability of the individual to integrate multiple roles, maintain a sense of continuity, and remain open to new ideas, feelings and actions (Buescher & Higham, 1989).

Increasingly, this internal process is influenced by the peer group. A peer group becomes an active source of values, directives, feedback and social comparison, sparking the adolescent to experiment with different selves in different social contexts, searching for the 'real me' while under the scrutiny of others (Harter, 1986; Harter, 1990; Ruble, 1983). This experimentation with different roles is part of a wider repertoire of social interactions which offers the individual an opportunity to see the self from an other's point of view, ensuring the cognitive changes are tested and integrated with those of society (Griffin, Chassin, & Young, 1981). Unfortunately, such comparisons are inherently subjective, and therefore, may leave the self

concept vulnerable to distortions that either inflate or devalue one's abilities (Harter, 1990).

Multi-dimensional Model and the Self Concept

Attempts to understand how the self concept is experienced resulted in a rich variety of explanatory models (Harter, 1990). Early models condensed all the various dimensions of one's life into a single score. Criticism of early uni-dimensional models recognized the fact that it is more revealing to study the variations in a person's self concept which are often masked by a single score.

The differentiation of the self into multiple domains continues the developmental process as more trait labels and abstractions become available. For example, Harter (1988) in developing her Self Perception Profile for Adolescents (SPPA) has identified eight separate domains for adolescents through factorial analysis (scholastic competence, athletic competence, social acceptance, physical appearance, behavioral conduct, romantic appeal, close friendship and job competence). (See Appendix A.) These domains emerge in concert with a developmental process that increasingly provides a fertile source of trait labels and abstractions to define the self. Together, they constitute a complicated self portrait which is continually adapting to the spheres of influence exerted by school, friends and family (Harter, 1986).

Closer scrutiny of the available studies on the self concept of the gifted reveals that few are based on domain specific research (Harter, 1988; Hoge & McSheffrey, 1991; Schneider, 1987). Those studies that do utilize domain specific investigations provide more insight into the generally accepted notion that the gifted learner's self concept is superior (Elmore & Ienus, 1992; Jenkins-Friedman & Murphy, 1988; Mulcahy, et al., 1991; Pyryt & Mendaglio, 1994). That superiority, it would appear, is limited to the academic sphere when compared to nongifted peers (Leroux, 1988; Schneider, 1987). The social sphere reveals a more complicated picture as conflicts appear between the gifted learner's social self concept, and the perception in the community that they have full peer acceptance (Harter, 1990). These studies combine to provide a broad outline of the gifted self concept and hint at the complexity contained within its multiple domains. More domain specific research is clearly warranted to expand the limited literature on gifted self concepts into areas such as age and gender differences that have received little attention (Kwan, 1992; Schneider et al., 1989).

Harter's standardized instrument is a sign of the considerable progress that has been made in the study of self concept; and, it promises to provide a solid methodological base from which to explore the issues

surrounding gender and age. Harter's multi-dimensional model (1988), in addition to having eight domains to profile the self concept, also has a more global measure of self worth. It is based on a comparison process with both an internal standard and an external source of feedback. It is this combination of self-appraisal and the reflected appraisals of others that shapes the perception of the various dimensions of the self concept and defines the global sense of self worth. Because of their importance, the determinants of global self worth will be explained in further detail in the following sections.

Determinants of global self worth (internal comparison). Adolescents clearly discriminate among the domains in the Harter's research, reporting different levels of adequacy depending on the domain (Harter, 1988). In addition, adolescents can make a more global judgement about self worth which is measured by the Harter SPPA and is based on a process involving the various domains of the self concept.

According to Harter (1988), global self esteem is based on a process involving the various domains of the self concept and an internal comparison of actual versus ideal competencies. It stands to reason that if success in a certain domain is deemed to be important, a failure will have a greater impact on self worth than if a failure occurs

in a domain that is not valued. The consequences of a large gap appearing between the actual and ideal self could manifest itself in disappointment and depression (Harter, 1990).

The challenge remains for the adolescent to continue to develop multiple self concepts yet pull them together in a unified theory of self or personality (Epstein, 1973). Gifted learners, particularly, have to face the perils of a prolonged conflict over the demands of different roles and their associated opposing attributes. Due to accelerated development, the normative crises come sooner without the necessary cognitive and social support (Manaster & Powell, 1983).

In attempts to reduce any conflict between their internal needs and the demands of the social environment, the gifted cope in differing ways. They become compliant, withdrawn or aggressive (Whitmore, 1990). A negative attitude toward oneself, characterized by distrust, suspiciousness, and criticism, will impede one's ability to create emotional ties to other people (Niebrzydowski, 1993). On the other hand, studies of gifted adolescents find they are positive about their giftedness yet at the same time may feel others were not so inclined, creating a source of stress (Kerr, Colangelo, & Gaeth, 1988). It is this perception that the gifted have about how others feel toward

them which is very subjective and yet very powerful in determining global self worth. The reflected appraisals of others and its impact on global self worth forms the basis for the following section.

Determinants of global self worth (perceived regard of others). The perceived regard of others does not necessarily represent what others actually think but it has the power to influence a self concept. The self concept can be shaped by other's opinions based on the persuasive power of our need to fit into an appropriate reference group. This social construct is the core of a powerful counterweight to the introspective process of comparing actual versus ideal competencies, outlined in the previous section. Due to the subjective nature of such a process, distortions are inevitable, and inaccurate self concepts can lead one to over estimate or devalue abilities, resulting in maladaptive consequences (Harter, 1990).

Cooley (1902), recognized the essential short-coming of a theory that left the self vulnerable to distortion. Accordingly, the self is considered essentially an integration of the attitudes of parents, peers and close friends (Harter, 1986). They form the primary source of feedback or reflected appraisals which Cooley (1902) labelled as the "looking glass self". Leroux (1988) reported that both gifted males and females found that

societal pressures from adults and friends proved extremely influential in reinforcing a positive self image. In particular, significant others are a primary shaper of the academic self concept (Maddux, Scheiber, & Bass, 1982; Sloat, Hayes, & Morton, 1990; Winne, Woodlands, & Wong, 1982).

Festinger's (1954) social comparison theory pin-pointed the role the social environment plays in shaping the self concept. When searching for a comparison group from which to derive social feedback, individuals will naturally choose to compare themselves to those who are relatively similar. In a mainstream class, however, gifted learners, denied a group of similarly talented peers, compare themselves with those of lesser ability. This unequal comparison can leave the gifted learner with a heightened sense of mastery and competence, resulting in a high self concept (Schneider et al., 1989).

The transition in self concept inherent in a move from the heterogeneous population in a mainstream program to a more homogeneous group in gifted programming would suggest a decline in self concept (Coleman & Fults, 1982). In particular, one outcome that has been widely predicted for classes that are restricted to a group of similarly gifted individuals sees decreases in academic self concept (Chapman & McAlpine, 1988). Denied the opportunity to be the "star"

in a class of mixed abilities, gifted learners in a congregated class can often experience a momentary identity crisis. Problems in adjusting may be due in part to the 'imposter phenomenon' where supersensitivity, perceptiveness, and perfectionism cause them to feel inadequate when compared to their friends (Kwan, 1992).

Comparison with others, reliance on normative standards, and sensitivity to other's opinions are forces that have a powerful ability to mold any self concept (Harter, 1990). Kenny (1988) divided social relations such as these into three components:

1. "Other appraisal (how A views B);
2. Reflected appraisal (how A thinks B views A). This includes the actor (A's view of how others view A), the partner (how B is viewed as viewing others), and the relationship (A's unique view of how B views A); and
3. Self-appraisal (how A views A)" (p. 253).

The above social interactionist approach demands one focus on what is perceived, and, not necessarily, on what is. Self-esteem hinges on the accuracy of perception which is subject to the influence of consensus, objectivity and bias (McCreary-Juhasz, 1992). For example, the relationship between self-appraisals and reflected appraisal is strong but this relationship breaks down when one considers the actual appraisals of others (McCreary-Juhasz, 1992).

A developmental perspective on the process outlined above is found in an analysis by Damon and Hart (1988).

Junior high school students are especially vulnerable as they compare and contrast, using their self concept to compensate for their worries about being different (Bryant, 1989; Olszewski et al., 1987; Peterson et al., 1984; Seligman, 1990; Wintre & Crowley, 1993). An early adolescent's self concept is greatly influenced by social comparisons, normative standards, social similarities, and behaviours which are intended to accentuate their social appeal. Late adolescence ushers in a change in the self concept as it becomes increasingly dependent on personal beliefs and internal standards. If this transition is not successfully negotiated, the adolescent will continue to rely on the vagaries of social comparisons which prevent the creation of a stable sense of self and set the stage for identity development problems (Damon & Hart, 1988).

Ultimately, the emerging adolescent self concept helps define what is possible. How one views giftedness will determine whether one is motivated to use abilities to achieve or withdraw to introspection and isolation (Powell & Haden, 1984).

Gifted Adolescents and the Self Concept

Gifted adolescents were chosen as the subjects in this study because adolescence heralds the onset of a pivotal period of change, both physically and psychologically, and when combined with exceptional abilities of the gifted

learner, produces long term consequences for successful adjustment. It is a time of dramatic psychosocial change where gifted youth re-emerge with a new self concept, seeing themselves and the world around them in a different light.

It is during adolescence that the relationship between gifted performance, motivation and commitment comes into sharp focus as teenagers take increasing ownership for how they express their unique abilities (Van Boxtel & Monks, 1992; Whalen & Csikszentmihalyi, 1989). This new self-assertiveness and autonomy heralds the emergence of a personal identity which will challenge many of the preconceptions of the self and others (Van Boxtel & Monks, 1992; Wintre & Crowley, 1993).

Self-esteem, peer and family relationships can reinforce or test an adolescent's commitment and motivation to achieve in a particular field (Cornell & Grossberg, 1987; Stern & Zevon, 1990; Whalen & Csikszentmihalyi, 1989). In fact, Feldhusen & Hoover (1986) felt that a positive self concept was one of the most important dynamic forces driving gifted learners to achieve their full potential. For example, the most striking difference between gifted achievers and underachievers was a very low academic self concept (Butler-Por, 1987; Van Boxtel & Monks, 1992). The consequences, both short and long term, for the healthy integration of the gifted personality demands a thorough

investigation into developing self-concepts and social perceptions of talented teenagers.

Self Concept. The dimension that clearly distinguishes the gifted from the nongifted is the scholastic domain (Chapman & McAlpine, 1988; Garzarelli, Everhart, & Lester, 1993; Li, 1988). High academic achievement is definitely related to a positive self-concept. However, these relationships are rarely that simple, and, in fact, research indicates it may be folly to assume the gifted learner has more positive perceptions across all school areas (Chapman & McAlpine, 1988).

In order to fit in, the gifted often experience fluctuations in their self concept. Academic competence and physical appearance drop, during early adolescence, while social acceptability and global self-worth increase (Buescher & Olszewski, 1987). What price is paid for social acceptability? Many gifted adolescents are willing to hide their talents and move away from their equally gifted peers in order to gain wider acceptance (Buescher & Olszewski, 1987).

According to Harter (1990), the domains of competence that contribute the most to adolescent global self-esteem are physical appearance and peer social acceptance followed by the less influential scholastic competence, athletic competence, and behavioral conduct. If the adolescents fail

to measure up to their expectations, the discrepancy theory suggests that they will experience lower self-esteem. With the high value placed on appearance, girls, especially, feel less attractive, more self-conscious, and develop negative attitudes toward their gender (Buescher & Olszewski, 1987).

The social feedback of classmates provides the other major impact on self esteem. Surprisingly, they have more influence than close friends due to the fact that they are seen to be more objective, whereas, close friends are expected to give unconditional support which is less self-enhancing (Kwan, 1992). Kwan (1992) has shown that gifted learners depend more on close friendships because they cannot find a peer group, leaving them without an objective source of social feedback.

Torrance (1980) found the gifted child's search for identity and the development of a self concept as both "painful and prolonged". Dabrowski (1976) saw this inner conflict, so prevalent in the gifted profile, as essential and not necessarily maladaptive in propelling a gifted individual to achieve. In order to successfully navigate this journey, the gifted learner must accept the painful and often prolonged process without the excessive self criticism which can lead to low self esteem and underachievement. A crucial element in the success of this endeavour is the support of a peer group. Self esteem is nurtured and

reinforced by peer interactions. Difficulty in finding a peer group to which one can relate can handicap the gifted child by engendering loneliness, negative self concepts, less adjustment, depression and alienation (Kaiser & Berndt, 1985).

Psychosocial differences between the gifted and other children brought about by a greater developmental potential can increase their vulnerability and predispose them to fall prey to myths surrounding giftedness, unrealistic expectations, pressure to perform, pressure to conform, constant praise or criticism, and difficulty in finding friends (Roedell, 1986). It is important to note that despite the challenges of being 'different' the gifted have the same level of psychopathology as the normal population (Delisle, 1990; Gallucci, 1988). The gifted have to learn to cope in novel ways, but, on the whole, perceive the label to be positive (Hershey & Oliver, 1988). One study reported one out of six adolescents reported extreme discomfort, with adolescent girls showing a greater concern for the social implications of labelling than gifted boys (Gilligan, Lyons, & Hanmer, 1990; Robinson, 1990).

Age. Gifted young people cope with the situational stress brought on by the demands of early and middle adolescence in different ways (Buescher & Olszewski, 1987). In their efforts to minimize differences between themselves

and their peers, gifted adolescents act like any adolescent, yet there are degrees of coping ability depending on the age of the teen (Buescher & Olszewski, 1987; Olszewski et al., 1987). Prior to age 13 and after age 15, gifted adolescents were better able to cope positively with being seen as 'different' (Buescher & Olszewski, 1987; Peterson et al., 1984). Often, the changes in programs or schools which occur around the age of 13 and 14, the very changes under scrutiny in this study, demand students reassess their competence in light of the new social environment, friends, and peer group (Feldhusen & Nimlos-Hippen, 1992; Olszewski et al., 1987).

Unfortunately, 14 and 15 year olds are more troubled than younger and older adolescents by inconsistencies because they have not developed the capacity to integrate these contradictions (Damon & Hart, 1988; Harter, 1986, 1990). The emergence of abstract systems, according to Fisher's (1980) cognitive-developmental theory, can be viewed as a series of levels in formal operational thought. Young adolescents construct abstractions about the self yet don't compare, and, therefore, don't experience any conflict. The ability to compare emerges in middle adolescence, resulting in the discovery that many conflicting traits are held within a personality. Older adolescents may resolve any confusion that may arise by

integrating these polar opposites into higher order abstractions, and internal consistency is maintained by being flexible and adaptable (Harter, 1990; Harter & Monsour, 1992). The gifted, particularly, have to face the perils of a prolonged conflict over the demands of different roles and their associated opposing attributes. Due to accelerated development, the normative crises often come sooner without the necessary cognitive and social support (Manaster & Powell, 1983).

Formal operations, in addition to providing a mandate to develop a coherent self from the myriad of role related selves, also provide the adolescent with the ability to imagine future selves, both positive and negative. Once again, if a large gap appears between an actual and ideal self, disappointment and depression could result (Harter, 1990). These maladaptive responses manifest themselves with greater frequency in the middle adolescent population as opposed to early or late adolescence (Strachen & Jones, 1982).

It is speculated that the negative outcomes are far outweighed by the motivational benefits of such a discrepancy between actual and the possible selves, both negative and positive. They provide a valuable source of attributes to either be cultivated or avoided (Markus & Narius, 1986). If the adolescent dons a false identity, it is usually the

result of role experimentation which is motivated by a need to impress, to try new behaviors, or to avoid social sanctions against one's true self (Harter, 1990). The point at which normal experimentation evolves into a destructive sense of alienation is not known but the process does dominate the adolescent's passage into adulthood (Harter, 1990).

Rosenberg's (1986) "barometric self concept" provides an instructive image that highlights the dynamic nature of adolescence. Gifted adolescents not only have to deal with society's ambiguous feelings toward the concepts of giftedness and adolescences, but they feel compelled to put their faith in the fickle opinions of others, resulting in fluctuating self appraisals. To form a healthy personality requires an active process which involves mastery of the environment, and a high level of autonomy and independence, thereby reducing any discrepancy between one's idealized self and one's real self as accepted by significant others (Markstrom-Adams, Ascione, Braegger, & Adams, 1993; Niebrzydowski, 1993).

Gender. It is estimated that 15% of the gifted students in the schools are underachieving with boys outnumbering girls two to one (Green, Fine, & Tollefson, 1988; Gonzalez & Hayes, 1988; Whitmore, 1980). The main effect of gender appears to be the deciding factor in different coping

strategies employed between the ages of 13 and 16. Boys use more strategies, often increasing their profile, and look to adults for support, whereas girls use fewer strategies, relying on support from their gifted and nongifted friends, while trying to blend in to a diverse peer group (Hollinger, 1983; 1985). Feldhusen and Nimlos-Hippen (1992) found that gifted girls with higher academic self concepts perceive themselves as better copers than males who see themselves as achievers.

In their attempt to fit in, to be perceived as normal yet competent, gifted youth often suffer a shift in their self concept. Between the ages of 13 and 14, academic competence and physical appearance drop while social acceptability and global self-worth increase. Gifted girls, in particular, minimize their talents and move away from their equally gifted peers (Buescher & Olszewski, 1987).

According to Bem's gender schema theory (1981), individuals limit the number of self perceptions considered possible by conforming to a gender schema often limited by stereotypes (Hollinger, 1983; 1985). Around the age of 14, gifted girls suddenly abandon achievement and self esteem in favour of a need for belongingness, adjusting to society's lower expectations for women (Kerr, 1985). Even when girls achieve top grades, their low educational and occupational goals suggest a hidden underachievement problem (Hollinger &

Fleming, 1988; Reis, 1987). Girls, typically, find a need to integrate their perception of the self and its many opposing attributes with their many relationships and roles in society (Harter, 1988). Boys, however, seem less prone to this pressure and often see roles and relationships as being independent and not in need of integration (Gilligan, 1982). Gifted boys, on the other hand, cope in a more positive fashion to being labelled 'gifted', and, therefore, 'different'. They acquire additional labels and surround themselves with a group of equally talented friends (Buescher & Olszewski, 1987).

It would seem being gifted has a unique meaning for preadolescent boys when compared to the experience of preadolescent girls (Alvino, 1991; Loeb & Jay, 1987). Academic achievement and giftedness in the traditional elementary school setting reinforce a positive self-image for girls and leave boys with nagging self-doubt about meeting the demands of the idealized male. These trends appear to reverse in high school as males leave an elementary school environment which emphasizes being well-behaved, conscientious, and obedient. In high school, males receive more positive support for a masculine achievement style while females often find conflict between achievement and feminine stereotypes (Rodenstein, Pflieger, & Colangelo, 1977; Kelly, 1993).

However, this is not the case across the board. Leroux (1988) reveals that grade 12 adolescent males, identified as gifted, have continuing problems in the areas of body image, social image, and emotional harmony. Future research will have to ascertain why gifted males respond to the high school environment in an uneven manner, continuing some negative behavior patterns while improving other aspects of their self concept. Androgynous characteristics have been identified in this population, possibly putting them in conflict with the idealized male atmosphere so prevalent in high school. Some gifted males may feel pressure to conform to a masculine stereotype, and the resulting internal tension can express itself in diminished self esteem and a sense of inadequacy (Alvino, 1991). At the same time, boys who exhibit aggression, independence, and restlessness are often seen as being behavioral problems, impeding their chances of having their gifted potential recognized. Once again, the consequences for the gifted male of nonconformity result in loneliness and alienation (Kline & Short, 1991).

The female group shows superior, above average adjustment in all areas except social relationships where they fall below the male scores. A comparison with the findings in Leroux (1988), indicates that as females progress through high school, they improve in the area of social relationships. Loeb & Jay (1987) state that females

have problems in high school because of the sudden need to conform to a model of femininity that is not congruent with their identity as a gifted student. However, females in Leroux's study (1988) describe themselves as aggressive leaders with a high degree of self esteem that seems to allow them to adapt to their environment. In this case, androgeny proves to be an asset in a high school environment that values aggressiveness, self reliance, and individualistic characteristics (Hollinger, 1983).

Programming

For many gifted students, the interaction of cognitive, emotional and social spheres comes under the greatest pressure in school (Dirkes, 1983; Kline & Short, 1992 a,b). It is in the classroom that the greatest anxiety can occur. Androgynous behaviour, task commitment, perfectionist tendencies, feeling different, heightened sensitivity and creativity all place the gifted child at risk for conflict in a school environment where conformity and peer pressure weighs heavily on their minds (Kline & Short, 1992 a,b; Leroux, 1988; Loeb & Jay, 1987; Lovecky, 1992).

A historical perspective on the research associated with ability grouping reveals support waxing and waning according to which educational philosophy was dominant at that time. Since the 1920's, when mental testing spurred the initial enthusiasm for ability grouping, a spirited

debate between those in favour and those against has continued to the present, with opposing camps selectively interpreting the research to support their side of the argument (Schneider, 1987). It would appear critics have once again found a receptive audience in these tough economic times because of funding concerns. Their claims that ability grouping is actually detrimental to social adjustment has undercut some of the support for programs dedicated to the gifted learner (Oakes, 1990; Slavin, 1990a, 1990b).

It is no simple task to marshal the literature to the defense of one side or the other, and to find a consistent thread through many studies on the myriad manifestations of ability grouping (subject specific grouping, flexible grouping, team regrouping, cluster grouping multi-age grouping, non-graded grouping, developmental age grouping, and magnet schools) (Rogne, 1993). The various forms of ability grouping have been studied extensively and collectively account for over 2,618 citations in the literature, an astounding body of research (Rogne, 1993).

Into this muddled picture came a new approach to literature review - the technique called "best-evidence synthesis or meta-analysis". By using clearly defined, objective methods, meta-analysis brought order to a chaotic situation caused by the variety of designs and methodology

represented in literature. Results of this type of analysis are far from unanimous but reveal that the academic benefits of ability grouping depend on which program is employed, appearing strongest for those students in special accelerated and enriched classes (Kulik, 1992). Kulik and Kulik (1982, 1984, 1987, 1992), were positive in their assessment of grouping and acceleration for gifted students even though their work is handicapped by standardized achievement tests. They tried to broaden the scope of study to include factors beyond the academic realm and found a slight positive effect on self esteem accompanied by a general positive attitude toward school in general (Rogne, 1993).

In addition to academic benefits of gifted programs, a positive effect has been measured for self concept, peer relations, college success, and career success when a variety of strategies are employed. These successful programs include: enrichment class grouping, acceleration, early entrance to school, grade skipping, cross-grade grouping, non-graded classes, flexible grouping, mentorships, continuous progress, independent study, pull-out programs, advance placement, cluster grouping, and curriculum compacting (Feldhusen, 1986).

Slavin (1986, 1988, 1990a, 1990b) also used the best-evidence synthesis or meta-analysis technique to study

ability grouping, and his results are extensively quoted by those who oppose this practice even though his work specifically excluded studies of gifted programs because of concerns about quality. Other limitations of Slavin's work which undermine its relevance for grouping gifted students include only looking at school achievement in math and reading as measured by standardized tests, and, in the process, ignoring the effects of ability grouping on affective factors, such as self concept (Rogne, 1993). This is a serious oversight because the alternatives available for the education of the gifted (acceleration, enrichment, and special classes or schools) all entail consequences for psychosocial development.

Including training to improve the self concept and creative thinking through strategies, such as task analysis, time management, and goal setting in gifted programming would go a long way toward providing consistency in the results of research into ability grouping (Jenkins-Friedman & Murphy, 1988; Kwan, 1993). It must be remembered that these programs as presently constituted don't necessarily represent the best pedagogy has to offer but are more of a compromise, and the research reflects this fact (Schneider, 1987). It is inevitable that the literature will remain equivocal about the benefits of enrichment programs as long as the pedagogical practice employed in gifted programming

remains inconsistent (Kolloff & Feldhusen, 1984; Mulcahy et al., 1991).

While the argument over the inconclusive research continues, special programming outside the regular classroom continues to come under attack. In light of this criticism of special programming, it would be prudent to review what is being done in the regular class to accommodate the needs of the gifted learner. If this is where the future of gifted education lies, then there is reason to be concerned. The research states that despite the accumulated evidence indicating the gifted students have special educational needs, little is being done to change the standard content and teaching practices of a regular class (Westberg et al., 1993).

The Research Problem

With the spectre of increasing numbers of gifted learners being abandoned to the regular class, it becomes necessary to re-establish the rationale for an educational experience that meets the emergent needs and concerns of the gifted (Archambault et al., 1992; Meade, 1991; Schneider, 1987; Westberg et al., 1993). While no inherent crisis haunts the gifted child, vulnerabilities do exist, especially in the social/emotional area which can be addressed through special programming.

It is clear from the research that gifted adolescents are affected by their identification and placement in special education programs. The debate lies in whether programming and ~~grouping~~ practices ease the transition from adolescence to adulthood by enhancing self concepts, or do they exacerbate an acute self awareness through separation from other students. In order to provide an educational system that fosters a positive self concept, it is important to sift through the various issues to discern how school influences children. ~~Grouping~~ students for the purposes of enrichment or acceleration must continue to prove its value. Studies reinforce the academic benefits of grouping, yet methodological problems leave lingering questions concerning self esteem.

The following table summarizes the key concepts found in the Review of the Literature.

Table 1
Key Concepts from the Review of the Literature

Concept	References
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Psychosocial adjustment of gifted learners	
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Certain socio/emotional traits held in common.	Piechowski & Colangelo (1984)
Hypersensitivity and intensity	Coleman & Fults (1982) Dirkes (1983)
Gifted approach life with increased intensity.	Kundel, et al. (1992) Lovecky (1992) Piechowski (1991)
Uneven development pin-point sources of stress.	Manaster & Powell (1983) Powell & Haden (1984)
Early and rapid development leave the gifted vulnerable.	Clark (1992) Cross, et al. (1993) Dauber & Benbow (1990)
Gifted are well-adjusted.	Mulcahy, et al. (1990, 1991)
Gifted are at risk for psychosocial problems.	Olszewski-Kubilius, et al (1988) Whalen & Csikszentmihalyi (1989) Rimm (1993)
Gifted are at risk for underachievement.	Whitmore (1980, 1990) Butler-Por (1987)

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Gifted learners' self concept (adolescent)

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Junior high school students' self concepts are vulnerable as they worry about being different.	Bryant (1989)
14 and 15 year olds are more troubled than younger and older adolescents by inconsistencies in their self concept.	Damon & Hart (1988)
Positive self concept is the most important force driving gifted to achieve.	Feldhusen & Hoover (1986) Goldis & Blasi (1993) Kerr, et al. (1988)
Early adolescence sees self esteem at a low ebb.	Olszewski, et al. (1987) Peterson, et al. (1984)
Gifted differ in self concept from average-ability adolescents, particularly the academic self.	Pyryt & Mendaglio (1994) Robinson, (1986, 1990)
Gifted learners remain vulnerable to the sanctions society holds for those who are considered outsiders.	Seligman (1990) Stern & Zevon (1990) Van Bortel & Monks (1992)
The biggest difference between gifted achievers and underachievers is low academic self concept.	Whalen & Csikszentmihalyi (1989) Wintre & Crowley (1993)

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Gifted learners' self concept and significant others

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The issues of popularity and social adjustment emerge as pressing concerns.	Austin & Draper (1981) Rimm (1989)
Significant others are the primary shaper of academic self concept.	Cornell & Grossberg (1987) Maddux, et al. (1982)
Gifted were positive about giftedness, felt others weren't.	Markstrom-Adams, et al. (1993)
Adolescents need to find appropriate reference group.	Niebrzydowski (1993) Winne, et al. (1982)

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Gifted learners' self concept and the influence of gender

High emphasis on appearance for adolescent girls results in self consciousness and a negative attitude toward her gender.	Buescher & Olszewski (1987) Feldhusen & Nimlos-Hippen (1992) Gilligan (1982) Harter (1988)
Adolescent females are willing to hide talents and move away from gifted peers to gain acceptance.	Harter (1990) Hollinger (1983, 1985) Hollinger & Fleming (1988)
Gifted females often abandon achievement and self esteem in favour of a need for belongingness.	Kerr (1985)
Females often find conflict between achievement and feminine stereotype.	Kelly (1993) Gilligan, et al. (1990)
Females show superior adjustment in all areas except social relationships.	Leroux (1988)
Gifted males often respond to high school environment in a uneven manner.	Alvino (1991) Kline & Short (1991)
Low educational and occupational goals of gifted females suggest a hidden underachievement problem.	Reis (1987)
Adolescent girls show greater concern over social implications of labelling.	Robinson (1990)

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Programming for the gifted learner

There are clear academic benefits for the gifted when grouped by ability.	Allan (1991) Cocking (1990) Delisle (1990) Feldhusen (1991)
Ability grouping shows no effect on achievement.	Slavin (1986, 1988, 1990 a,b)
Little is being done to change content and teaching practices in regular class for gifted learner.	Westberg, et al. (1993) Archambault, et al. (1993)

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Programming and its influence on the self concept

Ability grouping shows slight positive effect for self concept.	Kulik & Kulik (1982, 1984, 1987, 1992) Rogne (1993)
A decline is experienced in self concept when gifted are enrolled in congregated class.	Chapman & McAlpine (1988) Frame (1991) Gambino & Rejskind (1990)
Programming must include specific training in improving self concept.	Jenkins-Friedman & Murphy (1988) Kolloff & Feldhusen (1984)
The superior self concept of gifted learners is limited to the academic self concept.	Mulcahy, et al. (1991) Kwan (1992) Schneider (1987) Schneider, et al. (1989)

Review of the Literature Summary

With special programming and ability grouping continuing to draw criticism in the face of a persistent effort to mainstream all students, the needs of the gifted learner often get lost in the confusion. Mainstreaming gifted learners continues to be advocated despite recent studies which are highly critical of the fragmented educational experience offered to many gifted children in the regular classroom (Cox, Daniel & Boston, 1985).

Gifted children can be as different from one another as they are from non-gifted children. However, particular traits such as sensitivity, intensity, reactivity, and perfectionism can increase vulnerability to problems. Advanced cognitive functioning allows the gifted learner to deal with anxieties at a younger age, exposing the gifted to mature thinking on values, self-evaluation, and personal philosophy without the resources to effect a satisfactory resolution of conflicts that might arise (Manaster & Powell, 1983; Powell & Haden, 1984; Dauber & Benbow, 1990; Cross, et al., 1993).

Gifted learners, in particular, have different learning experiences which, if not recognized, can lead to conflict and a negative impact on their self acceptance. Considering the fact that Feldhusen (1986) believes a positive self-concept to be a dynamic and driving force in the

actualization of giftedness, the negative consequences of a fragmented educational experience on the self concept looms large.

"Self concept and self esteem are probably major influences which impels an individual to work, to investigate, to learn to solve problems, to strive to achieve, to compete"

Feldhusen (1986, p. 141)

There is a need to continue the study of programs for gifted students, as they are presently constituted, gauging their effectiveness as they influence the social environment in which adolescents define their self concepts (Gambino & Rejaskind, 1990). This is especially true when radical change in that social environment, such as new programs or schools, unsettles an individual's self perception.

The research, to date, shows conflicting results as illustrated by Kulik & Kulik (1982) and a meta-analysis of 15 studies on the self concept of gifted students in self contained special programs and integrated settings. Seven of these studies showed a slight advantage for gifted students in special programs, six found slightly lower self-concepts, and two reported no significant differences.

It is necessary to continue to examine the ways in which self concept scores of children are influenced in programs for the gifted (Gambino & Rejaskind, 1990). There is still room for more research on the self concept of gifted children and ability grouping because of

methodological limitations in previous research; the scarcity of research into age and sex differences in gifted children's self concept; and the limited attention given to domain specific self concepts and social comparison theory (Schneider et al., 1989).

Guiding Research Question

The research project is designed to address a specific question:

1. Do gifted adolescent self concepts change due to their participation in a grouped or congregated setting?

In summary, the main purpose of this study is to assess the effects of programming for the gifted in a congregated setting as they impact on the self concept of gifted adolescents; thereby providing an opportunity to explore the central role self concept plays in the coping ability of gifted males and females.

Theoretical Assumptions

1. All people want to fit in. A place in a larger group fulfils a deep personal need to be connected to society. The feedback and support provided by other people can create the social climate necessary for the expression of individuality and exceptional talent (Manaster & Powell, 1983).

2. The second assumption is based on social interaction and labelling theory (Becker, 1963; Festinger, 1954). While other people do provide support to the gifted learner, they also use labels, for better or worse, to fit people into the broader social context. Ultimately, the "gifted" label and the role it defines is absorbed in an individual's self concept and expressed in his/her behaviour.

3. The third assumption is based on social comparison theory (Festinger, 1954). The talented learner, who now accepts the label of "gifted", will naturally choose to compare herself/himself with those that are relatively similar.

In a mainstream class, when gifted learners are searching for a comparison group, they compare themselves with those of lesser ability, resulting in high self concept (Schneider et al., 1989). However, the transition from a mainstream program to a more homogeneous, congregated gifted program also entails a change in the gifted learner's comparison group. Comparisons with those of equal or higher ability will heighten feelings of inadequacy, resulting in a decline in the self concept (Coleman & Fults, 1982).

Operational Definitions

The term "gifted" refers to those students attending College catholique Samuel Genest who have been formally identified. They are selected according to criteria used by

the Conseil de Langue Francaise d'Ottawa Carleton Secteur Catholique which includes: ability testing, interviews, IQ testing, and checklists from parents, teachers, and students (see Appendix D).

The "congregated class" is part of the College catholique Samuel Genest program for gifted learners in grade nine. This program for gifted learners follows clearly defined principles which are outlined in Appendix D.

"Self concept" is composed of different areas or domains (abilities, skills, appearance, and social acceptability) which help individuals evaluate their thoughts and feelings about themselves and their competence (Harter, 1990).

"Self esteem" represents a more global evaluation of oneself and is related to the discrepancy between the importance or value that the individual places on each separate domain and their perceived competence in those domains (Olszewski et al., 1987). For example, if academic achievements were highly valued yet the student felt incompetent, exhibiting a low academic self concept, then an effect would be felt at the global level on one's self-esteem.

The preceding section helps to sharpen the focus on issues raised in the literature review, developing a specific research question and theoretical assumptions which

underpin the main purpose of this study into programming's effects on the self concept of gifted adolescents. By establishing a basis for a research framework, this section marks the transition into the methodological issues and specific details of the research study which are provided in the following chapter.

Chapter 3

Methodology

This section outlines the design and procedures of the investigation into the effects of a congregated program on the self concepts of gifted adolescents. A summary of the research design, variables, and parameters of the study sets the foundation upon which is built a detailed review of the subjects, instruments, procedures, and process of analysis.

Research Model

A research model developed by Altman (1983) helps place this research into context. The present study incorporates the adolescent as the source of data while investigating the self concept in the psychosocial dimension. The demographics will be outlined and consideration will be given to their impact on the self concept of the subjects.

The combination of a quantitative instrument (Harter's Self Perception Profile for Adolescents, SPPA, 1988) used over time, and a qualitative interview technique is an attempt to fully define nine months in an adolescent's development. Historically, research in the field of self concept is vulnerable to misinterpretation due to problems associated with defining and measuring such a subjective concept. Qualitative research holds the promise of filling in the gaps left by the questionnaire with a more holistic view of how an adolescent perceives the events. In the

process, internal reliability will be enhanced by reinforcing the norm referenced Harter SPPA with detailed, recorded interviews and observations. The following tables outline the research design, variables, and parameters of the study.

Table 2

The One Group Pretest/Posttest Research Design

O Pretest	X Treatment	O Posttest
Harter SPPA completed by students (Dependent variable)	Gifted Programming	Harter SPPA completed by students (Dependent variable)

Table 3

Variables

2 Gender (male/female) X 2 Time (pre/posttest)

Independent Variables	Dependent Variable
Gender Age Birth order Previous experience Programming Social relations	Gifted Self Concepts (as measured by the Harter SPPA)

Table 4

Parameters of the Study

Setting:	College catholique Samuel-Genest
Participants:	25 grade nine gifted subjects
Events:	Entry into high school gifted program in congregated setting
Processes:	Self concept development

Subjects

The sample was composed of bilingual gifted adolescent students (age 12-14) from a high school program offered by College catholique Samuel Genest. College catholique Samuel Genest is a secondary school which decided to augment their existing revolving door, pull-out program with a more complete, congregated program offered to their in-coming grade nine students in 1993. The school screens and selects special students based on their ability to meet the requirements of a strong math/science program. The students were identified as intellectually gifted by the selection criteria employed by the School Board (see Appendix D). The program includes an interdisciplinary approach incorporating the core subjects of French, science, mathematics and social studies (Butler, 1994).

This sample was purposively selected. Purposive sampling has been widely used in place of random sampling in education to address the logistical problem associated with studying children in school. The six subjects interviewed

(three males and three females) were selected at random from the gifted students that made up the congregated class in the school.

The students formed a predominately white, bilingual, middle class sample that necessarily limits generalizability. The demographics of the students are outlined in Table 5 and will be considered in the interpretation of the results of the study.

Table 5

Demographic Characteristics of Subjects			
Gender		Language Spoken at Home	
Males	14 (52%)	French	16 (59%)
females	13 (48%)	English	3 (11%)
		Both	8 (30%)
Age		Birth Order	
12	1 (4%)	Oldest/Only	4 (15%)
13	8 (30%)	Oldest	14 (52%)
14	18 (52%)	Middle	2 (7%)
		Youngest	7 (26%)
Previous Gifted Program		Language Facility (English)	
Yes	24 (89%)	Written	100%
No	3 (11%)	Conversation	93%

(Two (2) subjects dropped out over the course of the year, giving a total of 25 matches for the pre-post test results.)

Students' level of English proficiency was identified by school personnel with the help of a student language survey to assure reliable completion of the questionnaire and interview in English. A questionnaire with a Likert

type scale providing six choices concerning perceived proficiency in the use of English, both oral and written, was completed by the students. All students felt comfortable reading and understanding English, while most students responded as favourably to having a conversation in English (see Language Facility in Table 5).

Instruments

The study was largely confirmatory in nature, therefore, a well structured instrument design, such as, the Harter Self Perception Profile for Adolescents, was the logical choice. Table 6 profiles the relative merits of the two processes, used in the study.

Table 6

A Comparison of the Quantitative Questionnaire and the Qualitative In-depth Interview

Quantitative	Qualitative
Harter SPPA	Interview (20-25% of sample)
internal validity generalizability manageability comparability	open-ended construct validity contextual validity
Generalized to other gifted adolescents	Specific to Samuel Genest (Open-ended questions designed to probe the subjects' psychosocial adjustment as it relates to the eight subscales found on Harter's SPPA.)

Rationale for using the Harter Self Perception Profile for Adolescents (SPPA). The self concept of the gifted learner, as outlined in the literature, is an area of enormous importance yet remains relatively unexplored at the level of complexity and sophistication now available. A recent assessment of the Samuel Genest program delivery for gifted students covered a wide spectrum, but did not probe the depths of the self concept of gifted students. The use of the Harter SPPA provided additional understanding in this area because it has been developed specifically for adolescents and their multi-dimensional self concepts. This knowledge would be particularly and immediately beneficial to school personnel.

The Harter Self Perception Profile for Adolescents (SPPA) was selected because it has been specifically constructed and pretested to gather accurate and reliable data on adolescent self concepts (Harter, 1988). The subscales in the SPPA which encompass social acceptance, physical appearance, behavioral conduct, close friendship, job competence, athletic competence, academic competence have proven to be internally consistent with Cronbach's Alpha reliability estimates for a normal population from the Colorado area ranging from .74 to .92. Four separate normal populations were sampled with a fifth currently underway to bring the total number of students who have been

administered this revised version of the SPPA to 2000 (Harter, 1988).

The subscales provided means (2.9) and standard deviations (.50-.75) which show systematic differences across and within the adolescent samples, plus a definite gender link, depending on which subscale was being analyzed (Harter, 1988). The results from the four samples indicate that close friendship and job competence are rated higher than romantic appeal and physical appearance. In addition, girls did not compare themselves very favourably with boys on a number of subscales. In particular, athletic competence, physical appearance and global self worth were given lower ratings than found with the boys, yet girls outdistanced boys in the area of close friendships (Harter, 1988).

The instrument was factor analysed revealing a strong profile of eight subscales with very little cross loading (.08-.12), building confidence in the fact that these domains are representative of the adolescent self concept (Harter, 1988).

Intercorrelations conducted on the various samples provide an insight into the world of the gifted adolescent. Scholastic competence loses its link to social acceptance, a link found in most elementary school populations, when the student enters adolescence. In high school, scholastic

competence fades in importance while close friendship and romantic appeal take on greater significance for social acceptance. These three domains are moderately linked, suggesting possible conflict areas for those who suddenly feel less acceptance from their peers for their scholastic ability. In fact, self worth is moderately related to scholastic competence, social acceptance, close friendship, romantic appeal, and behavioral conduct (Harter, 1988).

One advantage of the Harter approach in developing the series of profiles is that they offer the opportunity to explore the greater complexity of the self concept as the developmental process unfolds over time. In addition, Harter's SPPA allows an exploration of the processes underlying global self worth by not only measuring a student's perceived competence in the various domains that make up the self concept but also assessing the importance of those domains to the individual. If a large gap appears between their perceived competence level and their idealized level in a domain they value, then disappointment and depression could result.

Another advantage for the study of the gifted learner lies in the fact that it is possible to assess their scores based on which group they are comparing themselves to, gifted or regular students (Harter, 1988). Social comparison can have a profound impact on one's self concept

and has particular significance to those studying programs based on ability grouping and the impact they have on those being transferred between regular classrooms and gifted classrooms.

Translation of the instruments was not necessary, nor would it have been possible without incurring additional problems due to issues surrounding copyright infringement, and diminished validity and reliability. Reference to language considerations will be addressed in the limitations section of the study.

Therefore, in summation, the research study using the Harter SPPA, as presently constituted, met the mutual interests of the school and researcher to improve the knowledge base on the gifted learner, and the practice of gifted education in the schools. These results when combined with the data from the other evaluation instruments were expected to inform changes in the gifted program which would then benefit students in the future.

Rationale for a qualitative methodology and in-depth interview. The emphasis in educational research has shifted from just quantifying results to an assessment of how students think and feel. The social relevance of educational research will be enhanced if this shift enables those most directly affected by program change to have a voice in determining the goals, procedures, and outcomes

(Lundsteen, 1987). The advantages of qualitative methods rests with their ability to expand the research horizons, and to increase understanding of the gifted student relationship with the program (Bogdan & Biklen, 1982; Lincoln & Guba, 1985; Miles & Huberman, 1984). In the final analysis, it is the subjective value of the consumers of education, who decide the fate of any program. The effectiveness of the program will necessarily be reflected in its ability to strike a resonant chord with the individual's values and needs in a particular context (Borland, 1990).

Interviews are an extension of the Harter SPPA and were conducted immediately after the completion of the survey. To maintain consistency, the same language and terms used in the Harter SPPA were used to help facilitate the coding and interpretation of the results. The in-depth interview provides an opportunity to explore an adolescent's perception of events and activities that could escape findings of a questionnaire measure due to logistical or time constraints.

By examining particular cases, the researcher hopes to increase the understanding of other specific cases but not necessarily all cases. Generalizations or external validity are to be replaced by the notion of transferability. At the same time, credibility is enhanced by the students having a

voice while they actively participate in revealing their own experience. The emphasis shifts from just quantifying results to an assessment of how the students think and feel (Lincoln & Guba, 1985).

Procedures

A pretest/posttest using the Harter SPPA was administered at the school in the fall, at the start, and in the spring, at the end, of the school year. Each session was conducted in the classroom and required approximately 45 minutes. Confidentiality was stressed to the students. A brief explanation of the SPPA and the answering format was followed by a question period. The SPPA consisted of 45 paired statements. The subjects selected one or the other based on how well the statement described themselves, and then made a further decision on how strongly they felt it described them (see Appendix A).

An additional 16 items rated the importance of the eight domains in one's life. If the gifted students didn't place any great weight on a particular domain, then a low score in that area had little impact on their self concept. By calculating a discrepancy score between the importance ratings and the competence scores, a more accurate picture emerges of the subject's profile across the different domains of the self concept when compared to a normative pattern (Harter, 1988).

The interviews were conducted in English after the posttest with a randomly selected group of six gifted students, split evenly by gender. The interview questions were based on the eight self concept domains contained in the Harter SPPA, and they expanded the issues surrounding social comparison processes, bases for self judgement, determinants of competence, and gifted programming. (See Appendix B.) Responses to the open-ended questions were tape recorded and observations noted. All information was preserved and kept confidential, thereby ensuring anonymity.

Process of analysis. The Harter SPPA consists of 45 paired statements rating perceived competence in eight domains of the self concept plus an additional 16 statements rating the importance of those domains to the subjects. (See Appendix A.) For each item, the student is asked to decide whether he/she is most like the student described by the statement on the left or the statement on the right of the page. After this decision is made, the student is requested to choose whether the statement is "sort of true" or "really true" for him or her. Each item on the Harter SPPA is answered by the student using a one (1) to four (4) scale where one (1) indicates low perceived competence or low importance and four (4) indicates high perceived competence or high importance. The scores are summed and then averaged for each subscale to yield a subscale score that can range

from one (1) to four (4). The resulting scores generated by the Harter SPPA for each domain represent a competence rating which, when compared to the student's importance rating, allows for an accurate interpretation of self concept profile.

In addition, averages, standard deviations, and correlations are obtained for the eight domains plus global self worth. Finally, a two factor, 2x2 (gender x time) analysis of variance with repeated measures on the time factor sought interactions between the independent variables.

The recordings of the interviews were transcribed verbatim, placed on computer, and subjected to analytic induction and coded according to the dominant emergent themes (Lincoln & Guba, 1985; Miles & Huberman, 1984). Codes to classify the data for retrieval included descriptive, inferential and emergent pattern categories. Segments were also coded as "positive", "negative" or "mixed" based on the researcher's observations of the different kinds of feelings associated with the students' responses at the time of the interview. (See Appendix E.)

The interview was specifically designed to illuminate the role the social environment plays in the gifted adolescent's developing self concept. The dynamic involved in the transition to high school, and a new, homogeneous

peer group required a more thorough analysis of external influences, such as, comparisons with others, and sensitivity to other's opinions. The social interpretation provided a balance to the cognitive analysis of the individual's self concept which is addressed by the Harter SPPA and its internal comparison of competence with importance.

The following chapter will present the findings from both the quantitative measure, the Harter SPPA, and the qualitative-based interviews.

Chapter 4

Results

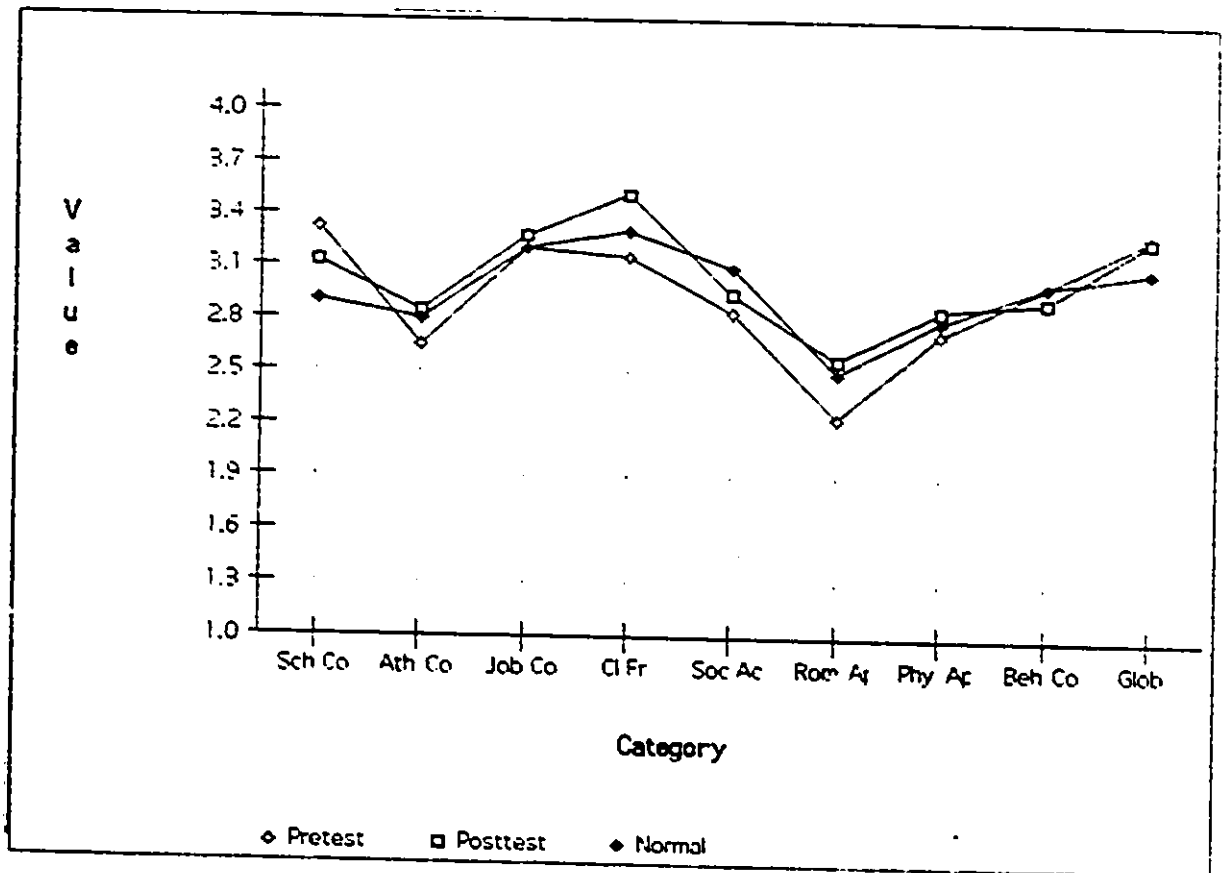
This chapter summarizes the results from the pre/posttest Harter SPPA and interviews conducted with a grade nine congregated class. First, the quantitative findings from the analysis of the Harter SPPA, including a self concept profile, are presented. In addition, findings are described from a two factor analysis of variance with repeated measures on the time factor. Secondly, averages, standard deviations, correlations, and regression analysis are obtained for the eight domains plus global self worth. Third, the attitude, descriptive, inferential, and pattern coding of the interviews are investigated through frequencies counts and a chi-square analyses. Finally, direct quotes, relating to the emergent themes in the interview are presented to reinforce the gifted students' experience.

Self Perception Profiles for Adolescents Pre/Posttest

Figure 1 and Figure 2 provide self perception profiles for gifted students, both the pre and posttest results of their competence and importance ratings. Included on the self perception profile for competence ratings are the normative data compiled by Harter (1988).

Figure 1

Total Gifted Self Perception Profile (Pre/Posttest)



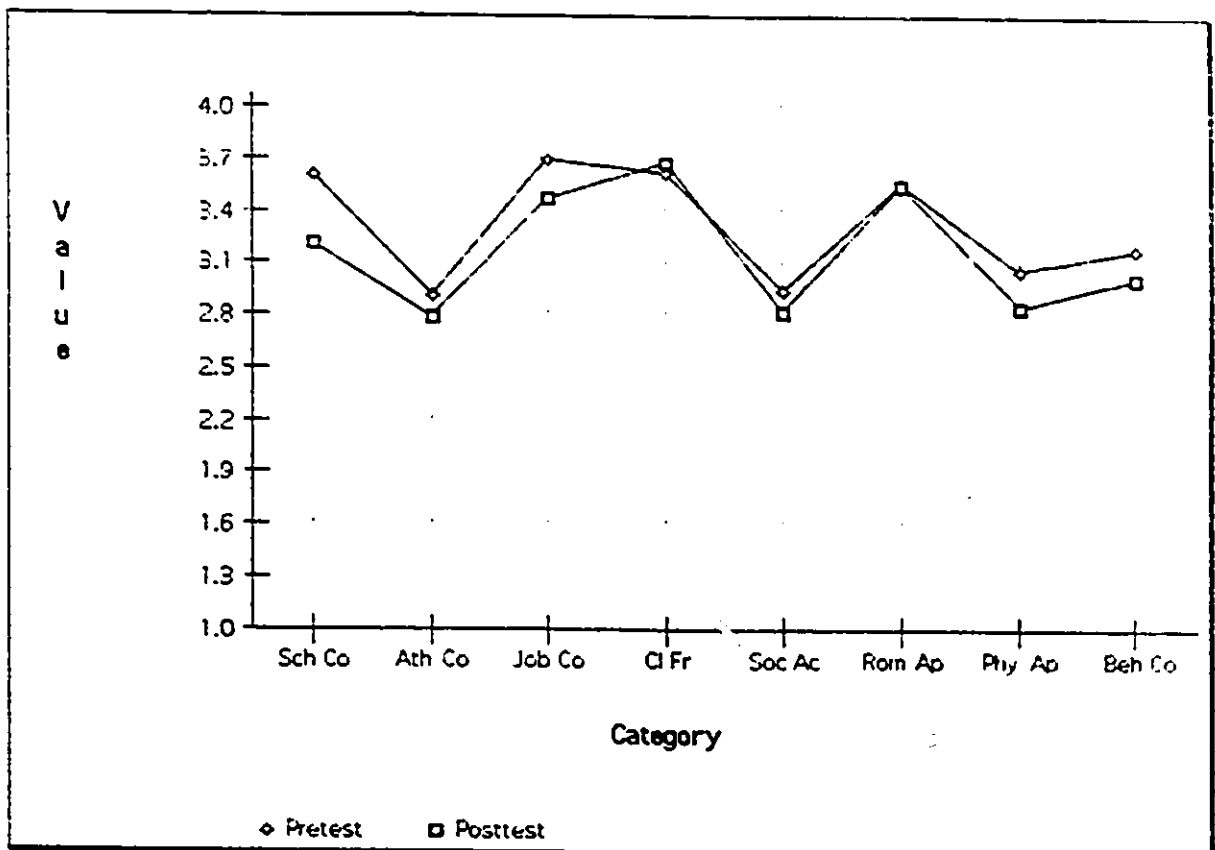
The results in Figure 1, in general, show a drop in scholastic competence and behavioral conduct with a sharp

rise in close friendship, and lesser gains in social acceptance, romantic appeal, job competence, and physical appearance while no appreciable change is observed in global self worth.

The corresponding importance ratings in Table 2 show the largest drop in scholastic competence, followed by lesser decreases in job competence, social acceptance, physical appearance and behavioral conduct with a rise in close friendship and a negligible change in romantic appeal.

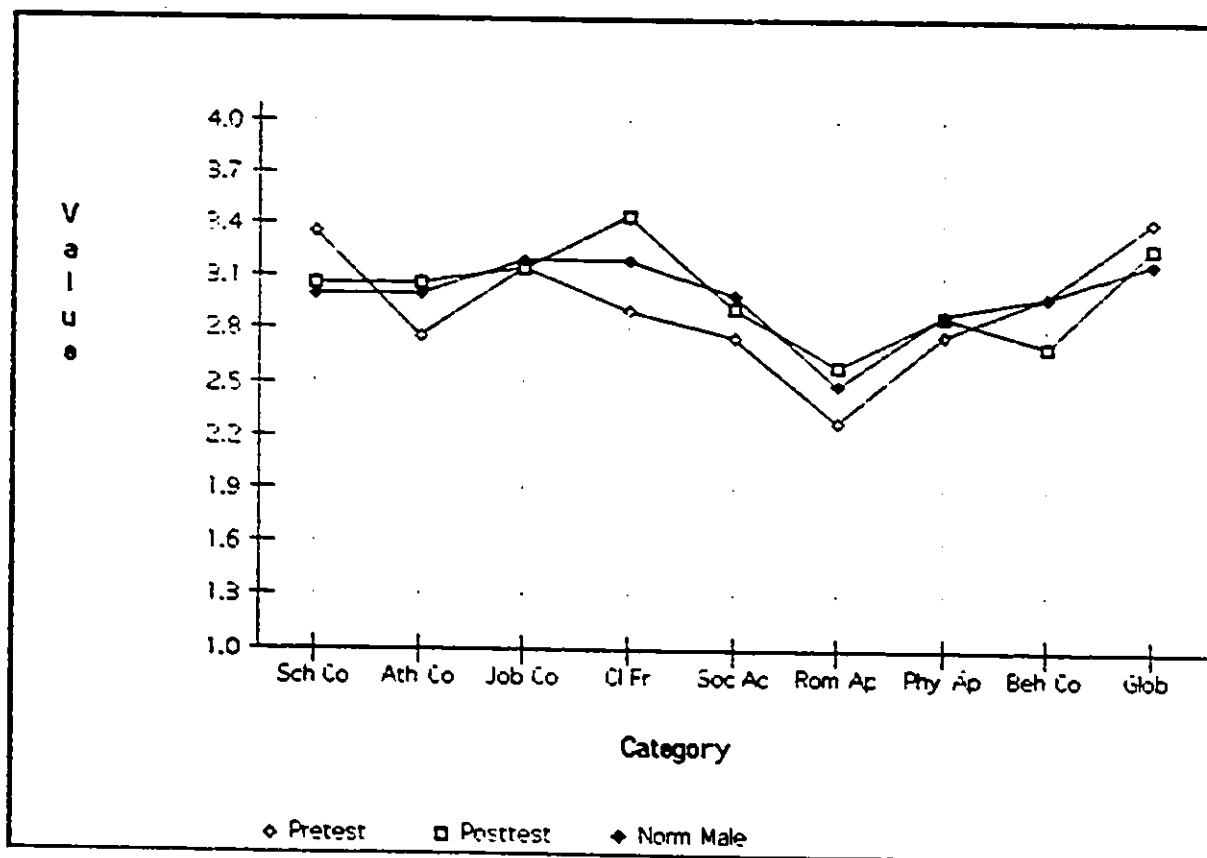
Figure 2

Total Gifted Self Perception Profile Importance Ratings
(Pre/Posttest)



Figures 3 and 4 reveal the self perception profile of the pre/posttest for females and males, separately. The males show considerable fluctuation between their pre/posttest profiles, especially in the increase in close friendship and the decrease in behavioral conduct.

Figure 3
Gifted Male Self Perception Profiles (Pre/Posttest)



It is important to note that the females' pre and posttest profiles, shown in Figure 4, are remarkably similar with a consistent level of improvement apparent for all subscales, except scholastic competence.

Figure 4
 Gifted Female Self Perception Profiles (Pre/Posttest)

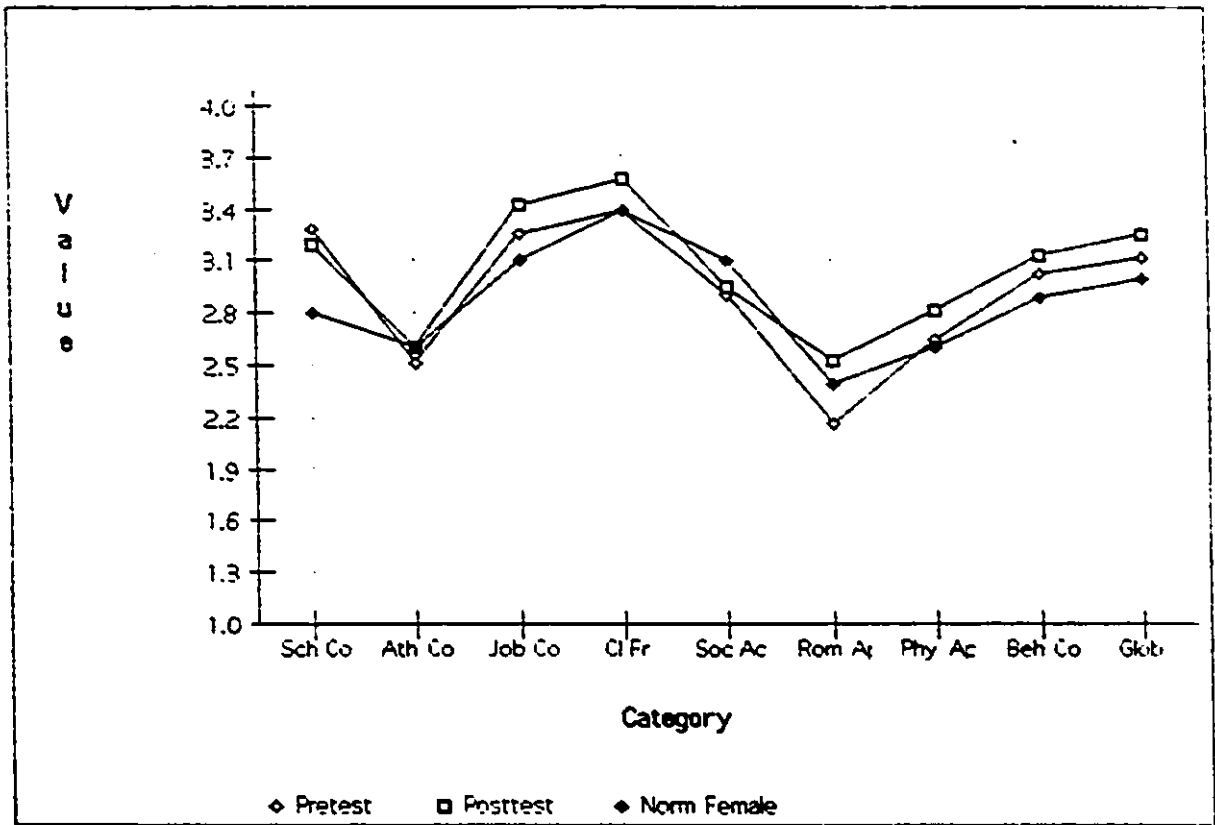
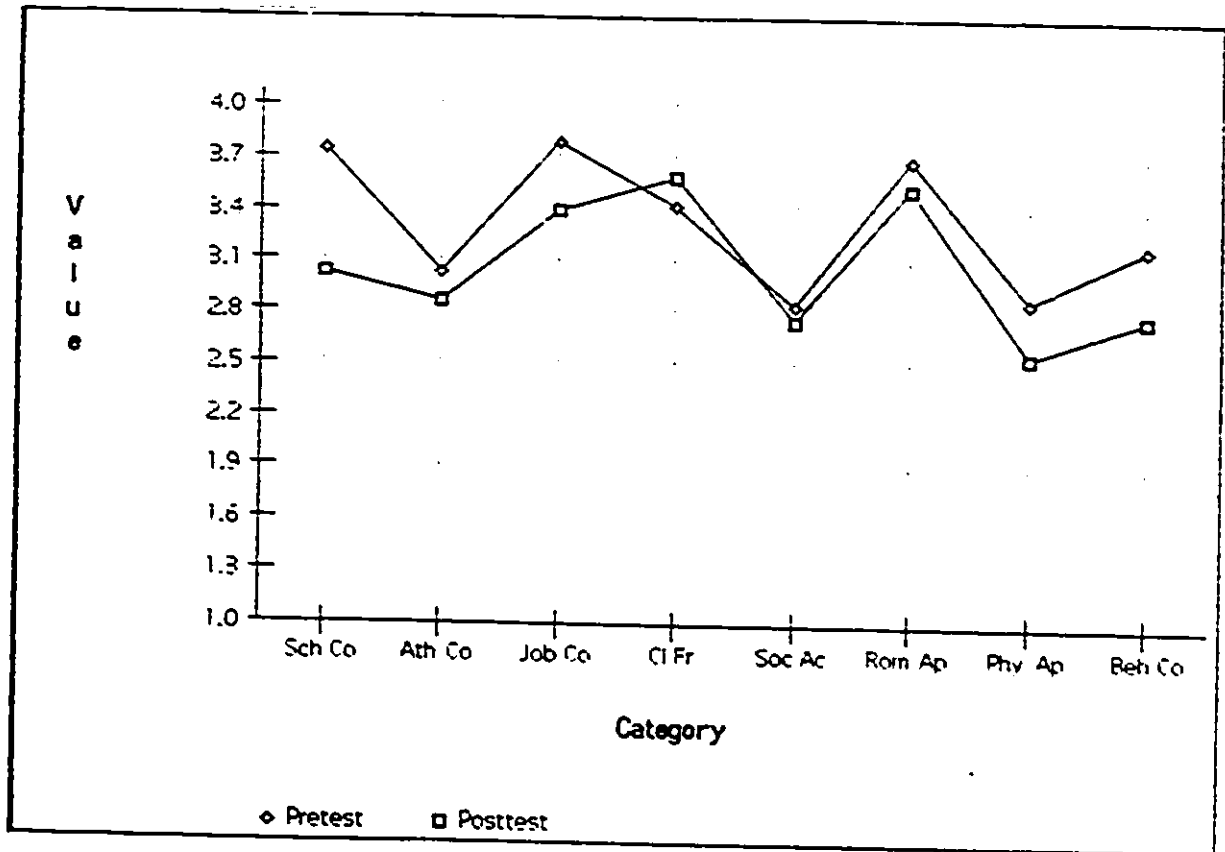


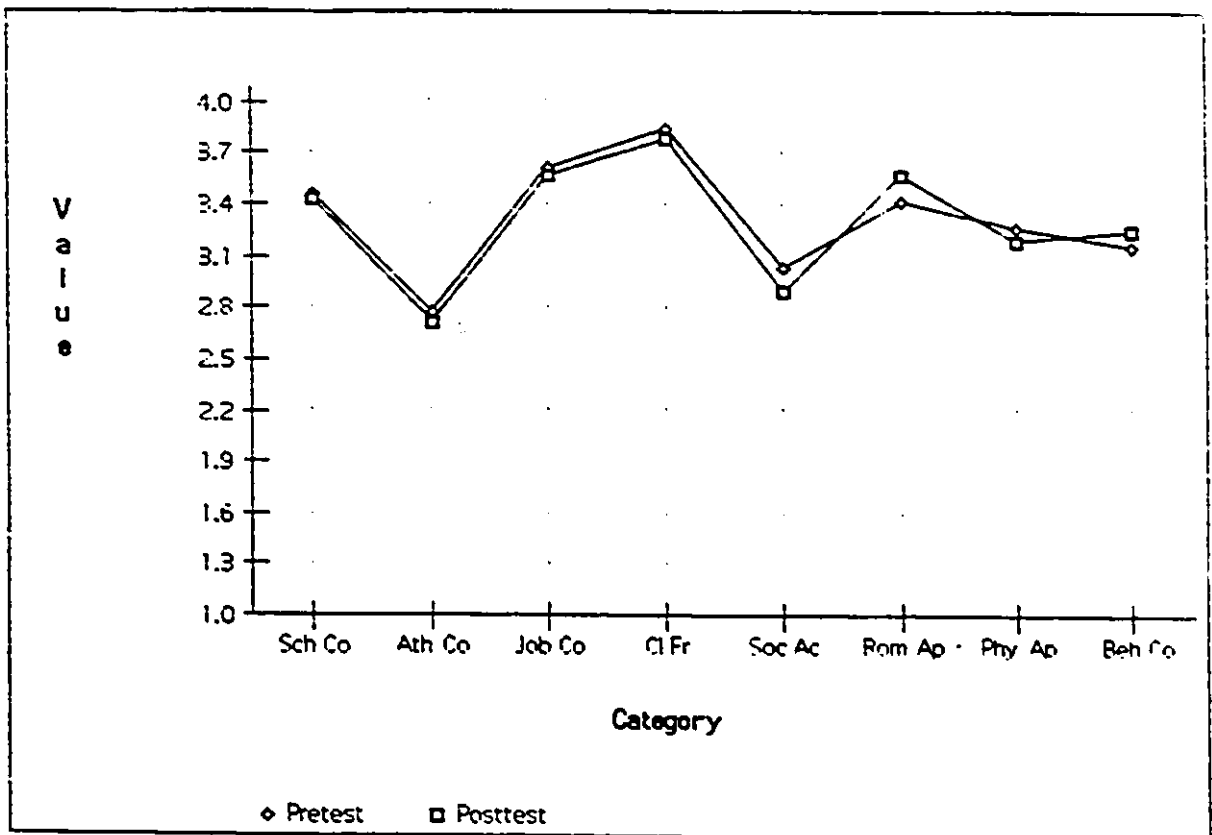
Figure 5 and Figure 6 represent the importance ratings of males and females on the Self Perception Profile for Adolescents.

Figure 5
Male Self Perception Profile Importance Ratings
(Pre/Posttest)



Males show a dramatic drop in scholastic competence and consistently lower ratings across all other domains, especially behavioral conduct, with the exception of close friendship.

Figure 6
 Female Self Perception Profile Importance Ratings
 (Pre/Posttest)



Females, on the other hand, show small decreases in importance ratings across all domains except romantic appeal and behavioral conduct.

Analysis of Variance Findings for the Self Perception Profile for Adolescents

An analysis of variance with gender (male, female) and time (pretest, posttest) as factors was performed on each of

the nine subscales of the Harter Self Perception Profile for Adolescents. Table 7 summarizes the results of the analyses of variance.

Table 7
Analysis of Variance Findings of the Self Perception Profile
for Adolescents Subscales

		Pre	Post	Time	Gender	Time X Gender
	df				F	
Scholastic competence	1	.02	.64	1.97	.28	1.10
Social acceptance	1	.56	1.42	.75	1.15	.04
Athletic competence	1	.80	.98	1.82	.95	.03
Physical appearance	1	.50	.08	.11	.27	.26
Job competence	1	.35	3.21	.68	1.94	1.32
Romantic appeal	1	.24	.09	5.43*	.01	.56
Behavioral conduct	1	.09	4.69*	2.58	1.90	12.64a
Close friendship	1	2.33	.06	8.83a	1.17	3.05
Global self worth	1	1.24	0.00	0.00	.39	1.46

* $p < 0.05$

a $p < 0.01$

Table 7 indicates that there were no gender differences or changes over time in the global self worth scores.

However, significant changes occurred in some of the subscales of the Harter SPPA over time. In the grade nine gifted program at Samuel Genest, the self concept of their students as defined by the subscales of romantic appeal and

close friendship changed over time. In addition, there was an interaction of time by gender on behavioral conduct with a significant difference between the genders in the posttest.

The different directions of the changes in the subscales are shown in Table 8. On romantic appeal and close friendship, the self image of the students increased significantly. There was also an interaction of time by gender on behavioral conduct with an increase for females but a significantly larger decrease for males in the posttest.

The overall trend in competence ratings as presented in Table 8 for males revealed an increase in social acceptance, romantic appeal, physical appearance, athletic competence and close friendship with a neutral response in job competence over time. Counterbalancing this upward trend was a decline in scholastic competence, behavioral conduct and global self worth. In contrast, females showed an increase in all competence ratings with the exception of scholastic competence over time.

Table 8

**Means and Standard Deviations on Self-Perception Profile
Subscales for Males and Females by Time**

Subscale	Gender	Pretest		Posttest	
		Mean	SD	Mean	SD
Scholastic Competence	Male	3.36	.41	3.07	.83
	Female	3.28	.43	3.20	.60
Social Acceptance	Male	2.77	.70	2.93	.54
	Female	2.91	.43	2.96	.46
Athletic Competence	Male	2.77	.89	3.06	.77
	Female	2.52	.65	2.60	.75
Physical Appearance	Male	2.79	.62	2.89	.76
	Female	2.65	.54	2.81	.59
Job Competence	Male	3.15	.46	3.15	.48
	Female	3.25	.48	3.43	.45
Romantic Appeal	Male	2.30	.55	2.61	.65
	Female	2.17	.50	2.53	.49
Behavioral Conduct	Male	3.00	.69	2.73	.82
	Female	3.03	.39	3.13	.40
Close Friendship	Male	2.91	.89	3.45	.47
	Female	3.40	.69	3.57	.60
Global Self Worth	Male	3.44	.49	3.29	.61
	Female	3.12	.70	3.26	.58

Differences over Time for Subscales

T-tests between the means of the pretest and the posttest of each subscale were run, separately, for males and females. No significant differences existed for females. However, males showed significant differences for

the competence ratings of behavioral conduct ($t = -3.34$, $p < .01$), and close friendship ($t = 3.18$, $p < .01$).

Analysis of Variance findings of the Self Perception Profile for Adolescents Subscales Importance Ratings

Table 9 contains the results of the analysis of variance findings of the importance ratings for the pre and posttest. Significant changes in some of the importance ratings occurred over time.

Table 9

Analysis of Variance Findings of the Self Perception Profile for Adolescents Subscales Importance Ratings

		Pre	Post	Time	Gender	Time X Gender
	df	F				
Scholastic competence	1	2.40	3.12	4.55*	.38	5.58*
Social acceptance	1	.47	.38	.45	.58	.01
Athletic competence	1	.18	.27	0.00	.26	0.00
Physical appearance	1	1.11	4.01	1.84	2.84	1.84
Job competence	1	.49	1.26	1.04	.15	2.66
Romantic appeal	1	1.67	.03	.20	.56	1.26
Behavioral conduct	1	.39	4.05	2.82	.80	9.26a
Close friendship	1	5.18*	.01	2.63	1.73	6.73*
Discrepancy Scores	1	.15	0.00	4.40*	.08	.10

* $p < 0.05$

a $p < 0.01$

The self concept of the gifted students as defined by the importance rating of scholastic competence changed over time. In addition, there were significant interactions of time by gender on scholastic competence, behavioral conduct, and close friendship. The significant difference in close friendship was found between the genders in the pretest. The interactions of gender and time found in scholastic competence, behavioral conduct and close friendship are further explored in Table 10.

Table 10

Means and Standard Deviations on Self-Perception Profile
Subscales Importance Ratings for Males and Females by Time

Subscale	Gender	Pretest		Posttest	
		Mean	SD	Mean	SD
Scholastic Competence	Male	3.75	.38	3.03	.79
	Female	3.46	.52	3.43	.62
Social Acceptance	Male	2.86	.84	2.77	.80
	Female	3.04	.59	2.89	.49
Athletic Competence	Male	3.04	1.05	2.87	.83
	Female	2.77	.60	2.71	.64
Physical Appearance	Male	2.89	.86	2.57	.96
	Female	3.27	.56	3.18	.58
Job Competence	Male	3.79	.43	3.40	.74
	Female	3.62	.51	3.57	.58
Romantic Appeal	Male	3.71	.38	3.53	.48
	Female	3.42	.53	3.57	.43
Behavioral Conduct	Male	3.21	.96	2.80	.96
	Female	3.15	.69	3.25	.73
Close Friendship	Male	3.43	.58	3.60	.66
	Female	3.85	.32	3.79	.43

The different directions of the changes in the subscales are also shown in Table 10. The importance of scholastic competence for the students declined over time with males dropping more than females. Ratings of the importance of behavioral conduct decreased for males while females showed an increase. In addition, the importance of close friendship increased for males while females showed a decrease. The trend with importance ratings showed a

consistent decrease for both males and females over time. The one positive exception for males was found in close friendship while females showed positive increases over time in both behavioral conduct and romantic appeal.

Differences over time for Importance Ratings

T-tests between the means of the pretest and the posttest of each importance rating were run, separately, for males and females. No significant differences existed for females. However, males showed significant differences in the importance ratings of scholastic competence ($t = -3.00$, $p < .05$), and behavioral conduct ($t = -2.77$, $p < .05$).

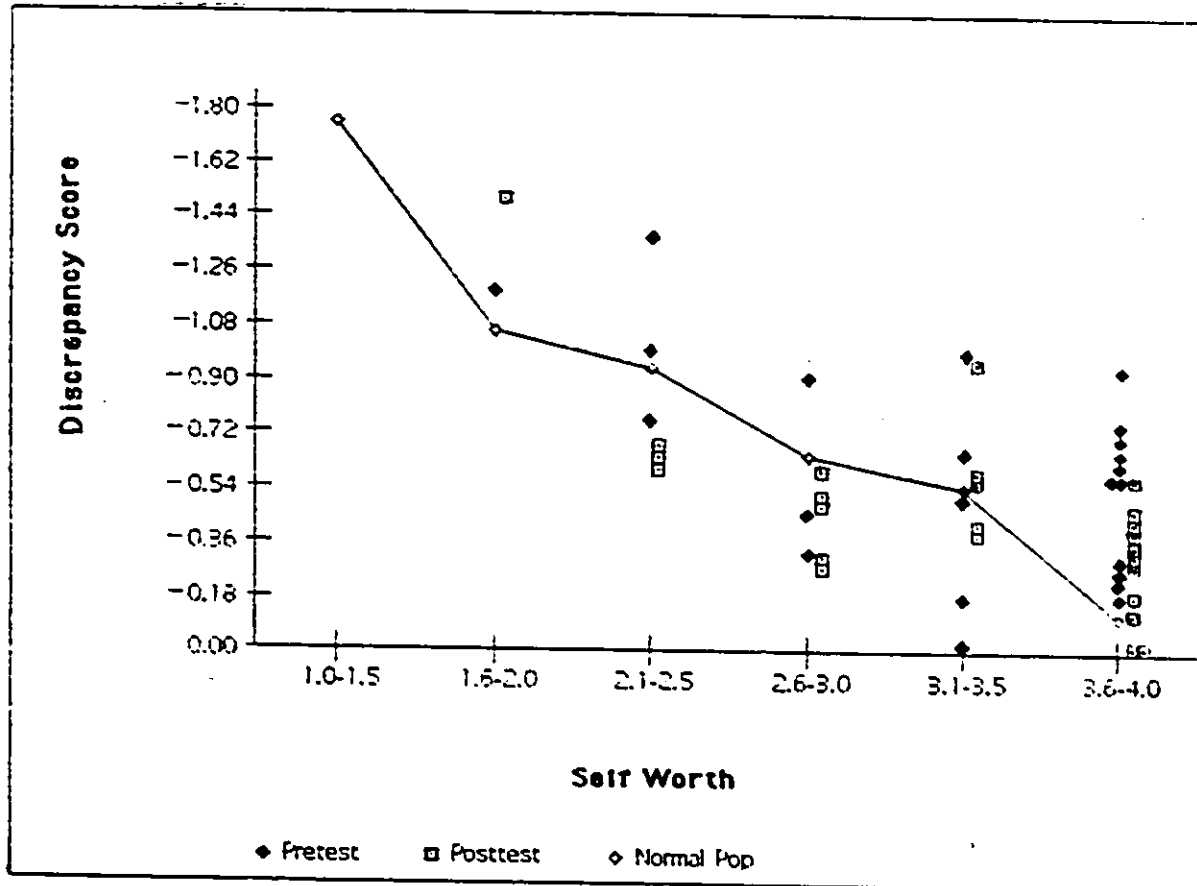
Discrepancy Scores

A separate analysis was carried out on the discrepancy scores which were a measure of the difference between the scores on the Harter SPPA subscales and its corresponding importance rating. If the student felt competent in a certain subscale that was also considered important, then there should be little discrepancy. On the other hand, a large discrepancy score was indicative of low competence in areas deemed very important. The discrepancy score calculations for this study are contained in the Appendix F. For males, the highest discrepancy scores were found in the domains of romantic appeal, job competence, and close friendship. Although discrepancy scores in all domains decreased over the duration of the program, these three

maintained their rankings in the top three positions. Females scores also showed this consistency with romantic appeal, physical appearance and close friendship occupying the top positions throughout the program. According to the results of the analysis of variance, the discrepancy scores changed significantly over time from the pre to posttest. The difference between what the students felt was important and how they perceived their competence was lessened over time, indicating less internal conflict. Figure 7 displays the scatterplot of the two sets of discrepancy scores from the pre and posttest plotted against the global self worth scores.

Figure 7

Self Worth and Competence/Importance Discrepancy Score



The normal population curve highlights the inverse relationship that exists between the discrepancy scores and the self worth scores. If the student feels competent in areas that are deemed important, then a low discrepancy score will correspond to a high self worth score. The reverse is also true as a high discrepancy between perceived competence in areas judged important will see a concomitant lowering in global self worth. This relationship between

these two variables was only strengthened in the gifted students from the pretest to the posttest.

Upon further investigation, it was revealed that the drop in discrepancy scores from pre to posttest was consistent for both genders (male $-.57$ to $-.34$), (female $-.44$ to $-.35$). Although the gifted students maintained relatively high global self worth scores, the gain in female scores (3.12 to 3.36) was offset by a decrease in male global self worth scores (3.44 to 3.29). This male trend downward while, at the same time, lowering their discrepancy score ran counter to Harter's (1990) predictions and was probably due to the fact that some valued domains, such as scholastic competence, were much harder to discount. Discounting domains where the students have lower perceived competence was an effective coping strategy but there can be unforeseen repercussions on a complex relationship with global self worth.

Predicting Global Self Worth

In order to investigate the possibility that the various subscales could predict global self worth in the gifted students, a stepwise regression analysis was conducted (see Table 11). Separate analyses were carried out on male and female scores - pre and posttest. In the pretest for both males and females, physical appearance was the only significant contributor to the prediction of global

self worth. Physical appearance accounted for 46% of the variance in males' global self worth and 77% of the variance in females' global self worth.

In the male posttest, physical appearance, romantic appeal, and job competence subscales accounted for 93% of the variance in global self worth. It can be seen that physical appearance (62%) was the primary contributor to the prediction of global self worth with romantic appeal (23%) and job competence (8%) making lesser contributions. In the female posttest, romantic appeal, close friendship, and behavioral conduct subscales accounted for 74% of the variance in global self worth. Romantic appeal (38%) was the primary contributor to the prediction of global self worth with close friendship (25%) and behavioral conduct (11%) providing lesser contributions. Behavioral conduct was not significant.

Table 11

Stepwise Regression of Subscales on Global Self Worth for
Gifted Students

Pretest Male	Step	Criterion	Predictors	BETA	R**2
	1	Global S.W.	Physical A.	.54	.46*
	R-square = .46 F=9.56 df=1,11 p<.05				
Pretest Female	Step	Criterion	Predictors	BETA	R**2
	1	Global S.W.	Physical A.	1.15	.77b
	R-square = .77 F=37.78 df=1,11 p<.001				
Posttest Male	Step	Criterion	Predictors	BETA	R**2
	1	Global S.W.	Physical A.	.72	.62a
	2		Romantic A.	-.42	.23a
	3		Job C.	.42	.08*
	R-square = .93 F=38.48 df=3,9 p<.001				
Posttest Female	Step	Criterion	Predictors	BETA	R**2
	1	Global S.W.	Romantic A.	.62	.38*
	2		Close F.	-.31	.25*
	3		Behavioral C.	.29	.11
	R-square = .74 F=7.61 df=3,8 p<.01				
* p<0.05					
a p<0.01					
b p<0.001					

Intercorrelations Among Subscales and Importance Rating

The intercorrelations among the competence subscales and importance ratings for the gifted class are displayed in Tables 12 and 13.

Table 12

Correlation Analysis of Subscales (Gifted: Total)

	Athl	Soc	Close	Rom	Phys	Behav	Job	Glob
Schol	-.03	.07	.01	-.11	.15	.58b	.17	.34a
Athl	--	.28*	-.10	.32*	.21	-.35a	-.01	.05
Soc		--	.41a	.41a	.31*	-.004	.12	.24
Close			--	.19	.03	-.05	.22	.09
Rom				--	.44b	-.10	-.08	.34*
Phys					--	.27*	-.14	.72b
Behav						--	.15	.37a
Job							--	-.03

* $p < 0.05$

a $p < 0.01$

b $p < 0.001$

Table 13

Correlation Analysis of Importance Ratings (Gifted: Total)

	Importance Rating						
	B Soc	C Athl	D Phys	E Job	F Rom	G Behav	H Close
A Schol	.36a	.06	.21	.50b	.28*	.32*	.16
B Soc	--	.30*	.62b	-.008	.15	-.11	.50b
C Athl		--	.31*	.02	.002	-.19	.12
D Phys			--	.12	.18	.03	.41a
E Job				--	.30*	.41a	.03
F Rom					--	-.04	.20
G Behav						--	-.09

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

The analysis of the total gifted sample provides a basis for comparison with the normal population scores established by Harter (1988). Additional tables for the data, broken down by gender and pre/posttest scores, are located in Appendix G. The integrated results from these statistical tests are presented below, according to the eight self concept domains plus global self worth.

Scholastic competence. There was a decline in perceived scholastic competence, although not statistically significant, it was the one area where both male and female gifted students have shown a decline. Scholastic competence was strongly related to behavioral conduct. Males also linked scholastic competence to global self worth, while

females related scholastic competence with job competence. In addition, scholastic competence was poorly related to social acceptance. In fact, this study showed scholastic competence to have a weak link to close friendship and a negative impact on romantic appeal and athletic competence.

This finding was in sharp contrast to the importance ratings of females which indicated they continued to value a relationship between scholastic competence and social acceptance, despite the fact that this relationship was no longer present in their adolescent lives. Males, on the other hand, linked the importance of scholastic competence to behavioral conduct. Both genders established a relationship between the importance of scholastic competence and job competence.

In the end, the influence of the congregated program on scholastic competence became strongly linked for all gifted students to global self worth, reinforcing a relationship already present in the males. This relationship was common among students receiving special programming (Hoge & McSheffrey, 1991). In addition, the value or importance placed in scholastic success and social acceptance or popularity appeared to have diminished considerably by the end of the program.

Social acceptance. The social acceptance scores of the gifted students improved but remained below the normal

level. Males established links for social acceptance with close friendship, romantic appeal, physical appearance and athletic competence, while females related social acceptance with close friendship and global self worth. At the end of the program, romantic appeal emerged with a strong relationship with social acceptance. It was noteworthy that, at the start of the program, scholastic competence was valued as an important domain associated with social acceptance, along with physical appearance and close friendship. Social acceptance remained relatively untouched by programming with one notable exception. The posttest revealed the importance of scholastic competence missing from the domains associated with social acceptance.

Physical appearance. The gifted students showed improvement in their physical appearance scores over time. The gifted male students felt strong links between physical appearance and social acceptance, while female students concentrated on the relationship between physical appearance and romantic appeal. Over time, physical appearance was dropped from its relationship with romantic appeal and social acceptance yet remained linked to global self worth. This association, between physical appearance and global self worth, bore the strongest link. Physical appearance played a pivotal role in one's sense of self worth (Harter, 1987; 1990). Physical appearance was a significant

contributor to the prediction of the gifted students' self worth when measured at the start of the program, and the male students maintained this trend throughout the year (see Table 11).

The students' importance ratings revealed they valued and were motivated to develop a relationship between physical appearance, social acceptance, close friendship and athletic competence. During the year, the gifted continued to value a bond between physical appearance and social acceptance but not friendship. Males continued to value the physical appearance's relationship to athletic competence and social acceptance. Interestingly, females showed concern over the relationship between physical appearance, job competence and social acceptance.

Close friendship. The self concept score for close friendship was the highest for females during the program, and it became the highest for males as all the scores improved over the course of the program, especially for the males. At the beginning of the program, close friendship was linked to social acceptance. Females associated close friendship with global self worth, while it had a negative affect on romantic appeal. In the posttest, close friendship was dropped from social acceptance while females added close friendship to the domains that contributed

significantly to the prediction of the gifted students' self worth.

The importance of close friendship was higher for females than males. Kline & Short (1991) found that by late adolescence, relationships had taken the primary position in the female value system. In this study, the importance of close friendships increased for males while females showed a slight decrease over time. The gifted students valued the association between close friendship, social acceptance and physical appearance. During the program, the importance of the bond between close friendship and social acceptance remained untouched while its relationship with physical appearance decreased.

Romantic appeal. The gifted perception of their romantic appeal increased significantly over the duration of the program. Males built relationships between romantic appeal and athletic competence and social acceptance, while females linked romantic appeal to physical appearance and global self worth. At the same time, females felt romantic appeal had a negative influence on close friendship. During the program, romantic appeal rose to make a significant contribution to the prediction of global self worth, especially for females. Female students showed an increase in the importance of romantic appeal as the program progressed.

Behavioral conduct. Males perceived themselves to be less well-behaved than did the females, and they valued behavioral conduct less than females over the course of the program. In fact, during this time, females increased the value they placed on behavioral conduct.

Athletic competence. Athletic competence scores rose to normal levels for both males and females in the gifted congregated program. Males established a significant relationship for athletic competence with social acceptance and romantic appeal, and interestingly, a moderately strong negative association with behavioral conduct. During the program, the bond with romantic appeal strengthened while the negative relationship to behavioral conduct lessened. At the same time, the gifted males valued the link between the importance of athletic competence and physical appearance. The importance of athletic competence was related to social acceptance and physical appearance. All of which suggested that athletic prowess was valued and brought with it important physical and social attributes.

Job competence. Female students showed a relationship between scholastic competence and job competence. Females valued this relationship in their importance ratings and also included a connection between job competence and physical appearance. For males, the importance of job

competence was connected to scholastic competence, romantic appeal and behavioral conduct.

Global self worth. During the test period, the overall global self worth score for males dropped below the norm while females continued to rise above the normal curve. The gifted male students associated global self worth with scholastic competence, physical appearance, and behavioral conduct. Female students connected global self worth with social acceptance, close friendship, romantic appeal, and physical appearance. The global self worth relationship to the other subscales changed by dropping romantic appeal and adding scholastic competence and behavioral conduct to physical appearance. In the pretest, physical appearance was the only significant contributor to the prediction of global self worth. In the posttest, physical appearance remained dominant for males but was replaced by romantic appeal for females.

The cognitive analysis as defined by an internal comparison within the self concept was addressed with the Harter SPPA in the preceding sections. In order to fully understand the determinants of competence and self judgements within the gifted students, as well as their social comparison perceptions, the interviews underwent the following indepth analysis and interpretation.

Interviews

Individual interviews with a random sample of three gifted males and three gifted females were conducted to obtain their perceptions of their psychological, social and coping development during the program. Triangulation of the findings was obtained through the use of different sources and methods. Butler's (1994) study of the same class provided an alternative source of information based on interviews, as well as, pencil and paper tests and direct observations. Contextual validation, in this study, was further enhanced by an analysis that employed descriptive statistical procedures to support any emergent themes from the interviews. The process involved codes used by the researcher to classify the interview data for retrieval, including attitude, descriptive, inferential and pattern codes (see Appendix E). The degree to which gifted students self concepts and experiences as recounted in the interview differed according to gender was addressed through a chi-square analyses. Crosstabulation procedures were used to produce contingency tables, chi-square statistics, and contingency coefficients. The descriptive statistical analysis is presented first to be followed by direct quotes from the interview that further define, in the students' own voice, the gifted self concept in a congregated program.

Descriptive statistical results. Descriptive statistical procedures were used to arrange and group the

coded responses and to address the influence of school programming on the gifted students' self concepts. Table 14 presents the total number of references made by the three male and three female students when describing their experiences in the interview. Separate analyses of similar detail are presented in Appendix H for the gender differences broken down by attitude (positive, negative and mixed). References are made to these results but their numbers are reported as frequency totals and percentages.

Table 14

Frequency Data from the Interviews (Female/Male Totals)					
Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	14	10	26	50
	social comparison	10	9	22	41
	friendship	6	2	13	21
	family	0	0	3	3
	behavioral conduct	9	4	5	18
	romantic appeal	2	0	3	5
	labelling	1	1	3	5
	Subtotal	42	26	75	143
Self	descriptive character	2	10	5	17
	leadership	1	1	2	4
	honesty	2	1	3	6
	physical appeal	0	0	4	4
	athletic competence	2	7	4	13
	humour	0	6	3	9
	Subtotal	7	25	21	53
School	school program	7	43	12	62
	scholastic competence	4	21	2	27
	workload	3	1	0	4
	teacher	0	6	5	11
	Subtotal	14	71	19	104
	Total	63	122	115	300

A summary of the frequency subtotals and column percentages is presented in Table 15. The descriptions are grouped into three categories, revealing that gifted students in this interview make the most references to others (47.7%). They refer to school issues 34.7% of the time and to themselves 17.7% of the time.

Table 15

Frequencies and Percentages for Data (Male/Female Totals)

Description	Inferred Point of View				
	Coping	Psych	Social	Total	Row %
Others	42(67)	26(21)	75(65)	143	47.7
Self	7(11)	25(21)	21(18)	53	17.7
School	14(22)	71(58)	19(17)	104	34.7
Total	63	122	115	300	
Column %	21.0	40.7	38.3		100.0

Note: (Rounded column percentages indicated in brackets)

In addition to recording the descriptions of the students' responses, the students' point of view is noted. The percentage of responses that reflects each of the three points of view is also shown in Table 15. Gifted and talented students spend most of the time (40.7%) in the interview discussing things from an egocentric point of view, often engaged in self appraisal, followed closely by the social self (38.3%). A noteworthy difference is found between these two points of view in the descriptions of what they were discussing. Table 15 indicates that the psychological self is dominated by references to school issues (58%), whereas, the social self is concerned mostly with relationships to others (65%). Concerns with others also dominate the coping self (67%).

The frequency and percentage of female responses from the interview are shown in Table 16.

Table 16
Frequency Data and Percentages (Female Totals)

Description	Inferred Point of View				
	Coping	Psych	Social	Total	Row %
Others	26(77)	14(29)	48(60)	88	54.3
Self	5(15)	10(21)	15(19)	30	18.5
School	3 (9)	24(50)	17(21)	44	27.2
Total	34	48	80	162	
Column %	21.0	29.6	49.4		100.0

(Rounded column percentages indicated in brackets)

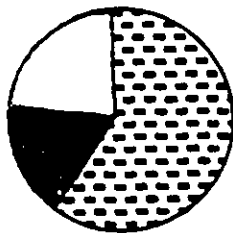
Overall, it is the social self that dominates the world of the gifted female student in these interviews by representing 49.4% of the responses. A graphic representation of female inferred points of view or selves, as summarized in Table 16, can be seen in Figure 8. A central pie chart shows the frequency of responses, from the psychological, social and coping selves, displayed as percentages. In addition, the attitudes of the students are coded for each point of view and are represented in adjacent pie charts (see Tables S, T, & U in Appendix I). They indicate the percentage of responses from that point of view that are positive, negative or mixed. In general, females have a positive attitude within the psychological self (70.8%), within social self (60.0%), and within the coping self (50.0%).

Figure 8

Female: Frequency of Inferential Codes

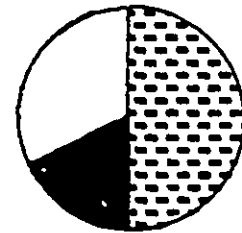
 Cope 21.0%
 Psych 29.6%
 Social 49.4%

Attitude & Social Self



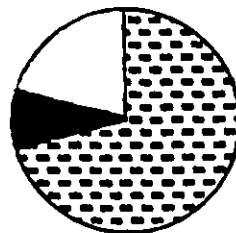
 Positive 60.0%
 Negative 17.5%
 Mixed 22.5%

Attitude & Coping Self



 Positive 50.0%
 Negative 17.6%
 Mixed 32.4%

Attitude & Psychological Self



 Positive 70.8%
 Negative 8.3%
 Mixed 20.8%

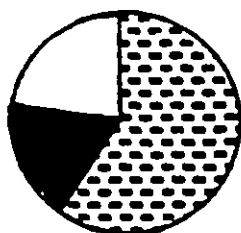
In addition, a graphic representation of the descriptions used by females in the interview, as summarized in Table 16, can be seen in the Figure 9. The results show that the female gifted students spend most of their time describing their relationships with others (54.3%). Once again, a central pie chart shows the frequency of responses, from the three descriptive categories, displayed as percentages. Furthermore, the attitudes of the students are coded for each description and are represented in adjacent pie charts. They indicate how many responses in that specific category are positive, negative or mixed (see Tables V, W, & X in Appendix I). In general, females are positive in their descriptions of themselves (76.7%), of school (59.1%), and of others (56.8%).

Figure 9

Female: Frequency of Descriptive Codes

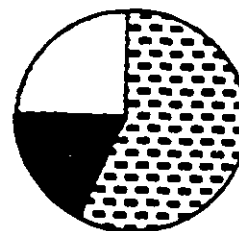
Others	54.3%
Self	18.5%
School	27.2%

Attitude & School



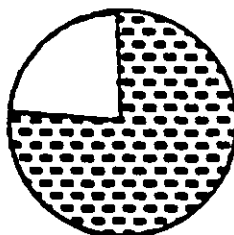
Positive	59.1%
Negative	18.2%
Mixed	22.7%

Attitude & Others



Positive	56.8%
Negative	18.2%
Mixed	25.0%

Attitude & the Self



Positive	76.7%
Negative	0.0%
Mixed	23.3%

Table 16 also highlights the interaction of both descriptions and points of view in the female student. It is revealed that the description of the relationships with others captures 60% of the responses invested in the social self and 77% of the responses invested in the coping self. The psychological self breaks this trend as gifted female students prefer to talk about school (50%) from this point of view.

The frequency and percentage of male responses from the interview are shown in Table 17.

Table 17

Frequency Data and Percentages (Male Totals)

Description	Inferred Point of View				Row %
	Coping	Psych	Social	Total	
Others	16(55)	12(16)	27(77)	55	39.9
Self	2 (7)	15(20)	6(17)	23	16.7
School	11(38)	47(64)	2 (6)	60	43.5
Total	29	74	35	138	
Column %	21.0	53.6	25.4		100.0

(Rounded column percentages indicated in brackets)

Overall, it is the psychological self that dominates the world of the gifted male student in these interviews by representing 53.6% of the responses. A graphic representation of male inferred points of view or selves, as summarized in Table 17, can be seen in Figure 10. In addition, the attitudes of the students are coded for each

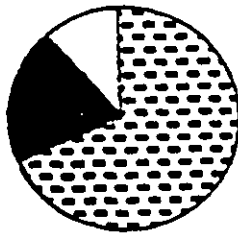
point of view and are represented in adjacent pie charts (see Tables S, T, & U in Appendix I). In general, males have a positive attitude within their social self (68.6%), within their psychological self (62.2%), and within their coping self (55.2%).

Figure 10

Male: Frequency of Inferential Codes

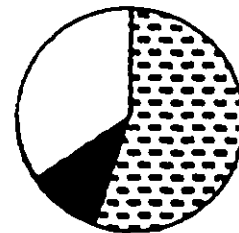
 Cope 21.0%
 Psych 53.6%
 Social 25.4%

Attitude & Social Self



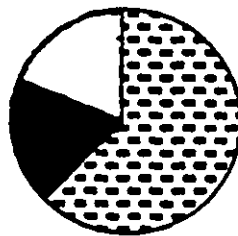
 Positive 68.6%
 Negative 20.0%
 Mixed 11.4%

Attitude & Coping Self



 Positive 55.2%
 Negative 10.3%
 Mixed 34.5%

Attitude & Psychological Self



 Positive 62.2%
 Negative 18.9%
 Mixed 18.9%

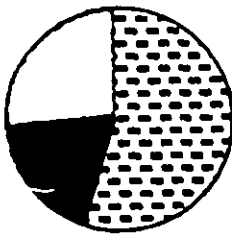
When looking at the description of what gifted males said, their responses indicate, as seen in Table 17, that there is a strong and fairly equal split between others (39.9%) and school (43.5%). A graphic representation of the descriptions used by males in the interview, as summarized in Table 17, can be seen in the Figure 11. The attitudes of the male students are coded for each description. They are displayed in adjacent pie charts, indicating how many of the descriptions are positive, negative or mixed (see Tables V, W, & X in Appendix I). In general, males are positive in their descriptions of themselves (82.6%), of others (61.8%), and school (55.0%).

Figure 11

Male: Frequency of Descriptive Codes

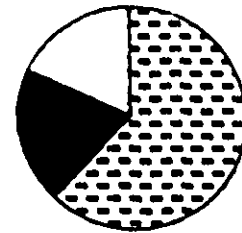
Others	39.9%
Self	16.7%
School	43.5%

Attitude & School



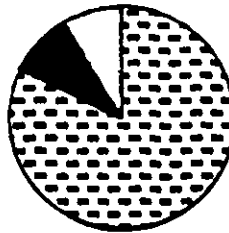
Positive	55.0%
Negative	18.3%
Mixed	26.7%

Attitude & Others



Positive	61.8%
Negative	20.0%
Mixed	18.2%

Attitude & the Self



Positive	82.6%
Negative	8.7%
Mixed	8.7%

Table 17 also highlights the interaction of both descriptions and points of view in the male student. It is revealed that the description of the relationships with others dominate the responses in the coping (55%) and social (77%) points of view; whereas, school represents 38% of the responses dedicated to the coping self and 64% of the responses within the psychological self.

Results of chi-square analyses. The degree to which gifted students self concepts and experiences as recounted in the interview differed according to gender was addressed through a chi-square analyses. Crosstabulation procedures were used to produce contingency tables, chi-square statistics, and contingency coefficients. The results of the analyses are presented below in Table 18 representing descriptive coding and Table 19 representing inferential coding.

Table 18

Frequencies, Expected Frequencies and Percentages for
Descriptive Codes by Gender

	Male			Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %
Others	55 (66)	38.5	39.9	88 (77)	61.5	54.3
Self	23 (24)	43.4	16.7	30 (29)	56.6	18.5
School	60 (48)	57.7	43.5	44 (56)	42.3	27.2
Total	138			162		

The obtained X was 9.15 (2), $p < .05$. The contingency coefficient (C) = .17 (Upper limit for 3x2 table = .77)

Note: (Rounded expected frequency scores indicated in brackets - see Appendix I for summary of calculation)

A discrepancy between what could be expected if no relationship existed and what was actually obtained can be clearly seen in Table 18. Specifically, the number of responses that male gifted students used to refer to school is well above the expected frequency (observed frequency =

60 vs expected frequency = 48), whereas, the number of responses concerning others is less than expected (observed frequency = 55 vs expected frequency = 66). Females concentrate on their relationships with others (observed frequency = 88 vs expected frequency = 77) and spend less time than expected talking about school (observed frequency = 44 vs expected frequency = 56). A chi-square test was employed to analyze the above totals, producing an obtained chi-square statistic of 9.15, $df=2$, indicating that the type of description and the gender of the students are not independent variables. There is a significant difference, at the .05 alpha level, in the types of descriptions used by gifted male students compared to those used by gifted female students. The strength of this relationship is measured by a contingency coefficient which at .17 reflects a weak link between these variables.

Table 19
Frequencies, Expected Frequencies and Percentages for
Inferential Codes by Gender

	Male			Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %
Psych	74 (56)	60.7	53.6	48 (66)	39.3	29.6
Social	35 (53)	30.4	25.4	80 (62)	69.6	49.4
Coping	29 (29)	46.0	21.0	34 (34)	54.0	21.0
Total	138			162		

The obtained χ^2 was 21.9 (2), $p < .001$. The contingency coefficient (C) = .26 (Upper limit for 3x2 table = .77)

Note: (Rounded expected frequency scores indicated in brackets)

As indicated in the above table, more responses than expected from the male gifted students involve the psychological self (observed frequency = 74 vs expected frequency = 56), and there are less responses than expected for the social self (observed frequency = 35 vs expected frequency = 53). On the other hand, the female students concentrate more of their responses than expected on the social self (observed frequency = 80 vs expected frequency = 62) and less than expected on the psychological self (observed frequency = 48 vs expected frequency = 66). A significant chi-square value of 21.9, at the .001 alpha level, is obtained for these variables, indicating gender and point of view as expressed by the different types of selves are not independent. The contingency coefficient is

.26, representing moderate strength in the relationship between these variables.

Chi-Square analyses of attitude. Segments were coded as "positive", "negative" or "mixed" based on the researcher's observations of the different kinds of feelings associated with the students' responses at the time of the interview. An investigation into the attitudes associated with the inferential codes (psychological, social and coping selves) and descriptive codes (others, self, school) revealed large percentages of positive responses for both males and females in the gifted congregated program, and they fitted the expected result in the crossbreak tables (see Appendix I for complete analysis description). In fact, a chi-square analysis of the data confirmed that there was no significant relationship, and the variables of attitude and gender were independent of each other, across all coded data.

Emergent themes. Emergent themes, causes/explanations and relationships were handled by pattern codes. Within each of the above categories (social, psychological, and coping self), pattern codes provided elaboration and insight. For example, the psychological self revealed information on individuality, competitiveness and leadership, defensiveness, social aggressiveness, sense of humour, creativity and originality, honesty and heightened

morality, and perfectionism. The social self contained references to feelings on social comparison, social isolation and acceptance, interaction with the peer group, importance of teachers and programming, labelling, influence of family relationships, and social skills in groups. Finally, the coping self dealt with emergent themes concerning the gifted peer group and its ability to provide acceptance, support and understanding, sports and its connection to friendship and competition, the value of a sense of humour, defensiveness, discipline, conformity, and social skills.

Tables 20 summarizes the significance of the differences between males and female emergent patterns grouped according to psychological, social, and coping selves. The results of a chi-square analysis of each one of these combinations are represented in the following 2 x 3 contingency table.

Table 20

Frequencies, Expected Frequencies and Percentages for
Emergent Patterns by Gender

	Male			Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %
Psych	62 (53)	56.9	44.3	47 (56)	43.1	31.8
Social	44 (55)	38.6	31.4	70 (59)	61.4	47.3
Coping	34 (32)	52.3	24.3	31 (33)	47.7	20.9
Total	140			148		

The obtained X was 7.75 (2), was significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

Table 20 clearly shows a discrepancy between what could be expected if no relationship existed and what was actually obtained. Male gifted students exhibit a greater than expected number of psychological responses in the emerging patterns which defined their experiences (observed frequency = 62 vs expected frequency = 53), while the social sphere remains underdeveloped (observed frequency = 44 vs expected frequency = 55). The reverse appears in the responses of the female gifted students who define their experience through the use of the social self. The emergent patterns in their lives contain more responses from the social perspective (observed frequency = 70 vs expected frequency = 59) than would be expected if these variables are completely independent. On the other hand, the number of responses

concerning the psychological self are less than expected (observed frequency = 47 vs expected frequency = 56). A chi-square test produces an obtained chi-square statistic of 7.75, $df=2$, indicating that the type of emergent pattern and the gender of the students are not independent variables. There is a significant difference, at the .05 alpha level, in the types of patterns emerging from the experiences of gifted male students compared to those of gifted female students. The strength of this relationship is measured by a contingency coefficient which at .16 reflects a weak link between these variables.

The research question investigated the influence of a congregated program on the self concept of gifted males and gifted females. All responses from the interview provided a rich source of information beyond the statistical analysis. In an effort to fully develop a portrait of the impact of gifted programming, direct quotes from the interview are used in the following section to outline the emergent patterns in the psychological, social and coping selves of the gifted students.

Psychological Characteristics of Gifted Adolescents

Scholastic competence and the culture of learning. The males focused on what the school program does and could do for them, an instrumental approach. In general, they were positive about the program because they found more individualized attention, it was easier to express themselves, and they were more interested and less bored. The males seemed to appreciate the special culture, the atmosphere, that was created within the gifted program and its ability to free them to meet their potential:

The teacher really seemed to, to ah, try to expand your minds and all that, you know. Most people say that, ah, about enriched courses, you know, but I think the only difference really is that enriched courses ... seem to be a little more relaxed. Ya, you know, it seems a little bit easier, it seems a little more personalized. They really worry about you.

Teachers and the whole school spirit is great. There is nothing really academically that I don't really like. Its mostly, sometimes it really is hard. I find its really challenging, and it helps me grow both mentally and physically also ... and helps me for future jobs.

They (courses) meet my needs. They're very challenging... its easier to express yourself ... Like I've learned a lot this year probably a lot more than any other years I've been at school.

In addition, the males were forced to set short and long term goals because of their experiences in the congregated gifted program. They were concerned about scholastic competence due to their experiences in the gifted congregated program, and in response, they faced tough

decisions concerning future plans. They were forced to reevaluate their competence and self concept in light of the demands of the gifted program:

Courses (that influenced me), probably science, math, and English. Those are probably the ones that influenced me the most cause I was thinking of going into science, majoring in science later on, but now I'm gearing a bit more towards communications instead of science just because the way my courses are being taken care of with results and progress.

Math would be another (that influenced me) one because, um, my dad and my brother ... got their diplomas in... math and chemistry and stuff. I was thinking of doing that, you know, even becoming a doctor or something. But now that I've taken math this year, I realized that if I have to take more than four years of this, forget it.

There was a strong family influence with parents and siblings providing positive, achievement-oriented role models and the pressure to succeed. This solid base has provided an inspiration to excel as some mentioned wanting to follow in their parents' or siblings' footsteps. Unfortunately, the family's influence also provided a source of conflict if they failed to meet the necessary academic standards or had personal aspirations in other directions.

Female students exhibited more confidence in the gifted class because of its ability to offer unique opportunities to expand horizons, developing creative thinking and originality. The gifted females were quick to point out the

impact of programming on their cognitive development:

Our distinct class ... special class, I think its a great idea... because it makes you think differently than others... later in life well you're going to get better advantages mainly because you change the school program a little so that you can get more creative thinking and writing than just learning it by heart.

The tests (have)... more questions that (let) you ... speak what you think. But in the other classes its like um you list stuff all by heart, and when it comes to the tests you know everything by heart and you don't say what you think.

In addition, it was important for gifted females that they liked the courses for them to do well, a lack of interest undermined their performance.

(Commenting on competence in course work) I'm ok all around... (in) some courses its not that I'm less competent but sometimes I don't like them as much, and I just don't do as well.

They're (school subjects) a part of my life, and when I like them, I like, enjoy being in them and work for them.

These responses contrasted with the males' tendency to assume failure in a subject, specifically math and science, was due to a lack of ability not a lack of effort.

Individuality and its mixed blessing. The gifted often harboured concerns about their uniqueness. This was a uniqueness that they wanted addressed in course work that was different in kind as well as degree, but they understandably did not want to be treated differently in their interpersonal relationships and disliked being singled out or made to feel odd. Many of them have had to meet this

challenge, and in the process, have gained strength of character because they now celebrate their individuality.

(In) grade seven when I had to change schools because they wanted to put me in another enrichment program, and I didn't really like it there because well most people really rejected me, and I was really miserable. I was kind of sad, angry but once I got over that afterwards I felt I was much stronger. I could live with myself.
(gifted male)

Well, sometimes (find problems with acceptance), but that was a long time ago like were talking about grade 3, maybe, ah not even. I became mad but it wasn't everybody. It was just a few people so it doesn't matter.
(gifted male)

One male's early school experience, with its lack of acceptance by peers, seemed to have engendered a rebellious stance. He came to terms with rejection and celebrated his differences in high school.

I just don't like it (conforming). It's, it's just not me so I try to bring out myself with what I do, how I act.

The females preferred to define themselves as average individuals not associated with any particular group. The gifted females were unanimous in accentuating their individuality and rejecting any association with a group and any stereotypes. Indeed, the strength of this tendency was unshaken, and maybe, reinforced by a congregated setting where specific attempts were made to increase cooperation and tolerance through group work. In response to this experience, the gifted females were remarkably tolerant of

others and nonjudgemental, preferring not to compare themselves, preferring to accept others' strengths and weaknesses.

I think I'm different in the way I think, but I don't think I'm to compare to my friends, I think we're all different but all the same like in my class. I mean, I don't feel that different. I like to do different things but not always follow others ...

No, I'm sort of different, well not different. Different, sort of in a good way, I'm myself.

Ya, people don't think of me as a group, like sometimes you think of people as, "Oh, there's that group", and this is more like individualistic.

No, I think I'm different ... though I'm not too different ... but in my class, I think I'm average in everything, average ...

No, I like competition but not that much (social comparison). I like to be different.

Creativity and originality: the need to risk. The gifted seemed sensitive to the view that they might lack creativity or originality in their pursuit of excellence in math and science. This select group did seem to prefer the structure and learning style associated with math and science.

When I'm doing math, I know what I'm doing so I'm sure of my answers... it's like numbers, and ... you have to follow certain rules. But ... in geography, you just ask your question ... and if you don't know it well you have to find it out and (the teacher) just won't tell you. You know, "you have to do it like this, this and this" not like math.
(gifted female)

Yet, they valued creativity and originality and strove to avoid the stereotype image of the "nerd", pursuing

creative opportunities in other areas even though some found it intimidating. As one gifted female said:

Well, um, I like science and stuff, but I really don't consider myself a nerd or anything. And I don't like it when people say that, "oh, you're a nerd or you're a geek", or something. Like, cause well, I'm not, but people think I am because I'm in a special class and I'm smart, and I like math and science. But, I also like English and French cause you can write, and it permits you to be like creative and original.

There was emphasis on freeing the thought process and introspection to help in creative self expression. Another female remarked:

Reading other peoples' works and stuff makes you think a lot about what you think because ... you can expand your vocabulary, and you can say, "oh, I like how he thinks", so you can think like that too. And they make you do a lot of composition and that's also good because it makes you be creative and original.

Sense of humour: the common ground. A common theme for all the students was the value placed on a sense of humour in themselves. It was the focal point of many self descriptions and was a common ground on which to connect with others.

They really think I'm well sort of wacko. I guess, I don't know, I guess I have a sense of humour.
(gifted female)

I'm patient. I'm funny, and ah ya, I think those are good qualities... my sense of humour and my abstract thinking.
(gifted male)

Probably, um a sense of humour (is what others see as my best quality).
(gifted male)

Social Characteristics of Gifted Adolescents

Social acceptance: a sense of belonging. The social dynamic had changed for the gifted students entering a congregated grade nine program. They now had the opportunity to develop close friendships and working relationships with peers of similar ability. The students were, understandably, enthusiastic about the social atmosphere they found in the gifted program.

Ah, I like it (present gifted program), it's great, you know, it's a whole lot better. The other program, you know... This one it gets much more sociable people, are more... They want to get along with you. They are really curious about who you are, and what you're about, and all that kind of stuff.
(gifted male)

I find that some people most of them are kind of, they don't really care what your mark is, and, if you get like a bad mark, they always joke about it and everything works out fine. They don't reject you if your stupid or not.
(gifted male)

In response to this more accepting social environment, the gifted students were willing to engage in more social interaction.

... if you can talk (to other people) without them being completely, like um, shut out from what you're trying to say, you know, they don't have an idea of what your saying, then ah there should be like no reason to reject them or anything.
(gifted male)

I like to know people, take a step back and look, and, then I will go. But, ya I think I'm easy to know.
(gifted female)

Most of the students, especially the gifted females, were outgoing, enjoyed being with gifted peers, and were full of social self confidence.

Well, like my other friends they think I'm very friendly, you know, that I reach out to people. Some of them say that I'm generous, you know.

It's not always a quality. Well often, it becomes kind of. But um ya, I guess I'm friendly, I'm not really shy.

The students seemed to attribute some of these social skills to the group work which emphasized cooperation and sharing of responsibilities, all of which were cornerstones of the congregated program at Samuel Genest.

Well, I think that we're working in groups a lot, and I think that helps for the future.
(gifted female)

Well, like last year, ... we were a really small class we were just twelve people in the eighth grade, and we always worked together... it really made us aware that you had to work together, and that it wasn't just one person who could do all the work you had to all separate it equally.
(gifted female)

Social isolation: the cost of labelling. The students' enthusiasm for the gifted program was tempered by the reaction of others toward them. They have developed a solidarity within the class and a collective consciousness concerning their needs and sensitivities. They were attracted to the group because of its comforting support yet repelled by the consequences of being seen as a stereotype of a group. It was clear they do not want to be treated

differently in their interpersonal relationships and were acutely aware of how others view them, especially the teachers.

Well, it's fun being in a class where we were all gifted. We sort of go faster and don't spend as much time on stuff that's boring, but, in a way, I mean, the teachers, some of the teachers, they think we're too different. They try to make us different. We don't like that. Well, I don't like that, and I don't think anybody else does either.
(gifted female)

They shouldn't treat us differently, just like don't, we just want to go faster without spending too much time on one aspect. As long as they keep that up, they don't have to act differently or anything.
(gifted female)

It became apparent that some students react to their social environment in a negative way. The perception of bias may be the result of over-sensitivity due to past experience. One male student who had experienced early rejection continued to exhibit a defensiveness, approaching others with caution, warming to them slowly.

I'm not a very sociable person. Lots of people have told me that ... When people start talking to me, and just trying to make conversation, I usually give them one syllable answers so they kind of like give up and think that I hate them or whatever and they just walk away. But ah, I don't know, it's just something that I suppose I do. It's not really conscious or anything, it's just there: I was born that way.

It seemed inevitable that separate grouping would confront students with a challenge to overcome a sense of segregation from the "normal" population. Even when the gifted student developed a wider circle of friends, the

issue of distinctiveness hovered in the background, sapping the emotional energy, and causing distress.

Well, because we're in a distinct class there, like sometimes, I find myself talking to my other friends who are just in normal class about what we're doing, and they're like, "oh, you're smart", and you're in this class and ... you guys never get to do what we do. I just wish that I wasn't in a special class because then people would stop bugging me, you know.
(gifted female)

The pressure to conform or to not let it be known that you are smart seemed to be constantly present in settings of mixed academic ability.

Well, sometimes it bothers me because they're like ... I know once during an exam like we were doing a math exam and this guy was saying, "well I think the answer is this", then I said, "well, that's not the answer", and my other friend said, "well listen to her, she's like in a special class, you know", and I don't know it made me feel different like apart from other people.
(gifted female)

There did appear to be another way to react to the negative treatment meted out by others. Instead of withdrawing, some students appeared to be aggressively outgoing and defiant in the face of labels like "nerd" or "geek".

When you get high tests and things, everyone goes, "Oh, nerd" and everything, and instead of bothering me, I feel proud cause I think, "Oh cool"! Ya, I like be on top and people noticing that.
(gifted female)

Peer pressure: inside and outside the classroom.

Rejecting peer pressure and charting your own course can exact a heavy price. Popularity was often denied to those

who were perceived to be different. The individualism that was so often exhibited by the gifted students provided a safe haven, a way to insulate oneself. As individuals freed from the constraints of a competitive drive for popularity, the gifted students wore their differences as a badge of honour.

... I don't think you really have to be popular, you know, cause ... I think of it as a burden cause then you have to keep up with your image and that makes you do stuff that you don't want to do, you know.
(gifted female)

A problem often faced in the congregated class involved breaking down some of the walls that have been erected, creating an atmosphere of trust and sharing.

Um, I think the gifted classes were much more, we work more like as a group instead of individually. Like when you share thoughts with our teachers, it's more like discussing instead like the other courses where it's more, "ok, you're right, you're wrong". It's more of a discussion in the gifted class.
(gifted male)

Unfortunately, the very act of placing the students together can isolate them from the potential moderating influence of a wider sphere of friends which some students clearly wanted.

Ya, I'd say I'm pretty much happy. But in this program, like the one I'm in here, well you always have the same people, and it doesn't really make you expand your horizons there. You don't make new friends, you know, go to other people.
(gifted female)

Social comparison: the looking glass. Grouping the students together could isolate them and prevent them from

having the information necessary to make accurate judgements about themselves and their abilities.

We're all together, so we don't really notice the difference between gifted and nongifted because ... our group stays together.
(gifted female)

When social comparisons were made, they increasingly depended on the individuals within the congregated class as models.

Well, not really (social comparison) to any other group ... but sometimes like I say, "oh, I wish I was like her, or I wish I was like this person", you know, but not to ... a group.
(gifted female)

A clear consequence of this increased focus on comparisons within the group was a reassessment of one's self concept in the new and narrower social milieu.

I think I'm pretty average. It's kind of hard to really say it yourself without having to talk to other people cause you can't judge yourself. It's hard to judge yourself, but I think I'm average.
(gifted male)

The students expressed a reluctance to compare themselves to others, but readily recognized the fact that they think differently from nongifted students, not just a difference in degree but a difference in the kind of thought.

I think I'm different in the way I think, ... to compare to my friends, I think we're all different but all the same like in my class. I mean, I don't feel that different. I like to do different things ... not always follow others.
(gifted female)

Friendship. It was clear that close friendships were formed among the gifted classmates. Intellectual ability appeared necessary but not sufficient to develop these friendships.

The way we think. ... I have friends at school, and at home, (and) if you want to be friends with someone you have to be ... kind of similar. I think it's the way we think.
(gifted female)

Within the congregated class, the gifted students were equally aware of the diversity of personalities and interests that have been grouped together.

... I mean we're all different, we've all got different personalities and different interests and things like that.
(gifted female)

Most students, especially the avowed extroverts, valued the friendships that seemed to flourish in this diverse social environment.

Ya, I guess so (makes friends easily), since I'm sort of outgoing, I kind of go to people and people come to me. I'm friendly with a lot of people and pick up friends easily.
(gifted female)

Some students commented that they were a little reluctant to commit in the early stages of a friendship.

I like to know people, take a step back and look, and, then I will go. But, ya I think I'm easy to know.
(gifted female)

Well, at first, I'm a little cautious like I don't trust everyone, you know, but once I get to know them well I get really friendly and I say anything what's on my mind.
(gifted female)

The early reluctance could probably be linked to a need to be truly committed and totally honest.

I'm very comfortable with people. I don't really hold back. I say my piece of mind. I'm very open with people.
(gifted female)

Coping Characteristics of Gifted Adolescents

The stress of a busy life. Some gifted students led very busy lives and had to be personally disciplined to juggle their commitments.

I play the piano. I really like that and I really, really like baseball, and I play that too. I'm pretty athletic. I guess I do a lot of sports. I'm always busy. I'm often last in it because everything is all at the same time.
(gifted female)

This student's enthusiasm was not shared by another student who seemed indifferent to the demands placed on his life. In the face of increased competition, some rationalized that marks were irrelevant and rejected the notion that they cared.

Well, at school, I don't really care what kind of thing is going on, the work load or anything. I just do it to get rid of it, and if I get high marks that's great, you know, but I don't really pay attention. I just don't look at it.
(gifted male)

I'm really kind of indifferent to it all. I could be, I could be whatever they want me to and I'd probably say well that's great for what it is.
(gifted male)

Conflict between individual and group experience.

There was a tendency in some students to have a defensive

shell and to approach others with caution or be non-committal. Some were easy to get to know, others, due to unpleasant past experiences, were cautious.

A male student commented on giving up some of his individuality in order to fit in:

Well, I came here in the first place because I didn't want to get beat up because of what I was wearing, but ah, I suppose sometimes I have to conform. It's great, I can do that.

The students mentioned they felt a need to conform to family and societal values, and felt the influence of siblings.

I'm not this rebel. I'm not looking for trouble... but acting the way I'm supposed to, I think its your values, your family values, you act not the way you're supposed to but the way you were raised, so it is not really the way you're supposed to act.
(gifted female)

Yet, at the same time, they rejected any suggestion of conforming to peer pressure, seeing it as compromising their integrity.

I don't like doing that (conforming to others expectations). I don't like it at all, actually. I find that ... most of the time...(to) be the way that they try to force you to act ... I just don't like it. It's, it's just not me so I try to bring out myself with what I do, how I act.
(gifted male)

The students were individuals who recognized their differences and were conscious of being labelled. These gifted adolescents had a strong sense of individuality, were self accepting, and had a problem with accepting the need

for conformity. A conflict could arise between individual and group demands, between self reliance versus peer pressure and labelling.

Well, I'm different because I'm my own self, like I don't want to copy my friends, either.
(gifted female)

Well, it (popularity) doesn't matter, I'm so busy, I don't have time to worry about it. I accept things as they come.
(gifted female)

The students had learned to be self reliant. So much so, that some lacked certain social skills, and, were both repelled and attracted by the social "give and take" in high school. Programming could attempt to ameliorate these tendencies by stressing that there was a time when one could give up leadership roles and learn to compromise.

So I think they (administrators) are really working on the teachers so it will be team work. You know, out to work with someone, accept ideas, and not always be a leader.
(gifted female)

Self reliance and the need to be in leadership role conflicted with some of the goals of the gifted programming. In emphasizing group work, the program interfered with some of the gifted students' ingrained tendencies, or survival instincts.

Different. Maybe, I'm more, compared to my friends I like to tell people what to do. I'm more, I like to be a leader. I just like that I think to be different than everybody. I know I like to be the leader and if someone takes my place I'm more like this. I just like the position.
(gifted female)

The classroom and a safe environment. The gifted programming brought together many like-minded individuals and helped encourage the students to cope with the challenge of breaking down barriers to developing a full range of social skills.

I don't know, we also have lots of work working in groups. Like you have to work with other people, so I suppose that will also help me with the socializing bit.
(gifted male)

Group work and social skill development, may, in the long run, meet a need to work together. In addition, gifted peers can provide a safe environment, understanding, and support when students feel stressed out in their academic endeavours.

When we're all stressed out over something and people say, "Why? It's just school". Well, we understand each other.
(gifted female)

It might be possible that increased levels of stress match increased levels of competition in congregated setting. However, that stress can be a positive or negative experience depending on the abilities of the teacher and curriculum to meet the social and cognitive needs of the gifted student. These students were well aware of their needs, and the role the teacher played in enabling them to cope with the external demands of the program.

To tell you the truth, I don't think I've been in a class that hasn't expected a lot of me. Even if I've been in a class where it wasn't officially gifted, it seemed gifted. The teacher really seemed to, to ah, try to expand your minds and all that.
(gifted male)

When the gifted students did well and their feelings of competence grew, it was often the teacher who made the difference, allowing them to cope with course work that often didn't meet their individual needs.

It's not the course itself because the course itself is boring, but if you have a good teacher, that's the difference.
(gifted male)

Friendships that are not based on the academic sphere.

A teacher could make a difference by sharing some common interests and traits of the students. One such trait that was almost unanimously mentioned in the students' self descriptions was a sense of humour.

I know some English teacher who is very, um, she likes the really weird, bizarre comic stuff, and I like that too, you know. I just like writing it so she has been very promoting of that, you know, so I suppose that helps.
(gifted male)

This shared trait played an important role in how they coped with the social environment around them, forming the basis for many friendships.

I like playing sports and just hanging around with friends. I think I'm fun to be with. I can be funny.
(gifted male)

... Laugh, my friends and I, everybody wants to laugh.
(gifted female)

A sense of humour that could often be bizarre was not easily appreciated; and therefore, when a kindred spirit was found, it became an affirming experience and supportive of a positive self concept.

Sports were also an important element in the busy lives of the students who were aggressively outgoing, displacing some of the competitive drive. They used sports as a competitive field to develop friendships that were not related to the academic sphere. In response to a question about the importance of sports in his life a male student responded without equivocation:

Oh, yes, definitely (sports is important), I think it gives you, um, self esteem, and it helps you in school and your social life to be confident about yourself. Not really always being the best but being able to tell yourself that you tried your best.

Another male student found individual sports more fulfilling.

I like them both, personally, because they both have their own points of view, but I seem to like personal sport better. It just gives me a chance to get away from it all, socializing and that stuff I have to do with everybody else.

The cost of labelling and the backlash against comparison. Socializing carried with it inherent risks for those who had been treated differently in the past, risks that caused some gifted students to be cautious. They disliked labelling or being singled out and avoided social comparison. Knowing that they wanted to be accepted as an individual prevented the gifted students from being

judgemental and discriminatory, at least openly. They knew, only too well, the potential social backlash against them when comparisons were made, an unfortunate cost of labelling. Therefore, the preservation of self-esteem required the gifted student to play down exceptional abilities in the non-gifted sphere where differences were often rejected. Even in the congregated gifted class, there could be an unwritten prohibition on feeling or acting superior due to the sobering experience of being among others that were suddenly one's equal or possibly better in many areas. The resultant insecurity felt by some students who had lost their "star" status in the regular class, could be reflected in the responses of the gifted students in this study who characterized themselves as average and avoided comparisons.

I don't think it's fair because everyone is different, and they all have different sort of capacities. If we're not made to be the same, then why compare. It usually turns out bad anyway because they know that I'm not as good as her.
(gifted female)

Ah, um, I don't think I probably could (comparing yourself to others) because every situation is pretty special. You just can't do that because every situation has its own variables.
(gifted male)

Both attracted and repelled by groups, gifted adolescents have been forced to make an early transition to an internal basis for self esteem. They don't need to

compare and rejected the notion openly, suggesting it indicated a lack of satisfaction with themselves.

I don't really believe in comparing yourself because everyone is totally different. You can't really measure up to anyone else.
(gifted male)

(comparing yourself to others) No, not usually. I don't know. What's the use? It's, you know, you know what I mean. Well, why would I?
(gifted male)

Well, I mean, everybody does it sometimes but it's, it doesn't really help you if you're happy with yourself, fine.
(gifted male)

Table 21 summarizes the significant factors brought out in the interview.

Table 21

Summary of Interviews

1. Gifted students wanted to be judged as individuals, recognizing their differences.
2. Gifted students didn't like to compare themselves to others.
3. Gifted students were conscious of being labelled, didn't like being singled out or treated differently, and had ambivalent feelings about labels, such as "nerd" or "geek".
4. Gifted students enjoyed being with gifted peers, felt they were average in this group.
5. They liked competition and leadership roles.
6. Some were easy to get to know, others due to unpleasant past experiences, were cautious.
7. A sense of humour was important.
8. Gifted peers provided understanding and support to some of the gifted students who felt stressed out in their academic endeavours.
9. They led very busy lives and had to be disciplined to juggle their commitments.
10. Gifted students felt a need to conform to family values and the influence of siblings.
11. The teacher was very important.
12. They valued the importance of honesty, being forthright, being true to oneself even if they might have offended others.
13. They had a need to have unequivocal answers, a need to be sure.
14. They were creative and original, and valued courses that provided these opportunities.
15. Gifted students felt a need to work together, in groups, to learn social skills.
16. They felt the gifted program teachers cared about them personally.

Together with the statistical analysis, these interviews provided a window into the world of the gifted adolescent in a transitional year. The discussion that follows will place this information in context with the body of knowledge that presently exists in this research area.

Chapter 5

Discussion

This study concentrated on a special program that was instituted to meet the needs of students who were specifically selected based on their ability to excel in science and mathematics. It was apparent from the research that gifted adolescents were affected by their identification and placement in a special education program. Their responses to this challenge, as recorded by changes in their self concept, are the subject of the following discussion. The discussion focuses on the domains of the adolescent self concept, including global self worth, scholastic competence, social acceptance, romantic appeal, close friendship, physical appearance and behavioral conduct. In order to judge the conclusions drawn from the research, it is necessary to establish the context through a brief review of the observations carried out on the actual implementation of the program.

Program

Observations were made in classrooms, at the beginning and end of the school year. Butler (1994) summarized the observations which confirmed the teachers' use of higher order questioning techniques and flexible teaching strategies in developing critical and creative thinking skills in the students. Some compacting of the curriculum

and faster pacing accelerated the progress of students in the core subjects. In addition, affective development received consideration with the inclusion of self evaluation and exploration in creative writing, group work, and the presentation of independently selected projects.

This emphasis on student-centered learning developed around group activities, self directed learning and creative thinking, proved to be popular among most of the students, but not all. Whitmore (1980) confirmed the fact that gifted students often responded unevenly to group activity in the school. As independent thinkers, and nonconformists, gifted students naturally rebelled against what they perceived to be rigid group expectations. These expectations conflicted with personal goals, taxing the patience of some of the gifted adolescents. This finding supports the research of Buescher (1985) and Frey (1991).

Problems associated with teachers were also noted in gender interactions as unequal attention, both positive and negative, was perceived to be given to the males in the classroom. Sexual stereotypes existed in the congregated classroom as witnessed by the different attention and communication patterns employed by teachers when dealing with the males and females (Butler, 1994). Numerous studies confirmed that teachers often reinforce sex role behaviors by giving more attention to high achieving boys and

expecting less from gifted girls (Brophy, 1985; Callahan, Cunningham, & Plucker, 1994; Eccles & Blumfield, 1985; Kramer, 1991).

The teacher/student relationship also impacted the gifted class, as a whole, by accentuating feelings of differentness. A female student noted that some of the teachers saw them as different, "The teachers, some of the teachers, they think we're too different. They try to make us different. We don't like that. Well, I don't like that, and I don't think anybody else does either." This relationship seemed to alter teachers' expectations in the classroom and could affect treatment and opportunities. A similar finding was reported by Coleman & Cross (1988) and Cross, Coleman & Stewart (1993). This finding reinforces a recurrent theme in the study that the teacher's role is crucial to the successful implementation of gifted programming.

In summary, the curriculum was enriched in the core courses and the students responded favourably to the opportunity for independent self directed study in a interdisciplinary atmosphere. Social skills were improved through group learning. Unfortunately, the efforts to enhance self esteem and higher level thinking skills produced equivocal results which is not surprising considering the limited time frame of one year.

Global Self Worth

In general, teachers' attempts to improve self-esteem through the use of small group, cooperative activities proved inadequate. In fact, some students who subsequently expressed concerns about their personal attributes were not properly prepared to deal with the demands of independent learning. Butler (1994) reported that the gifted students' marks didn't always meet their high expectations during the year in a congregated program. The gifted adolescents may have had feelings of self doubt because of a social comparison process, in the congregated classroom, with students of equal ability. This corresponds with research findings by Coleman & Fults 1982; Freeman, 1994; Hoge & Renzulli, 1991; Janos, 1990; Manaster, 1994. Butler (1994) used Rosenberg's self esteem instrument with this congregated class, and it confirmed a problem with their global self worth. The gifted group reported an average of a 10% lower agreement than normative peers in the posttest regarding three items: 1) "Sometimes I can't do anything right", 2) "Sometimes I feel useless", 3) "I think my life is generally unsuccessful". It appeared as if many of the students were experiencing a certain amount of self doubt during the program. The gifted characteristics of perfectionism, supersensitivity and perceptiveness when coupled with a competitive comparison process in a

congregated setting, may have led to a sense of inadequacy - the imposter syndrome (Clance, 1985; Harvey & Katz, 1985).

To counteract this sense of inadequacy, it appears that a concerted, systematic process of individual development needs to be undertaken in the congregated setting with the appropriate training and support for the teachers. The task of becoming a self directed learner can be difficult, requiring the student to acquire new perspectives on learning, to develop new skills, and to build a positive self concept with new attitudes.

The results of a lack of support for the students in the congregated setting could be seen in their attempts to cope by discounting areas where their competence was low. This pattern corresponds with the belief that a healthy personality was formed by reducing any discrepancy within the self concept (Markstrom-Adams, Ascione, Braegger, & Adams, 1993; Harter, 1986; Harter, 1990; Niebrzydowski, 1993; Tesser & Campbell, 1983).

However, a cautionary note must be raised because it was more difficult to discount certain domains than others. For example, the importance of scholastic competence was one of the highest rated domains, yet for males it took the largest decrease during the program. There were bound to be consequences when this domain which was linked so closely with the gifted self definition was discounted.

Harter (1986) stated the domains chosen for the Self Perception Profile for Adolescents were extremely difficult to discount because success in these areas was highly valued by society. This was especially true for the gifted adolescents because of the influence of high peer and parental expectations. The congregated program seemed to reinforce the power of high expectations as global self worth became strongly linked to scholastic competence. This relationship has proven to be common among students receiving special programming (Hoge & McSheffrey, 1991). In fact, the congregated setting seemed to have precipitated a sudden shift in the male self concept which forced them to rationalize away the importance of the valued domain of scholastic competence. The consequences to those who persisted in discounting a valued domain seemed to surface in a lower overall global self worth. This resulting lower self worth score was what occurred to the male students.

Scholastic Competence

There was a decline in perceived scholastic competence. It was the one domain where both male and female gifted students showed a decline. Although not statistically significant, this decline was consistent with the results of Chapman & McAlpine (1988); Coleman & Fults (1982, 1985); Frame (1991); Gambino & Rejskind (1990); Hultgren & Marquardt (1985) and Olszewski et al. (1987). It is a trend

that bears watching because Coleman and Fults (1982) suggested that this decline in scholastic competence may possibly increase over time.

Despite these changes, the gifted adolescents still maintained higher than normal perceptions of their scholastic competence. This study supported Frey & Carlock (1989) and Leroux (1988) in finding that gifted adolescents often had high academic self-esteem while at the same time reporting lower than normal social self esteem. Scholastic competence was poorly related to social acceptance which was a major reversal from scores obtained by Harter for elementary school, indicating that doing well in high school did not help one's popularity (Harter, 1988). This finding was reinforced by Rimm (1988) and Jenkins-Friedman & Murphy (1988) who found that some gifted students rejected the label and felt it hurt their popularity. In fact, this study showed scholastic competence to have a weak link to close friendship and a negative influence on romantic appeal and athletic competence. Gifted students' scholastic success didn't have a strong influence on social acceptance or popularity. It was more associated with good behavior. Scholastic competence was strongly related to behavioral conduct, suggesting the gifted students felt good behavior was a prerequisite for good school work. This relationship is mirrored in the normal population but to a lesser degree

(Harter, 1988). In addition, the value or importance placed in scholastic success and social acceptance or popularity appeared to have diminished considerably.

A potential source of conflict arose when one considers the importance ratings which represented the values that motivate the students (Moretti & Higgins, 1990). The importance ratings of females indicated they valued a relationship between scholastic competence and social acceptance. This appeared to be carried over from elementary school years where scholastic ability could make one more popular (Harter, 1988). Males, on the other hand, linked the importance of scholastic competence to behavioral conduct.

Some males' emphasis on behavioral conduct suggests their perception of control in the congregated program was external, and they lacked some of the intrinsic values and motivation derived from being an autonomous learner. The evidence of passive dependence on the part of some males could be the result of an inappropriate and unchallenged response to a failure to meet their own high standards. Failure that is experienced as a stable, internal attribute can reflect on their ability. The negative consequences of passive dependence could have long lasting effects (Slavin, 1988).

Feelings of instrumentality and wanting to be in charge, often linked to giftedness, demand the gifted students take responsibility for their failures as well as their successes. Gifted females, in this study, learned to cope by attributing success or failure to their own efforts, a positive adaptation. Some males, however, took a perceived failure to heart, seeing it as a reflection of a lack of ability not effort, and in the process, sapping their desire to work hard in those subjects. These differences in attribution, between some males and females, possibly due the younger age and immaturity of the males, appeared to contradict the literature (Loeb & Jay, 1987).

All the gifted students were forced to re-evaluate their competence and self concept in light of the demands of the gifted program. Males, in particular, responded to the widened gap between their performance and the ideal they held by lowering the importance ratings of the areas where they felt less competent. One student stated, "I was thinking of ... becoming a doctor or something. But now that I've taken math this year, I realized that if I have to take more than four years of this, forget it." The lowering of importance ratings could result in the gifted students reducing the motivation to seek and develop potential or ideal selves.

Some males found it difficult to devalue the importance of academic marks such as mathematics and science in the view of their scholastic competence, probably because it had such a strong association with their gender role socialization and the expectations of others, especially their families. They may be over-reacting to the congregated setting, as a student said, "this year, science hasn't been too hot for me. I've been better in years past... (and future plans have been altered) "I was thinking of majoring in science later on, but now I'm gearing a bit more towards communications instead of science just because the way my courses are being taken care of, with results and progress."

It is imperative that consideration be given to the often unanticipated consequences of placing gifted pupils amongst a new, highly select, reference group. As a consequence of this conflict, some of these gifted males made the maladaptive choice of seeing their failure as a result of a lack of ability, a stable, internal attribution which inevitably damaged their self esteem (Slavin, 1988).

The gifted females in this study coped with success and failure by focusing on the importance of how dependent they were on their own efforts. This internal attribution strategy was indicative of the most successful students. Although there is a tendency to at times overestimate one's

ability to influence success or failure, it was adaptive because it encouraged hard work and optimism. For the gifted female students in the congregated class, it was a lack of effort that undermined performance in courses they didn't like. "Some courses it's not that I'm less competent but sometimes I don't like them as much, and I just don't do as well... when I like them, I like, enjoy being in them and work for them."

In addition, females felt that it was their natural ability in math, especially, that accounted for their extraordinary performance. "I just hear things once and I get them and that's why sometimes I always doodle, and I don't listen cause I know it, and I don't have to learn it again." This finding runs counter to the research on females which indicates they perceive themselves as only possessing potential, seeing ability as the purview of males. (Kramer, 1991).

Jenkins-Friedman & Murphy (1988) reported that well adjusted students set high goals and were not disturbed by the anxiety brought about by a large gap between actual and ideal self images. Harter (1986) has shown that all high self worth students tend to overestimate their sense of competence compared to their teachers' judgements. The students' tendency of setting high goals should be seen as an incentive to excel and an accepted part of gifted

character. Other studies questioned the wisdom of reducing the discrepancy between ideal and real self concepts for fear that in doing so students would be robbed of the motivation to achieve and develop (Markus & Nurius, 1986; Miller & Silverman 1987; Whitmore, 1980).

In summary, any lowering of the importance and self concept rating of scholastic competence when combined with the pressure placed on the gifted to bring about early identity closure and entry into adulthood could restrict the adolescent's progress through the later stages of adolescence and into adulthood (Elkind, 1980; Frey, 1991; Buescher & Higham, 1989; Delisle, 1985). Doors of opportunity would be closed if the gifted student remained passive in the face of these pressures (Frey, 1991). Teachers must de-emphasize ability within the classroom and use more individualized instruction where success is measured according to the student's own level of achievement. The students in the congregated setting, with its vulnerability to the effects of social comparisons, need to feel that academic success is dependent on effort, not just their ability.

Social Acceptance

During the course of the program, the overall global self worth score for males dropped toward the norm while females continued to rise above the normal curve. The fact

that the genders had changing global self worth responses in scholastic competence compares to research by Whitmore (1980). Perhaps this was the result of females having received greater social/emotional support from the peer group. Callahan et al. (1994) found similar results suggesting that any decrease in scholastic competence would be ameliorated by the emotional feedback and support of the group. In fact, the females were successful in their attempt to maintain close friendship's dominance as their most important domain throughout the program. Males made an adaptive response to the program by switching their allegiance from scholastic competence to close friendship as their most important domain.

Females seemed to show a more consistently positive response to the social atmosphere created in the congregated setting. It is in this area of social relationships that females improved throughout their high school years, thus supporting research by Leroux (1988). The down side of such developments could be a susceptibility to the pressures to conform which could be acute for females, especially as they start to seek opposite sex relationships.

It remains a question whether or not the females in this study may experience these difficulties in the future. At the end of the year's program, romantic appeal emerged to build a strong relationship with social acceptance, while

the importance of scholastic competence was no longer associated with social acceptance. Gifted adolescent females, in their efforts to try to fit into a wider social sphere, may suppress conflict within the self and fall prey to conforming to sexual stereotypes, and in the process, succumb to underachievement (Jordan, 1991; Miller, 1986; Whitmore, 1980). Therefore, educators need to be aware of this potential conflict and be prepared to intervene at an early stage. In fact, Buescher & Olszewski (1987) and Leroux (1991) pointed out that as females moved through adolescence, they tended to hide or down-play their talents, and, in the process, distanced themselves from gifted peers.

Conversely, males, in this study, coped with feelings of being different by avoiding integration in favour of acquiring more labels while seeking out a group of similarly talented peers (Buescher & Olszewski, 1987). Boys seemed less prone to the socialization pressure to seek a wider social network, and, therefore, could proceed to develop multiple roles with the freedom to move from one to the other, perceiving them as independent without a need to integrate them. Thus, many boys in the study delayed the often confusing task of rationalizing opposing attributes within the self concept. This supported the findings of Harter & Monsour (1992).

While most of the gifted students presented a positive self image, their sense of adjustment was affected by the their negative perception of how others see them. Jenkins-Friedman & Murphy (1988) supported the finding that gifted students were ambivalent to the label. As one female student in this study stated, "I just wish that I wasn't in a special class because then people would stop bugging me, you know." According to Jenkins-Friedman & Murphy (1988) the gifted believed others didn't think they were very sociable and this result was confirmed by this study. A male student stated, "I'm not a very sociable person. Lots of people have told me that."

Being seen as different and labelled, denied the gifted student the feeling that they were accepted for themselves, beyond the label (Frey, 1991). In the interviews, the students seemed reluctant to discuss differences between themselves and their peers. Janos (1990) also found this defensive posture. Further probing uncovered that it was not uncommon for students to recount experiences of stress, alienation, and the pressure brought about by the higher expectations from peers, parents and teachers.

Unfortunately, as Janos (1990) found, being singled out in a regular class, even when it was meant to be praise or a compliment, could be very unpleasant. A male student experienced this first hand, "I know once during an exam

like we were doing a math exam and this guy was saying, 'well, I think the answer is this'. Then I said, 'well, that's not the answer', and my other friend said, 'well listen to her, she's like in a special class, you know, and I don't know it made me feel different like apart from other people." VanTassel et al. (1989) stated that a congregated setting could address this problem by fostering an atmosphere that eliminated the fear or embarrassment of being too smart. The gifted students would then be freed from the burden of having to hide or down-play their abilities (Janos, 1990). The program under study holds some promise of providing a more accepting atmosphere as indicated by the students who commented, "This (program) gets much more sociable people ... They want to get along with you. They are really curious about who you are, and what you're about."

Grouping these students together in a congregated classroom did not guarantee they would use high ability students for social comparisons across all self concept domains (Gambino & Rejaskind, 1990). The gifted students were very aware of the variety of abilities in the different domains among their peers in the congregated class. Therefore, they may choose not to use their gifted peers as a reference group for social comparison purposes. Even when a group of individuals was used for comparison purposes, it

may not be large enough to form a reference group with the power to influence the self concept (Gambino & Rejaskind, 1990). In this study, finding an appropriate reference group has proven to be an important step for the gifted adolescents in avoiding adjustment problems.

The gifted students tried to avoid the "nerd" or "brain" label placed on them collectively, and it became more difficult when isolated in the congregated setting. In contrast to the cliques formed within the classroom, which were beneficial and self-affirming, the crowd affiliation of the gifted group was based on a stereotyped image that others hold to be true (Brown, 1990). Brown (1990) felt one's self esteem was directly linked to the position of an adolescent's imposed crowd designation in society's status hierarchy. Nongifted students have often used this ranking system to enhance their self concept by putting down the gifted students in this study with terms like "nerd" or "geek". In response, the gifted participants rejected the crowd label and sought other reference groups beyond the academic sphere to establish guidelines for their actions and values (athletics, drama, or music).

The gifted students were almost unanimous in accentuating their individuality and rejecting any association with a group and any stereotypes. The gifted students in this study understandably did not want to be

treated differently in their interpersonal relationships and disliked being singled out or made to feel odd. This was a finding supported by Cross et al. (1993). Students in this study feared the stigma associated with giftedness and wanted a normal social life. They felt if others saw them as different, they would be treated differently. A school-based academic setting, like the congregated program, concerned gifted students because of the potential to be stigmatized and denied normal social relations (Bendow, 1991; Cross, Coleman & Terharr-Yonkers, 1991). The heightened awareness of their differences caused the gifted to try to manage information about themselves, especially outside the congregated setting. The gifted students scrupulously avoided overt comparisons because of this sensitivity to others' opinions. One female student said, "I don't think its fair (to compare) because everyone is different, and they all have different sorts of capacities. If we're not made to be the same, then why compare." Indeed, the strength of this tendency was unshaken, and maybe, reinforced by a congregated setting.

However, increasingly, their differences were seen as a source of pride. One female student responded by saying, "when you get high tests and things, everyone goes, "Oh, nerd' and everything, and instead of bothering me, I feel proud cause I think, "Oh cool". This lack of crowd

identification and the rejection of the stigma was indicative of the higher stage of social development characteristic of older adolescents (Brown, 1990; Buescher & Olszewski, 1987; Peterson et al., 1984). However, the cliquishness and social competitiveness often associated with young adolescents posed a problem for these students in emerging domains of their self concept that were not yet developed, such as romantic appeal and its impact on popularity (Whalen & Csikszentmihalyi, 1988).

The gifted females in this study exhibited traits that seemed to blur some of the distinctions found in the research on gender differences. A couple of the students stated, "I like to be on top and people noticing that"; and "I know I like to be the leader and if someone takes my place I'm more like this. I just like the position". As assertive leaders, gifted females showed healthy adaptations in their social, psychological, and emotional development (Leroux, 1988; 1991). This study seemed to use a congregated setting full of potential female role models to reinforce a positive expectation for females to succeed in math and science. One student describes her experience, "In math this year, we were doing algebra, and like, I'm about the only person who understood it in the whole class. And, you know, when I'm doing math, I know what I'm doing so I'm sure of my answers."

Overall, this research supported the view shared by Mulcahy, Wilgosh, & Peat (1990, 1991); Olszewski-Kubilius, Kulieke, & Krasney (1988); and Schnieder, Clegg, Byrne, Ledingham, & Crombie (1989) that the gifted adolescents are relatively well-adjusted. The social acceptance scores of the gifted students improved but remained below the normal level. It should be noted that they were struggling and continued to struggle with the challenge of not only being gifted but also adolescent, with all the attendant uncertainty of this pivotal, transitional time in one's life (Vallerand, Gagne, Senecal & Pelletier, 1994).

Ability grouping offers only a partial solution to the social needs of an adolescent. Pressure builds in high school, especially for younger adolescents, to evaluate oneself based on attractiveness and in terms of relationships. Whereas individualized instruction, skill development and peer interaction are best achieved in a congregated setting, social skills and the ability to learn and work with others may require the inclusion of more cooperative learning experiences within a heterogeneous group (Clark, 1992). By modifying the learning environment to accommodate a wider social mix, the teacher can facilitate the development of interpersonal, communication, and leadership skills, providing a balance for the program's continued focus on academics, activities and career goals.

Romantic Appeal

It had been speculated that gifted adolescents, especially around the age of the students in this study (14 years), were susceptible to conflicting demands between the need for achievement and the need for belongingness and romantic love (Kerr, 1985). During the year of the study, romantic appeal rose to establish a significant ability to predict global self worth, especially for females. If female students felt the pressure to conform to a self image based on gender stereotypes, then they risked losing the motivation to achieve (Whitmore, 1980; Bendow, 1991). It is important to note that in this study, gifted females maintained the value they placed on the importance of scholastic competence. Therefore, although there was some evidence of traditional sex role orientation, it may not be detrimental to academic achievement in females. Cate & Sugawara (1986) suggested that programs, such as this one which emphasized mathematics and science, exposed females to less stereotypical attitudes toward academic achievement.

Close Friendship

The self concept score for close friendship was the highest for females during the program. Kline & Short (1991) found that by late adolescence, relationships had taken the primary position in the female value system. In this study, the importance of close friendship was higher

for females than males. During the program, the domain of close friendship improved, especially for males who elevated it with their highest ranking.

The social dynamic had changed for the gifted students entering a congregated grade nine program. The gifted students now had the opportunity to develop close friendships and working relationships with peers of similar ability. Close friendship was linked to social acceptance. It was clear that close friendships were formed among the gifted classmates. Intellectual ability appeared necessary but not sufficient to develop these friendships. Within the congregated class, the gifted students were equally aware of the diversity of personalities and interests that have been grouped together. Most students, especially the avowed extroverts, valued the friendships that seemed to flourish in this diverse social environment. Some students commented that they were a little reluctant to commit in the early stages of a friendship. The early reluctance could probably be linked to a need to be truly committed and totally honest.

In this study, the congregated setting provided an environment for friendships, especially for males who preferred to associate with those of similar ability as opposed to females who preferred a wider mix (Savin-Williams & Berndt, 1990). The results showed a remarkable increase

in the close friendship ratings of males. Unfortunately, social acceptance and global self worth didn't show a similar rise because as Kwan (1992) had pointed out close friends were expected to give unconditional support, and therefore, their opinions didn't carry the same weight as others. However, Kwan (1992) suggested that having one very close friend was extremely important in ensuring a positive psychosocial adjustment for most gifted adolescents. The sharing of one's experiences was extremely beneficial as a female student recounted during the interview. "Well, I have a lot of friends that are in the gifted program so were all pretty intelligent so we can work together. Like, have a friend that really understands how we feel about things when we're all stressed out over something and people say, "Why? Its just school". Well, we understand each other."

Wright & Keple (1981) stated that there is a difference in the kind of friendships formed by the genders. While females preferred close, one to one relationships, males formed group or gang affiliations which could be highly competitive (Savin-Williams & Berndt, 1990; Wright & Keple, 1981). Gifted males already had a tendency to deal with feelings of being different by seeking out a group of equally talented friends (Buescher & Olszewski, 1987). Males were reluctant to relate to one another on an emotional level and their peer relationships suffered as a

result (Leroux, 1988). However, males may have received important support from their group of friends for their self worth through actions and deeds, rather than through emotional, interpersonal sharing of feelings (Savin-Williams & Berndt, 1990). Because of this tendency to establish less intense relationships, males seemed more open to establishing new friendships in new environments. On the other hand, the heavy emphasis females placed on relationships in their value system, and their preference for one to one friendships tended to make these adolescent friendships endure over time, preventing them from quickly making new friends in a new environment ((Kline & Short, 1991; Savin-Williams & Berndt, 1990). Gifted females also felt a greater need to fit in, and in doing so, tended to move away from equally talented peers. Females, in this study, often tried to integrate into a wider social context, thus supporting research by Buescher & Olszewski (1987).

The benefits of stable friendships with high ability peers were seen both academically and socially, especially during the transitions brought about by the move to high school and the change in the programming. The younger males lack of social skill and maturity often prevented them from establishing quality relationships that might prove to be more stable. As a consequence they made quick friendships immediately after the transition to the new program. Savin-

Williams & Berndt (1990) suggested these quick friendships may represent a rebound from failures in past relationships. Teachers and peers judged these individuals as aggressive and disruptive, possibly due to continuing feelings of frustration and loneliness because of a lack of social skills and maturity necessary to express themselves in a long term committed relationship. Similar findings were reported by Savin-Williams & Berndt (1990).

Some researchers have considered close friendships as detrimental to the development of adolescents (Savin-Williams & Berndt, 1990). Increased introspection and self absorption may result from a congregated group of similar individuals who would accentuate common concerns and complaints. In this study, there was enough variability in interests and abilities, often outside the academic realm, that the friendships formed were more likely to distract the adolescents from being preoccupied with themselves. However, one female student voiced a concern over the lack of opportunities to socialize with students outside the congregated setting. "In this program, like the one I'm in here, well you always have the same people, and it doesn't really make you expand your horizons there. You don't make new friends, you know, go to other people." Kwan (1992) agreed that a wider social circle for the gifted could

prevent the negative effects of being overly preoccupied with themselves.

This study showed a large increase in their perceived competence in close friendships. The school program met a need for friendship in a group of gifted males. Broustein, Dreyden & Holahan (1991) suggested that programming did have a positive effect on the number, closeness, and longevity of friendships for the gifted students. These friendships had a greater impact on the lives of gifted rather than nongifted students, suggesting they filled a void (Webb, Meckstroth & Tolan, 1985; Kwan, 1992). Therefore, the congregated setting probably met the pent up social needs of the gifted males to form friendship groups based on common ability, actions and deeds. The sudden changing of the social environment allowed the gifted male to acquire more labels, to avoid integrating the different attributes within the self, to move easily between different roles, and to make friendships that didn't require deep emotional commitment.

However, the quick formation of new friendships during a transitional period, such as, moving to the congregated setting, highlighted what they perceived to be instability in past relationships. This race to build new relationships, while at the same time avoiding the negative stereotypes associated with the academic crowd within the

high school peer culture, could have caused the return to more egocentric behavior and attitudes (Buescher, 1991; Elkind, 1984). Butler (1994) referred to these students in the congregated program at Samuel Genest as "computer hackers" and "immature males". They often ended up internalizing isolation and remained estranged from the wider social environment. Teachers must attempt to integrate these students into the school environment by making accommodations for their different developmental levels, helping them assess their needs. Scholarship had too often been used by males as a mask to avoid the vulnerability associated with learning to make friends (Freeman, 1994). Gifted education should explore ways to incorporate lessons which actually enhance social and emotional development, building on the friendships which are naturally established in a group of equally talented peers (Betts, 1985). Some curriculum models, particularly Betts' Autonomous Learner Model (1985), attempt to address these needs by including a strong affective component to develop awareness, understanding, and acceptance of the self. The congregated setting may hold the promise of providing opportunities for the gifted students to acquire and develop social skills that have laid dormant (Janos, 1990).

Physical Appearance

This study confirmed the finding in Harter (1990) that gifted children's physical appearance rather than scholastic competence was the best predictor of global self worth, even when placed in a congregated setting where academics should take precedence. Both Harter (1990) and Buescher & Olszewski (1987) felt that the high value placed on appearance in society had a serious impact on adolescent lives, especially girls. The females, in the congregated program, exhibited a discrepancy score for physical appearance that ranked second only to romantic appeal and was suggestive of some anxiety or concern in this area.

According to Leroux (1988) it was the gifted male not the gifted female who suffered from negative feelings about their physical development and body image. In this study, both genders had similar self concept scores on their profiles, however, the males were able to discount the importance of physical appearance more effectively than females. However, considering the fact that the males persisted in maintaining the strength of the relationship between physical appearance and self worth, discounting this domain inevitably exacted a price on the self worth.

The enduring nature of this relationship between physical appearance and global self worth had led Harter (1990) to suggest that these two domains were different from

the rest. Harter's (1990) findings provide a possible explanation for the persistent strength of the physical appearance domain and its links to global self worth throughout this study. The global self worth score continued to represent the inner self; however, physical appearance was now elevated to a global characterization of the outer self, one's perception of how others view you. Together, they depicted global portraits of the inner and outer self which were resistant to fluctuations characteristic of more situation specific domains.

While scholastic competence didn't take a prominent position in the study, other domains did surface to challenge physical appearance's hold on global self worth. The possibility remained that the gifted students were starting to respond to the reduction in the influence of physical appearance in the often competitive atmosphere surrounding popularity.

Over the course of the program, the students' perception of their physical appearance improved while its importance in their lives dropped, helping to reduce any discrepancy. The atmosphere inside the classroom counteracted the pressure alluded to by Chan (1988) and Buescher & Olszewski (1987) where attempts to get peer acceptance contributed to the neglect of academics. In fact, an academic orientation gained new status in the

collective identity of the gifted students within the study, reducing the importance of areas that were valued outside of the congregated setting in establishing popularity (Olszewski et al., 1987).

Behavioral Conduct

The decrease in behavioral conduct over time for males in a congregated setting corresponded to the findings of Olszewski et al. (1987). Males perceived themselves to be less well-behaved than did the females, and they valued behavioral conduct less than females over the course of the program. In fact, females increased the value they placed on behavioral conduct, reflecting their response to the disruptive behavior displayed in the class by the males, who often dominated student/teacher interactions (Butler, 1994).

It has been suggested that gifted boys would react more negatively than gifted girls to any discrepancy between the educational environment and their personality (Gonzalez & Hayes, 1988). Whitmore (1980) had pointed out that gifted males often used aggressive dominance, defiance, clowning, and constant talking as a coping behavior to an unhappy school situation. If the student used these coping behaviors to address conflicting needs, he was quickly identified as a behavior problem. Whitmore (1980) felt that despite the consternation of teachers, it was far healthier to act out than suppressing one's needs through conformity.

Studies showed that maladaptive male behavior and lack of social confidence could be associated with the need to conform to a "macho" image (Alvino, 1989). Academic ability in males, especially in elementary school, wasn't seen as an advantage for males (Loeb & Jay, 1987). Being labelled gifted often fostered feeling of self doubt because it did not fit the idealized male. In addition, early attempts to extinguish some of those male traits such as, aggression, independence and restlessness, only served to heighten gifted males' sense of weakness or lack of control before they reached high school.

Gifted males, in this study, had a pent up need to express themselves in an aggressive, independent, and restless fashion denied them in elementary school. The stereotype of the "nerd" haunted the gifted adolescent. In an effort to compensate, they took the opportunity afforded them in the cliques, formed in the congregated setting, to disrupt the class which in many ways was still habitual from the elementary atmosphere (cooperative group work). On the other hand, some males may have been reacting to being pushed into math/science areas because it fitted a male stereotype. Alvino (1991) found, and it was confirmed in this study, that some of the discomfort found in the males could be the result of being directed toward mathematics/science at the expense of intuitive areas like

poetry, and creative writing. Androgeny didn't prove to be an asset for males in the more masculine high school environment; therefore, they didn't feel they belonged inside or outside the program. Other males gained acceptance in the wider school culture by turning to sports. Athletics was one area that seemed to transcend the negative effects of the 'nerd' image in high school culture (Alvino, 1991).

The male sense of insecurity and fluctuating self concept may have been further threatened by gifted females and their advanced development, especially socially, leaving females more aggressive, self-confident, and goal directed. This was similar to findings by Alvino (1991). Leroux (1988) also reported found that adolescent males continue to experience problems with body image, social image, and emotional harmony throughout high school.

In summary, the behavioral problems of males were suggestive of the dynamics of a new program and its emphasis on independent and self directed learning. In this less structured environment, some of the gifted students had difficulty getting their needs met. The teacher in concert with a systematic strategy could have addressed their particular needs and established clear cut goals. For example, Betts (1985) included seven categories of curriculum development for this Autonomous Learner Model

that dealt with social and emotional growth. They included: awareness, understanding and acceptance of self and others, interpersonal skills, group process and interaction skills, creativity, problems of being gifted, and nurturing environments and people. The congregated program must be developed with improved teaching strategies and classroom management techniques. They must be implemented by sensitive, well-trained teachers to provide more flexibility and choice, de-emphasizing the importance of ability. The present program must be more rigorous in providing systematic assessment and support of the socio-emotional needs of its students by incorporating this process in the curriculum.

Conclusions

The males' relatively high global self worth scores, despite the fluctuating perception of competence, leaves one to consider the possibility that the male stereotype is more accepting of these conflicts (Harter, 1990). It remains incumbent upon the educational programs to keep these young gifted males socially engaged and released from stereotypical beliefs. Their multiple selves in different roles are viewed as independent of one another, therefore, the volatility in the self concept may reflect this lack of desire to integrate them. Gifted males can exhibit uneven development as they continue to value intelligence to the

exclusion of emotional and social issues (Miller, Silverman & Falk, 1994). The initial shock of a congregated setting, combined with a male's uneven development, tends to have consequences for the self concept. In the face of a comparison with those of equal ability, they devalue scholastic competence. In addition, a new emphasis on social skills in curriculum based on group interactions encourages the forming of close friendships, but also requires them to deal with their emotional and social immaturity. If they do not have the skills to do this yet, then it is incumbent on educators to help them learn the skills.

The emphasis for gifted females should remain on intellectual endeavours. Females do experience a need to create harmony across their many relationships and this tendency only increases during adolescence (Harter, 1990). The need for emotional and social security often shields females from the uncomfortable feelings dissonance might evoke when social comparisons lower feelings of competence. The motivational benefits could be lost. When combined with the stereotypical attitudes found in gifted females toward their future prospects, the consequences for the long term could be disastrous for a career (Reis, Callahan & Goldsmith, 1994). Females are at risk due to pressure to emphasize the emotional, social aspects of their lives,

especially as they begin to concern themselves with their romantic appeal. In this study, the females were just starting to talk about romantic relationships where potential conflicts may arise with gender stereotypes and the need for gifted achievement. Therefore, teachers must keep the focus on academic achievement, activities and career goals in gifted females to keep a balance and perspective in their lives during this transitional phase.

The main purpose of this research study was to assess whether gifted adolescents' self concepts changed due to their participation in a gifted, congregated setting; thereby providing an opportunity to explore the central role self concept plays in the coping ability of gifted males and females. The results did show significant changes in the various domains of the self concept of gifted adolescents after their participation in a congregated program. Changes surrounding global self worth, scholastic competence, social acceptance, close friendship, romantic appeal, physical appearance, and behavioral conduct reveal a mixture of positive and some negative adaptations to the school environment. It appears that ability grouping provides a partial answer. It is evident that the curriculum must be expanded to meet the emotional and social growth of the gifted individual, and the teachers who deliver this curriculum must be specially trained.

Limitations

From a methodological point of view, this study has several limitations:

The time frame didn't allow large effects to develop. A longitudinal study extended beyond the first year would have improved the confidence in the significance of the changes under way in the self concept of the gifted adolescents.

Another factor which underplayed the changes that did occur was the limited range and resolution of the Harter scale (1-4). One positive note, however, is that any changes that were recorded, in the face of these limitations, were all that more noteworthy. They appeared despite the narrow time frame and lack of flexibility in the instrumentation.

This select group of adolescent subjects wasn't randomly assigned to the congregated program. Furthermore, this study depended on a small sample and relied on pre-existing criteria for identification. In addition, the students' primary language was French, although all efforts were made to ensure language would not be an intervening variable. The students' proficiency in English was deemed adequate to complete the requirements of the study. As well, use of interviews resulted in enriching the SPPA and controlling for possible language bias.

It was necessary to maintain the integrity of the original Harter SPPA to preserve the validity and reliability of the results. The benefits to the study found in the test-retest reliability of the instrument included using the gifted as their own control, and the use of Harter's (1988) normative sample as the basis for comparisons. Reliability and validity of this study were further enhanced through the replication of previous work (Olszewski & Kulieke, 1987) which obtained similar results in separate settings.

Recommendations for Program Changes

This program appeared to have limited success in emphasizing social skills development, while attempting to engender a sense of empathy, and an ethic of caring. It appears that a greater effort should be placed on group skills, cooperative learning, and value development to build a social ethic, a concern for the welfare of others. It is often necessary to enhance social maturity because gifted students aren't advanced in all areas evenly. Opportunities to expand one's social and cultural horizons can be helped through peer tutoring, and the encouragement of trained teachers who have been selected because they are gifted themselves, especially in the social sphere (Schneider, 1987). The powerful influence and importance of the teacher to the program can not be overstated. From the selection of an appropriate curriculum model through the assessment of the school situation and the review of the needs of the gifted students, the teacher is the guiding force.

Gender stereotypes, often reinforced by student/teacher interactions, must be countered in a congregated class which can encourage females to take ownership of their giftedness, developing an identity that doesn't find a contradiction between being academically and socially able at the same time. Opportunities to learn with intellectual peers must also be accompanied with the bolstering of the gifted

learner's motivation to maintain their career aspirations. Career development, adult mentors, long term and short term career planning goals must be accentuated for gifted males and females to counter the notion that a sudden drop in scholastic competence in the congregated setting is due to a lack of ability. Once again, there is a role for a sensitive, well-trained teacher or facilitator.

Butler (1994) also recommended that teachers need to improve teaching strategies, classroom management techniques and avoid stereotypical beliefs to meet the varying challenges provided by gifted students. In addition, the interdisciplinary nature of the program requires more organization on the part of the teachers' approach to thinking skills. It should be noted that in response, Bloom's taxonomy is to be used by the six teachers on the team in future program revisions. This is a new starting point, but represents only one step on the road to greater program success.

Recommendations for Future Research

It is evident that teachers play a pivotal role in the success or failure of a special program. Therefore, teacher performance within the program, and the most effective personal traits and classroom strategies need to be the objects of on-going study.

The gifted students' cliques, reference group, peer group, and crowd affiliation impact the social comparison process. Examining this complex relationship in more detail, by having the gifted students compare themselves explicitly to each group, can make these results more powerful. Such follow-up classroom research would be valuable.

Considering the importance of close friendships to the gifted learner, the quality of the personal relationships formed in the congregated setting should be studied further. An instrument such as The Acquaintance Description Form (Wright, 1991) offers the ability to gain insight into relationship strength, interpersonal rewards, measures of tension/strain, favorability and kinds of relationships.

It has been speculated that the gifted learners' high internal locus of control helps them deal with the lack of acceptance by their peers (Brody & Benbow, 1986). Perhaps a study of any changes in attribution characteristics of

gifted learners within congregated setting could illuminate some of the consequences of a drop in scholastic competence.

Considering the advanced development of the gifted learner, it might be instructive to use Harter's Self Perception Profile for College Students with the adolescent group (Neemann & Harter, 1986). Thus, further insights in the investigation of the gifted adolescents' self concept could be gained by adding the relevant domains of parent relationships, humour, and morality. It remains for future researchers to continue to help educators understand the impact of programs on the cognitive and affective development of gifted adolescents.

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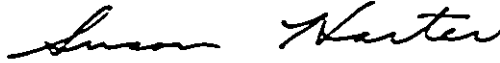
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MEMORANDUM

TO: Paul Wright

FROM: Susan Harter



DATE: October 31, 1996

RE: Permission

You have my permission to include elements of my Self-Perception Profile for Adolescents in the appendix of your dissertation.

SELF-PERCEPTION PROFILE FOR ADOLESCENTS

Susan Harter

Data Coding for the Self-Perception Profile for Adolescents

Scholastic Competence Subscale	Quest. 1, 10, 19, 28, 37
Social Acceptance Subscale	Quest. 2, 11, 20, 29, 38
Athletic Competence Subscale	Quest. 3, 12, 21, 30, 39
Physical Appearance Subscale	Quest. 4, 13, 22, 31, 40
Job Competence Subscale	Quest. 5, 14, 23, 32, 41
Romantic Appeal Subscale	Quest. 6, 15, 24, 33, 42
Behavioral Conduct Subscale	Quest. 7, 16, 25, 34, 43
Close Friendship Subscale	Quest. 8, 17, 26, 35, 44
Global Self Worth Subscale	Quest. 9, 18, 27, 36, 45

Data Coding for the Importance Ratings (separate 16 questions)

Scholastic Competence Subscale	Quest. 1, 9
Social Acceptance Subscale	Quest. 2, 10
Athletic Competence Subscale	Quest. 3, 11
Physical Appearance Subscale	Quest. 4, 12
Job Competence Subscale	Quest. 5, 13
Romantic Appeal Subscale	Quest. 6, 14
Behavioral Conduct Subscale	Quest. 7, 15
Close Friendship Subscale	Quest. 8, 16

University of Denver
1988

What I Am Like

Name _____ Age _____ Birthday _____ Month _____ Day _____ Group _____

SAMPLE SENTENCE

	Really True for Me	Sort of True for Me			Sort of True for Me	Really True for Me
a)	☐	☐	Some teenagers like to go to movies in their spare time	BUT	Other teenagers would rather go to sports events.	☐
1.	☐	☐	Some teenagers feel that they are just as smart as others their age	BUT	Other teenagers aren't so sure and wonder if they are as smart.	☐
2.	☐	☐	Some teenagers find it hard to make friends	BUT	For other teenagers it's pretty easy.	☐
3.	☐	☐	Some teenagers do very well at all kinds of sports	BUT	Other teenagers don't feel that they are very good when it comes to sports.	☐
4.	☐	☐	Some teenagers are <i>not</i> happy with the way they look	BUT	Other teenagers are happy with the way they look.	☐
5.	☐	☐	Some teenagers feel that they are ready to do well at a part-time job	BUT	Other teenagers feel that they are not quite ready to handle a part-time job.	☐
6.	☐	☐	Some teenagers feel that if they are romantically interested in someone, that person will like them back	BUT	Other teenagers worry that when they like someone romantically, that person won't like them back.	☐
7.	☐	☐	Some teenagers usually do the right thing	BUT	Other teenagers often don't do what they know is right.	☐
8.	☐	☐	Some teenagers are able to make really close friends	BUT	Other teenagers find it hard to make really close friends.	☐
9.	☐	☐	Some teenagers are often disappointed with themselves	BUT	Other teenagers are pretty pleased with themselves.	☐
10.	☐	☐	Some teenagers are pretty slow in finishing their school work	BUT	Other teenagers can do their school work more quickly.	☐
11.	☐	☐	Some teenagers have a lot of friends	BUT	Other teenagers don't have very many friends.	☐
12.	☐	☐	Some teenagers think they could do well at just about any new athletic activity	BUT	Other teenagers are afraid they might not do well at a new athletic activity.	☐

	Really True for Me	Sort of True for Me				Sort of True for Me	Really True for Me
13.	☐	☐	Some teenagers wish their body was different?	BUT	Other teenagers like their body the way it is.	☐	☐
14.	☐	☐	Some teenagers feel that they don't have enough skills to do well at a job	BUT	Other teenagers feel that they do have enough skills to do a job well.	☐	☐
15.	☐	☐	Some teenagers are <i>not</i> dating the people they are really attracted to	BUT	Other teenagers are dating those people they are attracted to.	☐	☐
16.	☐	☐	Some teenagers often get in trouble for the things they do	BUT	Other teenagers usually <i>don't</i> do things that get them in trouble	☐	☐
17.	☐	☐	Some teenagers do have a close friend they can share secrets with	BUT	Other teenagers do not have a really close friend they can share secrets with	☐	☐
18.	☐	☐	Some teenagers don't like the way they are leading their life	BUT	Other teenagers do like the way they are leading their life.	☐	☐
19.	☐	☐	Some teenagers do very well at their classwork	BUT	Other teenagers don't do very well at their classwork.	☐	☐
20.	☐	☐	Some teenagers are very hard to like	BUT	Other teenagers are really easy to like.	☐	☐
21.	☐	☐	Some teenagers feel that they are better than others their age at sports	BUT	Other teenagers don't feel they can play as well.	☐	☐
22.	☐	☐	Some teenagers wish their physical appearance was different	BUT	Other teenagers like their physical appearance the way it is.	☐	☐
23.	☐	☐	Some teenagers feel they are old enough to get and keep a paying job	BUT	Other teenagers do not feel they are old enough, yet, to really handle a job well	☐	☐
24.	☐	☐	Some teenagers feel that people their age will be romantically attracted to them	BUT	Other teenagers worry about whether people their age will be attracted to them.	☐	☐
25.	☐	☐	Some teenagers feel really good about the way they act	BUT	Other teenagers <i>don't</i> feel that good about the way they often act	☐	☐
26.	☐	☐	Some teenagers wish they had a really close friend to share things with	BUT	Other teenagers <i>do</i> have a close friend to share things with.	☐	☐
27.	☐	☐	Some teenagers are happy with themselves most of the time	BUT	Other teenagers are often not happy with themselves.	☐	☐
28.	☐	☐	Some teenagers have trouble figuring out the answers in school	BUT	Other teenagers almost always can figure out the answers.	☐	☐

	Really True for Me	Sort of True for Me				Sort of True for Me	Really True for Me
29	☐	☐	Some teenagers are popular with others their age	BUT	Other teenagers are not very popular.	☐	☐
30	☐	☐	Some teenagers don't do well at new outdoor games	BUT	Other teenagers are good at new games right away.	☐	☐
31	☐	☐	Some teenagers think that they are good looking	BUT	Other teenagers think that they are not very good looking.	☐	☐
32	☐	☐	Some teenagers feel like they could do better at work they do for pay	BUT	Other teenagers feel that they are doing really well at work they do for pay.	☐	☐
33	☐	☐	Some teenagers feel that they are fun and interesting on a date	BUT	Other teenagers wonder about how fun and interesting they are on a date.	☐	☐
34	☐	☐	Some teenagers do things they know they shouldn't do	BUT	Other teenagers hardly ever do things they know they shouldn't do.	☐	☐
35	☐	☐	Some teenagers find it hard to make friends they can really trust	BUT	Other teenagers are able to make close friends they can really trust.	☐	☐
36	☐	☐	Some teenagers like the kind of person they are	BUT	Other teenagers often wish they were someone else.	☐	☐
37	☐	☐	Some teenagers feel that they are pretty intelligent	BUT	Other teenagers question whether they are intelligent.	☐	☐
38	☐	☐	Some teenagers feel that they are socially accepted	BUT	Other teenagers wished that more people their age accepted them.	☐	☐
39	☐	☐	Some teenagers do not feel that they are very athletic	BUT	Other teenagers feel that they are very athletic.	☐	☐
40	☐	☐	Some teenagers really like their looks	BUT	Other teenagers wish they looked different.	☐	☐
41	☐	☐	Some teenagers feel that they are really able to handle the work on a paying job	BUT	Other teenagers wonder if they are really doing as good a job at work as they should be doing	☐	☐
42	☐	☐	Some teenagers usually <i>don't</i> go out with the people they would really like to date	BUT	Other teenagers <i>do</i> go out with the people they really want to date.	☐	☐
43	☐	☐	Some teenagers usually act the way they know they are supposed to	BUT	Other teenagers often don't act the way they are supposed to.	☐	☐
44	☐	☐	Some teenagers <i>don't</i> have a friend that is close enough to share really personal thoughts with	BUT	Other teenagers <i>do</i> have a close friend that they can share personal thoughts and feelings with.	☐	☐
45	☐	☐	Some teenagers are very happy being the way they are	BUT	Other teenagers wish they were different.	☐	☐

HOW IMPORTANT ARE EACH OF THESE THINGS TO YOU?

	Really True for Me	Sort of True for Me				Sort of True for Me	Really True for Me
1.	☐	☐	Some teenagers think it is important to be intelligent	BUT	Other teenagers don't think it is important to be intelligent	☐	☐
2.	☐	☐	Some teenagers don't think its all that important to have a lot of friends	BUT	Other teenagers think that having a lot of friends is important	☐	☐
3.	☐	☐	Some teenagers think its important to be good at sports	BUT	Other teenagers don't care much about being good at sports	☐	☐
4.	☐	☐	Some teenagers don't really think that their physical appearance is all that important	BUT	Other teenagers think that their physical appearance is important	☐	☐
5.	☐	☐	Some teenagers don't care that much about how well they do on a paying job	BUT	Other teenagers feel its important that they do well on a paying job	☐	☐
6.	☐	☐	Some teenagers think its important that the people they are romantically interested in like them back	BUT	Other teenagers don't really care that much whether someone they are interested in likes them that much	☐	☐
7.	☐	☐	Some teenagers don't think its that important to do the right thing	BUT	Other teenagers think that doing the right thing is important	☐	☐
8.	☐	☐	Some teenagers think its important to be able to make really close friends	BUT	Other teenagers don't think making close friends is all that important	☐	☐
9.	☐	☐	Some teenagers don't think that doing well in school is really that important	BUT	Other teenagers think that doing well in school is important	☐	☐
10.	☐	☐	Some teenagers think its important to be popular	BUT	Other teenagers don't care that much about whether they are popular	☐	☐
11.	☐	☐	Some teenagers don't think that being athletic is that important	BUT	Other teenagers think that being athletic is important	☐	☐
12.	☐	☐	Some teenagers think that how they look is important	BUT	Other teenagers don't care that much about how they look	☐	☐
13.	☐	☐	Some teenagers think its important to do their best on a paying job	BUT	Other teenagers don't think that doing their best on a job is all that important	☐	☐
14.	☐	☐	Some teenagers don't care that much whether they are dating someone they are romantically interested in	BUT	Other teenagers think its important to be dating someone they are interested in	☐	☐
15.	☐	☐	Some teenagers think its important to act the way they are supposed to	BUT	Other teenagers don't care that much whether they are acting the way they are supposed to	☐	☐
16.	☐	☐	Some teenagers don't care that much about having a close friend they can trust	BUT	Other teenagers think its important to have a really close friend you can trust	☐	☐

Appendix B: Interview Questions

Social Comparison Processes, Self-Judgements, and Determinants of Competence

Tell me about yourself?
 What are your qualities that you most appreciate?
 Do others agree with these characteristics?
 Do you compare yourself to any group?
 How do you feel about comparing yourself to others?
 Would you describe yourself as someone who makes friends easily?
 Do you see any conflict between high levels of achievement and acceptance by peers?
 How do you feel about popularity?
 How do you feel about physical appearance and romantic appeal?
 In what ways are you and your friends the same or different?
 Is it important to do well at sports?
 How important is a paying job?
 How do you feel about acting the way you are expected to?

Gifted Programming for Gifted Learners

How do you feel about school?
 Are you happy in your program? Why?
 In which courses do you feel quite competent?
 In which courses do you feel less competent?
 Why do you think you feel that way?
 How important are those courses to you?
 How do classes for gifted/talented students compare to others?
 Do they meet your needs?
 Where could they improve?
 Did you have any experience with tasks related to self awareness? creative thinking? the processes of task analysis? time management or goal setting?
 Which activities or courses ? How?
 Which teachers have influenced your outlook on the future?
 Why?

Appendix C: Origins of Social-Emotional Development

Clark (1992) incorporates Maslow's hierarchy of needs, to represent the stages of self concept development, with Erikson's model of personality development. The result highlights the major milestones in the human life span which mark changes in the developing self concept and personality as they respond to physical and social challenges.

Table A

Origins of Social-Emotional Development

<u>Period</u>	<u>Self Concept</u>	<u>Personality Development</u>
Infancy	Physical needs	Trust vs mistrust
Childhood	Safety needs	Autonomy vs shame or doubt
	Love & Belonging	Initiative vs guilt
	Need for self-esteem	
Adolescence		Industry vs inferiority
	Self-actualization	
	Transcendence	Ego identity vs ego diffusion
		Intimacy vs isolation
Adulthood	More aware More accepting Spontaneous More autonomous Self-motivated Seeks unity Devoted to cause Universal values Rich emotional life Peak experiences Empathetic & loving Private moments Creative Democratic Awed by life	Generativity vs self- absorption Integrity vs despair

Appendix D: Program Selection and Principles

The following factors were used to select students for the program:

- testing done in the elementary panel at grade 3 and 6
- Otis Lennon (98 percentile and above)
- Gifted students are identified by committees of identification, placement and review (IPR)
- a test for intellectual potential (other than the Otis Lennon) - the WISC-R, the Renzulli-Hartman or other
- a superior academic record
- a wish to activity take part in the program
- a series of observational checklists completed by parents and teachers lead to nominations
- interviews with formal, standardized questions

College catholique Samuel Genest program for gifted learners in grade nine follows these principles:

1. "Curriculum is enriched in breadth and depth and based on the interests of the student.
2. Social skill are developed and enhanced.
3. Self esteem is encouraged and facilitated.
4. Learning is cross disciplinary.
5. Students develop a wide area of higher level and creative thinking skills.
6. Responsibility for learning is placed on the students.
7. Students participate in individual and small group learning situations.
8. Students use varied resources, ie., mentors, to develop new and unique products/studies.
9. Students are involved in guided open-ended learning experiences.
10. School experiences allow and encourage students to become life-long learners".

Butler (1994, p. 2-3)

Appendix E: Data Coding Strategy

This researcher used Spradley's (1980) system of categorization with the interview data to isolate the various kinds of feelings and experiences expressed by the students. More specifically, Spradley's category of strict inclusion (X is a kind of Y) was used for both attitude coding and descriptive coding. Initially, each response was coded according to whether the attitude of the participant was positive, negative, or mixed. This judgement was based on the researcher's observations of the different kinds of feelings associated with the students' responses at the time of the interview. The descriptive coding followed, incorporating the eight domains of the Harter SPPA as well as other emergent categories. There were 17 kinds of experiences described by the gifted students during the course of the interview. They were coded and grouped into three larger classifications (others, self, school).

Additionally, the responses were coded according to whether they were made from the psychological, social or coping point of view. These responses constituted the inferred point of view, thus the term inferential codes. The researcher used Spradley's means-end category (X is a way to do Y) to isolate the different ways used by the students to see their experiences. The students can be egocentric, socially oriented or attempting to cope as they

recount their behavior and life experience. Responses dealing with self appraisal (the way A views A) or an egocentric point of view were coded as the psychological self. The social self represented a response that involved the appraisal of others (the way A views B) or reflected appraisal (the way A thinks B views A). Given the obvious variety and complexity of the psychosocial issues involved, it became imperative that a separate category (coping self) be used to record the strategies employed by the gifted to cope.

All the data was coded on a word processing computer program to facilitate the analysis of the qualitative data. Various computer aided searches helped identify the widest range of domains available and assisted in developing themes. In the course of these searches of the interview data, emergent themes arose and the dominant ones were categorized within the three separate points of view - psychological, social and coping self.

Appendix F: Competence/Importance Discrepancy Scores

Total Gifted: Competence/Importance Discrepancy Score (Pre/Posttest)

Specific procedure for calculating the competence/importance discrepancy score

Step 1 Name of domains in which importance Scores are 3.0, 3.5, or 4.0.	Step 2 Competence or Adequacy Scores (from Self-Perception Profile)		Step 3 Importance Ratings of 3, 3.5, and 4 only (from Importance Rating Scale)		Step 4 Discrepancy Score Sign Value (+ or -)
a) Scholastic Comp.	3.32 (3.13)*	minus	3.61 (3.22)	equals	- 0.29 (- 0.09)
b) Social Accept.	2.84 (2.94)	minus	2.94 (2.83)	equals	- 0.1 (---)
c) Athletic Comp.	2.65 (2.84)	minus	2.91 (2.79)	equals	--- (---)
d) Physical App.	2.72 (2.86)	minus	3.07 (2.86)	equals	- 0.35 (---)
e) Job Comp.	3.20 (3.27)	minus	3.70 (3.48)	equals	- 0.5 (- 0.21)
f) Romantic App.	2.24 (2.57)	minus	3.57 (3.55)	equals	- 1.33 (- 0.98)
g) Behavioral Con.	3.01 (2.92)	minus	3.19 (3.02)	equals	- 0.18 (- 0.1)
h) Close Friend	3.15 (3.51)	minus	3.63 (3.69)	equals	- 0.48 (- 0.18)

In most cases this Discrepancy Score will be negative, however, it can also be zero, or assume positive values.

The larger the negative discrepancy score, the more one's importance scores exceed one's competence levels, and the lower one's self-worth score should be as a result.

Step 5

Sum of Discrepancy Scores taking sign into account:

- 3.23 (- 1.56)
(sign) (score)

Step 6

Mean Discrepancy Score:

- 0.46	(- 0.31)
(sign)	(score)

Step 7

Transfer Global Self-Worth Score from the Self-Perception Profile, in order to compare.

3.29	(3.28)
------	--------

* Brackets contain posttest scores.

Gifted Males: Competence/Importance Discrepancy Score (Pre/Posttest)

Specific procedure for calculating the competence/importance discrepancy score

Step 1 Name of domains in which importance Scores are 3.0, 3.5, or 4.0.	Step 2 Competence or Adequacy Scores (from Self-Perception Profile)		Step 3 Importance Ratings of 3, 3.5, and 4 only (from Importance Rating Scale)		Step 4 Discrepancy Score Sign Value (+ or -)
a) Scholastic Comp.	3.36 (3.07)*	minus	3.75 (3.03)	equals	- 0.39 (+ 0.04)
b) Social Accept.	2.77 (2.93)	minus	2.86 (2.77)	equals	— (—)
c) Athletic Comp.	2.77 (3.06)	minus	3.04 (2.87)	equals	- 0.27 (—)
d) Physical App.	2.79 (2.89)	minus	2.89 (2.57)	equals	— (—)
e) Job Comp.	3.15 (3.15)	minus	3.79 (3.40)	equals	- 0.64 (- 0.25)
f) Romantic App.	2.30 (2.61)	minus	3.71 (3.53)	equals	- 1.41 (- 0.92)
g) Behavioral Con.	3.00 (2.73)	minus	3.21 (2.80)	equals	- 0.21 (—)
h) Close Friend	2.91 (3.45)	minus	3.43 (3.60)	equals	- 0.52 (- 0.15)

In most cases this Discrepancy Score will be negative, however, it can also be zero, or assume positive values.

The larger the negative discrepancy score, the more one's importance scores exceed one's competence levels, and the lower one's self-worth score should be as a result.

Step 5

Sum of Discrepancy
Scores taking sign into
account:

- 3.44 (- 1.36)
(sign) (score)

Step 6

Mean Discrepancy
Score:

- 0.57 (sign) (score)	(- 0.34)
--------------------------------	----------

Step 7

Transfer Global Self-
Worth Score from the
Self-Perception Profile,
in order to compare.

3.44	(3.29)
------	--------

* Brackets contain posttest scores.

Gifted Females: Competence/Importance Discrepancy Score (Pre/Posttest)

Specific procedure for calculating the competence/importance discrepancy score

Step 1 Name of domains in which importance Scores are 3.0, 3.5, or 4.0.	Step 2 Competence or Adequacy Scores (from Self-Perception Profile)		Step 3 Importance Ratings of 3, 3.5, and 4 only (from Importance Rating Scale)		Step 4 Discrepancy Score Sign Value (+ or -)
a) Scholastic Comp.	3.28 (3.20)*	minus	3.46 (3.43)	equals	- 0.18 (- 0.23)
b) Social Accept.	2.91 (2.96)	minus	3.04 (2.89)	equals	- 0.13 (---)
c) Athletic Comp.	2.52 (2.60)	minus	2.77 (2.71)	equals	--- (---)
d) Physical App.	2.65 (2.81)	minus	3.27 (3.18)	equals	- 0.62 (- 0.37)
e) Job Comp.	3.25 (3.43)	minus	3.62 (3.57)	equals	- 0.32 (- 0.14)
f) Romantic App.	2.17 (2.53)	minus	3.42 (3.57)	equals	- 1.25 (- 1.04)
g) Behavioral Con.	3.03 (3.13)	minus	3.15 (3.25)	equals	- 0.12 (- 0.12)
h) Close Friend	3.40 (3.57)	minus	3.85 (3.79)	equals	- 0.45 (- 0.22)

In most cases this Discrepancy Score will be negative, however, it can also be zero, or assume positive values.

The larger the negative discrepancy score, the more one's importance scores exceed one's competence levels, and the lower one's self-worth score should be as a result.

Step 5

Sum of Discrepancy
Scores taking sign into
account:

- 3.07 (- 2.12)
(sign) (score)

Step 6

Mean Discrepancy
Score:

- 0.44 (- 0.35)
(sign) (score)

Step 7

Transfer Global Self-
Worth Score from the
Self-Perception Profile,
in order to compare.

3.12 (3.26)

* Brackets contain posttest scores.

Appendix G: Correlational Analysis

Tables B and C provide an opportunity to compare the male and female scores on the correlation analysis. Males put heavy emphasis on the relationship between scholastic competence and behavioral conduct with athletic competence being associated with romantic appeal and behavioral conduct. Females, on the other hand, include job competence with behavioral conduct in a relationship with scholastic competence while ignoring athletic competence altogether. The males built a cluster around social acceptance relationships with close friendship, romantic appeal, and physical appearance. The females are more specific in the order of these relationships with social acceptance being connected to close friendship. Close friendship is then linked, in a negative way, to romantic appeal. And, romantic appeal is related to physical appearance.

The correlations among the subscales and self worth are also of interest. Males relate scholastic competence, behavioral conduct, and especially, physical appearance to self worth. In contrast, females associate global self worth with social acceptance, close friendship, romantic appeal, and physical appearance with the latter three representing a moderate to strong relationship.

Table B

Correlation Analysis of Subscales (Male)

	Athl	Soc	Close	Rom	Phys	Behav	Job	Glob
Schol	-.05	.06	-.21	-.15	.19	.63b	-.04	.43*
Athl	--	.48a	.15	.49*	.26	-.38*	.09	.0009
Soc		--	.42*	.45*	.37*	.005	-.02	.11
Close			--	-.003	-.14	-.19	.20	-.23
Rom				--	.36	-.14	-.28	.02
Phys					--	.36	-.25	.69b
Behav						--	.11	.53a
Job							--	-.16

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

Table C

Correlation Analysis of Subscales (Female)

	Athl	Soc	Close	Rom	Phys	Behav	Job	Glob
Schol	.05	.09	.34	-.06	.09	.51a	.47*	.27
Athl	--	-.002	-.37	.08	.11	-.24	-.02	.06
Soc		--	.40*	.37	.21	-.08	.33	.46*
Close			--	-.54a	.35	.14	.18	.51a
Rom				--	.54a	.03	.20	.65b
Phys					--	.13	.03	.78b
Behav						--	.15	.28
Job							--	-.16

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

Tables D and E provide an opportunity to compare the male and female importance ratings scores with the correlation analysis. Males relate the importance of scholastic competence with job competence and behavioral conduct; whereas, females put more emphasis on the relationship between the importance of scholastic competence and social acceptance as well as job competence. Both genders value the importance of the relationship between social acceptance and physical appearance and close friendship with males showing a stronger association. Males continue to value athletic competence and its importance to physical appearance. Interestingly, females show concern over the relationship between physical appearance and job competence. The importance of job competence for males is related to romantic appeal and behavioral conduct.

Table D

Correlation Analysis of Importance Ratings (Male)

	Importance Rating						
	B Soc	C Athl	D Phys	E Job	F Rom	G Behav	H Close
A Schol	.30	.08	.13	.56a	.31	.44*	.19
B Soc	--	.34	.65b	-.09	.27	-.08	.51a
C Athl		--	.49a	.02	-.006	-.22	.14
D Phys			--	-.05	.20	-.03	.36
E Job				--	.51a	.44*	.02
F Rom					--	.08	.36
G Behav						--	-.13

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

Table E

Correlation Analysis of Importance Ratings (Female)

	Importance Rating						
	B Soc	C Athl	D Phys	E Job	F Rom	G Behav	H Close
A Schol	.47*	.04	.38	.40*	.29	.08	.09
B Soc	--	.26	.54a	.15	.04	-.24	.45*
C Athl		--	.06	.02	-.03	-.09	.24
D Phys			--	.50a	.32	.03	.34
E Job				--	.07	.36	.04
F Rom					--	-.17	.11
G Behav						--	-.11

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

Tables F and G provide an opportunity to compare results from the correlation analysis for the pretest and posttest subscale scores. Scholastic competence remains linked to behavioral conduct, although at reduced strength. The negative relationship between athletic competence and behavioral conduct is no longer significant in the posttest while romantic appeal emerges to establish a relationship with athletic competence. There appears to be a change in the relationships surrounding social acceptance. Close friendships and physical appearance give way to romantic appeal as the relationship of choice with social acceptance. In turn, romantic appeal loses its significant connection to physical appearance. In addition, the global self worth relationship to the other subscales changes by dropping romantic appeal and adding scholastic competence and behavioral conduct to physical appearance.

Table F

Correlation Analysis of Subscales (Pretest)

	Athl	Soc	Close	Rom	Phys	Behav	Job	Glob
Schol	-.05	.10	.11	.09	.26	.70b	.33	.34
Athl	--	.25	-.16	.23	.05	-.44*	.14	.03
Soc		--	.47*	.37	.48*	-.08	.19	.32
Close			--	-.14	.10	.13	.17	.12
Rom				--	.54a	-.06	-.09	.56a
Phys					--	.38	-.12	.77b
Behav						--	-.05	.37
Job							--	-.07

* p<0.05

a p<0.01

b p<0.001

Table G

Correlation Analysis of Subscales (Post-test)

	Athl	Soc	Close	Rom	Phys	Behav	Job	Glob
Schol	.01	.09	.01	-.17	.13	.54a	.12	.37*
Athl	--	.29	-.13	.39*	.32	-.28	-.18	.07
Soc		--	.29	.43*	.14	.07	.04	.15
Close			--	-.12	-.11	-.22	.30	.05
Rom				--	.34	-.11	-.12	.14
Phys					--	.21	-.18	.71b
Behav						--	.31	.38*
Job							--	.01

* p<0.05

a p<0.01

b p<0.001

Tables H and I provide an opportunity to compare results from the correlation analysis for the pretest and post-test importance ratings scores. The importance of scholastic competence no longer remains linked to social acceptance and romantic appeal. Job competence now stands along side scholastic competence, representing a valued relationship. Social acceptance remains relatively untouched by programming in a congregated setting, as both physical appearance and close friendship maintain their strong bond to social acceptance. Physical appearance is dropped from its relationship with close friendship. At the same time, the importance of job competence appears in the association with romantic appeal and behavioral conduct.

Table H

Correlation Analysis of Importance Ratings (Pretest)

	Importance Rating						
	B Soc	C Athl	D Phys	E Job	F Rom	G Behav	H Close
A Schol	.45*	.07	.34	.20	.53a	-.06	.22
B Soc	--	.30	.65b	-.08	.24	-.30	.54a
C Athl		--	.33	-.02	.06	-.34	-.02
D Phys			--	.01	.17	-.15	.56a
E Job				--	.19	.30	-.03
F Rom					--	-.26	.24
G Behav						--	-.06

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

Table I

Correlation Analysis of Importance Ratings (Post-test)

	Importance Rating						
	B Soc	C Athl	D Phys	E Job	F Rom	G Behav	H Close
A Schol	.31	.02	.10	.58b	.15	.52a	.18
B Soc	--	.29	.60b	.01	.06	.05	.48a
C Athl		--	.28	.03	-.07	-.06	.27
D Phys			--	.16	.18	.14	.32
E Job				--	.39*	.47*	.08
F Rom					--	.16	.17
G Behav						--	-.10

* $p < 0.05$ a $p < 0.01$ b $p < 0.001$

Appendix H: Frequency Data

Table J

Female: Frequency Data from the Interviews (Totals)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	8	6	16	30
	social comparison	6	6	10	22
	friendship	6	0	10	16
	family	0	0	2	2
	behavioral conduct	3	1	5	9
	romantic appeal	2	0	2	4
	labelling	1	1	3	5
	Subtotal	26	14	48	88
Self	descriptive character	1	4	5	10
	leadership	1	0	2	3
	honesty	2	1	2	5
	physical appeal	0	0	2	2
	athletic competence	1	4	3	8
	humour	0	1	1	2
	Subtotal	5	10	15	30
School	school program	0	15	10	25
	scholastic competence	1	8	2	11
	workload	2	0	0	2
	teacher	0	1	5	6
	Subtotal	3	24	17	44
	Total	34	48	80	162

Table K

Female: Frequency Data from the Interviews (Positive)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	3	5	10	18
	social comparison	2	6	8	16
	friendship	2	0	7	9
	family	0	0	1	1
	behavioral conduct	1	0	2	3
	romantic appeal	1	0	1	2
	labelling	1	0	0	1
	Subtotal	10	11	29	50
Self	descriptive character	1	3	5	9
	leadership	1	0	2	3
	honesty	1	1	1	3
	physical appeal	0	0	2	2
	athletic competence	1	3	0	4
	humour	0	1	1	2
	Subtotal	4	8	11	23
School	school program	0	10	5	15
	scholastic competence	1	4	1	6
	workload	2	0	0	2
	teacher	0	1	2	3
	Subtotal	3	15	8	26
	Total	17	34	48	99

Table L

Female: Frequency Data from the Interviews (Negative)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	2	1	3	6
	social comparison	2	0	0	2
	friendship	2	0	1	3
	family	0	0	0	0
	behavioral conduct	0	0	1	1
	romantic appeal	0	0	0	0
	labelling	0	1	3	4
	Subtotal	6	2	8	16
Self	descriptive character	0	0	0	0
	leadership	0	0	0	0
	honesty	0	0	0	0
	physical appeal	0	0	0	0
	athletic competence	0	0	0	0
	humour	0	0	0	0
	Subtotal	0	0	0	0
School	school program	0	0	3	3
	scholastic competence	0	2	1	3
	workload	0	0	0	0
	teacher	0	0	2	2
	Subtotal	0	2	6	8
	Total	6	4	14	24

Table M

Female: Frequency Data from the Interviews (Mixed)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	3	0	0	6
	social comparison	2	0		4
	friendship	2	0		4
	family	0	0	1	1
	behavioral conduct	2	1	2	5
	romantic appeal	1	0	1	2
	labelling	0	0	0	0
	Subtotal	10	1	11	22
Self	descriptive character	0	1	0	1
	leadership	0	0	0	0
	honesty	1	0	1	2
	physical appeal	0	0	0	0
	athletic competence	0	1	3	4
	humour	0	0	0	0
	Subtotal	1	2	4	7
School	school program	0	5	2	7
	scholastic competence	0	2	0	2
	workload	0	0	0	0
	teacher	0	0	1	1
	Subtotal	0	7	3	10
	Total	11	10	18	39

Table N

Male: Frequency Data from the Interviews (Totals)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	6	4	10	20
	social comparison	4	3	12	19
	friendship	0	2	3	5
	family	0	0	1	1
	behavioral conduct	6	3	0	9
	romantic appeal	0	0	1	1
	labelling	0	0	0	0
Subtotal		16	12	27	55
Self	descriptive character	1	6	0	7
	leadership	0	1	0	1
	honesty	0	0	1	1
	physical appeal	0	0	2	2
	athletic competence	1	3	1	5
	humour	0	5	2	7
Subtotal		2	15	6	23
School	school program	7	28	2	37
	scholastic competence	3	13	0	16
	workload	1	1	0	2
	teacher	0	5	0	5
Subtotal		11	47	2	60
Total		29	74	35	138

Table 0

Male: Frequency Data from the Interviews (Positive)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	4	2	4	10
	social comparison	2	2	9	13
	friendship	0	1	3	4
	family	0	0	1	1
	behavioral conduct	3	2	0	5
	romantic appeal	0	0	1	1
	labelling	0	0	0	0
Subtotal		9	7	18	34
Self	descriptive character	1	5	0	6
	leadership	0	1	0	1
	honesty	0	0	1	1
	physical appeal	0	0	1	1
	athletic competence	1	2	0	3
	humour	0	5	2	7
Subtotal		2	13	4	19
School	school program	4	16	2	22
	scholastic competence	1	8	0	9
	workload	0	0	0	0
	teacher	0	2	0	2
Subtotal		5	26	2	33
Total		16	46	24	86

Table P

Male: Frequency Data from the Interviews (Negative)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	1	1	4	6
	social comparison	1	1	2	4
	friendship	0	0	0	0
	family	0	0	0	0
	behavioral conduct	0	1	0	1
	romantic appeal	0	0	0	0
	labelling	0	0	0	0
	Subtotal	2	3	6	11
Self	descriptive character	0	1	0	1
	leadership	0	0	0	0
	honesty	0	0	0	0
	physical appeal	0	0	1	1
	athletic competence	0	0	0	0
	humour	0	0	0	0
	Subtotal	0	1	1	2
School	school program	1	5	0	6
	scholastic competence	0	3	0	3
	workload	0	0	0	0
	teacher	0	2	0	2
	Subtotal	1	10	0	11
	Total	3	14	7	24

Table Q

Male: Frequency Data from the Interviews (Mixed)

Description		Inferred Point of View			
		Coping	Psych	Social	Total
Others	social acceptance	1	1	2	4
	social comparison	1	0	1	2
	friendship	0	1	0	1
	family	0	0	0	0
	behavioral conduct	3	0	0	3
	romantic appeal	0	0	0	0
	labelling	0	0	0	0
	Subtotal	5	2	3	10
Self	descriptive character	0	0	0	0
	leadership	0	0	0	0
	honesty	0	0	0	0
	physical appeal	0	0	0	0
	athletic competence	0	1	1	2
	humour	0	0	0	0
	Subtotal	0	1	1	2
School	school program	2	7	0	9
	scholastic competence	2	2	0	4
	workload	1	1	0	2
	teacher	0	1	0	1
	Subtotal	5	11	0	16
	Total	10	14	4	28

Appendix I: Chi-Square Analyses of Attitude

Expected frequencies are calculated by establishing the proportion of male and female responses to the total number of responses, and then applying these proportions to each category used for the purpose of comparison between the genders. The resulting numbers represent what would be expected if gender was unrelated to any response category because they are simply a reflection of the proportion of male and female responses to the total number of responses. However, variations between expected and observed frequencies indicate an active relationship between gender and the response categories, and, in addition, help show the size and direction of that relationship.

For example, in Table R, the total number of responses from both males and females were categorized and the frequency of the attitude codes represented as a percentage. A large percentage of responses were positive for both males and females (62.3% and 61.1%) in the gifted congregated program, and they fit the expected result in the following crossbreak table. The expected results were established for males and females by dividing the total number of responses (300) by 138 and 162, respectively. The resulting proportions were applied to the totals for each category: positive (185), negative (48), mixed (67). The numbers provided an expected frequency for males and females in each category based on their representation in the

overall total. Those rounded expected frequency scores are presented in brackets and are indicative of a score which is expected if no relationship exists between gender and attitude. A comparison with the actual observed scores reveals if there are large enough differences to indicate the variables are dependent in a relationship.

Table R

Frequencies Expected Frequencies and Percentages
for Attitude by Gender

		Male		Female	
	Frequency	Row	Column	Row	Column
		%	%	%	%
Positive	86 (85)	46.5	62.3	99 (100)	53.5 61.1
Negative	24 (22)	50.0	17.4	24 (26)	50.0 14.8
Mixed	28 (31)	41.8	20.3	39 (36)	58.2 24.1
Total	138			162	

The obtained X was .79 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

The notable feature of these results is the fact that the column percentages within the gender variable are all but identical and the observed frequencies are very close to the expected frequencies. In fact, a chi-square analysis of the above data confirms that there is no significant relationship and the variables of attitude and gender are independent of each other.

Chi-Square Analyses of the Relationship between Inferential and Attitude Codes

The results of chi-square analysis on the attitude codes (positive, negative, or mixed) and the inferential codes on each one of these combinations are represented in the following 3 x 2 contingency tables. Tables S, T, and U summarize the significance of the differences between males and female attitudes within the psych, social and coping self.

Table S

Frequencies, Expected Frequencies and Percentages for Attitudes within the Psych Self by Gender

	Male				Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %	
Positive	46 (49)	57.5	62.2	34 (32)	42.5	70.8	
Negative	14 (11)	77.8	18.9	4 (7)	22.2	8.3	
Mixed	14 (15)	58.3	18.9	10 (9)	41.7	20.8	
Total	74			48			

The obtained X was 2.07 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

Table S shows that positive responses represent a large percentage of the total responses in the psychological self for both males and females (62.2% and 70.8%); however, these results fall within the expected frequencies. The results of the chi-square analysis of differences between males and females summarized in Table K above reveals an obtained

score of 2.07, $df=2$, which is not significant, at the .05 alpha level. The obtained chi-square statistic indicates a lack of a significant association in the attitude in the psychological self and the gender of the gifted students.

Table T

Frequencies, Expected Frequencies and Percentages for
Attitudes within the Social Self by Gender

		Male		Female	
	Frequency	Row %	Column %	Frequency	Row %
Positive	24 (22)	33.3	68.6	48 (50)	66.7
Negative	7 (6)	33.3	20.0	14 (15)	66.7
Mixed	4 (7)	18.2	11.4	18 (15)	81.8
Total	35			80	

The obtained X was 2.04 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

Table T confirms a general positive attitude expressed in the social self by both males and females which also fall within expected frequencies. The results of the chi-square analysis of differences between males and females summarized in Table T reveals an obtained score of 2.04, $df=2$, which is not significant, at the .05 alpha level. The obtained chi-square statistic indicates no significant relationship between attitude and the gender when these gifted students talk from their social point of view.

Table U

Frequencies, Expected Frequencies and Percentages for
Attitudes within the Coping Self by Gender

	Male			Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %
Positive	16 (15)	48.5	55.2	17 (18)	51.5	50.0
Negative	3 (4)	33.3	10.3	6 (5)	66.7	17.6
Mixed	10 (10)	47.6	34.5	11 (11)	52.4	32.4
Total	29			34		

The obtained X was .64 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

Table U continues the positive trend evident in the gifted students' responses during the interview. Once again, the positive responses associated with the coping self dominate (55.2% and 50.0%), and these results are in keeping with the expected frequencies for both males and females. The results of the chi-square analysis finds no association between the attitude in the copying self and the gender of the gifted students.

Chi-Square Analyses of the Relationship between Descriptive and Attitude Codes

The results of chi-square analysis of descriptive codes and the attitude codes (positive, negative, or mixed) are represented in the following 3 x 2 contingency tables. Tables V, W, and X summarize the significance of the differences between males and female attitudes with others, the self and school.

Table V

Frequencies, Expected Frequencies and Percentages for
Attitudes towards Others by Gender

		Male		Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %
Positive	34 (32)	40.5	61.8	50 (51)	59.5	56.8
Negative	11 (10)	40.7	20.0	16 (17)	59.3	18.2
Mixed	10 (12)	31.3	18.2	22 (20)	68.8	25.0
Total	55			88		

The obtained X was .91 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

The frequency and column percentages from the analysis shows a strong positive attitude toward others. The 3 x 2 contingency table for this analysis shows no significant chi-square statistic at the .05 level (.91, df=2, $p < .05$). Therefore, no significant association exists between the attitude towards others and the gender of the gifted students.

Table W

Frequencies, Expected Frequencies and Percentages for
Attitudes towards the Self by Gender

	Male				Female			
	Frequency	Row %	Column %		Frequency	Row %	Column %	
Positive	19 (18)	45.2	82.6		23 (24)	54.8	76.7	
Negative	2 (1)	100.0	8.7		0 (1)	0.0	0.0	
Mixed	2 (4)	22.2	8.7		7 (5)	77.8	23.3	
Total	23				30			

The obtained X was 4.4 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

Table W indicates that a large percentage of the total responses are positive towards the self for both males and females in the gifted congregated program. The results of the chi-square analysis reveals most of the responses approaching the expected frequencies, mitigating against the possibility that there is a relationship between the attitude towards the self and the gender of the gifted students. In fact, the obtained chi-square statistic of 4.4, $df=2$, is not significant at the $p<.05$ level,

Table X

Frequencies, Expected Frequencies and Percentages for
Attitudes towards School by Gender

	Male			Female		
	Frequency	Row %	Column %	Frequency	Row %	Column %
Positive	33 (34)	55.9	55.0	26 (25)	44.1	59.1
Negative	11 (11)	57.9	18.3	8 (8)	42.1	18.2
Mixed	16 (15)	61.5	26.7	10 (11)	38.5	22.7
Total	60			44		

The obtained X was .23 (2), not significant at .05 alpha level.

Note: (Rounded expected frequency scores indicated in brackets)

The frequency and column percentages from the analysis shows similar results for both genders. A strong positive attitude is balanced by a combination of negative and mixed responses. The 3 x 2 contingency table for this analysis showed no significant chi-square statistic at the .05 level (.23, df=2, $p < .05$). Therefore, no significant association exists between the attitude towards school and the gender of the gifted students.