A STUDY OF SOURCES OF COMPETENCY, THEIR VALUE, AND THEIR INFLUENCE ON SELF-WORTH IN CHILDREN IN GRADES 4 AND 7

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By

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ABSTRACT

This research study investigates the relationship between domain competency, importance and self-worth in pre-adolescent and adolescent children. The sample consisted of 127 grade 4 students and 144 grade 7 students in 4 schools on the Avalon Peninsula of Newfoundland. A questionnaire was developed to measure perceptions of competency, importance of competency and self-worth. This questionnaire was administered to male and female students of all ability levels.

Data analysis consisted of several phases. In the first phase, a series of factor analyses were conducted to establish the consistency and coherency of each of the scales of the questionnaire. In phase two, analysis of variance procedures were used to examine how competency and importance influence self-worth. Finally, cluster analyses of the competency and importance scales were conducted to determine how competency and importance interact to influence self-worth. At each phase only the second order factors (Social and Academics) were considered in order to allow for ease of interpretation of data.

Results of this study indicated that there is a decline in perceptions of academic competency as children approach adolescence. Grade 4 students perceived themselves as being more competent academically and placed more importance on academic competency than their grade 7 counterparts. Students at both grade levels perceived themselves as being equally competent in the Social domain and placed equal importance on social competency. In grade 4 a relationship was suggested between academic and social competency and global self-worth. Grade 7 results indicated a relationship between social competency and global self-worth. At both grade levels a relationship was suggested between importance of academic competency and global self-worth. There was no indication of

gender differences in perceptions of competency in the Social domain. However, in the Academic domain females at each grade level perceived themselves as being more competent than their male counterparts. There was evidence, particularly in grade 7, that devaluing and/or compensatory strategies were probably being used by some students as a means of sustaining global self-worth.

Further investigation into the decline in perceptions of academic competency as children approach adolescence is recommended. This investigation should examine the role of the school environment (if any) in this decline.

This study provides evidence to support the use of cluster analysis methodology. This method of analysis uncovered patterns of interaction between competency and importance and their effects on self-worth which was not possible through factor and correlations analyses. The combination of methodologies resulted in a more effective and thorough study of the sample.

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Finally, I extend my heartfelt thanks to the children who so eagerly completed my questionnaire thus providing me with the pertinent information presented in this thesis. I dedicate this thesis to them, and to all the children I have had the pleasure of teaching over the past 28 years. They are all very special!

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CHAPTER 1

Introduction

Over the years, theorists have attempted to unravel the mystery of the self-concept. Publications have offered numerous definitions, some simple, some complex. Combs (1963) defined the self-concept as being what an individual believes about him. Rogers offered a more complex definition which includes values. According to Rogers, self-concept is defined as "the sum total of all of the characteristics a person attributes to him, and the positive and negative values he attaches to these characteristics" (Rogers cited in Silvernail, 1981, p. 9).

One definition proposed by contemporary theorists is that of Shavelson & Byrne (1987). These researchers conclude that the self-concept is:

> one's perception of self; these perceptions derive from interactions with significant others, self-attributions, and the overall experiential aspects of the social environment. (p. 366)

Shavelson & Byrne (1982) propose there is a descriptive and evaluative dimension to self-concept. The descriptive dimension contains the self-perceptions (of competency) of the individual. The evaluative dimension is comprised of evaluations of these self-perceptions and is referred to as 'self-worth' (Silvernail, 1981). Specifically, our self-concept is our attitudes, feelings and knowledge about our abilities, skills, appearance, and social acceptability (Labenne & Greene, 1969; Leahy, 1985).

Significance of the Study

Published studies on self-concept theory and research number in the thousands (Wylie, 1982). Early research focused on the relationship between self-concept and academic achievement (Purkey, 1970; Farls, 1976;

Fink, 1962; Williams & Cole, 1968). Current research has concentrated on measurement and structure of self-concept (Fleming & Courtney, 1984; Harter, 1982; Marsh, 1986; Shavelson & Marsh, 1986; Marsh & Holmes,1990). To date, few studies (Rosenberg,1965; Hoge & McCarthy, 1984; Marsh, 1986; Pelham & Swann, 1989) have explored the relationship between the descriptive (self-perceptions of competency) and evaluative (self-worth) dimensions of self-concept and the impact of personal values on each. This study is an attempt to investigate the relationship between self-perceptions of competency, value and self-worth. Further, it will explore how value (importance) mediates the relationship between these two dimensions of self-concept. Data gained from this research study will contribute to the sparse body of knowledge on this important issue. As well, in attempting to answer the research questions posed in this study, this data may also determine to what degree perceptions of competency, self-worth, and personal values are affected by age and gender in preadolescents and adolescents. Such information may be used by teachers and counsellors to ease the transition into adolescence and to help develop a more positive sense of self-worth in their students.

Research Questions

This research study will look at how competency and importance interact to influence self-worth. It will provide new evidence of the relationship between self-concept and self-worth and the influence of personal values on these two constructs. Specifically, this study will attempt to answer the following questions:

1. Are there grade differences in childrens' perceptions of domain competency in grades 4 and 7?

2. Are there gender differences in childrens' perceptions of domain competency at these grade levels?
3. How does domain competency affect self-worth?
4. Are there grade differences in the importance children place on domain competency in grades 4 and 7?
5. Are there gender differences in the importance children place on domain competency at these grade levels?
6. How does the importance children place on domain competency affect self-worth?
7. What impact does the interaction of competency and importance have on self-worth?

CHAPTER 2

Review of the Literature

The self-concept is thought to have a powerful influence on human behavior because it is the frame of reference through which an individual interacts with the world (Fitts, 1972). According to Silvernail (1981) self-concept is the way we perceive ourselves and our actions as well as our opinions regarding how others perceive us. Consequently, self-concept strongly directs all aspects of human behavior.

The extensive research literature devoted to understanding the expression of self-concept in human behavior leaves little doubt that the social and emotional well-being of individuals depends upon how they perceive themselves. Individuals with positive self-concepts see themselves as liked, acceptable, able and worthy. They are happy and secure. In comparison, those individuals with negative self-concepts tend to have unhappy dispositions. They have difficulty with personal relationships and lack confidence in their ability (Battle, 1987). Consequently, the self-concept plays a dynamic role in social and emotional development (Lynch et al., 1981).

Self-Concept Development

Infancy

Self-concept development begins at birth. Within seconds after birth infants begin to interact with their environment. At this time they are not aware that they are separate beings. Gradually,they develop simple patterns of perception and action. These patterns become more complex and in a few weeks infants become aware of themselves as separate beings. The first signs of separation from the mother appear during the third or fourth month (Mahler,1963). It is around this time that infants begin to

see themselves as separate from other people and begin to develop a perception of and a sense of who they are (Smirnoff, 1971).

Early Childhood

Once children perceive themselves as separate beings and language acquisition begins, the core dimensions of their self-concepts quickly begin to develop. These core dimensions (the body, the cognitive, the social and self-esteem) are the perceptions which make up the general self-concept. These first few years are crucial in children's social, emotional, intellectual and physical development. The first three areas of development will be influenced strongly by how children perceive themselves and how they are perceived by others. These areas will continue to be influenced significantly by the perception children have of themselves, or their self-concepts (Silvernail, 1981).

Environment and parental care play major roles in the development of self-concepts in children. Supportive enriched environments and loving parental care are crucial to children if they are to develop stable and healthy self-concepts (Battle, 1987). However, research studies (Rosenberg, 1965; Coopersmith, 1967; Bowlby, 1980) have found that loving parental care is the most influential of the two variables.

Early parental care has an enormous impact on self-concept development in children. The care children receive in the early years establishes the core self-image and thereby influences the further development of self-concepts as they begin attending school (Silvernail, 1981). A study by Dreyer and Haupt (1966) reported children with positive self-concepts came from homes in which mothers encouraged independence and autonomy on the part of their children. A seven-year follow-up study of five-year-olds by Sears (1970) reported that those who came from loving homes had higher self-concept levels at age twelve. Purkey (1970) suggests that parents'

influence on their children's self-concept remained as strong in adolescence as it was in early childhood.

The School Years

Once children enter school, teachers play a significant role in self-concept development. They greatly influence their students' sense of competence in their ability to perform assigned tasks. The biggest factor in self-concept development in the early school years appears to be how children are evaluated in terms of their performance relative to their peers. This affects their judgment about themselves as they rely increasingly on comparing themselves to their peers. Six-year olds are not always upset when they fail and often pay little attention to how they compare with others. However, eight-year-olds are more likely to be upset with failure (Ruble et al., 1980). They are beginning to pay close attention to how they measure up in comparison with their peers. Because of this, it is important that children are supported and encouraged by their teachers. In this way, they will feel competent in the areas that are important in the school environment.

Educators would like to believe that the school environment is conducive to the development of a positive self-concept. Unfortunately, one study (Bills, 1978) revealed that many students acquire a more negative self-concept with each additional year of schooling. This researcher measured perceptions of and others in approximately twenty-six thousand students in grades three through twelve. He concluded that there is a progressive deterioration in perceptions of and perceptions of others in children at these grade levels. There is also a deterioration in adherence to a set of values which are important to human welfare and relationships.

These findings are supported by the research of Stenner and Katzenmeyer (1976) who measured the self-concept in approximately thirty-seven hundred primary students in grades one through three. To the question "Are you good looking?" 25 percent of the first graders and almost 50 percent of the third graders answered in the negative. Twenty percent of the first graders and 30 percent of third graders thought other children disliked them. Eighty percent of the first graders and only 67 percent of third graders thought that they were doing well in school.

According to a study by Stipek & Daniels (1988) deterioration in perceptions of school-age children may be developmental as well as the result of classroom environment. In their study eighty kindergarten and fourth grade children rated their academic competency and predicted their future academic success. Half the children at each grade level were in classrooms which stressed normative evaluation (grades), while the other half were in classrooms where normative evaluation was not emphasized. The kindergarten children who received normative evaluation rated their competency and future success much lower than those kindergarten children who did not receive normative evaluation. The latter group of children received daily feedback on their assignments in the form of stars and happy and sad faces. The results of daily feedback were [illegible]ren with more positive perceptions of competence and with greater confidence in having future academic success.

In grade 4, the results were quite different. There were no differences in the two groups in rating perceptions of competency or future academic success. Stipek and Daniels suggest that neither age nor environment alone can explain these findings. Instead there is a need to examine the interaction between age and school environment in order to understand children's perceptions of competency.

Adolescence

Self-concept becomes increasingly differentiated and complex as the child grows (Gottfredson, 1981; Super, 1980). According to Rosenberg (1979) the onset of adolescence is a time of great disturbance in self-concept development. At around age 12 children show a decrease in self-esteem and self-concept stability. Similarly, they show an increase in depression and self-consciousness. For some of the dimensions of self-concept the disturbances diminish in later adolescence, but not for self-consciousness. Rosenberg (1979) further explained this by discussing the development of exterior and interior components of the self-concept. Preadolescent children seem to see themselves almost wholly in terms of exterior components, such as observable behaviors, abilities and physical characteristics. When they reach adolescence they refer to the in terms of a psychological interior and deal with thoughts, feelings and traits. Rosenberg (1979) explains this difference in preadolescence and adolescence by noting that when children become adolescents they develop the ability to introspect. He refers to the young child as a "radical empiricist", responding to external stimuli, and the adolescent as a "psychological clinician", able to reflect and contemplate internal stimuli. Elliott, (1984). Simmons, Rosenberg, and Rosenberg (1973) found that although older adolescents have higher global self-concepts, their self-evaluation of specific qualities such as intelligence, honesty, diligence, and good behavior decline from childhood to adolescence.

The characteristics of adolescence listed by Lerner (1989) help us to further understand why the adolescent years are a time of great disturbance in self-concept development.

1. Adolescents are faced with the task of becoming independent and separating themselves from their families but also need these ties. Thus, they must resolve a conflict between a desire for freedom and independence and a desire for security and dependence.

2. Adolescence is a period of rapid changes in physical growth and appearance, including dramatic changes in facial and body structure. Adolescents must develop a new self-image and learn to cope with a different physical appearance as well as new psychological and biological drives.

3. The adolescent period is also one of developing sexuality - another change that the adolescent must learn to handle.

4. Peer pressure and values greatly influence adolescents. When peer values differ from those of the parents, family confrontation and conflict may result.

5. Teenagers tend to be very conscious of themselves - how they look and how they compare with group norms. This self-consciousness can lead to feelings of inferiority and withdrawal. (pp.249-50)

Piers and Harris (1964), Simmons et al. (1973), Soares and Soares (1982), and Rosenberg (1986) found significant declines in self-concept as children approached adolescence. Another study by Simmons, Rosenberg, and Rosenberg (1973) identified the movement from sixth to seventh grade as a crucial and stressful period for self-concept. These researchers have provided the major source of evidence of the instability of self- concept in the adolescent years. Other studies (Offer and Howard, 1972; Piers and Harris, 1964) showed similar disturbance in self-concept in early adolescence. Further studies by Ruble (1980), Eshel and Klein (1981) and Stipek (1981) suggested declines in most areas of self- concept as children approach adolescence. In a study of children six to eleven years of age, Marsh et al. (1984) found a significant and consistent decline in self-concept in the areas of academics and physical ability as children approached adolescence. However, there was no evidence to suggest a decline in the social self-concepts of this age group. Dusek and Flaherty (1981) found no consistent age effects in self-concept during adolescent years for either longitudinal or cross- sectional comparisons. Hoge and McCarthy (1984) found significant increases in self-concept in Grades 7-12 for both longitudinal and cross-sectional comparisons. A study by Connell

et al. (1975) found a primarily linear increase in self-concept in boys between the ages of 12 and 18. For girls, self-concept declined between ages 12 and 13 and remained stable through about 17. This was followed by an increase in self-concept. Studies of adolescents in high school or beyond report increases in self-esteem (Bachman & O'Malley, 1977). Simmons et al. (1973) and Rosenberg (1986) reported increases in self-concept after age 13. According to Marsh, Parker, and Barnes (1985) self-concept shows a decline in grades 7-9 and then levels out and increases in grades 9-11. From these studies we can conclude the following:

(a) There is a decline in self-concept during preadolescence.

(b) This decline reverses itself during early or middle adolescence.

(c) There is an increase in self-concept during late-adolescence and early adulthood.

Gender Issues and Self-Concept

Studies by Connell et al. (1975) and Smith (1975) reveal that by adolescence boys possess more positive self-concepts than girls. However, gender differences in self-esteem seem to occur from late primary school age onwards. It is during this period that the young girl tunes into the fact that the stereotypical characteristics of the female self-image are less valued than those of the male (Burns, 1979). Until then the self-esteem of girls, as well as boys, comes largely from ability to perform the required skills. Burns (1979) explained the conflict in self-concept development experienced in girls:

> Beginning in pre-puberty and increasing through adolescence, girls shift their source of self-esteem from achievement to heterosexual affiliation. Girls who identify with both the stereotypical feminine model and the achievement model will experience role conflict and, hence, have lower self-esteem than boys. (p.195)

This was further evidenced in a study by Hardi & Bridges (1988) and Smith (1975). Smith administered the Sears' self-Concept Inventory to 171 upper primary school pupils, 7 and 8 years of age. Generally the children possessed positive self-concept. This was consistent with previous investigations by Coopersmith (1967) and Connell et al. (1975). However, a sex difference was evident in most aspects of the self-concepts measured. Boys consistently rated themselves more positively than girls on seven out of nine subscales (physical ability, appearance, convergent mental ability, divergent mental ability, social relations, social virtues, school performance). On the remaining scales (work habits, happy qualities) the boys were ahead but the difference was not significant. This study indicated that as early as middle childhood (6-11 years), girls begin to evaluate themselves less positively than boys).

Girls may receive lower self-concept scores because they appear to be more willing than boys to disclose their weaknesses. Bogo, Winget and Gleser (1970) noted that boys obtained higher scores on "lie" and "defensiveness" scales than girls. These scales measure the extent to which the individuals disguise their "true" feelings in an effort to present themselves in a more favourable light.

Factors Influencing Gender Differences in Self-Concept

Feelings of self-worth often come at an early age from external factors such as appearance, social achievement and group approval. The importance of these factors has been taught to children often unintentionally (and sometimes intentionally) by parents, teachers, society and the media (Page, 1993). The importance of physical attractiveness in our society has been well documented. However, women seem to be more pressured by society to be attractive. According to Bersheid & Walster (1974) and Krebs and Adinolfi (1975) attractive women,

but not men, had more dates than their less attractive counterparts. Bar-Tal and Saxe (1976) report that men paired with attractive women were more successful than men paired with unattractive women. Attractiveness of partner was not important in the evaluation of the women. Attractive people have been found to be happier, more successful, popular (Berscheid & Walster, 1974) more sensitive, kind, interesting, strong, poised, sociable, and outgoing than less attractive people (Dion, Berscheid, & Walster, 1972).

The importance of physical appearance to females from pre-adolescence has been documented in recent studies (Bybee, Glick, Zigler, 1990; Kinnon & McLeod, 1990). In the study "A Cappella" (Kinnon & McLeod, 1990) 85% of the adolescent girls surveyed strongly agreed or agreed that they worried about their looks. Males, on the other hand, though concerned about physical appearance, are more preoccupied with athletic abilities and physical strength (Bybee et al, 1990). The results of the study by Bybee et al. (1990) are consistent with studies of femininity and masculinity that find beauty to be more central in the female sex role stereotype and physical strength to be more important in the male sex role stereotype (Spence & Swain, 1985).

Henggeler & Borduin (1990) indicate that one of the consistent findings in children's peer relations, is the positive relationship between physical attractiveness and sociometric status. Their research indicates that physically attractive individuals interact better within groups and are more readily accepted than their unattractive counterparts. As early as preschool and elementary school years, children who are better looking typically are held in higher regard by their peers (Kleck, Richardson & Ronald, 1974; Vaughn, 1983). This tendency of peers to accord higher social status to physically attractive individuals extends from

childhood into adolescence and throughout the college years (Byrne, Ervin & Lambeth, 1970).

Models of Self-Concept

A review of the current literature reveals four types of theoretical models of self-concept: the **nomothetic model**; the **taxonomic model**; the **compensatory model** and the **hierarchical model**.

The **nomothetic model** (Soares & Soares, 1982) is the oldest perspective of self-concept. According to this model characteristics descriptive of self-concept are used to explain one's behavior in various settings. This model supports similar views (Rosenberg 1986; Rosenberg & Simmons, 1975; Winne & Marx, 1981) that self-concept is perceived as a unidimensional construct. The nomothetic model suggests there is a general self-concept influencing all behaviors and this general self-concept has only one dimension or facet.

The **taxonomic model** (Soares & Soares, 1982) supports the notion that the structure of self-concept is a series of several highly specific factors. It suggests that self-concepts are highly individualized conceptualizations based on experiences and reinforcement. Self-concepts develop independently according to experiences, capabilities, treatment from others, and relationships with significant others. For example if a person is a highly skilled musician, then music would be a factor in the structure of the individuals self- concept. As well, this factor would be independent and unrelated to other factors in the structure of the individuals self-concept. Several studies have supported the **taxonomic model** (Lillemyr, 1983; Marx, et al. 1977; Marx & Winne, 1987; Soares & Soares, 1982; Strang, Smith, & Rogers, 1978;).

The **compensatory model** (Winne & Marx, 1981) supports the notion of a general facet of self-concept. In this way it resembles the hierarchical

and taxonomic models. However, unlike these two models, the compensatory model suggests that specific facets of self-concept are inversely related, rather than independent from one another. Accordingly, a low standing in one specific facet of self-concept might be compensated by higher standing on another specific facet of self-concept. For example, Winne & Marx (1981) found that students who were less successful academically perceived themselves as being more successful in the social and physical facets of self-concept. As well, they found that students who perceived themselves as being successful socially and physically were less successful on the academic facet of self-concept. This data supports the hypothesis that a lack of self- perceived success in one area tends to be associated with self-perceived success in another area. Similar findings based on studies of exceptional children support the compensatory model of self-concept (Milgrim & Milgrim, 1976; Ross & Parker, 1980; Winne et al., 1982).

The **hierarchical model** (Shavelson, Hubner & Stanton, 1976; Shavelson & Stuart, 1981) suggests multiple facets of self-concept that may be ranked in a hierarchical formation. At the base of the hierarchy are the situation-specific self-concept; at the top of the hierarchy is the general self-concept.

Of these 4 theoretical perspectives of self-concept, the **hierarchical model** (Shavelson, Hubner & Stanton , 1976; Shavelson & Stuart, 1981) has been proposed and widely researched by leading educators and psychologists (Byrne, 1984; Harter, 1982, 1984, 1985; Marsh, Barnes & Hocevar, 1985; Marsh & Hocevar, 1985; Soares & Soares, 1982; Song & Hattie, 1985; Hattie, 1992).

The hierarchical model (Shavelson, Hubner and Stanton, 1976; Shavelson and Stuart, 1981) postulates a multi-faceted, hierarchical model of self-concept. Marsh and Shavelson (1985) listed six characteristics describing the hierarchical model.

1. It is multifaceted in that people categorize the vast amount of information they have about themselves and relate these categories to one another. The specific facets reflect the category system adopted by a particular individual and/or shared by a group.

2. It is hierarchically organized, with perceptions of behavior at the base moving to inferences about in subareas (e.g., academics - english, science, history, mathematics), then to inferences about self in general.

3. General self-concept is stable, but as one descends the hierarchy, self-concept becomes increasingly situation specific and as a consequence less stable.

4. Self-concept becomes increasingly multifaceted as the individual moves from infancy to adulthood.

5. It has both a descriptive and an evaluative dimension such that individuals may describe themselves ("I do well in mathematics") and evaluative ("I like mathematics").

6. It can be differentiated from other constructs such as academic achievement. (pp.107-108)

Self-Concept and Self-Worth

The hierarchical model claims there is a **descriptive** and **evaluative** dimension to self-concept (Shavelson & Marsh, 1985). The descriptive dimension contains the self-perceptions of competency of the individual. The evaluative dimension evaluates these self-perceptions and is referred to as 'self-worth' (Silvernail, 1981). However, self-perceptions and self-worth are not one and the same thing (Hoge & McCarthy, 1984; Rosenberg, 1986). Although Shavelson and Marsh (1985) propose that the self-concept has a descriptive and an evaluative dimension, they do not distinguish between the two or show how they are related.

The instrument used by Marsh and Shavelson (1986) in obtaining evidence which indicated a descriptive and evaluative dimension to self-concept was the Self-Description Questionnaire (Marsh, Parker & Smith, 1983). This self-concept measure, based on Shavelson's model of self-concept, contains 7 simple declarative statements which are either

descriptive ["I am good at Math"] or evaluative ["I love Math"] in nature. These statements are purported to represent measures of self-concept in 7 domains: Physical Ability; Physical Appearance; Peer Relationships; Parents Relationships; Reading; Math; and General School.

The S.D.Q. combines the descriptive and evaluative nature of self-concept. The fact that Marsh and colleagues included both descriptive and evaluative items for a domain, but failed to see separate factors (i.e. a descriptive factor and an evaluative factor) suggests that the items were correlated. That is, evaluation of (worth) is closely connected to description of (concept). This suggests a relationship between self-concept and self-worth. However, Marsh and colleagues fail to show how self-concept and self-worth support and influence one another.

Covington's self-worth theory (1984) postulates an operative link between self-concept and self-worth. According to Covington (1984), all individuals seek to maximize feelings of worthiness by gaining the approval of others. In doing this, they disassociate themselves from behaviors or events that attract negative attention. This striving to establish and maintain a positive self-image is referred to by Covington as the <u>self-worth motive</u>. Covington (1984) suggests that individuals derive self-worth from their perceptions of competency and accomplishments in some valued activity.

According to Covington, society tends to equate ability and achievements with human value. Considering this, many individuals have come to believe that they are only as worthy as their achievements. Failure brings with it disapproval from others as well as a sense of worthlessness. In the classroom achievement context, competence is perceived to be a dominant component for academic success. Considering this, factors which influence individuals' sense of worth are their self-perceptions of competency. Understandably, motivation to achieve emanates

from these perceptions of competency. For example, if a student has high perceptions of competency in a certain domain, then the student will be highly motivated to achieve in that domain knowing that he will succeed. Likewise, if a student has low perceptions of competency in a domain, he will not be motivated to achieve knowing that effort may result in failure. From achie. ...t, students derive a sense of value or worth. They are motivated to achieve to protect their sense of self-worth (Covington, 1984).

Similar views were held by Cooley (1964,) who proposed that the origins of the were essentially social in nature and resided in the attitudes of significant others. According to Cooley individuals evaluate these attitudes and incorporate this evaluation into an opinion about the self. These reflected evaluations describe what he terms the "looking glass self", since significant others are the social mirror into which one looks for information to describe the self.

Both Covington and Cooley argue that competency (the descriptive component) is a key construct for worth (the evaluative component). However, they also suggest that values play significant role in influencing self-worth.

According to Covington and Cooley, individuals value the attitudes of significant others and this, in turn, strongly influences self-worth. As well, they derive a sense of worth from achievement in valued activities. However, what individuals value, or consider to be important differs in each person. Students do not tend to put similar value on competencies in similar domains.

The Issue of Values

Individuals have different concepts of values or value systems. Values are personal in nature and are a product of experience. Like self-

concept, an individual's values are influenced by the social environment, and significant others, especially parents. Because people have different experiences, they develop different values (Van Has et al., 1987).

Although Cooley and Covington provided an operative link between self-perceptions of competency and self-worth, they did not adequately address the issue of values (the importance an individual places on competencies in the various domains), or their impact on self- worth. They failed to show the relationship between self-perceptions of competency, values and self-worth.

This important issue, overlooked by Covington, was addressed as early as 1890 by William James. James suggested that one's self-perceptions of competency in domains of great personal value should have greater impact on one's global self-worth than self-perceptions of competency in domains that are unimportant to the individual (Marsh, 1986b). James (1890, 1963) argued that failure in domains that are unimportant to the individual has little effect on self-worth.

The Jamesian hypothesis was supported by Pelham and Swann (1989). They postulated that individuals' self-perceptions are the "building blocks" of self-worth. However, the way that people frame their self-views, or the importance they attach to them greatly influences self-worth. self-views (perceptions of competency) that are strongly linked to goals are those that will be considered to be the most important to the individual. Ultimately, these will be the self-views that will most strongly influence and determine self-worth. For example, a young man whose ambition is to become a doctor will strive to achieve academic success because he knows this is necessary if he is to attain his goal. He places much value on being a good student and, if he succeeds, his self-perceptions of being a good student will have a positive influence on his

self-worth. If he is unsuccessful, his self-perceptions of being a poor student will have a negative impact on his self-worth.

Similar views were held by Rosenberg (1986). According to Rosenberg, having positive self-perceptions of competency in a particular domain will contribute positively to self-worth. However, the size of this contribution will depend on the importance the individual places on the particular domain. This **interactive hypothesis** suggests that the positive contribution to self-worth will be larger when the specific perception of competency is more positive and the perceived value of the domain of competency is greater. Likewise,the negative contribution to self-worth will be larger when the specific perception of competency is more negative and the perceived value of the domain of competency is greater.

Marsh (1986) attempted to investigate Rosenberg's **interactive hypothesis** by administering the Self-Descriptive Questionnaire-III (Marsh & O'Neill, 1984) tc 930 high school and college aged students. The SDQIII is a self-concept measurement designed for late adolescents and young adults. The SDQ111 contains 13 scales: Physical Ability, Physical Appearance, Opposite Sex Relations, Same Sex Relations, Relations With Parents, Spiritual Values/Religion, Honesty, Emotional Stability, Verbal, Math, General Academic, Problem solving, General-Self . Each scale is represented by 10 or 12 items half of which are negatively worded. Subjects respond on an eight-point scale that ranges from 1 (definitely false) to 8 (definitely true). In addition to the SDQIII, students were asked to respond to a set of twelve items (designed to reflect twelve of the thirteen scales of the SDQIII). The additional twelve items were rated on a scale of one to eight, first in terms of personal accuracy (i.e., How accurately does this statement describe you?) then in terms of personal importance (i.e., How important is this characteristic in determining how you feel about yourself?). Responses to these additional items were made

on a scale ranging from 1 (very inaccurate/very unimportant) to 9 (very accurate/very important).

Marsh (1986) found little support for Rosenberg's theory. Instead, he found moderate support for what he terms the "**selectivity hypothesis**" which predicts that individuals will rate as more important those domains in which they have high perceptions of competency. After dividing the sample into low, medium, and high self-worth groups he found that the correlations between importance ratings and domain perceptions of competency scores increased as self-worth increased. Marsh concluded that subjects with high self-worth were more likely to have high perceptions of competency in domains they perceived to be more important. But their importance ratings did not contribute to predicting self-worth.

Unlike Marsh (1986) Hoge and McCarthy (1986) found support for the interactive hypothesis and presented a model of self-concept based on Rosenberg's theory (1965, 1986). In their model, importance and self-perceptions of competency interact in such a manner that a positive self-perception rating in a valued domain will contribute positively to general self-worth ratings. A negative self-perception rating in a valued domain will take away from general self-worth. In domains that are not considered to be important to the individual, neither positive nor negative self-perception of competency ratings had a significant affect on general self-worth. Therefore, the degree to which an individual's perceptions of competency in a specific domain affects self-worth depends upon the importance the individual places on that specific domain.

Further, the issue of importance as it relates to self-worth has been addressed by Harter (1982, 1984, 1986). A strong supporter of the Jamesian hypothesis, Harter developed an importance scale to gather data on the relationship between importance and self-worth. This scale was used to supplement the self-Perception Profile for Children (SPPC: Harter,

1985), a multi-faceted self-concept inventory. The items on the importance scale match in pairs the five domain-specific subscales on the SPPC: school competence, athletic ability, physical appearance, social competency, and behavioral conduct. Each of the two domain-specific items evaluated the general importance of behaviors, feelings, or competency in that domain. Instead of weighting each specific facet by its perceived importance (an interactive model), Harter measured the difference between each specific competency domain and its perceived importance (a discrepancy model). To calculate the "discrepancy scores" considered by Harter to be more pertinent to global self-worth than the domain-specific self-perception of competency scores, Harter subtracted the mean of each SPPC (Harter, 1985) domain sub-scale from its corresponding mean importance score. Harter found that importance ratings were usually higher than self-concept rating when both sets of ratings were made on the same response scale. However, she discovered that the discrepancy scores were close to zero for subjects with the highest self-worth, moderately negative for subjects with moderate self-worth, and most negative for subjects with the lowest self-worth. In other words, the smaller the resulting answer, or discrepancy, the greater the contribution to general self-worth.

Of particular interest to Harter was testing the applicability of the Jamesian model and the Cooley model of self-concept with individuals at four stages of development: middle childhood, early adolescence, college students and young adults.

Harter administered the SPPC to measure perceived competency. Additionally she included a separate rating scale which measured importance attached to each domain as well as self-worth. Harter examined the relationship between the competence/importance discrepancy score (derived from James theory) and self-worth, as well as the relationship

between positive regard by significant others (derived from Cooley's theory).

In support of James, the data suggested that the competency/ importance discrepancy score is a determinant of self-worth. Global judgments of self-worth are determined by how competent one is in domains considered important to the individual.

In support of Cooley's theory, the data indicated that the higher the regard of significant others, the higher the individual's sense of self-worth. Harter's findings revealed that in both older children and young adolescents, parent and classmate support was the biggest contributor to self-worth (r=.42 to .46). The influence of parent support is at least as strong as peer classmate support in early adolescence, ages thirteen to fifteen. However, classmates seem to have more of an influence on self-worth than close friends. This may be due to the fact that although one's close friends share intimate details of one's life and provide support, this may not be perceived as self- enhancing, whereas the acceptance and respect of peers in the more public scene is more crucial to positive self-regard.

Harter's research indicated that self-worth depends upon competency in domains considered to be important as well as the positive regard of significant others. Consequently, a child who is doing well in domains considered to be important could suffer some loss of self-worth if emotional support from significant others is not present. Similarly, high levels of emotional support do not guarantee that a child will have positive self-worth if he/she is not competent in valued domains. These data imply that in order to help develop positive self-worth in children we must attend to the competence/importance discrepancy construct and well as positive regard provided by significant others.

Of further interest to Harter was determining if certain domains contribute more than others to self-worth. Of the elementary and middle school samples, Harter examined the correlations of discrepancy scores calculated for each domain, and self-worth. This revealed that certain domains contributed more to self-worth than others. Physical appearance was the most important contributor for both elementary (r=-.66) and middle school (r=-.57) students. Accordingly, the discrepancy between the importance of attractiveness and one's evaluation of one's perceived appearance would have a major impact on self-worth for children in the age range of eight to fifteen.

Social acceptance was the second domain considered critical to self-worth. This was judged by the relationship between the discrepancy score and self-worth. However, its impact was slightly higher among young adolescents in middle school (r=-.45) than elementary school students (r=-.36). Contributing the least to self-worth were scholastic competence, athletic competence, and behavioral conduct. This was determined by the correlation of their discrepancy scores and self-worth (ranging from -.24 to -.35 across the two samples).

These data indicate that physical appearance and social acceptability are strong determinants of self-worth. This does not mean that children consider cognitive competency or behavioral conduct to be unimportant. These domains were considered to be very important. However, they did not affect self-worth as significantly as physical appearance and social acceptability.

Research conducted with college students and adults revealed the dynamic relationship between physical appearance and global self- worth. Interestingly, across the total age range examined, ages eight to fifty, the correlations between appearance discrepancy score and self-worth were impressively similar (r=-.65). Surprisingly, a study of third and fourth

grade intellectually gifted students indicated that physical appearance rather than scholastic competency continued to be the foremost predictor of self-worth (r=-.67).

These findings cause one to consider the reasons why physical attractiveness and social acceptability play such a powerful role in determining self-worth. Harter faults the media for its role in emphasizing physical attractiveness in its advertising. As well, movies, magazines and rock videos accentuate the importance of attractiveness in physical form and dress. According to Elkind (1978) importance of physical appearance among young people has escalated and is becoming evident in much younger children.

Harter's contribution to self-concept research has been significant in its recognition of the influence of domain importance on self-worth. Her research addresses and shows the relationship between competence, domain importance, and self-worth across the life span.

Problems in Methodology

In spite of this contribution, Harter's model has been criticized. The strong correlation support between the mean discrepancy score and the mean global self-worth (-.67) across groups has not been replicated in other studies (Marsh 1986). Marsh (1986) tested a hypothesis relevant to Harter's (1982, 1984, 1986) Discrepancy Model. He was unable to find support for Harter's model from this set of analyses because the correlations between the discrepancy scores and global self-worth were lower than those based on raw self-concept scores for all domains and lower than or about equal to those based on self-concept x importance products.

Problems with Harter's model stem from the discrepancy score calculation. Subtracting a score of one scale from a score of a different

scale does not maintain the meaningfulness of each score. Their position on the rating scales result in the scores being different in nature. Absolute differences ignore this significant fact. For instance, on the SPPC scale, which ranges from one to four, a discrepancy score of one could result from a mean importance score of two and a mean self-concept score of one. This would suggest that the domain is one of very low self-worth and lower than average importance. Yet, a mean importance score of four and a mean self-concept rating of three could also produce the same discrepancy score of one. This again suggests that the domain is one of low self-worth and lower than average importance. However, in the latter case, the domain is both important and one of higher than average self-perception. This clearly shows the problem in Harter's method of discrepancy score calculation (Marsh, 1986b).

Studies which have examined the interactive hypothesis between importance and competency would be subject to a similar criticism. Interaction effects are most often tested by computing a cross- product term and examining its contribution within a regression equation. The problem here is that an importance score of 1 and a competency score of 4 on a set of rating scales would produce the same cross-product as an importance score of 4 and a competency score of 1. Yet, we would expect the latter to significantly under- mine self-worth while the former might have little impact or a small positive impact on self-worth. However, examining interaction effects using cross-products does not enable such distinctions to be made. Thus, important information remains hidden within the constraints of the methodology.

One possible way to examine the interaction of importance and competency is to use cluster analysis methodology. This method separates the component data into groups or clusters. The goal of cluster analysis is to identify separate groups whose components are more similar to each

other than components belonging to other groups. In this way, cluster analysis endeavors to reduce the information on the whole set of n objects to information about, for example, g subgroups, where g < n. Subsequently, cluster analysis can be looked upon as another technique for data reduction (Dillon & Goldstein, 1984). Consider, for example, a simple model consisting of three latent constructs in which self-worth is predicted from competency and importance. A regression model using standardized terms would capture the relationships as: S.W. = B1 * COMP. + B2 * IMP; which would predict that both competency and importance would contribute to self-worth. Yet, some patterns of interaction between competency and importance may be left unaccounted for. It is likely, for example that students with high competency and high importance will have high self-worth scores, and low competency students with low importance scores will have low self-worth scores (unless they are using a devaluing or compensating strategy). However, consider the impact on self-worth of a situation in which students have high competency and low importance scores. Such a grouping may represent gifted students who are bored with the classroom curriculum. They place low importance on competency in areas which offer them little challenge. Because they are unchallenged they are not achieving at the levels of which they are capable. This may have a negative impact on self-worth resulting in low self-worth scores. It is also possible to find low competency/high importance students with high self-worth scores. These students may be strongly motivated and working hard to do well. This may result in success which has a positive impact on self-worth. Considering these last two groupings, there are two important observations to be made. First, the model as specified will not detect these possible interactions of the latent constructs; that is, while the model shows how each latent construct contributes to predicting the outcome, it will not enable the analyst to construct a profile of the

different groups of students. Consequently, although we see how competency impacts self-worth, and how importance impacts self-worth, we do not get a sense of how competency and importance go together to influence self-worth. Second, while the profile of students may be specified through the use of cross-product interaction terms, such a specification gives rise to two problems. The cross-product interaction term may not be accurate in representing the interaction effect. For example, it is unlikely that the cross-product interaction term would clearly describe the effect of the interaction of the latent constructs in this model. High COMP. * low IMP. would hardly be expected to yield the same contributions to self-worth as low COMP. * high IMP., even though both yield the same cross-product values. The second problem with cross-product interactions concerns interpretation. When a large number of variables are included in a model, multiple interaction terms arise as well as multiple dimension interactions. For example, how does one interpret a six-way interaction? In the light of these two considerations the cluster analysis may contribute to the specification and interpretation of measurement models. Considering the above example, the cluster analysis may reveal groups of students who display similar characteristics or patterns of behavior. This would enable the analyst to create a profile of different groups of similar students thus facilitating between group comparisons. This profile analysis would uncover patterns not necessarily revealed in the latent model. In the hypothetical models above, the cluster analysis would reveal the patterns of interactions and their effects, which would have been misrepresented or hidden. As well, the cluster analysis allows for the interpretation of larger numbers of variables at one time. In this way some of the limitations of the measurement model are overcome.

The advantages of cluster analysis methodology was evidenced in a study conducted by Seifert (1995) on the characteristics of ego- and task-

oriented students. A motivational questionnaire to measure the constructs of perceived ability, negative and positive emotions, goal orientation, attributions for success and failure, self-worth, preference for challenge, and strategy use was administered to seventy- five grade five students.

The focus of the research was upon identifying goals students pursue and the behaviors associated with each goal. However, two issues were of particular interest: First, the possibility of students pursuing multiple goals (past research identifies two predominant goals, mastery and performance). Second, the comparison of factor analysis-correlational methodology and cluster analysis methodology.

Prior to the cluster analysis a factor analysis was performed on students' responses to goal items. A correlation analysis was performed on resulting factor scores and a number of motivational and cognitive constructs. This data was compared to the results of the cluster analysis to determine if the two methodologies yielded different conclusions.

The cluster analysis was performed to identify potential subgroups of students within the sample who may be pursuing different goals. This analysis resulted in three distinct clusters -- high mastery/high performance, high mastery/low performance, and low mastery/moderate performance.

Differences in goals (mastery/performance) students pursued corresponded to different student characteristics and behaviors. Students in clusters 1 and 2 attributed success to controllable factors while cluster 3 students were less likely to do so. Cluster 3 students were also more likely to attribute failure to uncontrollable factors, while cluster 2 students were less likely to attribute failure to uncontrollable factors. Further, students in cluster 3 had lower perceptions of ability and a lower preference for challenge. Cluster 3 students experienced less

positive affect and reported lower self-worth scores than students in cluster 1. There were no differences in cluster 1 or cluster 2 students on the measures of perception of ability, preference for challenge, self-worth, or positive effect.

The results of the factor analysis revealed students with higher mastery scores tended to exhibit higher perceptions of their abilities, preferred challenge, and were more likely to attribute success to controllable factors. These students experienced more frequent positive emotions and less frequent negative emotions. They had high levels of self-worth, higher self-efficacy and used both shallow and deep processing strategies.

Higher performance orientation scores were associated with a greater frequency of positive emotions. Unlike students who were mastery oriented, students who were performance oriented did not have negative emotions. As well, these students attributed success to uncontrollable factors. There were positive correlations between performance orientation and reported frequent use of shallow processing strategies, but not deep processing strategies. Performance oriented students had greater self-worth and higher perceptions of ability. Overall, the factor analysis-correlational and cluster analysis methodologies conceded similar results. Of particular importance high mastery/low performance and high mastery/high performance students behaved in a manner consistent with interpretations of the correlations. They were inclined to have higher perceptions of their ability, experienced more positive affect, and made greater use of shallow processing strategies.

However, some important discrepancies were found between the methodologies. The factor analysis-correlational methodology suggested that higher mastery orientation scores were associated with a decrease in experiencing negative emotions whereas cluster analysis revealed no

statistical differences between clusters in experiencing negative emotions.As well, factor analysis suggested that performance oriented students attributed success to uncontrollable factors whereas cluster analysis revealed no statistical differences between clusters on attributing success to controllable or uncontrollable factors. An additional discrepancy was found in methodologies in attributing failure to controllable or uncontrollable factors. Factor analysis reported no relationship in attributing failure to controllable or uncontrollable factors. In contrast, the cluster analysis revealed that students in the low mastery/moderate performance group were more likely to attributed failure to uncontrollable factors.

A comparison of the two methodologies revealed the following important points: First, factor analysis-correlational models are very useful at identifying and seeing the relationships between important constructs. This may result in some form of causal modelling. However, the results of the cluster analysis suggest that interactions among constructs are possible and may need to be further researched. As well, cluster analyses enables profiles of students to be formulated which would reveal the effect of combinations of constructs.

Second, the results suggest that correlations which are non-statistically detectable may imply there is interaction among constructs. This may need to be further explored. Generally speaking, a low correlation usually indicates there is no relationship between variables. In this study, the low correlation of .05 between performance orientation and controllable attributions suggests no relationship between these two variables. However, it could also indicate a more complex relationship than first expected. The cluster analysis suggests that both the high mastery/high performance students and the high mastery/low performance students attributed success to controllable factors. However, the high

mastery/high performance students were more likely to attribute success to controllable factors than were the low mastery/moderate performance students. This would indicate that the high mastery orientation is dominant over performance orientation. Thus, in spite of a low correlation, there was an interaction between mastery and performance scores that poses another possible interpretation.

As evidenced in Seifert's (1995) study, cluster analysis methodology provides a way of exploring interactions and relationships among constructs. As well, it enables profiles of students to be formulated which provides a clearer description of the sample. Factor analysis, while being an effective method of data reduction does not provide this information. In combination, both methodologies allow for more effective interpretation of data.

The study presented in this paper investigated the relationship between the descriptive (perceptions of competency) and evaluative (self-worth) domains of self-concept, the importance children place on competency, and how competency and importance interact to influence self-worth. The data reduction technique of factor analysis was used to examine how competency and importance influence self-worth. However, factor analysis alone could not detect how competency and importance interact to influence self-worth. A cluster analysis made this possible by allowing the analyst to construct a profile of the different groups of students in the sample. The profile revealed groups of students who exhibited similar characteristics, thus making it possible to create a profile of different groups of similar students. This allowed between groups comparisons which uncovered patterns not manifest in the factor analysis. Consequently, the cluster analysis revealed patterns of interaction and their effects otherwise hidden. This provided the analyst with important additional information on how competency and importance interact to influence self-

worth. In this way, the cluster analysis supplemented the information provided by the factor analysis and allowed for a more effective study.

Chapter 3

Methodology

Design of the Study

A descriptive-comparative study of competency, importance, and their influence on the self-worth of school children was conducted using eight classes of 4th graders and eight classes of 7th graders. These grade levels were chosen because the ages of the children at each level represent different periods of development: preadolescence and adolescence. This permitted effective comparison of two groups of children at different developmental levels.

Sample Group

A sample of approximately 271 children was drawn from 5 schools on the Avalon Peninsula of Newfoundland. This sample included 127 children (73 females and 54 males) at the grade 4 level and 144 children (70 females and 74 males) at the grade 7 level. Students of all ability levels were included in the sample. The students were asked to complete a questionnaire which was developed for the study.

The Instrument

A self-concept questionnaire was constructed to measure competency, importance of competency and how competency affects self-worth in 10 domains: Athletic Ability (Sports); Physical Appearance (Social); Peer Relationships (Social); Parent Relationships (Parents); Reading (Academics); Math (Academics); Art; Music; Social Economic Status (S.E.S.) and Global Self-Worth (Appendix A). Children responded to 86 simple declarative statements on a 7 point likert scale with 1 being "not at all like me" and 7 being "a lot like me". 27 statements measured competency

[e.g."I am good at math", "I am a good artist"], 27 statements measured value, or importance [e.g."It is important to me to do well in math", "Being a good artist is important to me"], 27 statements measured self-worth [e.g. "Doing well in sports makes me feel good", "Getting along with my parents makes me feel important"] and 5 statements measured global worth [e.g. "I am a good person", " I feel appreciated by others"].

Prior to the administration of the questionnaire, a letter was sent home to parents requesting permission for their child to take part in the study. This letter is included in Appendix C. To ensure anonymity and to discourage "socially acceptable" responses the subjects were not asked to identify themselves by writing their names on the questionnaire. Only grade level and age were required. The scale was group administered to students in the sample.

CHAPTER 4

Analysis and Interpretation of the Data

The purpose of this study was to investigate the relationship between domain competency, importance and self-worth. First, domain competency and its relationship to self-worth was considered; then the importance of domain competency and its relationship to self-worth; finally, how competency and importance together influence self-worth.

The data analysis consisted of several phases. In the first phase, a series of factor analyses were conducted to establish the consistency and coherency of each of the scales on the questionnaire. In phase two, analysis of variance procedures were used to examine how competency and importance influence self-worth. Finally, cluster analyses of the competency and importance scales were conducted to determine how competency and importance interact to influence self- worth. At each phase only the second order factors were considered. This allowed for ease of interpretation of data.

Results

Factor Analysis

The competency, importance and self-worth scales were individually subjected to principal axis factoring with varimax rotation. Factor analysis of competency items (Table 1) yielded scores of competency in eight domains: Math, Reading, Music, Art, Social, Sports, Parents and S.E.S. For each competency scale the factor loadings were consistently large (.46 -.93) whereas the non factor loadings were much smaller (-.14-.34).

Factor analysis of importance items (Table 2) yielded scores of importance in 7 domains: Academic, Social, Music, Sports, Art, Parents and S.E.S. For each importance scale the factor loadings were consistently large (.40-.91) whereas the non factor loadings were much smaller (-.007-.40).

Table 1. Factor Loadings: Competency Items

Item	Label	Loading
	Factor 1. Social	
Q7	...I am good looking	.88
Q8	...I have lots of friends	.46
Q15	...I am handsome or pretty	.90
Q16	...I am a popular person	.71
Q26	...I am attractive looking	.89
	Factor 2. Music	
Q21	...Music is easy for me	.90
Q25	...I am good at music	.90
Q31	...I get good marks in music	.86
	Factor 3. Sports	
Q6	...I am good at sports	.91
Q13	...I do well in sports	.94
Q23	...I am a good athlete	.89
	Factor 4. Math	
Q11	...Math is easy for me	.91
Q19	...I am good at math	.92
Q29	...I get good marks in math	.88
	Factor 5. Art	
Q20	...I am a good artist	.90
Q24	...I am good at art	.90
Q30	...Art is easy for me	.87
	Factor 6. Reading	
Q10	...I am good at reading	.91
Q18	...I get good marks in reading	.87
Q28	...Reading is easy for me	.90
	Factor 7. Parents	
Q9	...My parents love me	.81
Q17	...My parents and I spend a lot of time together	.75
Q27	...I get along well with my parents	.80
	Factor 8. Socio-Economic Status (S.E.S.)	
Q12	...I live in a big house	.77
Q22	...I have expensive clothes	.63
Q32	...My family has lots of money	.79

Variance -	Social	Music	Sports	Math	Art	Reading	Parents	S.E.S.
	3.45	2.72	2.72	2.69	2.66	2.66	2.09	1.85

Table 2. Factor Loadings: Importance Items

Item	Label	Loading
	Factor 1. Academics	
Q37	...Being a good reader is important to me	.72
Q38	...It is important to me to do well in math	.80
Q46	...It is important to me to get good marks in reading	.82
Q47	...Getting good marks in math is important to me	.85
Q55	...It is important to me to do well in reading	.83
Q56	...Being good in math is important to me	.84
	Factor 2. Social	
Q34	...It is important to me to be good looking	.87
Q35	...Having lots of friends is important to me	.60
Q43	...It is important to me to be handsome or pretty	.89
Q44	...Being popular is important to me	.67
Q52	...Being attractive is important to me	.83
	Factor 3. Music	
Q40	...It is important to me to get good marks in music	.86
Q49	...It is important to me to be good in music	.90
Q58	...Doing well in music is important to me	.86
	Factor 4. Sports	
Q33	...It is important to me to be good in sports	.83
Q42	...Being a good athlete is important to me	.89
Q51	...Doing well in sports is important to me	.91
	Factor 5. Art	
Q39	...Being a good artist is important to me	.87
Q48	...It is important to me to be good in art	.87
Q57	...Doing well in art is important to me	.83
	Factor 6. Parents	
Q36	...It is important to me that my parents love me	.88
Q45	...It is important to me to spend time with my parents	.82
Q54	...Getting along with my parents is important to me	.81
	Factor 7. Socio-Economic Status (S.E.S.)	
Q41	...It is important to me to live in a big house	.76
Q50	...Wearing expensive clothes is important to me	.78
Q59	...Having lots of money is important to me	.83

Variance -	Academics	Social	Music	Sports	Art	Parents	S.E.S.
	4.69	3.51	2.77	2.66	2.60	2.41	2.27

A second order analysis was performed on the 1st order competency factors yielding two factors: Academic and Social (Table 3). Academic was comprised of the 1st order factors, Math, Reading, Music and Art. Social was comprised of Social, Sports, Parents, and S.E.S. The factor loadings for the 1st order factors were consistently large (.52-.77) whereas the non factor loadings were much smaller (-.11-.30).

Table 3. Second Order Factor Analysis of First Order Competency Factors

	FACTOR 1	FACTOR 2
Academics	.65	
Reading	.73	
Music	.68	
Art	.65	
Social		.76
Sports		.61
Parents		.52
Socio-Economic Status (S.E.S.)		.77
Variance	1.98	1.96

Note: Factor loadings less than .40 have been omitted for clarity.

A second order factor analyses was also performed on the 1st order importance factors which yielded two factors: Academic and Social (Table 4). Academic was comprised of the 1st order factors, Academic, Art, Music and Parents. Social was comprised of the 1st order factors, Social, Sports and S.E.S. (Socio Economic Status). The factor loadings for the 1st order factors were substantial (.66-.85) whereas the non-factor loadings were smaller (-.11-.23).

Table 4. Second Order Factor Analysis of First Order Importance Factors

	FACTOR 1	FACTOR 2
Academics	.81	
Art	.73	
Music	.76	
Parents	.72	
Social		.84
Sports		.66
Socio-Economic Status (S.E.S.)		.85
Variance 1.36	1.98	

Note: Factor loadings less than .40 have been omitted for clarity.

This particular study focuses only on analyses of second order factors because of statistical considerations. Specifically, the large number of first order factors combined with the relatively large number of groups that emerge in the cluster analyses yielded a considerably large number of statistical tests. This increased the likelihood that some comparisons would be statistically detectable by chance alone. This problem was minimized considerably by examining second order factors because the number of factors is reduced, therefore the chance of making a type 1 error is significantly reduced. Another reason for focusing on second order factors is one of interpretation. The smaller number of second order factors makes interpretations of results easier. We can see patterns and relationships more clearly. However, in combining first order factors this type of information is overlooked.

Domain Competency - Age and Gender Effects

Academic Competency

In order to determine if there were age and gender differences in childrens' perceptions of their academic competencies, a 2x2 between groups contrast was conducted using a General Linear Modelling Procedure.

The results revealed a statistically detectable main effects for grade [F(1,255)= 23.66, p<.05] and gender [F(1,255)=14.21,p<.05] but no interaction effect (Table 5). Specifically, grade 4 students perceived themselves to be more competent academically than grade 7 students and females perceived themselves to be more competent academically than their male counterparts (Table 6).

Table 5. Summary Statistics of Between Group Contrasts for Perceived Academic Competency

Source	df	SS	MS	F	p
Grade	1	20.86	20.86	23.66	<.05
Gender	1	12.53	12.53	14.21	<.05
Grade*Gender	1	.37	.37	.42	>.05
Error	255	224.85	.88		

Table 6. Means and Standard Deviations of Academic Competency by Gender and Grade

	Male		Female		Total	
	M	SD	M	SD	M	SD
Grade 4	.12	.92	.43	.69	.30	.81
Grade 7	-.49	1.09	-.03	1.02	-.27	1.08
Total	-.23	1.06	.22	.89		

Social Competency

A similar 2X2 between groups contrast was performed on perceptions of social competency scores. The results of this analysis revealed no main effects for gender or grade, and no interaction effects (Table 7). In other words grade 4's and grade 7's perceived themselves equally competent socially, as did males and females (Table 8).

Table 7. Summary Statistics of Between Group Contrasts for Perceived Social Competency

Source	df	SS	MS	F	p
Grade	1	1.58	1.58	1.62	>.05
Gender	1	.85	.85	.87	>.05
Grade*Gender	1	3.35	3.35	3.43	>.05
Error	239	233.41	.98		

Table 8. Means and Standard Deviations of Social Competency by Gender and Grade

	Male		Female		Total	
	M	SD	M	SD	M	SD
Grade 4	.28	.90	-.09	1.04	.07	.99
Grade 7	-.14	1.05	-.04	.95	-.09	1.00
Total	.05	1.00	-.07	1.00		

Cluster analyses

In an attempt to identify potential subgroups within the sample a cluster analysis was performed on the second order competency factor scores. Specifically, competency scores at each grade level were subjected to a hierarchical cluster analysis using Ward's method (this method was used in performing all cluster analyses throughout the study). In grade 4 a three cluster solution was retained and in grade 7 a five cluster solution was retained based upon a sharp drop in the t2 statistic and a plateauing increase on the incremental R2 (Figures 1,2).

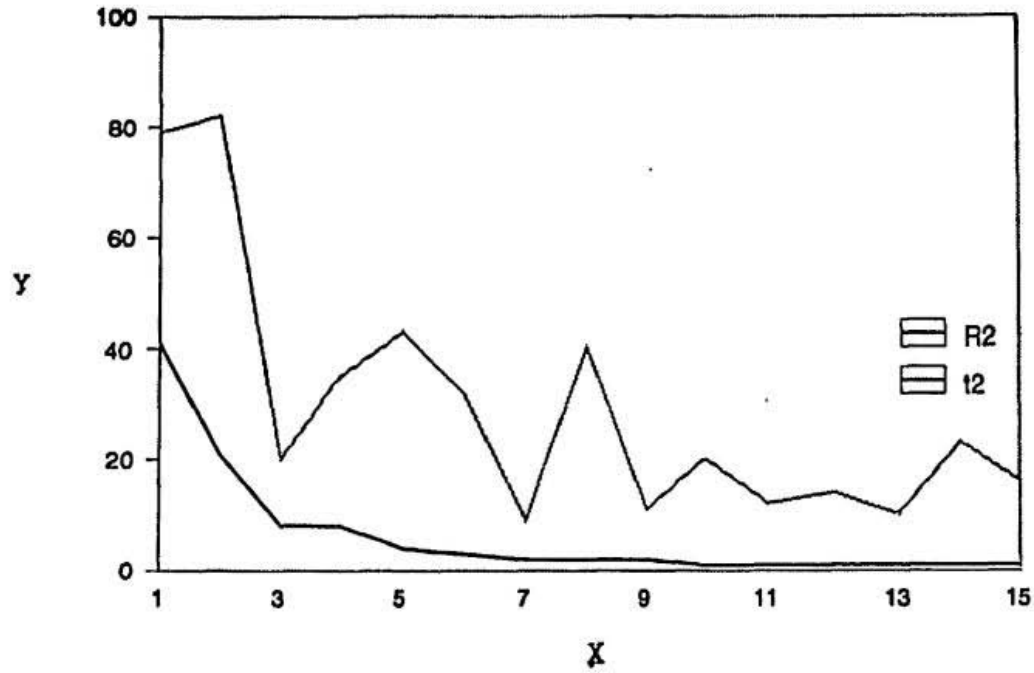

Figure 1. Clusters of competency items, second order factors - Grade 4.

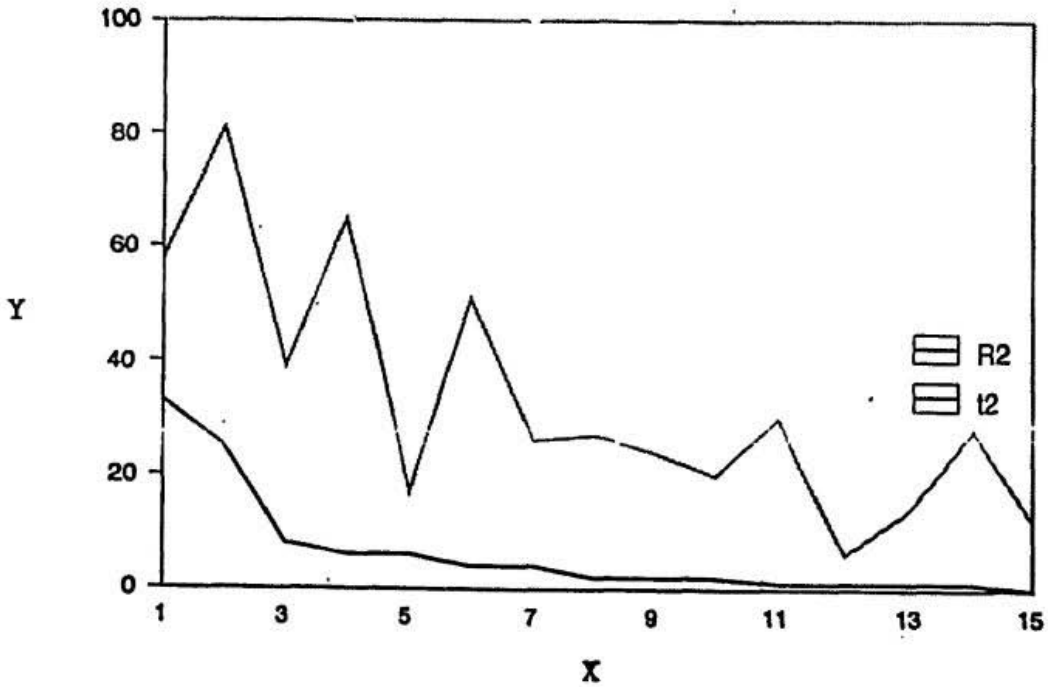

Figure 2. Clusters of competency items, second order factors - Grade 7.

A between groups repeated measures omnibus test using General Linear Modelling procedures was used in comparing groups. If the interaction effect was statistically detectable (at .05) a series of tests of simple main effects within each group was conducted.This was followed by a posteriori contrasts between groups to see which groups differed in each domain. The critical t value was set at 2.85, α =.005.

Grade 4

Results of the between groups repeated measures omnibus test (Table 9) indicated an effect for Group [F(2,112) = 171.03, p.<.05]. and Domain [F(1,112) = 23.36, p<.05]. Most importantly, there was an interaction effect [F(2,112) = 16.88, p<.05].

Table 9. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	P
Group1	2	105.25	52.62	171.03	<.05
Error	112	34.46	.31		
Domain	1	7.93	7.93	23.36	<.05
Domain*Group1	2	11.46	5.73	16.88	<.05
Error	112	38.02	.33		

A test of simple main effects within each group (Table 10) yielded no effect for group 1 [F(1,40) = .07, p>.005] and group 2 [F(1,57) = .09, p>.005]. Both groups perceived themselves as being equally competent in both domains. However there was an effect for group 3 [F(1,18) = 40.5, p <.005]. Students in group 3 perceived themselves to be lower in social competency than academic competency (Figure 3).

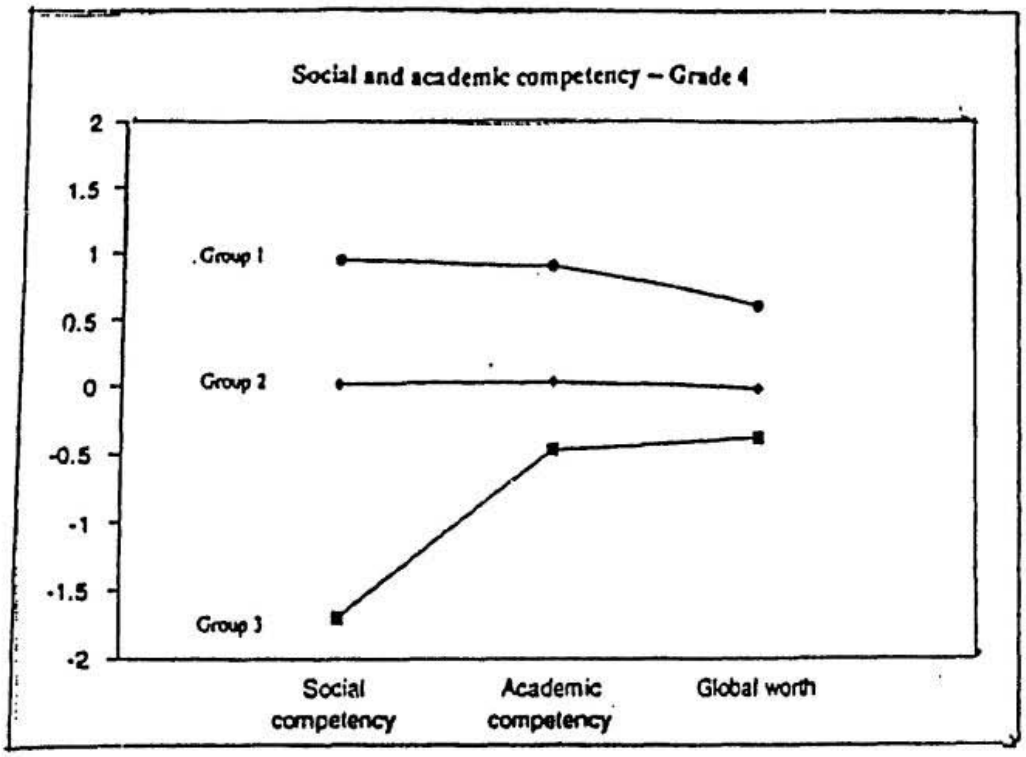

Figure 3. Profile of social and academic competency clusters - Grade 4.

Table 10. Results of Tests of Simple Main Effects Within Each Group

Source	df	SS	MS	F	p
Group 1	1	.01	.01	.02	>.005
Group 2	1	.03	.03	.09	>.005
Group 3	1	13.77	13.77	40.5	<.005

A posteriori contrasts between groups of grade 4 students (Tables 11, 12) indicated significant differences between groups 1 and 2 in both the Social (t=11.05) and Academic (t=10.47) domains. Differences also occurred between groups 2 and 3 in the Social (t=15.34) and Academic (t=4.49) domains.

Table 11. Social Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 2	0.95	0.01	40	57	0.34	0.94	11.05	<.01
Group 2 vs 3	0.01	-1.70	57	18	0.34	1.71	15.34	<.01

Table 12. Academic Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 2 vs 3	0.04	-0.46	57	18	0.34	0.50	4.49	<.01
Group 1 vs 2	0.93	0.04	40	57	0.34	0.89	10.47	<.01

In summary, results indicated (Figure 3) that group 1 students perceived themselves as being more competent academically and socially than did students in group 2. Group 3 students perceived themselves as being less competent in these domains than did students in groups 1 and 2. However, group 3 students perceived themselves as being more competent academically than socially. Group 3 students may be compensating for their lack of success in the Social domain by trying harder academically.

Grade 7

The between groups repeated measures omnibus test (Table 13) indicated an effect for Group [$F(4,116) = 80.21$, $p<.05$] and Domain [$F(1,116 = .02$, $p<.05$). More importantly, there was an interaction effect [$F(4,116) = 66.72$, $p<.05$).

Table 13. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	p
Group1	4	110.27	27.56	80.21	<.05
Error	116	39.86	0.34		
Domain	1	0.004	0.004	0.02	<.05
Domain*Group1	4	74.31	18.57	66.72	<.05
Error(Domain)	116	32.29	.27		

This was followed by a series of tests of simple main effects (Table 14) which yielded an effect for Group 2 [$F(1,34) = 26.17$, $p<.005$], Group 3 [$F(1.27) = 51.31$, $p<.005$], Group 4 [$F(1,14) = 89.41$, $p<.005$], and Group 5 [$F(1,25) = 93.9$, $p<.005$]. However there was no effect for Group 1 [$F(1,20) = .67$, $p>.005$]. Group 1 students perceived themselves as being equally competent in both domains. However, grade 7 students in other groups perceived themselves as being more or less competent in one domain than the other (Figure 4).

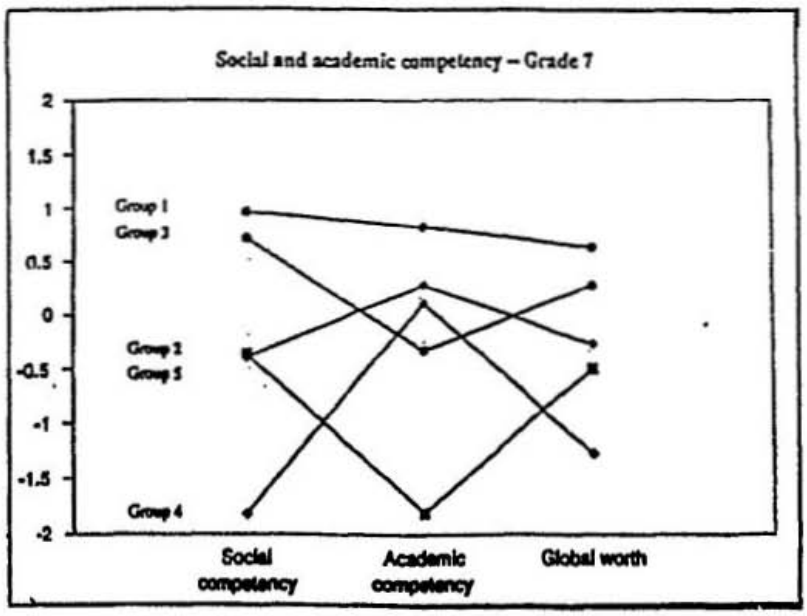

Figure 4. Profile of social and academic competency clusters - Grade 7.

Table 14. Results of Tests of Simple Main Effects

Source	df	SS	MS	F	p
Group 1	1	.19	.19	.67	>.005
Group 2	1	7.58	7.58	26.17	<.005
Group 3	1	14.87	14.87	51.31	<.005
Group 4	1	25.93	25.93	89.41	<.005
Group 5	1	27.22	27.22	93.9	<.005

A posteriori contrasts between groups (Table 15) indicated significant differences in the Social domain between groups 2 and 3 (t=-11.51) and groups 3 and 4 (t=11.60).

Table 15. Social Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 3	0.98	0.72	20	27	0.28	0.26	2.36	>.01
Group 2 vs 3	-0.39	0.72	34	27	0.28	-1.11	-11.51	<.01
Group 2 vs 5	-0.39	-0.36	34	26	0.28	-0.03	-0.31	>.01
Group 3 vs 4	-0.39	-1.82	14	27	0.28	1.43	11.60	<.01

In the Academic domain (Table 16) significant differences occurred between groups 1 and 3 (t=10.52), groups 2 and 5 (t=21.44) and groups 3 and 4 (t=-3.57).

Table 16. Academic Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 3	0.83	-0.33	20	27	0.28	1.16	10.52	<.01
Group 2 vs 4	0.28	0.11	34	14	0.28	0.17	1.43	>.01
Group 2 vs 5	0.28	-1.81	26	34	0.28	2.09	21.44	<.01
Group 3 vs 4	-0.33	0.11	14	27	0.28	-0.44	-3.57	<.01

These results indicated (Figure 4) that group 3 students perceived themselves as being more competent socially than students in groups 2 and 4. However, group 3 students were less competent academically than students in groups 2 and 4. Group 3 students may be compensating for their lack of success in the Academic domain by trying harder to achieve in the Social domain. Likewise, students in groups 2 and 4 may be compensating for lack of success in the Social domain by achieving in the Academic domain. Compared to group 2, group 5 students perceived themselves as being just as competent socially but not competent academically. These students may be trying harder to be accepted by their peers to compensate for lack of success in the Academic domain.

Competency and Global Self-Worth

Grade 4

Results of the between groups repeated measures omnibus test (Table 17) indicated a main effect for Group [$F(1,111) = 11.53$, $p<.05$).

Table 17. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group1	2	14.84	7.4	.64	<.05
Error	111	71.46	.6		

A posteriori contrasts between groups (Table 18) indicated significant differences between groups 1 and 2 (t=5.40).

Table 18. Global self-worth - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 2 vs 3	-0.03	-0.39	57	18	0.64	0.36	2.35	>.01
Group 1 vs 2	0.60	-0.03	40	57	0.64	0.63	5.40	<.01

This analysis indicated (Figure 3) that students in group 1 perceived themselves as being very competent socially and academically and had high global self-worth. Group 2 students perceived themselves as being less competent socially and academically and had less global self-worth. Although there were no significant differences in the global self-worth of groups 2 and 3, these groups did differ significantly in social and academic competency (Tables 15, 16). Unlike group 2 students who reported average social and academic competency, group 3 students reported low academic competency and much lower social competency. Interestingly, there were no significant differences in the global self- worth of both these groups. For group 3 students, global self-worth seemed to depend on academic competence. It would appear that for students in groups 1 and 2, self-worth depended on being competent in both domains. These results are reflected in the correlations analysis of second order competence and global self-worth scores (Table 19) which indicated that, in grade 4, self-worth depends on being competent in the Academic (r=.0001) and Social domains (r=.0001).

Table 19. Correlation Analyses of Second Order Factors - Grade 4

	GLOBAL	IMP_ACA	IMP_SOC	COMP_ACA
IMP_ACA	0.52*		0.33	0.59*
IMP-SOC	0.10	0.33*		0.15
COMP_ACA	0.55*	0.59*	0.15	
COMP_SOC	0.37*	0.47*	0.54*	0.48*

* denotes p<.05

Grade 7

Results of the between groups repeated measures omnibus test (Table 20) indicated an effect for group [F(4,115) = 10.43, p< .05).

Table 20. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group1	4	38.61	9.65	10.43	<.05
Error	115	106.42	0.92		

A posteriori contrasts of groups (Table 21) indicated significant differences between groups 2 and 4 (t=4.62).

Table 21. Global self-worth - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	test
Group 1 vs 3	0.63	0.28	20	27	0.93	0.35	1.74	no
Group 2 vs 5	-0.27	-0.50	34	26	0.93	0.23	1.29	no
Group 2 vs 4	-0.28	-1.28	14	34	0.93	1.00	4.62	yes

Results of this analysis (Figure 4) indicated that groups 1 and 3 had similar social competency but differed in academic competency. Students in these groups had the same self-worth. Groups 2 and 5 had similar social competency but differed in academic competency. Group 2 students had higher academic competency than their counterparts in group 5. However, both groups had similar global worth. Compared to group 1, group 2 students had similar academic competency and lower social competency. Both these groups differed in global worth. Group 1 students had higher global worth than students in group 2. Although groups 2 and 4 had higher academic competency than group 3 they had lower social competency and lower global worth than group 3 students.

From these results we may conclude that for grade 7 students, social competency is more important to global worth than academic competency. These results are reflected in the correlational analyses of competency and global worth scale scores which indicated that, in grade 7, global self-worth is related to being competent in the Social domain (Table 22).

Table 22. Correlation Analyses of Second Order Factors - Grade 7

	GLOBAL	IMP_ACA	IMP_SOC	COMP_ACA
IMP_ACA	0.39*		0.12	0.61*
IMP_SOC	0.29	0.12		-0.04
COMP_ACA	0.18	0.61*	-0.04	
COMP_SOC	0.67*	0.33	0.60*	0.16

* denotes p<.05

Importance of Domain Competency - Age and Gender Effects In the Academic Domain

In order to determine if there were age and gender differences in the importance children placed on competency in the Academic domain, two 2x2 between groups contrasts were conducted using a General Linear Modelling Procedure. In the Academic domain, the results revealed a statistically detectable main effects for grade [$F(1,250)=62.70$, $p<.05$] and gender [$F(1,250)=14.89$, $p<.05$] but no interaction effect (Table 23). Specifically, grade 4 students placed more importance on competency in the Academic domain than grade 7 students and females placed higher importance on academic competency than their male counterparts (Table 24).

Table 23. Summary Statistics of Between Group Contrasts for Perceived Academic Importance

Source	df	SS	MS	F	p
Grade	1	54.93	54.93	67.83	<.05
Gender	1	12.05	12.05	14.89	<.05
Grade*Gender	1	0.00	0.00	0.00	>.05
Error	250	202.46	.80		

Table 24. Means and Standard Deviations of Academic Importance by Gender and Grade

	Male		Female		Total	
	M	SD	M	SD	M	SD
Grade 4	.31	.82	.61	.60	.48	.71
Grade 7	-0.64	1.12	-0.24	.95	-0.44	1.06
Total	-0.23	1.12	.20	.89		

In the Social Domain

Results of the 2x2 between groups contrast performed on the social importance scores revealed a statistically detectable main effect for gender [$F(1,248)=5.54$, $p<.05$). There was no effect for grade and no interaction effect (Table 25). Specifically, grade 4 and grade 7 students place equal importance on competency in the Social domain, however, males place more importance on social competency than their female counterparts (Table 26).

Table 25. Summary Statistics of Between Group Contrasts for Perceived Social Importance

Source	df	SS	MS	F	p
Grade	1	.03	.03	.03	>.05
Gender	1	5.40	5.40	5.54	<.05
Grade*Gender	1	.59	.59	.61	>.05
Error	248	241.94	.97		

Table 26. Means and Standard Deviations of Social Importance by Gender and Grade

	Male		Female		Total	
	M	SD	M	SD	M	SD
Grade 4	.22	.94	-0.17	1.06	.004	1.02
Grade 7	.08	1.00	-0.12	.92	-0.01	.97
Total	.14	.97	-0.14	.99		

Cluster Analysis - Second Order Factors

In an attempt to identify potential subgroups within the sample and possible patterns existing within the groups a cluster analyses was performed of the second order importance scale scores. In grade 4, a six

cluster solution was retained and in grade 7 a four cluster solution was retained (Figures 5 and 6).

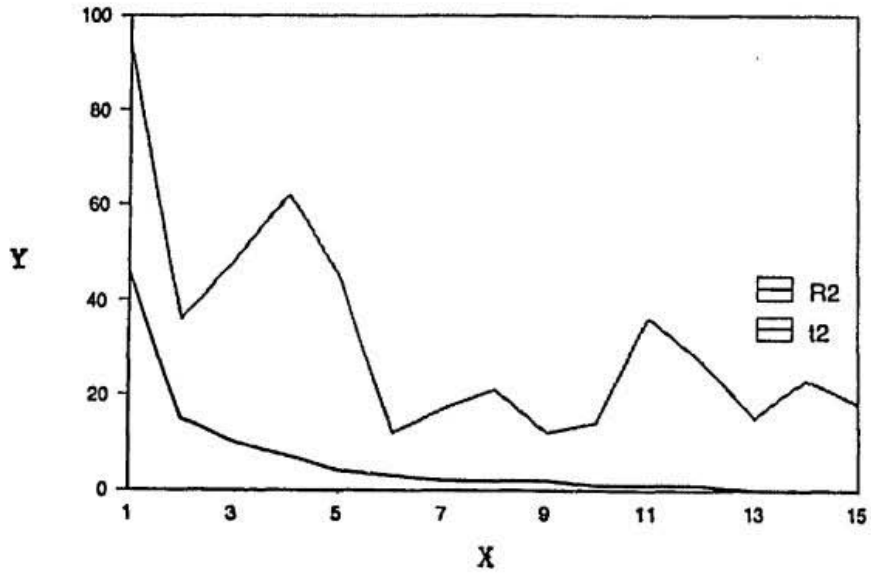

Figure 5. Clusters of second order importance factors - Grade 4.

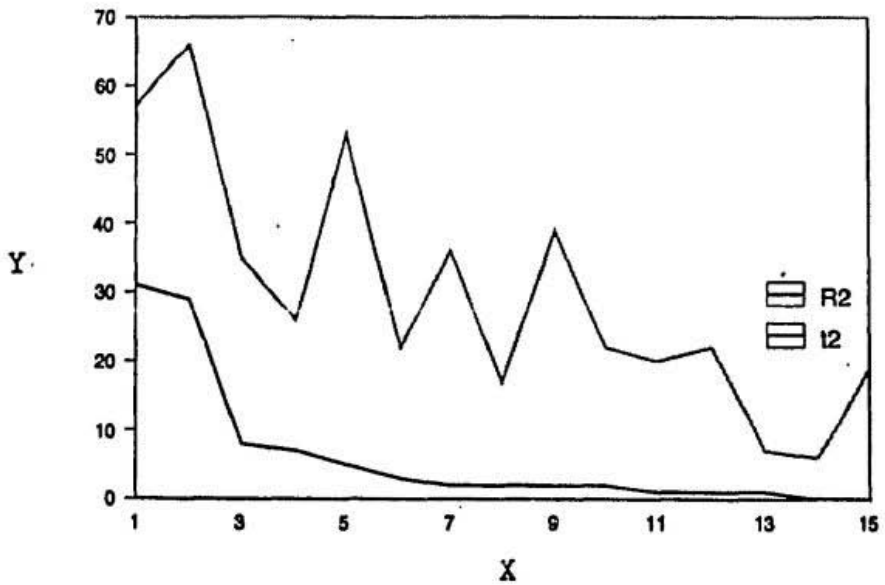

Figure 6. Clusters of second order importance factors - Grade 7.

Grade 4

Results of the between groups repeated measures omnibus test (Table 27) indicated an effect for Group [$F(5,106)=103.60$, $p<.05$] and Domain [$F(1,106)=88.43$, $p<.05$]. Most importantly, there was an interaction effect [$F(5,106)=77.47$, $p<.05$].

Table 27. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	p
Group1	5	96.38	19.38	103.60	<.05
Error	106	19.83	0.18		
Domain	1	10.93	10.93	88.43	<.05
Domain*Group1	5	47.87	9.57	77.47	<.05
Error (Domain)	106	13.10	0.12		

A test of simple main effects within each group (Table 28) yielded no effect for group 1 [$F(1,34)=2.08$, $p>.005$] or group 2 [$F(1,26)=.08$, $p>.005$]. Students in each group placed equal value on competency in both the Social and Academic domains. However, there was an effect for group 3 [$F(1,22)=156.25$, $p<.005$], group 4 [$F(1,12)=49.42$, $p<.005$], group 5 [$F(1,10)=210.58$, $p<.005$] and group 6 [$F(1,8)=92.00$, $p<.005$]. Grade 4 students in these groups valued social competency more or less than academic competency (Figure 7).

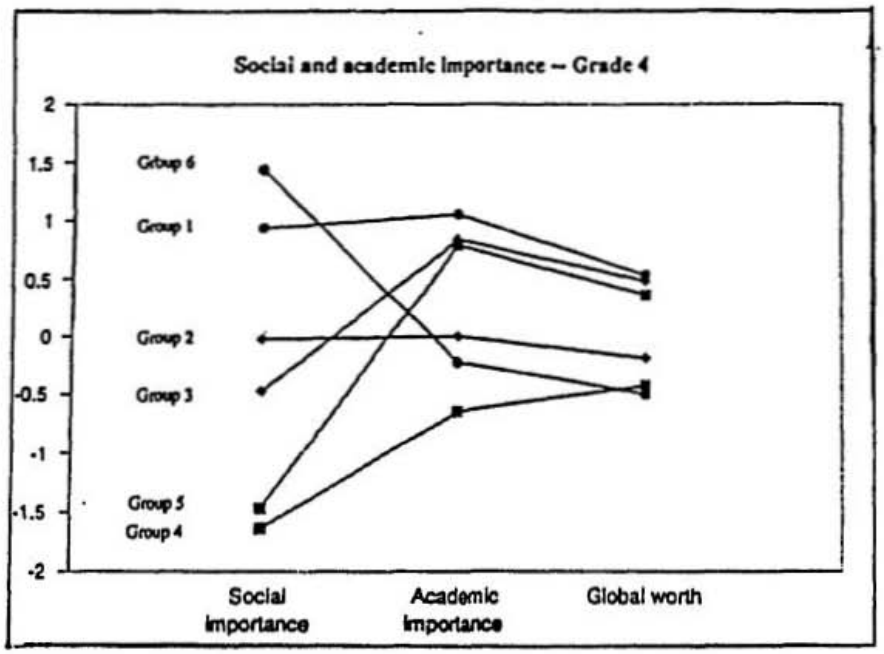

Figure 7. Profile of social and academic importance clusters - Grade 4

Table 28. Results of Tests of Simple Main Effects Within Each Group

Group	df	SS	MS	F	p
Group 1	1	0.25	0.25	2.08	>.005
Group 2	1	0.01	0.01	.08	>.005
Group 3	1	18.74	18.74	156.25	<.005
Group 4	1	5.92	5.92	49.42	<.005
Group 5	1	25.26	25.26	210.58	<.005
Group 6	1	11.04	11.04	92.00	<.005

A posteriori contrasts between groups indicated significant differences in the Social domain (Table 29) between groups 2 and 3 (t=6.34), groups 1 and 6 (t=-5.19) and groups 3 and 5 (t=10.60). In the Academic domain (Table 32) differences occurred between groups 1 and 5 (t=3.06), groups 1 and 3 (t=3.28) and group 4 and 6 (t=-3.76).

Table 29. Social Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 4 vs 4	-0.64	-1.47	10	12	0.12	-0.17	-1.62	>.01
Group 2 vs 3	-0.03	-0.48	26	22	0.12	0.45	6.34	<.01
Group 1 vs 6	0.93	1.43	8	34	0.12	-0.50	-5.19	<.01
Group 3 vs 5	-0.48	-1.47	22	10	0.12	0.99	10.60	<.01

Table 30. Academic Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 3 vs 5	0.83	0.78	22	10	0.12	0.05	0.54	>.01
Group 1 vs 5	1.05	0.78	34	10	0.12	0.27	3.06	<.01
Group 1 vs 3	1.05	0.83	22	34	0.12	0.22	3.28	<.01
Group 2 vs 6	-0.01	-0.23	8	26	0.12	0.22	2.22	>.01
Group 4 vs 6	-0.65	-0.23	8	12	0.12	-0.42	-3.76	<.01

These results (Figure 7) indicated students in group 2 placed more importance on social competence than did students in groups 3 and 5. However, students in groups 3 and 5 placed higher importance on academic competence than their group 2 counterparts. Group 6 students placed higher importance on social competence than students in group 1 but, unlike group 1 who also placed high importance on academic competence, group 6 students placed low importance on academic competence.

Grade 7

Results of the between groups repeated measures omnibus test on Grade 7 students' scores (Table 31) indicated an effect for Group [$F(3,125) = 84.80$, $<.05$] and Domain [$F(1, 125) = 37.34$, $p<.05$]. There was no interaction effect.

Table 31. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	p
Group1	3	100.14	33.38	84.80	<.05
Error	125	49.20	0.39		
Domain	1	11.13	11.13	37.34	<.05
Domain*Group1	0	0	0	0	>.05
Error	125	37.27	0.29		

This was followed by a series of tests of simple main effects (Table 32) which yielded an effect for group 2 [$F(1,22) = 31.4$, $p<.005$], group 3 [$F(1,57) = 15.1$, $p<.005$] and group 4 [$F(1,24) = 256.00$, $p<.005$]. These groups valued academic competency more or less than social competency. There was no effect for group 1 [$F(1,16) = 2.08$, $p>.005$). Group 1 students placed equal importance on competency in both domains (Figure 8).

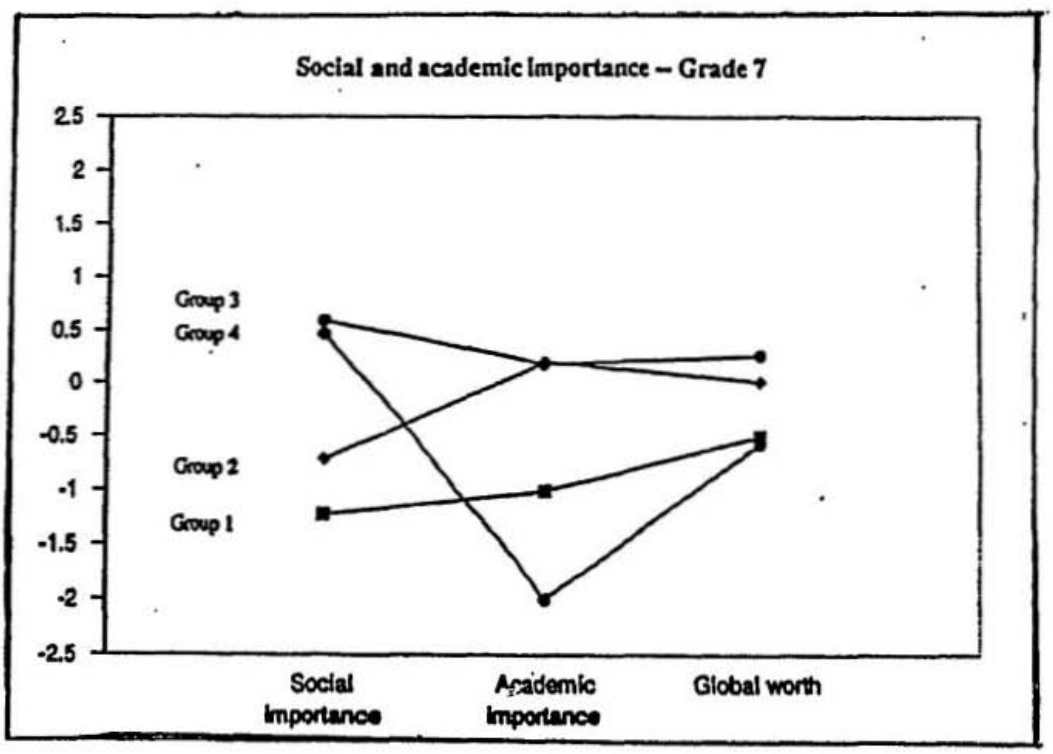

Figure 8. Profile of social and academic importance clusters - Grade 7.

Table 32. Results of Tests of Simple Main Effects

Source	df	SS	MS	F	p
Group 1	1	0.62	0.62	2.0	>.005
Group 2	1	9.42	9.42	31.4	<.005
Group 3	1	4.52	4.52	15.1	<.005
Group 4	1	76.89	76.89	256.0	<.005

A posteriori comparisons between groups (Table 33) indicated significant differences between groups 1 and 2 (t=-4.55) and groups 2 and 3 (t=-9.36) and in the Social domain.

Table 33. Social Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 2	-1.23	-0.72	26	22	0.30	-0.52	-4.55	<.01
Group 2 vs 3	-0.72	0.19	22	57	0.30	-0.91	-9.36	<.01
Group 3 vs 4	0.59	0.47	24	57	0.30	0.12	1.27	>.01

In the Academic domain (Table 34) significant differences occurred between groups 1 and 4 (t=-9.58) and groups 1 and 2 (t=-10.78).

Table 34. Academic Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 2 vs 3	0.20	0.19	22	57	0.30	0.01	0.10	>.01
Group 1 vs 4	-2.06	-1.01	26	24	0.30	-1.05	-9.58	<.01
Group 1 vs 2	-1.01	0.20	26	22	0.30	-1.21	-10.78	<.01

Results indicated (Figure 8) that group 3 students placed higher importance on social competence than students in group 2. However, no differences occurred between these groups in the importance placed on academic competence. Students in both groups placed equally high

importance on competency in the Academic domain. Group 1 students placed less importance on Academic competence than group 2 students but more importance on competency in this domain than students in group 4. Students in group 4 placed very low importance on academic competence but they considered Social competence to be very important.

Importance and Global Self-Worth

Grade 4

Results of the between groups repeated measures omnibus test on the global self-worth variable (Table 35) indicated an effect for Group [$F(5, 105) = .563$, $p<.05$).

Table 35. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group1	5	18.13	3.62	5.63	<.05
Error	105	67.67	0.64		

A posteriori contrasts (Table 36) indicated no significant differences between groups 1 and 5 or 2 and 6. However, differences occurred between groups 2 and 5.

Table 36. Global self-worth -A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 5	0.52	0.35	34	10	0.64	0.17	0.84	>.01
Group 2 vs 6	-0.20	-0.51	26	8	0.64	0.31	1.36	>.01
Group 2 vs 5	-0.20	.35	26	10	0.64	-0.55	-2.61	<.01

These results suggested (Figure 7) that students in groups 3 and 5 had high global self-worth. However, both these groups reported low social importance and high Academic importance. This indicated that, to students in groups 3 and 5, global self-worth depended on the importance placed on competency in the academic domain. The same may be said for students in group 6. These students placed very high importance on social competency but below average importance on academic competency. These students had low global self-worth. The high importance placed on competency in the social domain did not have a positive impact on the global self-worth of group 6 students.

These results are reflected in the correlations analysis of second order importance and global self-worth scores (Table 19) which indicated that for grade 4 students, global self-worth is related to the importance placed on competency in the Academic domain ($r=.0001$).

Grade 7

Results of the between groups repeated measures omnibus test on global self-worth (Table 37) indicated an effect for group [$F(3,124)=5.67$, $p<.05$].

Table 37. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group1	3	17.67	5.89	5.67	<.05
Error	124	128.96	1.04		

A posteriori contrasts between groups (Table 38) indicated significant differences between groups 1 and 3 (t=-4.51) and groups 3 and 4 (t=4.79). Differences also occurred between groups 2 and 4 (t=2.80).

Table 38. Global self-worth - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	test
Group 2 vs 3	0.01	0.26	57	24	1.04	-0.25	-1.42	>.01
Group 1 vs 4	-0.51	-0.58	26	24	1.04	0.07	0.34	>.01
Group 1 vs 2	-0.51	0.01	26	22	1.04	-0.52	-2.49	>.01
Group 1 vs 3	-0.51	0.26	26	57	1.04	-0.77	-4.51	<.01
Group 3 vs 4	0.26	-0.58	24	57	1.04	0.84	4.79	<.01
Group 2 vs 4	0.01	-0.58	22	24	1.04	0.59	2.80	<.01

Results indicated (figure 8) that students in group 3 placed higher importance on competency in the Academic domain than groups 1, 2 and 4 and higher importance on competency in the Social domain than groups 1 and 2. Further, Students in group 3 had higher global worth than students in the other groups. Compared to group 3, students in group 1 placed less importance on competency in the Social and Academic domains and had lower global worth. Students in groups 3 and 4 were similar in the importance they placed on social competency but group 4 placed less importance on academic competency than group 3 and reported lower global worth. These results indicated that for students in groups 1, 3 and 4 global worth is

associated with being competent in the Social and Academic domains. These results are reflected in the correlation analysis of second order importance and global self-worth scale scores (Table 22) which indicated that, in grade 7 global self-worth is related to the importance placed on competency in the Academic (r=.0001) and Social (r=.0005) domains. Interestingly, there was no significant difference in the global worth of students in groups 2 and 3. Both groups had similar global self- worth, however, both groups differed significantly in the importance they placed on competency in the Social domain. Group 2 students placed lower importance on social competence than group 3. It is possible that students in group 2 may be devaluing social competence because of lack of success in this domain. However, if this is so, group 2 students could be experiencing success in some other domain not measured in this study. This may have had a positive effect on their global worth.

Competency X Importance - Impact on Global Self-Worth

To investigate the impact of competency and importance on global self-worth, 2 cluster analyses were performed at each grade level on the 2nd order competency and importance scores in domain. In grade 4, a four cluster solution was retained in the Academic domain and a five cluster solution was retained in the Social domain (Figures 9 and 10). In grade 7, a six cluster solution was retained in both domains (Figures 11 and 12).

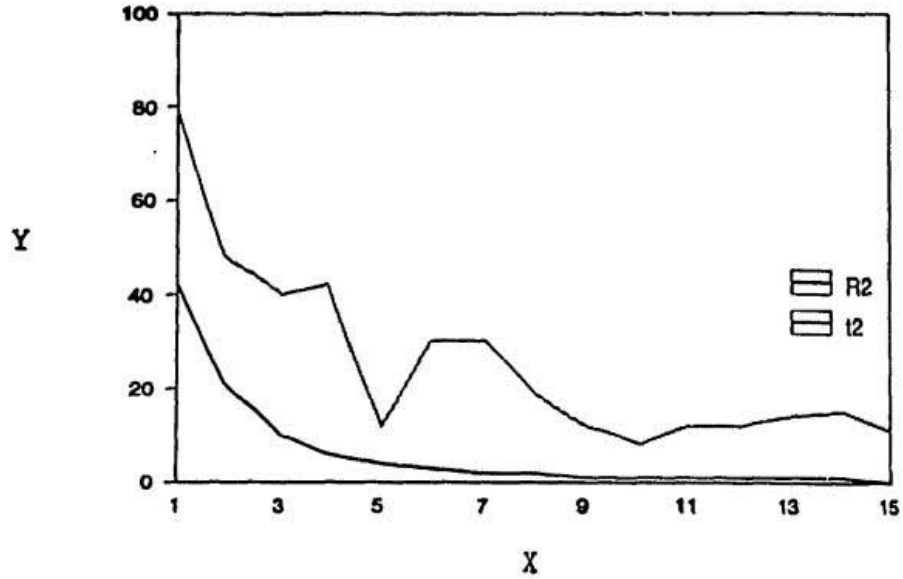

Figure 9. Clusters of social competence and importance items - Grade 4.

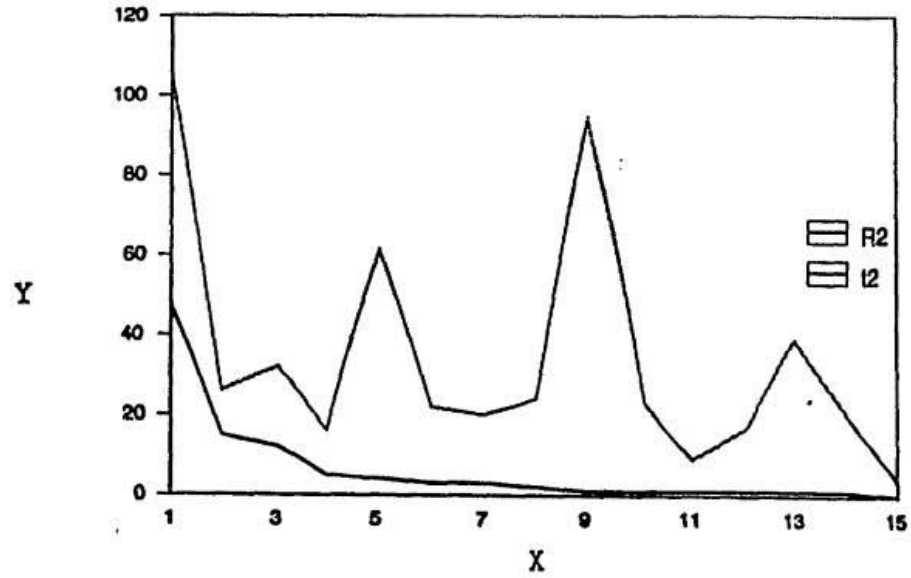

Figure 10. Clusters of academic competence and importance items - Grade 4.

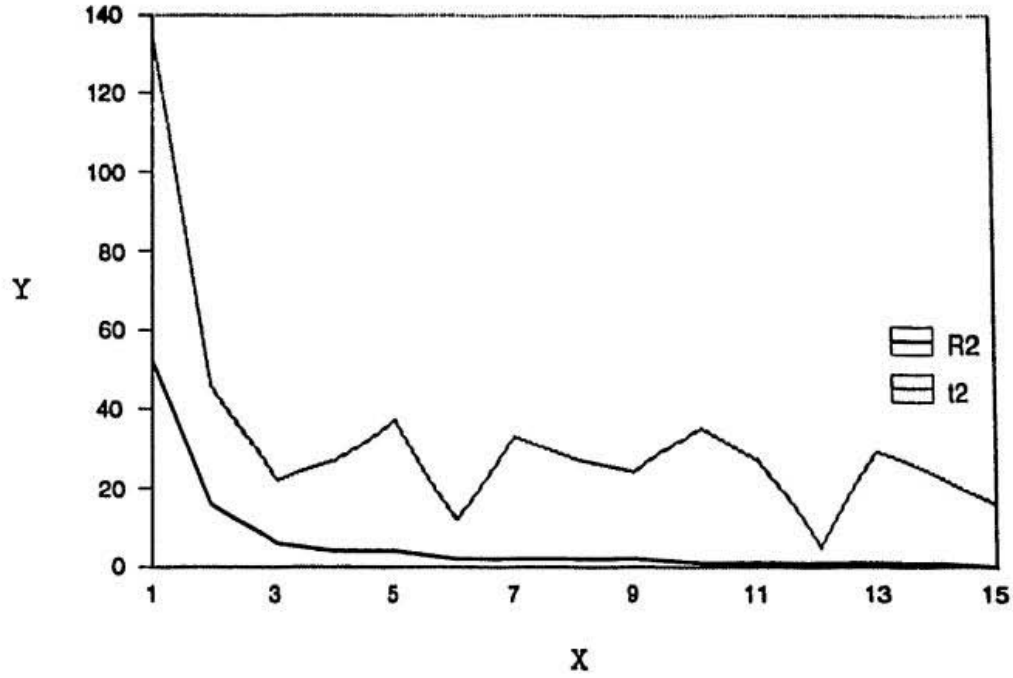

Figure 11. Clusters of social competence and importance items - Grade 7.

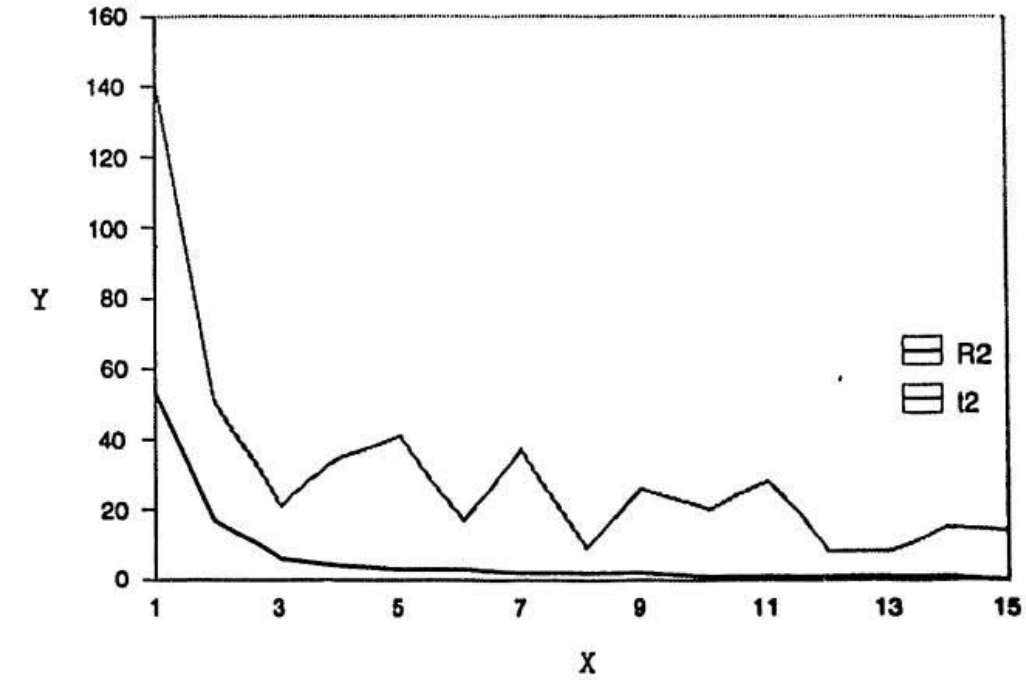

Figure 12. Clusters of academic competence and importance items - Grade 7.

At each grade level the interaction of social competency and Social importance was examined, then the interaction of academic competency and academic importance. This was followed by examining how these interactions impacted global worth.

Grade 4 - Social Competency X Social Importance

Results of the between groups repeated measures omnibus test (Table 39) indicated an effect for Group [$F(4,104)=213.19$, $p<.05$]. There was no effect for Component [$F(1,104)=0.77$, $p>.05$, but there was an interaction effect [$F(4,104)=20.50$, $p<.05$].

Table 39. Repeated Measures Analysis of Variance Tests of Hypothesis for Between Subjects Effects

Source	df	SS	MS	F	p
Group1	4	155.77	38.94	213.19	<.05
Error	104	18.99	0.18		
Social	1	0.21	0.21	0.77	>.05
Social*Group1	4	22.50	5.62	20.50	<.05
Error	104	28.55	0.27		

A test of simple main effects within each group (Table 40) yielded an effect for group 1 [$F(1,23)=19.96$, $p<.005$], group 2 [$F(1,25)=25.2$, $p<.005$] and group 3 [$F(1,14)=31.2$, $p<.005$]. There was no effect for group 4 [$F(1,33)=1.65$, $p>.005$] or group 5 [$F(1,44)=4.5$, $p>.005$]. For students in groups 1,2, and 3, their perceptions of social competence were more or less than the importance they placed on being competent in this domain (Figure 13).

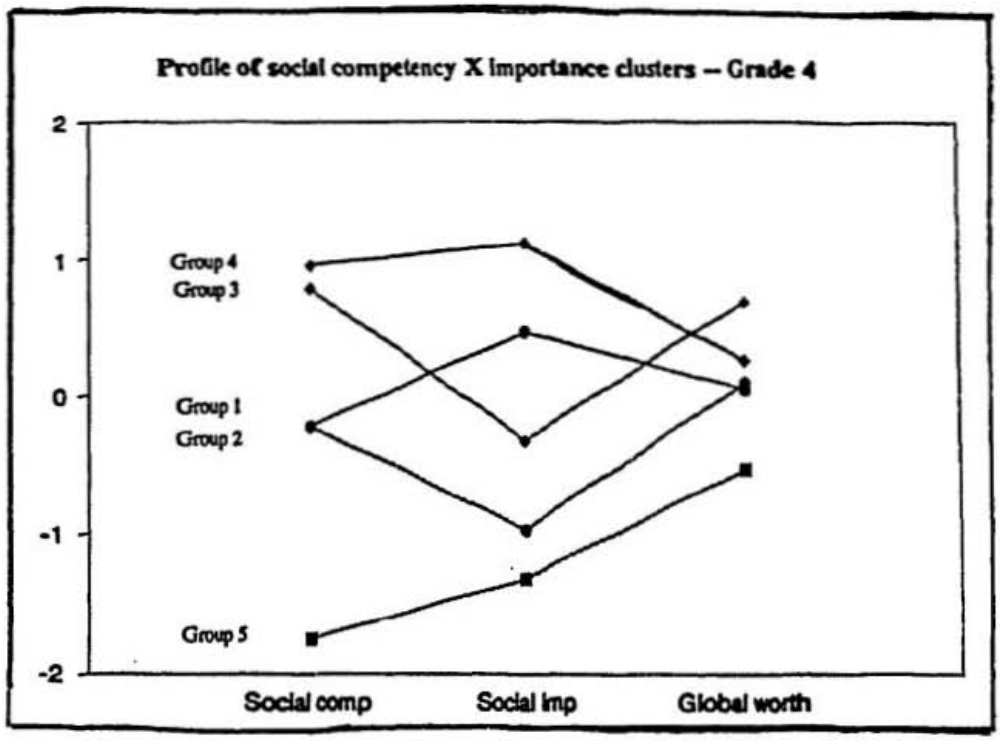

Figure 13. Profile of social competency X importance clusters - Grade 4.

Table 40. Results of Tests of Simple Main Effects

Source	df	SS	MS	F	p
Group 1	1	5.48	5.48	19.9	>.005
Group 2	1	6.93	6.93	25.2	>.005
Group 3	1	8.58	8.58	31.2	>.005
Group 4	1	0.45	0.45	1.6	<.005
Group 5	1	1.26	1.26	4.6	<.005

A posteriori contrasts between groups for social competency (Table 41) indicated significant differences between groups 1 and 3 (t=-9.83) and groups 1 and 5 (t=15.05).

Table 41. Social Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 3 vs 4	0.78	0.95	14	33	0.18	-0.17	-1.78	>.01
Group 1 vs 3	-0.22	0.78	23	14	0.18	-1.00	-9.83	<.01
Group 1 vs 5	-0.22	-1.75	23	14	0.18	1.53	15.05	<.01
Group 1 vs 2	-0.22	-0.22	23	25	0.18	0.00	0.00	>.01

A posteriori contrasts between groups for social importance (Table 42) indicated significant differences between groups 3 and 4 (t=-15.47) and groups 1 and 2 (t=13.15).

Table 42. Social Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 3 vs 4	- 0.32	1.16	14	33	0.18	-1.48	-15.47	<.01
Group 1 vs 2	0.47	-0.67	23	25	0.18	1.14	13.15	<.01

A profile of social competency X importance clusters (Figure 13) shows differences between groups 1 and 5 in social competency. Although both groups perceived themselves as being less competent socially, students in group 1 perceived themselves as being far more competent than students in group 5. Unlike group 5, students in group 1 considered social competence to be very important. Group 5 students may be devaluing social competency as a way of coping with lack of success in this domain. Students in group 3 perceived themselves as being more competent socially than group 1. However, Group 3 placed low importance on being competent socially whereas students in group 1 considered social competence to be very important. Although no differences occurred between groups 1 and 2 in social competency, there were differences in the value the groups placed on social competency. Although students in groups 1 and 2 considered

themselves to be equally competent in the Social domain they perceived themselves as performing below average socially. However, group 1 students placed high value on social competence whereas students in group 2 did not consider competence to be important. For group 2 students, devaluing social competence may be a way of coping with failure in this domain. There was little differences between groups 3 and 4 in social competence. Both groups perceived themselves as being competent socially. However, both groups differed in the importance placed on social competence. Students in group 4 considered social competence to be important whereas students in group 3 considered competence in the Social domain to be unimportant.

Social Competency X Social Importance - Impact on Global Self-Worth Grade 4

Results of the between groups repeated measures omnibus test (Table 43) indicated an effect for Group [$F(4,103)=3.93$, $p<.05$].

Table 43. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group1	4	11.11	2.77	3.93	<.05
Error	103	72.93	0.70		

A posteriori contrasts between groups (Table 44) indicated significant differences between groups 1 and 5 ($t=-2.82$).

Table 44. Global self-worth - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 3 vs 4	0.69	0.26	14	33	0.71	0.43	2.26	>.01
Group 1 vs 2	0.05	0.10	23	25	0.71	-0.05	-0.29	>.01
Group 1 vs 5	-0.52	0.05	23	14	0.71	-0.57	-2.82	<.01

The profile of social competency X importance clusters (Figure 13) indicated that groups 3 and 4 had similar social competence and global worth. However, they differed significantly in social importance (t=-15.47). Group 3 had lower importance than group 4. Groups 1 and 2 had similar social competence and similar global worth. Like their counterparts in groups 3 and 4, groups 1 and 2 differed significantly in social importance (t=13.15). Group 2 had lower social importance than group 1. These results indicated that for students in these groups, importance placed on social competency had little impact on global worth. These results are reflected in the correlation analyses of second order factors (Table 19) which indicated that, for grade 4 students, global worth is related to social competency (r=.0001). Interesting results were indicated for groups 4 and 5. The global worth of group 4 students was lower than their social competency or social importance. It would seem that neither social competency or the importance placed on social competency had an impact on the global worth of these students. For group 5, perceptions of social competence and the importance students placed on social competence was lower than their global worth. Like their counterparts in group 4, social competency and the importance placed on social competency had little impact on their global worth. For group 4 students, other factors may be negatively affecting their global worth. Group 5 suggests devaluing social competence as a means of preserving global worth.

Grade 4 - Academic Competency X Academic Importance

Results of the between groups repeated measures omnibus test (Table 45) indicated an effect for Group [$F(3,116)=143.80$, $p<.05$] and Domain [$F(1,116)=49.13$, $p<.05$]. Most importantly, there was an interaction effect [$F(3,116)=49.13$, $p<.05$].

Table 45. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	p
Group2	3	86.90	28.96	143.80	<.05
Error	116	23.36	0.20		
Academic	1	1.66	1.66	15.69	<.05
Academic* Group	3	15.68	5.22	49.13	<.05
Error	116	12.34	0.10		

This was followed by a series of tests of simple main effects (Table 46) which yielded an effect for group 2 [$F(1,32)=7.78$, $p<.005$] and group 3 [$F(1,15)=149.6$, $p<.005$]. There was no effect for group 1 [$F(1,67)=3.75$, $p>.005$] or group 4 [$F(1,4)=2.62$, $p>.005$]. This indicated that in groups 2 and 3, the students perceptions of academic competence did not equal the importance placed on competency in that domain (Figure 14).

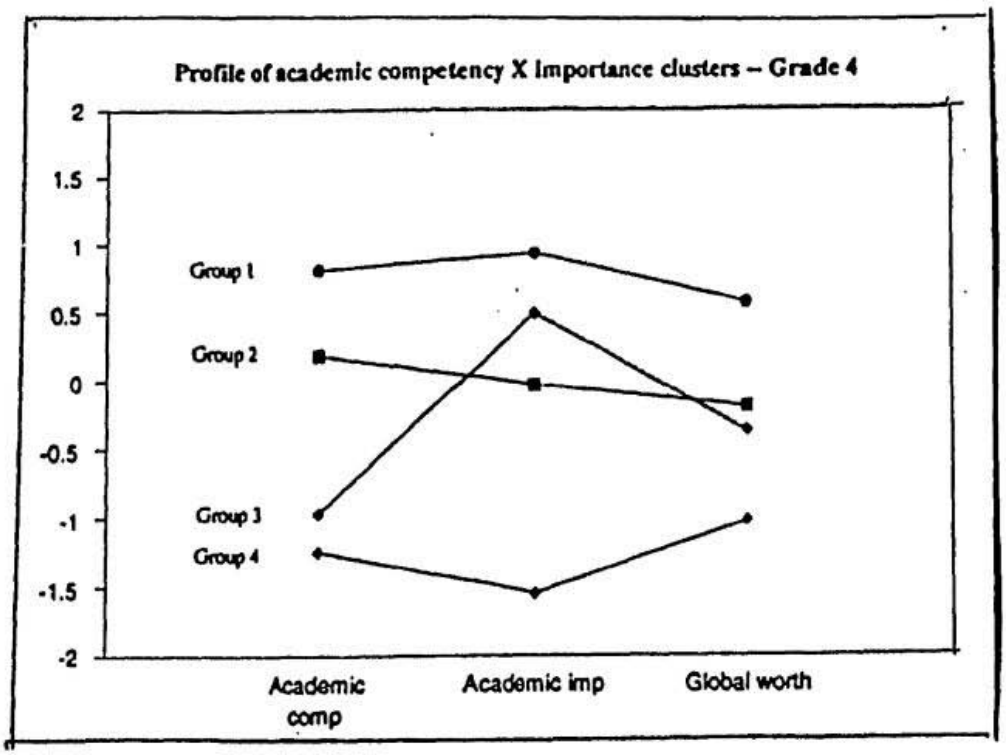

Figure 14. Profile of academic competency X importance clusters - Grade 4.

Table 46. Results of Tests of Simple Main Effects

Source	df	SS	MS	F	p
Group 1	1	0.39	0.39	3.75	>.005
Group 2	1	0.82	0.82	7.78	<.005
Group 3	1	15.85	15.85	149.6	<.005
Group 4	1	0.27	0.27	2.62	>.005

A posteriori contrasts of groups for academic competency (Table 49) indicated significant differences between groups 2 and 3 (t=17.17) and groups 1 and 2 (t=12.50).

Table 47. Academic Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 2 vs 3	0.18	-0.97	67	15	0.11	1.15	17.17	<.01
Group 3 vs 4	-0.97	-1.25	15	6	0.11	0.28	2.47	>.01
Group 1 vs 2	0.81	0.81	67	32	0.11	0.63	12.50	<.01

A posteriori contrasts of groups for academic importance (Table 48) indicated significant differences occurred between groups 2 and 3 (t=-5.26), groups 1 and 3 (t=4.87) and groups 3 and 4 (t=13.29).

Table 48. Academic Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 2 vs 3	-0.04	0.48	32	15	0.20	-0.52	-5.26	<.01
Group 1 vs 3	0.92	0.48	67	15	0.20	0.44	4.87	<.01
Group 3 vs 4	0.48	-1.55	15	6	0.20	2.03	13.29	<.01

A profile of academic competency X importance clusters (Figure 14) indicated that Students in group 1 placed more importance on academic competence and perceived themselves as being more competent than students in group 2. Group 2 students perceived themselves as being more competent than students in group 3, however group 3 students placed higher value on academic competence than their group 2 counterparts. Although students in group 3 did not perceive themselves as being competent in the Academic domain, they considered academic competency to be very important. Unlike group 3, students in group 4 placed little value on academic competency. Like their group 3 counterparts, group 4 students did not perceive themselves as being competent in the Academic domain. Group 4 students may be devaluing academic competency as a way of coping with lack of success in this domain.

Academic Competency X Academic Importance - Impact on Global Self-Worth

Grade 4

Results of the between groups repeated measures omnibus test (Table 49) indicated an effect for Group [$F(3,115)=17.22$, $p<.05$].

Table 49. Repeated Measures Analysis of Variance - Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group2	3	27.51	9.17	17.22	<.05
Error	115	61.23	0.53		

A posteriori contrasts between groups (Table 50) indicated significant differences between groups 1 and 2 ($t=6.87$) and groups 3 and 4 ($t=2.61$).

Table 50. A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 2	0.56	-0.20	67	32	0.53	0.76	6.87	<.01
Group 2 vs 3	-0.20	-0.38	32	15	0.53	0.18	1.12	>.01
Group 3 vs 4	-0.38	-1.03	15	6	0.53	0.65	2.61	<.01

The profile of academic competency X importance clusters (Figure 14) Group1 perceived themselves as being more competent academically than students in group 2. They also placed more importance on academic competence than group 2 and had higher global worth. To group 1 students global worth depended on academic competency and the importance placed on academic competency. Although group 2 students perceived themselves as being academically competent, unlike their group 1 counterparts, they did

not consider academic competency to be important and had low global worth. It would appear, that for students in group 2, the low importance placed on academic competency had a negative impact on their global worth. Therefore, their global worth depended not only on academic competence but the importance placed on academic competence as well. Students in groups 3 and 4 have similar low academic competency but group 3 had higher academic importance and higher global worth. Group 3 and group 2 had similar global worth. However, group 3 had lower academic competency than group 4 but higher academic importance. Group 3 results are not consistent with Rosenberg's interactive hypothesis (1965, 1986) theory that indicates that the negative contribution to self-worth will be larger when the specific perception of competency is more negative and the perceived value of the domain of competency is greater.

These results are reflected in the correlation analyses of second order factors (Table 19) which indicated that in grade 4 global worth is related to academic competence (r= .0001) and academic importance (r= .0001).

Grade 7 - Social Competency X Social Importance

Results of the between groups repeated measures omnibus test (Table 51) indicated an effect for Group [$F(5,117)=168.67$, $p<.05$]. There was no effect for Domain [$F(1,117)=0.60$, $p>.05$] but there was an interaction effect [$F(5,117)=33.37$, $p<.05$].

Table 51. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	p
Group1	5	163.19	32.63	168.67	<.05
Error	117	22.63	0.19		
Social	1	0.09	0.09	0.60	>.05
Social*Group1	5	26.72	5.34	33.37	<.05
Error	117	18.74	0.16		

A test of simple main effects within each group (Table 52) yielded an effect for group 1 [$F(1,31)=13.15$, $p<.005$), group 2 [$F(1,10)=39.28$, $p<.005$), group 3 [$F(1,30)=11.94$, $p<.005$), group 4 [$F(1,24)=10.87$, $p<.005$), group 5 [$F(1,21)=8.36$, $p<.005$) and group 6 [$F(1,7)=84.77$, $p<.005$). This indicated that for students in these groups, their actual perceptions of social competency did not equal the importance they placed on competency in this domain (Figure 15).

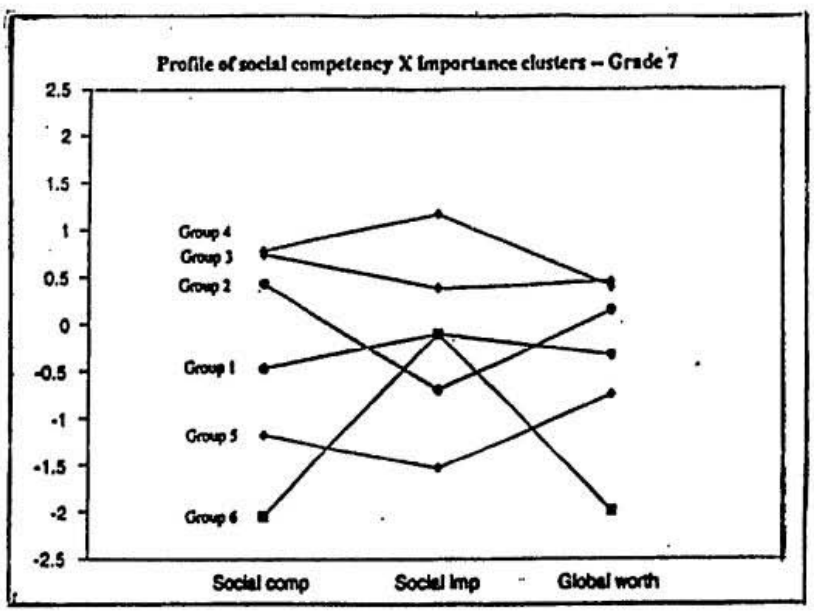

Figure 15. Profile of social competency X importance clusters - Grade 7.

Table 52. Results of Tests of Simple Main Effects

Source	df	SS	MS	F	p
Group 1	1	2.10	2.10	13.15	<.005
Group 2	1	6.29	6.29	39.28	<.005
Group 3	1	1.91	1.91	11.94	<.005
Group 4	1	1.74	1.74	10.87	<.005
Group 5	1	1.33	1.33	8.36	<.005
Group 6	1	13.42	13.42	84.77	<.005

A posteriori contrasts between groups for social competency (Table 53) indicated significant differences between groups 1 and 2 (t=-7.79), groups 1 and 5 (t=8.09), groups 5 and 6 (t=6.64) and groups 2 and 4 (t=-3.02).

Table 53. Social Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 2	-0.46	0.42	31	10	0.19	-0.88	-7.79	<.01
Group 1 vs 5	-0.47	-1.18	31	21	0.19	0.71	8.09	<.01
Group 5 vs 6	-1.18	-2.08	21	7	0.19	0.90	6.64	<.01
Group 2 vs 4	0.43	0.78	10	24	0.19	0.35	-3.02	<.01

A posteriori contrasts between groups for social importance (Table 54) indicated significant differences between groups 1 and 3 (t=-6.08), groups 1 and 2 (t=5.35), groups 2 and 3 (t=-9.51) and groups 1 and 5 (t=16.53).

Table 54. Social Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 3	-0.10	0.38	31	30	0.19	-0.48	-6.08	<.01
Group 1 vs 2	-0.10	-0.70	31	10	0.19	0.60	5.35	<.01
Group 2 vs 3	-0.69	0.38	10	30	0.19	-1.07	-9.51	<.01
Group 1 vs 5	-0.10	-1.54	31	21	0.19	1.44	16.53	<.01

Profile of social competency X importance clusters (Figure 15) indicated differences in perceptions of social competence in groups 2 and 4. Group 4 students perceived themselves as being more competent than students in group 2 and considered social competence to be important. Unlike group 4, students in group 2 did not perceive themselves as being socially competent and placed little value on social competence. Group 2 students may be devaluing social competence as a means of coping with failure in this domain. Students in group 1 perceived themselves as being less competent socially than students in group 2 but unlike their group 2 counterparts, group 1 placed higher value on social competency. Students in group 5 considered themselves to be less competent socially than group 1, but unlike students in group 1, they placed lower value on social competency. Like their counterparts in group 2, these students may be placing little importance on social competency so that they can better deal with lack of success in this domain. Group 6 perceived themselves as being less competent socially than group 5, but unlike group 5, students in group 6 placed higher value on social competence. Group 3 students and group 4 students perceived themselves as being competency socially, however, students in group 4 placed higher value on social competency than their counter- parts in group 3.

Social Competency X Social Importance - Impact on Global Self-worth

Grade 7

Results of the between groups repeated measures omnibus test (Table 55) indicated an effect for Group [$F(5,116)=14.11$, $p<.05$].

Table 55. Repeated Measures Analysis of Variance - Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group1	5	51.75	10.35	14.11	<.05
Error	116	85.06	0.73		

A posteriori contrast between groups (Table 56) indicated significant differences between groups 1 and 4 ($t=-4.44$) and groups 5 and 6 ($t=4.74$).

Table 56. Global Worth for Social Clusters- A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	test
Group 1 vs 2	-0.33	0.15	31	10	0.73	-0.48	-2.18	no
Group 2 vs 4	0.15	0.40	10	24	0.73	-0.25	-1.10	no
Group 1 vs 4	-0.33	0.40	31	24	0.73	-0.73	-4.44	yes
Group 1 vs 5	-0.33	-0.75	31	21	0.73	0.42	2.46	no
Group 5 vs 6	-0.75	-2.00	21	7	0.73	1.25	4.74	yes

A profile of social competency X importance clusters (Figure 15) indicates that groups 2, 3 and 4 differ on importance but had similar high competency and high global worth. This suggests that when competency is high, importance may not be a factor influencing global worth. Groups 1 and 6 had similar social importance but differed in social competency and global worth. Group 6 had lower competency and lower global worth than group 1. Group 6 is consistent with the low competency/high importance =

low global worth prediction of the interactive hypothesis (Rosenberg, 1965, 1986).

These results are reflected in the correlations of second order factors (Table 22) which indicated that, for grade 7 students, global worth is related to social competency (r=.0001) and Social importance (r=.0005).

Grade 7 - Academic Competency X Academic Importance

Results of the between groups repeated measures omnibus test (Table 57) indicated an effect for Group [F(5,123)=218.95, p<.05], and an effect for Domain [F(1,123)=12.60, p<.05]. There was also an interaction effect [F(5,123)=30.36, p<.05].

Table 57. Repeated Measures Analysis of Variance Tests of Hypotheses for Between Subjects Effects

Source	df	SS	MS	F	p
Group2	5	205.88	41.17	218.95	<.05
Error	123	23.13	0.18		
Academic	1	2.53	2.53	12.60	<.05
Academic* Group2	5	30.53	6.10	30.36	<.05
Error	123	24.74	0.20		

This was followed by a series of tests of simple main effects (Table 58) which yielded an effect an effect for group 2 [F(1.31)=10.45, p<.005], group 3 [F(1,38)=11.54, p<.005], group 4 [F(1,19)=7.15, p<.005], group 5 [F(1,13)=47.36, p<.005] and group 6 [F(1,7)=87.84, p<.005). This indicated that for students in these groups, their perceptions of academic competency did not equal the value they placed on competency in the Academic domain. There was no effect for group 1

[F(1,21)=.01,p<.005). Students in this group considered themselves to be equal in academic competency and academic importance (Figure 16).

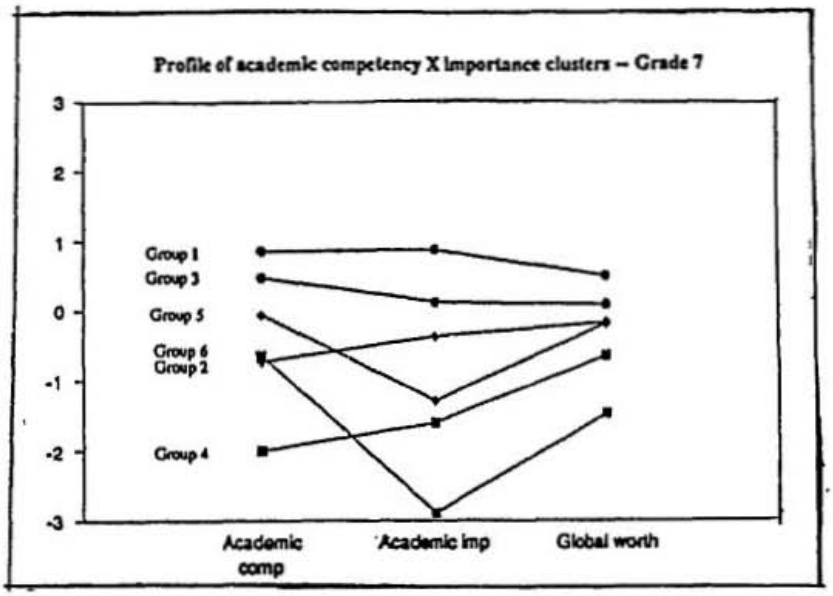

Figure 16. Profile of academic competency X importance clusters - Grade 7.

Table 58. Results of Tests of Simple Main Effects

Source	df	SS	MS	F	p
Group 1	1	0.003	0.003	0.01	>.005
Group 2	1	2.103	2.103	10.45	<.005
Group 3	1	2.32	2.32	11.54	<.005
Group 4	1	1.44	1.44	7.15	<.005
Group 5	1	9.52	9.52	47.36	<.005
Group 6	1	17.67	17.67	87.84	<.005

A posteriori contrasts between groups (Table 59) for academic competency indicated significant differences between groups 1 and 3

(t=4.53), groups 1 and 5 (t=8.37), groups 2 and 4 (t=14.03), groups 3 and 5 (t=5.35) and groups 5 and 6 (t=4.08).

Table 59. Academic Competency - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 3	0.85	0.47	21	38	0.19	0.38	4.53	<.01
Group 1 vs 5	0.85	-0.06	21	13	0.19	0.91	8.37	<.01
Group 2 vs 4	-0.74	-2.00	31	19	0.19	1.26	14.03	<.01
Group 3 vs 5	0.47	-0.06	38	13	0.19	0.53	5.35	<.01
Group 5 vs 6	-0.06	-0.65	13	7	0.19	0.59	4.08	<.01

A posteriori contrasts between groups for academic importance (Table 60) indicated significant differences between groups 1 and 3 (t=8.61), groups 2 and 3 (t=-6.43), groups 4 and 5 (t=-3.06) and groups 2 and 6 (t=19.54).

Table 60. Academic Importance - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 3	0.86	0.12	21	38	0.20	0.74	8.61	<.01
Group 2 vs 3	-0.37	0.11	31	38	0.19	-0.48	-6.43	<.01
Group 4 vs 5	-1.61	-1.27	19	13	0.19	-0.34	-3.06	<.01
Group 2 vs 6	-0.37	-2.89	31	7	0.19	2.52	19.54	<.01

A profile of academic competency X importance clusters (Figure 16) shows that groups 1 and 3 perceived themselves as being academically competent and considered academic competency to be important. However, students in group 1 perceived themselves as being more competent and placed more value on academic competency than students in group 3. Students in groups 5 and 6 did not perceive themselves as being academically competent and did not consider academic competency to be

important. They scored lower in importance than they did in competency. These students may be devaluing academic competency as a means of coping with failure in this domain. Although group 6 and group 2 considered themselves as being equally competent academically, students in group 2 placed more value on competency in the academic domain. Group 4 perceived themselves as being less competent than group 6, but unlike group 6, students in group 4 placed more value on Academic competency.

Academic Competency X Academic Importance - Impact on Global Worth

Grade 7

Results of the between groups repeated measures omnibus test (Table 61) indicated an effect for Group [F(5.122)=5.26, p<.05].

Table 61. Repeated Measures Analysis of Variance - Tests of Hypotheses for Between Subjects Effects

Dependent Variable: GLOBAL

Source	df	SS	MS	F	p
Group2	5	27.46	5.49	5.26	<.05
Error	122	127.39	1.04		

A posteriori contrasts between groups (Table 62) indicated significant differences between groups 1 and 2 (t=3.24) and groups 4 and 6 (t=2.60).

Table 62. Global Worth for Academic Clusters - A Posteriori Contrasts Between Groups

	Mean 1	Mean 2	n1	n2	MSe	diff	t	
Group 1 vs 3	0.49	0.09	21	38	1.04	0.40	2.04	>.01
Group 1 vs 2	0.49	-0.17	21	31	1.04	0.66	3.24	<.01
Group 2 vs 3	-0.17	0.09	31	38	1.04	-0.26	-1.49	>.01
Group 2 vs 4	-0.17	-0.65	31	19	1.04	0.48	2.28	>.01
Group 4 vs 6	-0.65	-1.48	19	7	1.04	0.83	2.60	<.01

A profile of academic competency X importance clusters (Figure 16) showed that groups 1 and 3 had high global worth. These groups perceived themselves as being academically competent and considered competency in this domain to be important. However, students in group 1 scored higher in these two variables than students in group 3. Students in group 1 also had higher global worth than group 3. There was little difference in the academic competence of students in Group 2 and group 6. However, group 6 placed less importance on being academically competent than group 2 and had lower global worth. Further, students in group 6 perceived themselves as being more competent academically that students in group 4. However, they placed less value on academic competency than students in group 4 and had lower global worth. It would appear, that for students in group 6, global worth depended on the importance placed on competency in academics. Group 5 students perceived themselves as being more competent academically than students in group 2 but group 5 placed lower importance on academic competency. Students in groups 2 and 5 were almost equal in global worth. Higher academic competency did not result in group 5 students having higher global worth than group 2 students. Placing a lower importance on academic competency could have had a negative impact on the global worth of students in group 5.

These results are reflected in the correlations of second order factors (Table 22). This analysis reveals a strong correlation between Global worth and academic importance (r= .0001). This indicates that, in grade 7, global worth is related to the importance students place on competency in academics.

CHAPTER 5

Discussions, Conclusions and Recommendations

The purpose of this research study was to explore the relationship between perceptions of competency, importance and self-worth. Of particular interest was the interaction between competency and importance and how this interaction impacted self-worth. Of further interest was the degree to which perceptions of competency, importance and self-worth are affected by age and gender in preadolescents and adolescents.

This study provided evidence to support the use of cluster analysis methodology. This method of analysis was used to investigate how competency and importance interacted to influence self-worth. The cluster analysis provided a rich description of the sample by creating profiles of students with similar characteristics which allowed for between-group comparisons. This uncovered patterns of interaction between competency and importance and their effects on self-worth which was not possible through factor and correlations analyses. The combination of data from these methodologies resulted in a more effective and thorough study of the sample.

Domain Competency and Importance

The results of this study indicated that in the Academic domain, students in grade 4 perceived themselves as being more competent and placed greater importance on competency than their grade 7 counter-parts. In the Social domain, there was no difference in students' perceptions of competency or the importance placed on competency at each grade level. These results support studies by Marsh et al. (1984) which indicated a decline in self-concept in the area of academics as children approach adolescence. Marsh et al. (1984) further indicated no evidence of a decline in the social area of self-concept.

Addressing the issue of gender, females at each grade level perceived themselves as being more competent academically than their male counterparts. However, in the Social domain, males and females at both grade levels perceived themselves as being equally competent. These results did not support the evidence presented in studies by Connell et al. (1975), Smith (1975), and Burns (1979) which indicated that males possessed a more positive self-concept than females. Further, results of this study were contrary to those of Coopersmith (1967), Smith (1975), and Connell et al. (1975) conducted with children between the ages of 6 and 11 which indicated that girls evaluated themselves less positively than boys.

Global Self-Worth

The cluster analyses revealed that for grade 4 students, global worth was related to both academic and social competency and the importance placed on academic competency. This suggested that students at this grade level derived a sense of self-worth from doing well in school and from getting along with their peers. However, they placed more importance on succeeding academically than socially.

For grade 7 students global worth was related to being competent in the social domain as well as the importance placed on social competency. From this we may conclude that students at this grade level considered getting along with their peers to be important. Being accepted and liked by those in their social circle gave them a sense of self-worth.

Domain Competency X Importance - Impact on Global Self-Worth

Interesting profiles emerged from the cluster analysis of academic competency/importance scores and social competency/importance scores. The cluster analyses provided data which both supported and rejected the

compensatory hypothesis (Winne and Marx, 1981), the interactive hypothesis of Rosenberg (1986), and the selectivity hypothesis of Marsh (1986).

The compensatory hypothesis (Winne and Marx, 1981) suggests that specific domains of self-concept are inversely related, rather than independent from one another. Accordingly, a low standing in one specific domain might be compensated by a higher standing in another specific domain. For example, Winne and Marx (1981) found that students who were less successful academically perceived themselves as being more successful socially. As well, they found that students who were less successful socially perceived themselves as being more successful academically. Their findings supported the hypothesis that a lack of success in one area seems to be associated with success in another area. Support for the compensatory hypothesis can be found in studies by Milgrim & Milgrim (1976), Ross & Parker (1980) and Winne et al. (1982).

This study found evidence for and against the compensatory hypothesis (Winne & Marx, 1981). The grade 4 profile of social and academic competency clusters (Figure 3) suggested that students in group 3 (low social/high academic/high worth) were compensating for lack of social competency by being competent in the academic domain. It appeared that succeeding in the academic domain was a strategy used by group3 students to sustain global worth.

These results indicated that the compensatory hypothesis (Winne & Marx, 1981) is not a generalizable theory applicable to all individuals. Rather, it is a strategy used by some individuals to preserve global worth.

Compensatory strategies were more evident among grade 7 students than their counterparts in grade 4. The grade 7 profile of social and academic competency clusters (Figure 4) suggested that students in groups 2, 3, 4 and 5 were compensating for lack of competency in one domain by

being competent in the other domain. Students in group 2 (low social/high academic/low worth), and group 4 (low social/high academic/low worth) compensated for lack of social success by achieving success in the academic domain. However, in the case of group 2 and group 4 students success in the academic domain did not compensate for lack of success in the social domain. Lack of social success resulted in low global worth. Interestingly, for students in group 3 (high social/low academic/high worth) compensating for lack of academic success by achieving socially did prove to be a successful strategy in preserving global worth. The same can be said for students in group 5. These students did not perceive themselves as being competent in either domain. However, they did perceive themselves as being more competent socially than academically and had similar ratings in social competency and global worth.

For grade 7 students it appeared that compensatory strategies were only successful in preserving self-worth if students were competent in the social domain. The strategy was not effective if students were competent academically and not competent socially. These results are reflected in the correlation analysis of competency and global worth scale scores which indicated that, in grade 7, global worth is related to being competent in the Social domain (Table 22).

Rosenberg's interactive hypothesis (1986) suggested that having positive perceptions of competency in a particular domain will contribute positively to self-worth. However, the size of the contribution depended on the importance the individual placed on that particular domain. For example, if a student is doing well in a subject that is unimportant to the student, then the positive contribution to self-worth will be less than if the student were experiencing success in a subject considered to be important. Further, negative perceptions of competency will contribute negatively to self-worth and the size of the negative contribution depends

on the degree of importance the individual places on the domain. For example, if a student is failing in a subject that is considered to be important to the student, then the negative impact on self-worth will be greater than if the student is failing in a subject that is of no importance.

This study provided evidence contrary to and in support of Rosenberg's interactive hypothesis (1986). In the grade 4 profile of social competency X importance clusters (Figure 13) students in group 4 (high competency/high importance/high worth) perceived themselves as being very competent socially and placed high value on this competency. However, their global worth ratings were lower than ratings in competency and importance. Group 3 (high competency/low importance/high worth) perceived themselves as being competent socially. However, to these students social competency was not important. Group 3 received similar high ratings in both competency and worth. A low importance rating had little impact on the self-worth of these students. Students in group 1 (low competency/high importance/high worth) and group 2 (low competency/low importance/high worth) had similar low competency ratings and similar high global worth. The importance ratings of students in these two groups had little impact on their global worth. According to Rosenberg (1986) the low importance ratings of students in groups 2 and 3 should have had a negative impact on their global worth. Similarly, the high importance ratings of groups 1 and 4 should have had a positive impact on their global worth. For groups 1, 2, 3 and 4 importance played an insignificant role in predicting global worth. Further evidence contrary to Rosenberg's hypothesis is found in group 1 (low competency/high importance/high worth). For these students low competency in a valued domain should have resulted in low global worth.

In the academic competency X importance clusters of grade 4 students (Figure 14) support for Rosenberg's hypothesis (1986) was found in group 1 (high competency/high importance/high worth), group 3 (low competency/ high importance/low worth), and group 4 (low competency/low importance/low worth). For group 3 students failure in a valued domain negatively impacted global worth. Although students in group 4 did not consider academic competency to be important, failure in this domain had a negative impact on global worth. Group 2 students (high competency/low importance/ low worth) provided evidence contrary to Rosenberg's hypothesis (1986). Positive perceptions of competency for students in group 2 did not result in positive global worth.

In the social competency and importance clusters of grade 7 students (figure 15) there is more evidence for than against the interactive hypothesis (Rosenberg, 1986). In the Social domain (Figure 15) support for Rosenberg's hypothesis (1986) is most evident in group 6 (low competency/ high importance/low worth). These students had negative perceptions of competency in a valued domain which resulted in negative global worth. Group 1 (low competency/low importance/low worth), group 2 (high competency/low importance/high worth), group 3 (high competency/high importance/high worth), group 4 (high competency/high importance/high worth) and group 5 (low competency/low importance/low worth) also provided support for the interactive hypothesis (Rosenberg, 1986). Group 2 (high competency/low importance/high worth) had positive perceptions of competency in a domain not considered to be important. Low ratings of importance had little impact on the global worth of these students. Although students in group 5 (low competency/low importance/low worth) had low ratings in all variables, their ratings in global worth were higher than those in competency and importance. Devaluing social competency could have been a strategy used by these students to sustain global worth.

In the profile of academic competency X importance clusters of grade 7 students (Table 16) support for Rosenberg's hypothesis (1986) is evident in all the groups. Most significant in this profile are group 5 (low competency/low importance/low worth) and group 6 (low competency/low importance/low worth). The importance ratings of each of these groups were much lower than ratings of competency and global worth. Neither of these groups perceived themselves as being competent academically and low importance ratings had little impact on their global worth. However, for students in groups 5 and 6 devaluing academic competency could have been a strategy used to sustain global worth. It would appear that if perceptions of competency are negative then low importance ratings have little impact on global worth.

Research by Marsh (1986) found little support for Rosenberg's interactive hypothesis. Instead, Marsh found support for what he termed the "selectivity hypothesis". This suggested that individuals will rate as more important those domains in which they have high perceptions of competency and will rate as unimportant those domains in which they have low perceptions of competency. In other words, individuals will place more value on domains of competency in which they are experiencing success and less value on domains of competency in which they are experiencing failure. For example, if a student is having more success in Math than any other subject then Math will be the subject of greatest value to that student. However, if the students are experiencing failure in Math then that subject will not be valued by the student. Unlike Rosenberg, Marsh did not suggest that importance had an impact on global worth. Rather, he suggested that individuals with high global worth are more likely to have high perceptions of competency in domains which they value. For example, if a student with high global worth considers Math to be very important then it is likely that the student will be competent in Math.

This study found evidence for and against Marsh's hypothesis. The profile of social competency X importance clusters of grade 4 students (Figure 13) presented evidence contrary to the selectivity hypothesis. Group 1 students (low competency/high importance/high worth) placed value on social competency however they did not perceive themselves as being competent in this domain. However, they had high global worth. According to Marsh (1986) students with high global worth are more likely to have high perceptions of competency in domains they valued. To these students this was not the case. Instead, they had low perceptions of competency in a domain that they valued. Group 3 (high competency/low importance/high worth) perceived themselves as being competent socially but they did not value this competency. These students had high global worth and should have valued being competent socially. Students in group 2 (low competency/ low importance/high worth) present an interesting profile. The importance placed on competency by these students was much lower than their actual perceptions of competency. These students could be devaluing competency as a means of preserving their global worth. Group 4 (high competency/high importance/high worth) supported Marsh's selectivity hypothesis. These students had positive perceptions of competency in a valued domain.

In the profile of academic competency X importance clusters of grade 4 students (Figure 14) evidence contrary to the selectivity hypothesis was seen in group 2 (high competency/low importance/low worth) and group 3 (low competency/high importance/low worth). Although students in group 2 perceived themselves as being competent academically, they did not value competency in this domain. Group 3 students placed high importance on competency even though they did not perceive themselves as being academically competent. Although group 4 (low competency/low importance/ low worth) received low ratings on all scales, global worth ratings were higher than competency and importance ratings. However, importance ratings

were lower than competency. This would suggest that students in this group could be devaluing academic competency as a means of sustaining global worth. Support for Marsh was found in group 1 (high competency/high importance/high worth). Students in this group valued being competent in the Academic domain.

More evidence for than against the selectivity hypothesis (Marsh, 1986) was found in the profile of social competency X importance clusters of grade 7 students (Figure 15). Group 3 (high competency/high importance/ high worth) and group 4 (high competency/high importance/high worth) supported Marsh's hypothesis. Students in both these groups perceived themselves as being competent and valued competency in that domain. Group 2 (high competency/low importance/high worth) provided evidence contrary to the selectivity hypothesis (Marsh, 1986). Students in this group perceived themselves as being competent socially but this competency was not important to them. Further, they possessed high global worth. According to Marsh, these students should have valued social competency. Group 6 students (low competency/high importance/low worth) did not perceive themselves as being competent but placed high value on social competency. Although group 5 (low competency/low importance/low worth) received low ratings on all scales, their global worth was higher than competency and importance. Further, importance was lower than competency. This suggested that these students may be devaluing social competency as a means of sustaining global worth.

The profile of academic competency X importance clusters of grade 7 students (Figure 16) provided support for Marsh's theory. Students in Group 1 (high competency/high importance/high worth) and group 3 (high competency/high importance/high worth) rated as important their competency in the Academic domain. Further support was found in group 5 (low competency/low importance/low worth) and group 6 (low/competency/low

importance/low worth). These students did not perceive themselves as being competent in the Academic domain. However the global worth of these students was higher than competency and importance. Further, importance ratings were lower than competency ratings. This would suggest that these students were devaluing academic competency as a means of protecting global worth.

According to Marsh, competency and importance complement one another. One does not subsist without the other. They exist in equal proportions within the realm of the individual's self-concept. However, unlike Rosenberg (1986), Marsh did not suggest that importance had an impact on global worth. Rather, he indicated that importance ratings did not contribute to predicting global worth. This leads one to conclude that to Marsh, domain competency is the only factor influencing global worth.

Summary

The results of this study suggest that importance does not always have either a positive or a negative impact on self-worth as suggested by Rosenberg. Nor does it parallel competency as indicated by Marsh. However, devaluing competency when one is unsuccessful could be a strategy used by some students to sustain global worth.

Rosenberg (1986), Marsh (1986), and Winne & Marx (1981) presented their hypotheses as generalizable theories applicable to all individuals. This study provided evidence which indicates that these "theories" cannot be applied to all students and are better referred to as "strategies" used by some individuals as a means of sustaining global worth.

This research study proposes that the interactive "hypothesis" of Rosenberg (1986) and the selectivity "hypothesis" of Marsh (1986) may be more applicable to grade 7 children than to children in grade 4. The

reasons for this could be developmental, environmental (home and school) or both.

Recommendations for Further Research

The study presented in this paper and studies by Marsh et al. (1984) indicate that there is a decline in academic self-concept as children approach adolescence. Interestingly, there is no evidence of a decline in social self-concept. A child's social self-concept is fostered in both the school and home environments. Relationships with peers also greatly influence self-concept. However, the building blocks for a healthy academic self-concept are found primarily within the school environment.

The decline in academic self-concept as children approach adolescence should be cause for great concern among educators. However, the approach of adolescence may not be wholly responsible for this decline. The school may also contribute by providing an environment that does not meet the academic needs of its children. Tasks presented to children by educators must suit their level of ability. Children must feel that all their accomplishments are worthwhile and they are valued members of the school environment. Further, teachers and school counsellors must recognize the different emotional needs of each child within their care and endeavor to meet these needs. Failure to do this will undoubtedly have an adverse affect on individual self-concepts.

Further research into the decline in academic self-concept as children approach adolescence is warranted. A study to investigate if the school environment plays a significant role in this decline is recommended. Meanwhile, educators must create a school environment that fosters feelings of self-worth in children and they must be particularly attentive to the diverse needs of children approaching adolescence.

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Appendix A - The Instrument

We are interested in finding out a little bit more about you? What things are you good at? What do you think is important? What makes you feel respected and important?

On the following pages are some sentences. Read each sentence carefully. Does that sentence describe you? Is that really like you? If so, then circle 7. Does that sentence almost describe you, but not quite? If so, then circle 6. Is that sentence not at all like you? Circle 1 if that sentence is not at all like you and doesn't describe you.

Practice

Here is an example to practice:

	Not at all like me						A lot like me
I would really like a cat for a pet.	1	2	3	4	5	6	7

Is that true? Would you really like a cat for a pet? Circle 7. Would you sort of like to have a cat for a pet but maybe you are not sure? Circle 4 or 5. Do you definitely NOT want a cat for a pet? Circle 1. Do you think that you probably don't want a cat, but you still are not sure? Circle 3 or 4.

Tell us a little bit about yourself.

I am a ____ boy ____ girl

I am in grade _____

My age is _____

I was born in the month of _____

Students have different thoughts about themselves as people. Some students think they are good people -- important and respected. Some do not think they are good people, and are not very important. *How do you think about yourself?* Read each sentence below carefully. Is that sentence true for you? Circle the number that best describes how true that sentence is for you. *Be honest -- we are interested in YOU.*

	Not at all like me						A lot like me
1. I am a good person.	1	2	3	4	5	6	7
2. I feel I am accepted as a person.	1	2	3	4	5	6	7
3. I feel appreciated by others.	1	2	3	4	5	6	7
4. I feel I am an important person.	1	2	3	4	5	6	7
5. I am a person who is respected.	1	2	3	4	5	6	7

People describe themselves in different ways. *How would YOU describe yourself?* Read each statement carefully. Is that sentence true for you? Circle the number that best describes how true that sentence is for you. *Be honest -- we are interested in YOU.*

	Not at all like me						A lot like me
6. I am good at sports.	1	2	3	4	5	6	7
7. I am good looking.	1	2	3	4	5	6	7

	Not at all like me						A lot like me
8. I have lots of friends.	1	2	3	4	5	6	7
9. My parents love me.	1	2	3	4	5	6	7
10. I am good at reading.	1	2	3	4	5	6	7
11. Math is easy for me.	1	2	3	4	5	6	7
12. I live in a big house.	1	2	3	4	5	6	7
13. I do well in sports.	1	2	3	4	5	6	7
14. I get along well with people.	1	2	3	4	5	6	7
15. I am handsome or pretty.	1	2	3	4	5	6	7
16. I am a popular person.	1	2	3	4	5	6	7
17. My parents and I spend a lot of time together.	1	2	3	4	5	6	7
18. I get good marks in reading.	1	2	3	4	5	6	7
19. I am good at math.	1	2	3	4	5	6	7
20. I am a good artist.	1	2	3	4	5	6	7

	Not at all like me						A lot like me
21. Music is easy for me.	1	2	3	4	5	6	7
22. I have expensive clothes.	1	2	3	4	5	6	7
23. I am a good athlete.	1	2	3	4	5	6	7
24. I am good at art.	1	2	3	4	5	6	7
25. I am good at music.	1	2	3	4	5	6	7
26. I am attractive looking.	1	2	3	4	5	6	7
27. I get along well with my parents.	1	2	3	4	5	6	7
28. Reading is easy for me.	1	2	3	4	5	6	7
29. I get good marks in math.	1	2	3	4	5	6	7
30. Art is easy for me.	1	2	3	4	5	6	7
31. I get good marks in music.	1	2	3	4	5	6	7
32. My family has lots of money.	1	2	3	4	5	6	7

Different people think different things are important. ***What is important to YOU?*** **Below are some sentences. Read each sentence carefully. Circle the number that best describes how true that sentence is for you.** ***Be honest -- what is important to YOU?***

	Not at all like me						A lot like me
33. It is important to me to be good in sports.	1	2	3	4	5	6	7
34. It is important to me to be good looking.	1	2	3	4	5	6	7
35. Having lots of friends is important to me.	1	2	3	4	5	6	7
36. It is important to me that my parents love me.	1	2	3	4	5	6	7
37. Being a good reader is important to me.	1	2	3	4	5	6	7
38. It is important to me to do well in math.	1	2	3	4	5	6	7
39. Being a good artist is important to me.	1	2	3	4	5	6	7
40. It is important to me to get good marks in music.	1	2	3	4	5	6	7
41. It is important to me to live in a big house.	1	2	3	4	5	6	7
42. Being a good athlete is important to me.	1	2	3	4	5	6	7

	Not at all like me						A lot like me
43. It is important to me to be handsome or pretty.	1	2	3	4	5	6	7
44. Being popular is important to me.	1	2	3	4	5	6	7
45. It is important to me to spend time with my parents.	1	2	3	4	5	6	7
46. It is important to me to get good marks in reading.	1	2	3	4	5	6	7
47. Getting good marks in math is important to me.	1	2	3	4	5	6	7
48. It is important to me to be good in art.	1	2	3	4	5	6	7
49. It is important to me to be good in music.	1	2	3	4	5	6	7
50. Wearing expensive clothes is important to me.	1	2	3	4	5	6	7
51. Doing well in sports is important to me.	1	2	3	4	5	6	7
52. Being attractive is important to me.	1	2	3	4	5	6	7
53. Getting along well with others is important to me.	1	2	3	4	5	6	7

	Not at all like me						A lot like me
54. Getting along with my parents is important to me.	1	2	3	4	5	6	7
55. It is important to me that I do well in reading.	1	2	3	4	5	6	7
56. Being good in math is important to me.	1	2	3	4	5	6	7
57. Doing well in art is important to me.	1	2	3	4	5	6	7
58. Doing well in music is important to me.	1	2	3	4	5	6	7
59. Having lots of money is important to me.	1	2	3	4	5	6	7

Different things make different people feel good, feel important, and respected. *What makes YOU feel good, important, and respected?* Below are some sentences. Read each sentence carefully. Circle the number that best describes how true that sentence is for you. *Be honest - what makes YOU feel good, feel important, or feel respected?*

	Not at all like me						A lot like me
60. Doing well in math makes me feel important.	1	2	3	4	5	6	7
61. Doing well in sports makes me feel good.	1	2	3	4	5	6	7
62. Being attractive makes me feel good.	1	2	3	4	5	6	7
63. Being popular makes me feel important.	1	2	3	4	5	6	7

	Not at all like me						A lot like me
64. I feel important because my parents love me.	1	2	3	4	5	6	7
65. Spending time with my parents. makes me feel good	1	2	3	4	5	6	7
66. Getting along with my parents . makes me feel respected	1	2	3	4	5	6	7
67. Doing well in reading makes me feel important.	1	2	3	4	5	6	7
68. Doing well in art makes me feel good..	1	2	3	4	5	6	7
69. Doing well in music makes me feel important.	1	2	3	4	5	6	7
70. Living in a big house makes me feel important.	1	2	3	4	5	6	7
71. Doing well in math makes me feel respected.	1	2	3	4	5	6	7
72. Doing well in sports makes me feel respected.	1	2	3	4	5	6	7
73. Being good looking makes me feel important.	1	2	3	4	5	6	7
74. Getting along well with people makes me feel good.	1	2	3	4	5	6	7

	Not at all like me						A lot like me
75. I feel respected when I do well in reading.	1	2	3	4	5	6	7
76. I feel respected when I do well in art.	1	2	3	4	5	6	7
77. Doing well in music makes me feel respected.	1	2	3	4	5	6	7
78. Wearing expensive clothes makes me feel good.	1	2	3	4	5	6	7
79. Doing well in math makes me feel good.	1	2	3	4	5	6	7
80. Doing well in sports makes me feel important.	1	2	3	4	5	6	7
81. Being good looking makes me feel respected.	1	2	3	4	5	6	7
82. Having a lot of friends makes me feel respected.	1	2	3	4	5	6	7
83. I feel good when I do well in reading.	1	2	3	4	5	6	7
84. Doing well in art makes me feel important.	1	2	3	4	5	6	7
85. I feel good when I do well in music.	1	2	3	4	5	6	7
86. Having lots of money makes me feel respected.	1	2	3	4	5	6	7

Appendix B - Letter to Assistant Superintendent

7 Princess Anne Place
St. John's, NF.
A1A 2P3
March 10th, 1994

Ms. Ruth Dawe
Assistant Superintendent
Avalon Consolidated School Board
P.O. Box 1980
St. John's, NF.
A1C 5R5

Dear Ms. Dawe,

Since September 1992, I have been on educational leave from my position as a grade three teacher at Vanier Elementary. The purpose of this leave is to obtain a Master's degree in educational psychology (guidance counselling) from Memorial University of Newfoundland.

I am presently working towards the completion of this degree with my supervisor Dr. Tim Seifert and wish to conduct an investigative study of children's self-concept and self-worth. Specifically, I will attempt to seek answers to the following research questions:

1. What sources of competency do children value most and how do they change from grades 4 to 7?

2. How do these sources of competency influence students self-worth?

In conducting my study, I would like to administer a self-concept and self-worth scale to children in grades 4 and 7. I am hereby requesting your permission to administer this test to 200 children at each of these grade levels.

If possible, I would like to carry out my research project in the following schools:

Vanier Elementary (2 classes of grade 4)
Cowan Heights Elementary (3 classes of grade 4)
Bishop Abraham Elementary (3 classes of grade 4)
MacDonald Drive Junior High School (8 classes of grade 7)

The self-concept and self-worth scale should require approximately 20-25 minutes to complete. Children will not be asked to give their names. Only age, gender and grade level will be requested.

I am attaching a copy of this questionnaire for your examination. Should you have any concerns regarding my request you may contact me at 726-8856 or Dr. Tim Seifert at 737-4470. A third party to contact is Dr. Pat Canning at 737-3402.

This study has received the approval of the Faculty Committee for Ethical Review of Research Involving Human Subjects.

I look forward to a favorable reply at your earliest convenience.

Sincerely yours,

_____

Sonia Harvey

Appendix C - Letter to Parents/Consent Form

March 23, 1994

Dear Parent(s):

I am requesting your permission to have your child participate in an investigation I am conducting. Presently I am working towards the completion of a Master's degree in educational psychology with my supervisor Dr. Tim Seifert of Memorial University. I would like to conduct a study of children's self-concepts. I am hoping to gain information on how children perceive themselves and how these perceptions affect their feelings of self-worth. Hopefully, this information may provide teachers with further understanding into the area of self-concept. The more knowledge and understanding teachers have of this very important area, the better equipped they are to help their students develop positive self-concepts.

I would like to administer a self-concept and self-worth questionnaire to your child. This questionnaire, which will take approximately 20-25 minutes of school time, has the approval of the Avalon Consolidated School Board, the principals of the various schools, and the Ethics Committee of Memorial University.

Please be assured that your child has not been singled out to participate in this study. All the students in his/her class will be requested to complete the questionnaire. Students will not be asked to write their names on the questionnaire, therefore all responses will be anonymous. Students may omit answering any questions they prefer to omit. As well, they may withdraw from the study at any time without prejudice of any kind. To ensure that this is understood by your child, prior to administering the questionnaire I will clearly state that students are not to write their names on the questionnaires and may omit answering questions they prefer to omit. They will also be reminded that they may withdraw from the study at any time without prejudice of any kind.

In order for this study to be successful, I will need approximately 400 children. Therefore, I am hoping that all children will participate. However, participation is voluntary. If you would like to discuss this matter further, please call me at 726-8856 or Dr. Tim Seifert at 737-4470. A third person you may contact (not associated with this study) is Dr. Pat Canning at 737-3402.

If you give permission for your child to participate, please complete the consent form below and return it to the school as soon as possible. Total results of the class study will be available on request. Upon granting permission you may still withdraw your child from the study should you decide to do so.

Thank you for your cooperation. It is greatly appreciated.

Sincerely,

_____

Sonia Harvey
(teacher-student)

Consent Form

I give permission for my child to take part in this study. In giving permission I understand the following:

This test will only be used for the purpose described above.
My child will not be required to write his/her name on the questionnaire.
My child is free to omit answering any questions he/she prefers to omit.
I may withdraw my permission at any time without prejudice of any kind.
My child may withdraw from the study at any time without prejudice of any kind.
In writing the report my child's school will not be identified.
In writing the report my child's name will not be used (This is ensured considering that my child's name will not appear on the questionnaire).
I may receive the results of this study on request.

Signature of Parent_____

Child's Name_____

Date:_____