The Pennsylvania State University
The Graduate School
College of Education

THE RELATIONSHIP BETWEEN LEARNER-CENTEREDNESS AND SELF-ESTEEM IN TWO MIDDLE SCHOOLS

A Thesis in
Instructional Systems
by
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Submitted in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy

May 2002
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Abstract

The purpose of this study was to investigate the effects of the implementation of a systemic approach to building self-esteem to help ward off the dip in self-esteem that is common in adolescence. Additionally, the study investigated the relationship between the learner-centeredness and the self-esteem of those students enrolled in two middle school environments.

Self-esteem was measured through the Coopersmith Self-Esteem Inventory administered in October and again in January. Students’ perceptions of learner-centeredness were measured by the Assessment of Learner-Centered Practices (ALCP) (McCombs & Lauer, 1997) in January. The ALCP measures learner-centeredness across four domains of classroom practice: (1) creating a positive classroom climate and relationships with students, (2) honoring student voice and providing individual learning challenges, (3) encouraging higher order thinking and learning skills, and (4) adapting to a variety of individual developmental differences (McCombs, 2001).

The results of this study suggest that a learning environment that is perceived as being more highly learner-centered and approaches the nurturing of self-esteem systemically will result in higher self-esteem scores.
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Acknowledgments

The completion of this dissertation would not have been possible without the support and assistance of many people. I take this opportunity to thank the faculty, staff, and students of the Instructional Systems program as well as a few individuals.

To the members of my dissertation committee, thank you. Dr. Kyle Peck, thank you for your support and guidance. Most importantly, thank you for allowing me to join you and Dr. Mark Toci on the CLC adventure. Dr. Ali Carr-Chellman, thank you for standing by me through thick and thin. I have the highest level of respect for your professionalism. Dr. Bill Milheim, thank you for always being there for me. Your encouragement and open ear were greatly appreciated. Dr. Roger Shouse, thank you for your experience and perspective of public education.

Thanks to the staff of the Adult Education, Instructional Systems, and Workforce Education and Development Department. Your encouraging words, constant smiles, and true understanding of the graduate school system were invaluable to me throughout my years in the Instructional Systems Program.

A special thanks to Dr. Barbara McCombs for the use of her Assessment of Learner-Centered Practices instruments and her time and patience in describing the use and scoring of the instruments.

To members of the Non-Charter Public School District, many thanks! First, thank you to Dr. John Sheridan and Mr. Cameron Bausch for believing in this study. Second, a big thank you to Dr. Donna Queeney and the other members of the School Board for their support of my endeavors. Thank you to Lynne Sanders, Pam Francis, Joyce Lee, John Casey, and Dave Dolbin for helping me better understand the NCP environment. Very special thanks to Julie Glantz for both her assistance with mailings and her encouraging words throughout some of the most trying times of this process.

To the Centre Learning Community Charter School, thanks for allowing me to use the data you collected. Also, extra special thanks to Diane Lehman and MJ Hogan for gathering and coding the data for my use.

A great big thanks to Brian Sonak for his assistance with the data analysis. Brian, your time, knowledge, and patience were much appreciated.

Thank you to the Penn State College of Education’s Alumni Society for the Graduate Student Research Initiation Grant that allowed me to focus on my research rather than how to pay for postage and ice cream cone certificates for study participants.

Christa Peck, thank you for your enduring support and for helping me keep all of this in perspective!

During my years in graduate school, I discovered that one of my greatest mentors was not a faculty member, but rather one of my fellow students. Dr. Tiffany Koszalka, thank you for helping me discover who I am and what I can do…if only I believe in myself.

Last but not least, I would like to thank my family – Mama and Daddy; sister Melissa and her family: Chris, Andrew, Ben, and Elaine; brother Jonathan; sister Emily and her family: Dan, Gunnar, Gannon, and Graden. I am so very blessed to have such a loving and supportive family. Thanks for standing by me!
Chapter 1

Introduction

In my life I have witnessed a shift from an industrial age where physical strength was power – to the information age where knowledge and information are power. Branden (1994) believes that the nature of the importance of self-esteem has changed with the paradigm shift from an industrial age to the information age. In the industrial age, Branden explains, there was a need for a few people to think and many people who would do what they were told. However, in the new information age, at each rung on the ladder there is a need for high levels of knowledge, skills, self-trust, independence, self-reliance, and self-esteem. Time has taken the concept of self-esteem, which was originally seen as a vastly important psychological need and transformed it to a “supremely important economical need” (Branden, 1994, p. 12).

The demands of the paradigm shift of which Branden speaks are cause for changes in how we think about educating our children – not just cognitively, but affectively. Despite the expressed importance of self-esteem, many traditional middle schools are ignoring the affective domain. Research continually shows a drop in self-esteem through the transition from elementary school to middle school (Rosenberg, 1965; Harter, 1981; Eccles, Midgley et al., 1984; Wigfield and Eccles, 1994). Such a drop is attributed to the stark difference in the middle school learning environment. Traditional middle schools provide less opportunity for adult/child relationship building, force students into larger classes, provide less personal interaction with
teachers, and teachers assigned to subject specialties – teaching many more students – which does not afford them the opportunity to get to know their students (Eccles, Midgley et al, 1989; Eccles, Midgley, Wigfield, 1993; Midgley, Feldlaufer, et al.; Brophy & Evertson, 1978).

McCombs and Whisler (1997) explain that in order for an educational system to serve the needs of all learners, it must go beyond the traditional understanding of the teaching and learning processes and focus on the individual learner. Creating a means for the promotion of motivation, learning, and achievement for all learners, demands a learner-centered approach focusing on the psychological, emotional, and social needs of learners.

As educational systems designers and educators, it is our responsibility to understand the demands of the new information age along with the need for learner-centered approaches to reform education. To date, self-esteem research has focused on traditional, teacher-focused learning environments. The purpose of this study was to examine the relationship between learner-centeredness, as perceived by students, and self-esteem of students in two middle schools.

The Centre Learning Community Charter School

In the Spring of 1997 a group of educators set out to open an innovative, project-based, technology-rich charter school that would provide an educational option for students in the middle school grades and their parents. Under the Pennsylvania Charter School Law, the Centre Learning Community Charter School
(CLC) was granted a regional charter by three school districts and opened its doors to 48 students in the Fall of 1998. Today, the CLC serves 126 students in grades 5-8.

**Charter School Defined:**

“Charter schools are schools of choice, meaning teachers and students choose them. They operate with freedom from many regulations that apply to traditional public schools. They generally offer teachers and students more authority to make decisions than most traditional public schools. Instead of being accountable for compliance with rules and regulations, they are accountable for academic results and for upholding their charter.”

U.S. Charter Schools Website, July 2001
http://www.uscharterschools.org/pub/uscs_docs/gi/faq.htm

The staff of the CLC continually works with students and parents to create an environment that meets the needs of students – both cognitively and affectively. Additionally, in accordance with the charter school law, the CLC strives to maintain a high level of accountability to the charter granting school districts. One constraint in judging the effectiveness of CLC and all charter schools is the lack of normative data for such schools. Comparing a charter school such as the CLC to a traditional middle school would seem to many researchers a comparison of apples and oranges. However, charter granting institutions are pressed to measure how charter schools stand up to the tried and true traditional schools. Therefore, as with any innovation, charter schools come with a plethora of questions related to effectiveness. One of the
questions regarding the affective effectiveness and accountability of the CLC compared to a traditional middle school is the basis of this study: Does the CLC environment built on learner-centered principles better stem off the decline of self-esteem during the early adolescent years?

The staff of the CLC believes that if they are able to maintain and/or build students’ self-esteem as students move from elementary school to middle school, their students will be better prepared to live happy and fulfilled lives. According to CLC co-founder, Mark Toci (2000), although happiness and fulfillment are measured on an individual by individual basis, there are specific skills, knowledge, and attributes that all individuals must possess to live a happy and fulfilled life. Underlying the development of skills, knowledge, and attributes is a foundation comprised of self-esteem, intrinsic motivation, independence, and self-trust. Providing a learning environment that does not address the psychological need of self-esteem, might place students at a disadvantage academically, socially, and even economically. It is for this reason the CLC has built a learning environment based on learner-centered principles. It is the desire of members of this community to live by the CLC moto, “Minds that think, Hearts that care, and the Confidence to make things happen.”

**Research Question**

This study seeks to answer the question, will the implementation of a program designed to influence the cycle of building self-esteem help ward off the dip in self-esteem that is common in adolescents? Additionally, the study will investigate the
relationship between the learner-centeredness of a learning environment and the self-esteem of those students enrolled in those environments.

Self-esteem will be defined as “a judgment of worthiness that is expressed by the attitudes he or she holds toward the self. It is a subjective experience conveyed by verbal reports and other overt expressive behavior (Coopersmith, 1990 p.5)” as measured by Coopersmith’s Self-Esteem Inventories.

The heightened attention on the need for reforms in our educational system spurred the work of the American Psychological Association’s Presidential Task Force on Psychology in Education (1997). This group was charged with using the contributions of psychology to better understand the learner in context and to make inquiry into how a focus on the psychology of the learner and learning can contribute to school redesign (APA, 1997). The group’s work resulted in the development of the “Learner-Centered Psychological Principles.” These fourteen principles focus on primarily internal psychological factors and their interaction with environmental and contextual factors. Learner-centered principles “emphasize the active and reflective nature of learning and learners” (p.1). From this perspective, it is believed that educational practice will be most likely to improve when the educational system is redesigned with the primary focus on the learner. (APA, 1997) The “learner-centeredness” of instructional practices is measured through the use of the Assessment of Learner-Centered Practices (ALCP) assessment tools. These instruments, based on the 14 Learner-Centered Psychological Principles, assess student and teacher perceptions of learner-centered practices at the classroom and school levels (McCombs, 1999).
Research Hypotheses

**H₁**: *The gap in the difference in self-esteem between the CLC students, non-charter public school students and national norms will not close across time.*

Several studies (Coopersmith, 1967; Rosenberg, 1986; Harter, 1990) have shown that although there is a drop in self-esteem between the ages of 11-13, the construct of self-esteem in general is quite stable. The term stable refers to self-esteem scores remaining similar from assessment to assessment. Therefore, it is predicted that the gap in self-esteem scores between the CLC and the non-charter public school will not close across time.

**H₂**: *The change in self-esteem exhibited by CLC students will be significantly different than that of the students in the non-charter public school and the students represented in the national norms.*

This directional hypothesis will look at the dependent variable self-esteem across three levels. Based on studies (i.e. Piers & Harris, 1964; Simmons, Rosenberg & Rosenberg, 1973; Hill and Lynch, 1983; Eccles, Midgley et al., 1984; Rosenberg, 1986; Simmons and Blyth, 1987) indicating a negative change in students’ self-esteem upon the transition to a traditional middle school environment, it is predicted that students enrolled in a non-traditional middle school environment such as the CLC will have self-esteem scores that are significantly different than those students enrolled in a non-charter public school.
**Ho³**: There will be no significant difference in pre- and post-self-esteem scores in students in their first year at the CLC.

Although there is evidence supporting the idea that enrolling students in a highly learner-centered environment has a positive effect on student self-beliefs (McCombs and Whisler, 1997; McCombs, 1999; Weinberger and McCombs, 2001), there is also evidence (Rosenberg, 1965; Coopersmith, 1967; Harter, 1990) that there is a drop in student self-esteem during adolescence. Therefore, the above null hypothesis is being tested.

**H⁴**: There will be a greater change in self-esteem scores of students in their first year at CLC than students in their second, third, or fourth year at the CLC.

Relying on the findings of studies investigating the impact of school transitions and the theory that self-esteem is a fairly stable construct, it is predicted that the dependent variable, self-esteem will have a greater change for students new to CLC than students in successive years at the school.

**H⁵**: There will be no significant difference in self-esteem scores across grades 5, 6, 7, and 8 at the CLC and the non-charter public school.

Again, relying on the theory that self-esteem is a fairly stable construct, it is predicted that there will be no significant difference in self-esteem across students in each of the four grades represented in the sample for this study.
**Ho**: There will be no significant difference in the level of learner-centeredness between the CLC, the non-charter public school and the national norms.

There is no evidence available that would allow a prediction that the learner-centeredness of the CLC is different from that of the non-charter public school or national norms. Therefore, a null hypothesis is used to test the difference in this dependent variable across the three levels.

**H⁷**: Environments with a greater perceived learner-centeredness will result in higher scores of self-esteem than those with a lower perception of learner-centeredness.

Several studies (McCombs and Whisler, 1997; McCombs, 1999; Weinberger and McCombs, 2001) have shown that environments with a greater degree of learner-centeredness will result in more positive self-beliefs. Based on that information, it is predicted that a greater degree of learner-centeredness (independent variable) will result in more positive change scores in self-esteem (dependent variable).
There will be no significant correlation between self-esteem and the scores on the Perception of creating positive classroom climate and relationships with students domain of the ALCP.

There will be no significant correlation between self-esteem and the scores on the Honoring student voice and providing individual learning challenges domain of the ALCP.

There will be no significant correlation between self-esteem and the scores on the Encouraging higher order thinking and learning skills domain of the ALCP.

There will be no significant correlation between self-esteem and the scores on the Adapting to a variety of individual developmental differences domain of the ALCP.

To date, no studies have been conducted that would provide the information necessary to make directional hypotheses with regard to the correlation of the subscales of the ALCP and the SEI. Therefore, null hypotheses will be tested to look at the correlation between the independent variable (learner-centeredness) and dependent variable (self-esteem).

Researcher Identity

My interest in the charter school movement was sparked in the Fall of 1997 when Drs. Kyle Peck and Mark Toci were beginning their quest to open the Centre
Learning Community Charter School (CLC). I volunteered to assist them as they set out to submit applications to area school districts for this technology-enhanced, project-based school to serve students in grades five through eight. The philosophy adopted by these innovative educators invigorated me. The educational experience they described to prospective parents and students caused me to wish that I could return to middle school – to do it again – to do it the CLC way.

Middle school can be a painful and cruel time for many adolescents. I remember grades 5-8 as some of the hardest years of my life. At this time when my body was undergoing many natural changes, I was thrown in an environment in which peers were insensitive and teachers often appeared to be distant and uncaring. Through conversations with the co-founders of the CLC, I quickly discovered that this school would be very different from that which I attended in grades 5-8.

My work with the CLC continued as they were granted a charter and set out to open their school. Although I had a strong interest in the design and development of the actual learning environment, it was my business skill and contacts that were of need to the CLC. I worked with the school to arrange their insurance coverage, create their corporate status, and assist them with tax documents and grant opportunities. Once the school was opened, my desire to work with students was fulfilled. A CLC parent and I started the CLC 4-H Club – an after school club that met once a week. My time with the 4-H Club along with other tasks such as technology wiring, building set-up, and extended school supervision allowed me to get a firsthand look at the workings of the CLC.
Over the first three years the CLC was open, I was involved in three research projects with the underlying mission of better understanding this new, innovative school. Specifically, the studies chronicled how the school got started (Moore & Carr-Chellman, 1999); anecdotal information of the schools efforts toward student motivation, problem-solving, and team work skills; and an investigation of the social climate of the school (Moore, 2000).

During the last year, I was facing the need to conduct my dissertation research. My understanding of the CLC philosophy and firsthand experiences with the school along with my personal interest in adolescent self-esteem caused me to wonder about the relationship between learning environments and self-esteem. Is the CLC different? Does this environment have a different impact on self-esteem? So, I decided to engage the CLC staff in a conversation regarding my conducting such a study at the school. The CLC staff appreciated my ideas and agreed to participate in the study. I am now enjoying my etic or outside researcher role with the CLC.

**Significance of the Study**

The significance of this study is tri-fold. First this study will add to the discourse on the relationship between learner-centered practices and the self-esteem of students. Second, it is hoped that the findings will guide the members of the CLC and other innovative educators as they continually work to improve their learning communities. Finally, this study will go beyond the conventional assessments that indicate the progress being made by CLC students to provide affective data on another dimension of the CLC learning environment to the local school district.
Chapter 2 will examine the domain of self-esteem, its importance to education, and potential threats to self-esteem. The Learner-Centered Principles identified by the APA will be reviewed as will the literature that discusses the effects of such practices on cognitive and affective measures. This chapter will close with a discussion of the CLC’s learning environment and a prediction of the effects that environment might have on self-esteem based on theory and prior research.
Chapter 2

Literature Review

Introduction

One needs only walk through the self-improvement section of the local bookstore or enter the term ‘self-esteem’ in a search engine to understand the vastness of the interest in self-esteem. Despite the fact that the complex human phenomenon, self-esteem, has become a fixture of both research and pop culture, the meaning, importance, and impacts of self-esteem are not collectively agreed upon (Branden, 1994; Mruk, 1999). Education circles buzz with the talk of reform, innovative practices, and learner-centered principles, yet, little is known about how such changes impact self-esteem. The following pages will provide a review of the literature on self-esteem, the impact of self-esteem on education, learner-centered principles, and the influence of such practices on the learner, learning, and learner self-beliefs. In addition, a description of the CLC philosophy and environment will be provided, as will a discussion of how that environment and philosophy might effect self-esteem.
Self-Esteem

What is self-esteem?

The literature provides a plethora of definitions of self-esteem. In an effort to define the essence of self-esteem, Mruk (1999) conducted an update to Wells and Marwell’s (1976) systematic review of the definitions of self-esteem. Wells and Marwell classified definitions of self-esteem based on two psychological processes: (1) evaluation (role of cognition) and (2) affection (role of feelings). Mruk (1999) used three scales as means for classifying various definitions: (1) competence/worthiness; (2) cognition/affect; and (3) stability/openness. Competence is seen as being behavioral and observable because it involves action; whereas worthiness is judgment making that replaces action. Cognition views self-esteem as being lived as some sort of mental evaluation that is either positive or negative as opposed to the emotional feeling state of the affective. The final scale, stability/openness, is fairly straightforward; it simply looks at the definition’s emphasis on change.

Although the 1960s can be considered the birth of the self-esteem movement, Mruk (1999) traced the construct of self-esteem back to 1890 with James’ idea that self-esteem is something affective, competence-oriented, and dynamic. James expressed self-esteem as a ratio of success and pretensions. Branden (1992) argues that James did not provide a definition, but rather a statement of how he believes that self-esteem is determined by outside sources.
The next identifiable definition of self-esteem came from the 1963 work of White who defined it in a developmental context. White tied self-esteem to the: (1) biological push for an organism to deal with the tasks of living competently (mastery); (2) emergence of increasingly sophisticated motor and cognitive abilities; and (3) a growing sense of self or identity. White’s definition is categorized as stable, affective, and competence-oriented (Mruk, 1999).

Rosenberg (1965) soon followed up the work of White with a different view of self-esteem. “Self-esteem is a positive or negative attitude toward a particular object, namely, the self…The individual simply feels that he is a person of worth; he respects himself for what he is, but he does not stand in awe of himself nor does he expect others to stand in awe of him. He does not necessarily consider himself superior to others (Rosenberg, 1965, p.30).” As was White’s definition, this definition is stable; however, referring to Mruk’s scales, it has a worthiness-orientation and is cognitive.

Two years after Rosenberg defined self-esteem, Coopersmith (1967) expanded the definition of self-esteem beyond the idea of worth. According to Coopersmith (1967), self-esteem “…expresses an attitude of approval or disapproval, and indicates an extent to which the individual believes himself to be capable, significant, successful, and worthy” (p. 244).

Citing holes in Coopersmith’s definition, Branden (1992) developed his own definition of self-esteem in 1969. In reviewing Coopersmith’s definition, Branden questioned what it is that one is capable of or worthy of to have high self-esteem. Also, Branden (1992) found the lack of measures of significance and successfulness
troublesome. Therefore, Branden defined self-esteem as having two interrelated aspects: (1) a sense of personal efficacy and (2) a sense of personal worth. The formal definition provided by Branden (1994) states, “Self-esteem is the experience that we are appropriate to life and to the requirements of life. More specifically, self-esteem is: (a) confidence in our ability to think, confidence in our ability to cope with the basic challenge of life; and (b) confidence in our right to be successful and happy, the feeling of being worthy, deserving, and entitled to assert our needs and wants, achieve our values, and enjoy the fruits of our efforts” (p.16). The analysis of self-esteem definitions by Mruk (1999) showed that Branden’s definition is the only definition that is both competence- and worthiness-oriented. In addition, this definition was the first since James’ 1890 definition that was classified as dynamic.

Mruk (1999) found that new definitions of self-esteem constantly inundate the literature; however, the substance of such definitions has little variance from those proposed earlier. Examination reveals that there are commonalities that span the definitions. Self-esteem is an attitude that is deemed either positive or negative. This attitude is formed from the beliefs one holds regarding his self-worth and self-efficacy.

For research purposes, the definition of self-esteem that is adopted usually has to do with the instruments available to measure the construct. One of the most widely adopted definitions and accompanying instruments are those developed by Stanley Coopersmith (1990). Coopersmith designed the Self-Esteem Inventory (SEI) to measure evaluative attitudes toward the self in four areas of experiences: social, academic, family, and personal. The SEI relies on the term self-esteem, referring to
…the evaluation a person makes, and customarily maintains, of him- or herself; that is, overall self-esteem is an expression of approval or disapproval, indicating the extent to which a person believes him- or herself competent, successful, significant, and worthy. (Coopersmith, 1990 p. 1-2)

Importance of Self-Esteem

Much attention has been given to the field of self-esteem for many years, but why? Why is self-esteem important? Mruk (1999) claims that self-esteem is valuable “…because it helps psychologists, sociologists, social workers, counselors, and others to integrate the complex interplay of personal and social factors involved in determining human behavior” (p.3). At a much more fundamental level, Branden (1994) describes self-esteem as a basic need with positive self-esteem acting as the “immune system of the consciousness” (p.16). Branden does not describe self-esteem as a panacea, which will guarantee fulfillment; however, he states that lack of self-esteem can lead to “some measure of anxiety, frustration, and despair” (p.21).

Harter (1990) focuses on the social importance of self-esteem to adolescents and works from a theoretical base that believes the self to be a social construction. The findings of her research indicate that global self-esteem has a major impact on adolescents’ moods or general affective states. Despite the strong thought base around the social construction of the self, the domain that most consistently correlates with
self-esteem is physical appearance which isn’t as much societal as it is a relationship between the inner and outer selves (Harter, 1990).

In the Self-Esteem Inventories’ manual, Coopersmith (1990) describes the importance of self-esteem and its importance in schools:

Children are not born with concerns of being good or bad, smart or stupid, lovable or unlovable. They develop these ideas. They form self-images – pictures of themselves- based largely on the way they are treated by the significant people, the parents, teachers, and peers, in their lives …building self-esteem is not a secondary luxury option in the schools’ programs, but is more of a basic component of programs geared to motivate learning…Self-esteem is not something separate from school performance in reading, math, and social and physical skills. It is an important, integral part of performance (p. 1).

A review of the self-esteem literature by DuBois and Hirsch (2000) revealed that the concept of self-esteem, as pertaining to adolescents, traditionally has been viewed as global, unidirectional, and independent of sources of influence. Despite the plethora of research supporting such an understanding of self-esteem in adolescence, DuBois and Hirsch (2000) uncovered research providing noteworthy exceptions to traditional understandings. Such evidence supports that the self-esteem of adolescent students is “multidimensional in structure, influenced by a complex, interdependent array of individual and contextual factors (p. 5).” Figure 2.1 illustrates the general

Figure 2.1 General Conceptual Model of Self-Esteem in Early Adolescence.

As mentioned in Chapter 1, the CLC strives to prepare students to live happy, fulfilled lives. In addition, CLC teachers seek to assist students in developing the skills and attributes including self-esteem to become contributing members of society.
According to the theories of Coopersmith (1990) and Branden (1994), a lack of self-esteem could inhibit the attainment of such goals.

**Self-Esteem Skeptics**

Although the self-esteem movement appeared to be quite popular, as with every movement, it has its skeptics (i.e. (Covington & Beery, 1976; Dweck, 1999; Stout, 2000)) It is our “addiction to self-esteem” that Stout (2000) believes to be dangerous. The danger stems from the lack of a clear definition for the construct. What the definitions deem as the source of self-esteem is the concern of Dweck (1999) who believes that too often self-esteem is seen as something that we can give to children.

Despite the obvious links between the essence of self-esteem and learning revealed through the various definitions (Coopersmith, 1967; Branden, 1992; Self-Esteem, 1992; Mruk, 1999), critics of the self-esteem movement dismiss the connection between education and self-esteem (Covington, 1998; Stout, 2000). Stout (2000) boldly states, “the preponderance of the data illustrate that self-esteem is irrelevant in all areas of education (p. 121).” This statement is backed up by the thoughts of Covington and Beery (1976) that reveal that self-esteem has little apparent relevance or use in education. More importantly, these authors cite the difficulty in scientifically pinpointing self-esteem as a roadblock to quality investigations. Self-esteem does not exist in a vacuum rather it is made up of multiple criteria. The multi-faceted nature of self-esteem causes difficulty in determining the impact of specific interventions on criteria of self-esteem.
Competition and Self-Esteem

Beyond the strong statements regarding the lack of relevance of self-esteem to education, Stout (2000), points to the very negative impact the self-esteem movement has had on education. Broadly, Stout believes that the self-esteem movement has transformed the very mission of public schools. Covington (1998) looks specifically at the impact of the movement on the roles of competition and self-esteem in education. Although Stout and Covington agree on the role of self-esteem in education; their views diverge when discussing the role of competition and education. Stout (2000) is adamantly opposed to the alternative assessment methods that in her opinion are resultant of the self-esteem movement’s place in education. In Stout’s works, methods such as the bell-curve, portfolios, etc. are cited as results of the self-esteem movement that are decreasing the quality of education (Stout, 2000). Stout argues that these methods should be replaced by competition – grading students and comparing them to one another. Covington (1998) warns that it is a misconception that competition is the best way to ensure at least a minimum level of competency. In addition, competition is seen by some as a detriment to self-esteem – creating an environment of winners and losers (Dweck, 1999).

Feeling Good – Doing Bad

Probably the most widely discussed issue regarding self-esteem and learning focuses on the idea of “feeling good for no good reason” (Stout, 2000, p. 12). Social commentaries delved into the self-esteem debate when they suggested that schools were sacrificing academic achievement in the name of self-esteem (Krauthammer,
Stout (2000) continued this commentary, “Schools are no longer [a place] for learning essential skills or acquiring knowledge, but for cultivating… ‘emotional intelligence’: the ability to get along with others, understand one’s feelings and one’s emotional hang-ups, and generally figure out how to deal with others effectively (p.3).” Rather than sacrificing learning for feeling good, Stout argues that feeling good about oneself should be the consequence of hard work, achievement, learning from one’s mistakes, giving to others, and trying to be a better person. Such discussion seems to be the start of a new chicken-egg debate – which comes first learning or feeling good? Stout argues that self-esteem is not something we are entitled to, but rather something that should result from a level of competence.

Stout is not alone in her belief that self-esteem is dependent on hard work and achievement. Branden (1994) shows that persons of high self-esteem seek stimulation. Therefore, being faced with demanding goals and reaching such goals nurtures self-esteem, whereas, low self-esteem seeking of the safety of the familiar and undemanding weakens self-esteem (Branden, 1994).

At certain levels, the links between the beliefs of Branden, Coopersmith, and Stout cause one to question if it is the construct of self-esteem itself or how the construct has been interpreted and implemented within the school system that is to blame for the ‘feeling good – doing bad’ syndrome of which Stout speaks.

As is evidenced by the literature reviewed in the previous sections, self-esteem, its importance, and its relationship to learning continue to be debated. This study seeks to address aspects of this debate by investigating the relationship between
the learner-centeredness of a learning environment and the self-esteem of middle school age students engaged in the corresponding learning environment.

**Nurturing Self-Esteem**

The programs used to enhance or nurture self-esteem in schools have been seen by skeptics such as Stout (2000) as “touchy-feely” and jeopardizing to the integrity of the educational institution. A great variety of programs have been designed to nurture self-esteem in both children and adults (Borba, 1989; Bean, 1992; Reasoner, 1992; Branden, 1994). Table 2.1 shows the elements employed to nurture self-esteem by such programs. It is easy to identify key criteria that are present in each of the programs. Each of the programs involves building a sense of connecting or belonging to a larger group beyond the self. Three out of the four programs listed involve a sense of mission or purpose. A sense of security and competence are also alluded to in the programs.
Table 2.1

*Programs for Nurturing Self-Esteem*

<table>
<thead>
<tr>
<th>Author and Year</th>
<th>Programs</th>
</tr>
</thead>
</table>
| Bean (1992)      | • Sense of Connectiveness  
                  | • Sense of Uniqueness  
                  | • Sense of Personal Power  
                  | • Sense of Models |
| Borba (1989)     | • Feeling of Security  
                  | • Feeling of Selfhood  
                  | • Feeling of Affiliation  
                  | • Sense of Mission  
                  | • Sense of Competence |
| Branden (1994)   | • Living Consciously  
                  | • Self-Acceptance  
                  | • Self-Responsibility  
                  | • Self-Assertiveness  
                  | • Living Purposefully  
                  | • Personal Integrity |
| Reasoner (1992)  | • Sense of Security  
                  | • Sense of Identity  
                  | • Sense of Belonging  
                  | • Sense of Purpose  
                  | • Sense of Competence |

The International Council for Self-Esteem (2001) has identified five categories in which these various self-esteem enhancement approaches are classified as the: 1) cognitive approach; 2) behavioral approach; 3) experiential approach; 4) skill development approach; and 5) environmental approach.

The cognitive approach is focused on changing how one views their life experiences. Students are taught to find the positive outcomes from various experiences. The behavioral approach deals with the adoption of specific behaviors. Such behaviors enable the student to act confidently among others. The design of activities that enable the use of individual strengths to reach success is the goal of the
experiential approach. Relying on the impact of the connection between success and a high level of skills, the skill development approach helps students develop specific skills. Finally, the environmental approach takes a systemic view and addresses all aspects of the system. This approach empowers students to take responsibility for their own self-esteem by providing an enabling environment.

Each of the approaches has been researched regarding effectiveness; however, no research has been conducted that compares one approach to another or that looks at the combining of aspects of various approaches. The International Council for Self-Esteem (2001) predicts that the most effective way for nurturing self-esteem would be a mix of all of the approaches.

The Centre Learning Community Charter School takes a systemic approach to nurturing self-esteem. Their systemic approach incorporates many of the elements illustrated in the various self-esteem nurturing programs. This study seeks to determine if such an approach is related to higher self-esteem scores.

_The Relationship Between Self-Esteem and Learning_

A review of the literature indicates that there are a variety of issues involving self-esteem and learning. Issues range from the simple relevance of self-esteem to education to more specific issues such as the impact of learning environment type and competition on students’ self-esteem.

this relationship as a cycle with performance and self-esteem feeding one another.

(See Figure 2.2 below.)

![Self-Esteem Cycle Diagram](image)


*Figure 2.2 Self-Esteem Cycle*

A similar, but negative cycle might also be applied to the position taken by Branden (1994) who suggested that a lack of self-esteem can lead to a level of anxiety and frustration. If a student does not have a certain level of self-esteem, being faced with a learning opportunity can lead to anxiety and frustration, which in turn may lead to a lesser feeling of competence and worth – no improvement in performance – no improvement in self-confidence – the cycle continues. In addition, this idea would align with Coopersmith’s (1967) thought that self-esteem is an integral part of schooling and performance.
Developmental Changes, School Transitions, and Self-Esteem

The majority of the literature resulting from empirical research regarding self-esteem and learning has focused on developmental changes in adolescents during students’ transitions between learning environments. A review of the literature revealed that although agreement has been reached with regard to the impacts of developmental changes on self-esteem, consensus had not been reached across all issues.

The research has provided consistent data on the changes in self-esteem resulting from development through adolescence (Rosenberg, 1965; Harter, 1990). The works of Rosenberg (1965), Harter (1990) and Coopersmith (1990) reveal that a decline in self-esteem begins around the age of 11 reaching a low point somewhere between the ages of 12 and 13. The magnitude of this decline is dependent on the impact of the school environment as well as other factors of pubertal change. Figure 2.3 shows the normative data for the Coopersmith SEI. From this representation the drop in self-esteem during the ages of eleven and thirteen is clear.
The students from the middle schools involved in this study range in age from 10-13 years. Therefore, according to developmental theory, we could expect to see a general drop in their self-esteem while they are enrolled in the school.

Theorists (Hill & Lynch, 1983; Eccles, Midgley et al., 1984; Rosenberg, 1986; Simmons & Blyth, 1987) have proposed that an environmental change, such as that from elementary to middle school, can have a significant impact on students’ self-beliefs. Studies conducted by Eccles, et. al. (1984) and Simmons, et. al.(1987)
support such theories with findings that the transition to junior high school resulted in adolescents being more negative about school and themselves and having lower and less stable self-esteem coupled with higher self-consciousness.

Equal treatment of students within a classroom was the focus of the work of Branden (1994) who argued that not only must we treat all students equally; we must also use discipline to inspire ALL students to want to do and learn. Branden related the treatment of students in the classroom environment to students’ self-esteem and motivation.

Hirsch and Rapkin (1992) reviewed the literature on the impact of transitioning between schools on self-esteem. This review revealed mixed results – with some studies finding a decrease in self-esteem through the transition (i.e. Piers & Harris, 1964; Simmons, Rosenberg & Rosenberg, 1973) and others finding no change in self-esteem due to transition (i.e. Berndt & Hawkins, 1985; Hirsch & Rapkin, 1992). Hirsch and Rapkin (1992) hypothesized that beyond the transition, it is the structure and opportunities provided in a junior high environment that impact self-esteem.

As was suggested by Hirsch and Rapkin (1992), the environmental differences in the elementary and junior high or middle school have been investigated (Midgley, Feldlaufer et al., 1988; Eccles and Midgley, 1989; Eccles, Wigfield et al., 1993). Studies have looked at the relationship of self-beliefs and particular aspects of traditional middle schools including: larger classrooms, less personal nature of classrooms, fewer opportunities for close student-teacher relationships, less autonomy, greater emphasis on teacher control and discipline, and fewer
opportunities for student decision making, choice, and self-management (Ryan, Mims et al., 1983; Ryan and Grolnick, 1986; Ryan, Stiller et al., 1994).

With regard to the environmental differences between elementary and middle schools, some researchers have looked specifically at the impact of the teacher-student relationship. Ryan and Grolnick (1986), for example, found that students with teachers who were autonomy-supportive and warm were more likely to be more motivated and to have higher self-esteem. Ryan, Stiller, and Lynch (1994) found that students associate a greater sense of control, autonomy, and engagement in school with the sense of security with teachers and utilization of teachers as emotional and school supports. Ryan, et al. (1994) concluded that strong, supportive teacher-student relationships result in teachers playing an important role in facilitating student outcomes. The results of this research is indicative of the important roles teachers play in education as well as the expansion from a simple cognitive enterprise of schooling to one that includes the interpersonal.

In conclusion, the literature reveals that there are a variety of factors impacting the self-esteem of students including: transition from an elementary to a middle school or junior high environment, the nature of the middle/junior high environment, and developmental changes. Understanding that developmental factors are involved and difficult to control for in a research study with this age group of subjects, this study seeks to investigate the relationship between the learner-centeredness of the learning environment and the self-esteem of the students enrolled in those environments.
Learner-Centered Principles

In their 1997 article, McCombs and Whisler state, “for educational systems to serve the needs of all learners, there must be a focus on the individual learner as well as an understanding of the teaching and learning process” (p. 8). Many educational reform efforts take a person-centered approach that focuses on the psychological, emotional, and social needs of the learners (Weinberger & McCombs, 2001). McCombs (1999) assesses learning environments according to their level of learner-centeredness. The Learner-Centered Model is a research-validated, principle-based framework for sharing both power and control with students. According to Weinberger and McCombs (2001),

The overall model of the relationships between teacher beliefs and perceptions of their classroom practices and how this influences student perceptions of these practices has been shown to lead to the identification of those domains of classroom practice that are most predictive of positive outcomes; for students from kindergarten through college age (p. 9-10).

The definition of learner-centeredness is aligned with the American Psychological Association’s (1997) research-validated Learner-Centered Psychological Principles (see Table 2.1), which provide a knowledge base for understanding the relationship between learning and learning environment. McCombs (2001) defines “learner-centered” as follows:
Learner-centered is the perspective that couples a focus on individual learners - their heredity, experiences, perspectives, background, talents, interests, capacities, and needs - with a focus on learning - the best available knowledge about learning and how it occurs and about teaching practices that are most effective in promoting the highest levels of motivation, learning, and achievement for all learners. This dual focus then informs and drives educational decision-making. Learner-centered is a reflection in practice of the Learner-Centered Psychological Principles - in the programs, practices, policies, and people that support learning for all (p. 9).

Research (McCombs and Whisler, 1997; McCombs, 1999) has shown that classroom practices in keeping with the Learner-Centered Psychological Principles are related to positive student motivation and achievement. McCombs and colleagues (1997; 2001) found that “learner-centeredness” is not solely a function of particular instructional practices or programs, but is instead the students’ perceptions of the qualities of the teacher in combination with characteristics of instructional practices. McCombs (2001), further explains this by describing learner-centeredness as being in “the eye of the beholder” (p.12) - perceptions resulting from each learner’s prior experiences, self-beliefs, and attitudes about schools and learning as well as their current interests, values, and goals. This shows that learner-centeredness does not lie in the design of the program itself.
Through the development and validation of the Assessment of Learner-Centered Practices, McCombs (1997) found that learner-centered practices tend to be more holistic and cut across several APA Principle domains. McCombs (personal communication, February 15, 2002) provides further explanation through an example, “…practices that create positive relationships meet social and developmental principles as well as motivational and affective principles.” From those findings, the four domains of classroom practice assessed through the Assessment of Learner-Centered Practices are defined as: (1) creating a positive classroom climate and relationships with students, (2) honoring student voice and providing individual learning challenges, (3) encouraging higher order thinking and learning skills, and (4) adapting to a variety of individual developmental differences (McCombs, 1999).

Studies conducted between 1997 and 2000 (McCombs and Lauer, 1997; McCombs and Whisler, 1997; McCombs, 1999; McCombs, 2001; McCombs, 2001) looked at the impact of teacher beliefs on their perceptions of their classroom practices as well as how teacher perceptions of practice differ from student perceptions of these practices. From this research, it was found that teachers are not absolutely learner-centered or completely non learner-centered. McCombs (2001) defines learner-centered teachers “as those that have more beliefs and practices classified as learner-centered than as non learner-centered (p. 16).” The Assessments of Learner-Centered Practices student and teacher surveys were administered to thousands of students and hundreds of teachers across the United States by McCombs and colleagues (1997; 1999; 2001). The results of the research confirmed that student perceptions of their teacher’s instructional practices are significantly related to their
motivation, learning, and achievement; and student perceptions of a positive learning environment and interpersonal relationship with the teacher are the most important practices for enhancing student motivation and achievement (McCombs and Lauer, 1997; McCombs, 1999; McCombs, 2001; Weinberger and McCombs, 2001).

McCombs and colleagues have found that classrooms aligned with the Learner-Centered Psychological Principles (See Table 2.2) are more likely to positively effect student motivation and achievement. Also, the research reveals that the learner-centeredness of a classroom is not simply learner-centered or non-learner-centered. In order to better understand the impact of the degrees of learner-centeredness, this study will investigate the relationship between the learner-centeredness, as reported by students enrolled in grades 5-8, and the self-esteem of those same students.
Table 2.2

Learner-Centered Psychological Principles

<table>
<thead>
<tr>
<th>COGNITIVE AND METACOGNITIVE FACTORS</th>
<th>Principle 9: Effects of motivation on effort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle 1: Nature of the learning process.</td>
<td>Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners’ motivation to learn, the willingness to exert this effort is unlikely without coercion.</td>
</tr>
<tr>
<td>Principle 2: Goals of the learning process.</td>
<td>The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.</td>
</tr>
<tr>
<td>Principle 3: Construction of knowledge.</td>
<td>The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.</td>
</tr>
<tr>
<td>Principle 4: Strategic thinking</td>
<td>The successful learner can link new information with existing knowledge in meaningful ways.</td>
</tr>
<tr>
<td>Principle 5: Thinking about thinking</td>
<td>The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.</td>
</tr>
<tr>
<td>Principle 6: Context of learning</td>
<td>Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MOTIVATIONAL AND AFFECTIVE FACTORS</th>
<th>Principle 10: Developmental influence on learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle 7: Motivational and emotional influences on learning</td>
<td>As individuals develop, they encounter different opportunities and experience different constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.</td>
</tr>
<tr>
<td>Principle 8: Intrinsic motivation to learn</td>
<td>Learning is influenced by social interactions, interpersonal relations, and communication with others.</td>
</tr>
<tr>
<td>Principle 11: Social influences on learning</td>
<td>Setting appropriately high and challenging standards and assessing the learner and learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEVELOPMENTAL AND SOCIAL FACTORS</th>
<th>Principle 12: Individual differences in learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle 10: Developmental influence on learning</td>
<td>Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.</td>
</tr>
<tr>
<td>Principle 11: Social influences on learning</td>
<td>Learning is most effective when differences in learners’ linguistic, cultural, and social backgrounds are taken into account.</td>
</tr>
<tr>
<td>Principle 13: Learning and diversity</td>
<td>Setting appropriately high and challenging standards and assessing the learner and learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process.</td>
</tr>
</tbody>
</table>

The CLC Environment

As stated on the school’s web site (http://clccharter.org) and in its brochure, the educators and founders of CLC believe that students learn best when they:

- are actively engaged,
- share the responsibility for learning,
- feel both safe and challenged,
- are allowed time to explore,
- are taught to think deeply,
- use powerful, computer-based “thinking tools,”
- collaborate with students and adults,
- compete with themselves rather than with other students,
- form strong relationships with good role models,
- have good information about the progress they are making,
- are encouraged to be creative,
- are supported by parents and/or other adult advocates who have a sincere interest in their progress,
- solve complex, real-world problems,
- engage in a series of activities prescribed to meet individual needs,
- are involved in multi-year relationships with their teachers,
- encounter the need for integrated knowledge and skills, rather than fragmented “subject areas,”
- have access to a variety of computer-based technologies at home and at school,
- are motivated by an intrinsic desire to do good work, not to avoid punishment or gain rewards.

The CLC engages students in solving complex and contextualized, real world problems. Working together, and independently, students develop important skills, knowledge, and attributes that will serve them well in school, at work, and in
developing strong relationships and families. In order to facilitate this active, project-based learning approach, students have access to a wide variety of learning tools including but not limited to at least 10 networked computers in each classroom. The ratio of students to computers at CLC during this study was 3 to 1. The CLC also sends an Internet-ready computer home with each student. The students may keep these computers at their homes as long as they are enrolled in the CLC.

At the CLC, communication with parents is ongoing, both formally and informally. Rather than using letter grades or report cards, students are evaluated frequently and information on student progress is provided to parents through an online assessment site. The focus of student assessment at the CLC is on student progress towards learning goals as they relate to important skills, knowledge, and attributes.

As discussed earlier in this chapter, across a series of research studies, Eccles and Midgley (1988; 1989; 1993) found that specific aspects of a traditional middle school environment negatively impact self-beliefs. The following paragraphs discuss how the CLC design deviates from that of the traditional middle school with regard to teacher-student relationships, autonomy, teacher control and discipline, student decision-making, and self-management.

**Teacher-Student Relationships**

The CLC provides the opportunity for students and teachers to develop the type of teacher-student relationship that Ryan (1994) discusses. Although some students have been accepted into the CLC program as late as their seventh grade year,
the majority of students begin at the CLC during grades five or six. Students are placed in a home team upon their enrollment in the school. Each student remains with the same home team comprised of peers, teacher, and teacher assistant for the remaining years at the CLC. By providing students an opportunity to work with the same teacher, the CLC provides an environment in which students may develop long term relationships with the CLC educators and students over the three or four years that they spend at the school.

**Autonomy vs. Control**

The project-based learning environment of the CLC breaks away from the confines of the traditional middle school. The CLC provides an environment that allows students a great deal of independence and autonomy. The CLC teachers and students work in a flexible environment where a wide range of possible solutions and strategies are considered when planning and developing projects. The teachers avoid the use of strategies that reduce student autonomy and are designed to control students. CLC educators work with students in order to help them identify individualized and meaningful learning goals. By helping students identify engaging and exciting learning opportunities, the need for controlling strategies is reduced. Students feel in control of the learning environment and in direct control of their success as learners. By providing students with high levels of autonomy and control, the CLC offers the opportunity to positively impact students’ self-beliefs (Toci, 2000).
Discipline

During the second and third years of operation, the CLC students, with the assistance of their teachers and staff, created the CLC Bill of Rights. This project involved students assuming the roles and responsibilities similar to that of the U.S. Congress inclusive of parties, committees, and many meetings. By the end of the project, the students developed a website outlining each student’s rights and responsibilities as a member of the CLC as well as the consequences of violation. This project required that students take responsibility for themselves and their actions, removing a need for extensive teacher discipline.

Self-Management

At the CLC students engage in both group and individual projects. Students are responsible for working with their teammates and teacher to develop their action plan and time line for each project. Then, it is their responsibility to follow through with that plan for project completion. The nature of this project work provides students with the opportunity and challenge of managing their time effectively, making the correct choices on how to spend their time, and prioritizing their various activities. Also, the group projects provide students with the opportunity to learn how to conduct themselves as a contributing member of a team.

CLC and Learner-Centered Practices

The Learner-Centered Model (Weinberger and McCombs, 2001) and the Learner-Centered Psychological Principles (APA, 1997) have been powerful in identifying the relationship between the learner and the learning environment. The
APA’s Learner-Centered Psychological Principles were used in designing Dr. Kyle Peck’s 1991 Reinventing Education as Active Learning (R.E.A.L.) Initiative. The CLC design is based on the R.E.A.L. Initiative, therefore, the Learner-Centered Psychological Principles can be used as a theoretical basis for evaluating the impacts of the CLC learning environment. Table 2.3 provides evidence of how the CLC implements the learner-centered psychological principles.

Table 2.3

How the CLC Implements the Learner-Centered Psychological Principles

<table>
<thead>
<tr>
<th>Learner-Centered Psychological Principles</th>
<th>What Centre Learning Community is Doing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COGNITIVE AND METACOGNITIVE FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td>Principle 1: Nature of the learning process. The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.</td>
<td>CLC students work independently and in groups on projects that they have designed and initiated. They often take responsibility for establishing learning goals, setting schedules and deadlines, and assessing the progress of their learning.</td>
</tr>
<tr>
<td>Principle 2: Goals of the learning process. The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.</td>
<td>CLC teachers work closely with a limited number of students for at least three years. This allows CLC educators to better understand and assist each student. CLC students work on projects that integrate traditional curricular areas. Students engage for six weeks to research, design, develop, and analyze problems/projects. Students’ final projects range in complexity from posters and papers to movies and database driven websites.</td>
</tr>
</tbody>
</table>
### Principle 3: Construction of knowledge
The successful learner can link new information with existing knowledge in meaningful ways.

The integrated, project-based nature of the CLC enables students to take previously learned skills and knowledge and apply them to new projects. Students application of knowledge and skills to complete projects facilitates the retention of that knowledge to be used in future projects.

### Principle 4: Strategic thinking
The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.

The CLC curriculum is project-based. Students must gather the appropriate information as well as use the appropriate thinking and reasoning strategies to achieve the goals of each project. The completion of projects involves analyzing the scope of the problem, developing a project plan, and designing an action plan. In addition, students are required to participate in the creation of grading rubrics and to assess their own work.

### Principle 5: Thinking about thinking
Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.

CLC students have many opportunities to work with teachers and other adults to share ideas, strategies, and theories. Teachers assist students in working with their ideas – enabling them to start the metacognitive process.

### Principle 6: Context of learning
Learning is influenced by environmental factors, including culture, technology, and instructional practices.

CLC students and teachers work together as a community. The community is founded on the basis that there will be respect for each individual. In a survey conducted by the University of Western Michigan, CLC students addressed the fact that they are respected by their teachers. Students are provided a variety of learning tools including at least ten networked computers in each classroom. In addition, each student is provided an internet ready computer to take home.
### Principle 7: Motivational and emotional influences on learning
What and how much is learned is influenced by the learner’s motivation. Motivation to learn, in turn, is influenced by the individual’s emotional states, beliefs, interests and goals, and habits of thinking.

CLC strives to instill in each student the skills and love for a life of learning. CLC does not use punishments and rewards but requires students to take responsibility for their own learning. CLC teachers implement practices such as continual feedback in an effort to increase students’ intrinsic motivation.

### Principle 8: Intrinsic motivation to learn
The learner’s creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control.

CLC students work independently and in groups on real-world projects that they have designed and initiated. Students often take responsibility for establishing their own learning goals, setting schedules and deadlines, designing and developing their solutions, and assessing the progress of their learning. Toci (2000) hypothesized that the Centre Learning Community students would exhibit significant movement toward the intrinsic motivational pole on Harter’s Challenge, Curiosity, and Independent Mastery subscales. The results of the study suggest that an appropriately designed learning environment can impact students’ motivational orientation in a positive way by helping them progress toward a more intrinsic orientation.
**Principle 9: Effects of motivation on effort**
Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners’ motivation to learn, the willingness to exert this effort is unlikely without coercion.

| **CLC teachers stress the importance of the activities and projects being pursued. Through the long-term relationships being formed at the CLC, students and educators come to understand and acknowledge personal feelings more frequently. The CLC learning environment focuses on shared responsibility between students and educators when it comes to learning. CLC does not use extrinsic punishments and rewards but requires students to take responsibility for their own learning – instilling an intrinsic desire to learn.** |

---

**DEVELOPMENTAL AND SOCIAL FACTORS**

<table>
<thead>
<tr>
<th><strong>Principle 10: Developmental influence on learning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>As individuals develop, they encounter different opportunities and experience different constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.</td>
</tr>
</tbody>
</table>

| **CLC students are engaged in activities that challenge them at an appropriate level and allow for continued success and growth. CLC teachers work with individual students to vary assignments according to the students’ needs.** |

<table>
<thead>
<tr>
<th><strong>Principle 11: Social influences on learning</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning is influenced by social interactions, interpersonal relations, and communication with others.</td>
</tr>
</tbody>
</table>

<p>| <strong>CLC students learn and work in a flexible environment that allows them to socialize and work in a way that best suits their individual learning style. When you walk into the CLC, you do not see students sitting at desks in rows. The learning space is open and flexible allowing for a great deal of interaction and teamwork. In addition to the social skills developed during project time, CLC students are afforded many opportunities for social growth whether it be during the extended school time, lunch, or projects.</strong> |</p>
<table>
<thead>
<tr>
<th>INDIVIDUAL DIFFERENCES FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle 12: Individual differences in learning</strong></td>
</tr>
<tr>
<td>Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity.</td>
</tr>
<tr>
<td>CLC students and teachers work side-by-side to determine appropriate and meaningful challenges. Students establish individual learning goals and over time they work towards mastery of important skills and knowledge. Each student sets goals based on individual needs and ability.</td>
</tr>
<tr>
<td><strong>Principle 13: Learning and diversity</strong></td>
</tr>
<tr>
<td>Learning is most effective when differences in learners’ linguistic, cultural, and social backgrounds are taken into account.</td>
</tr>
<tr>
<td>As mentioned above, CLC teachers work with individual students in order to design learning opportunities that best meet the needs of that learner.</td>
</tr>
<tr>
<td><strong>Principle 14: Standards and assessment</strong></td>
</tr>
<tr>
<td>Setting appropriately high and challenging standards and assessing the learner and learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process.</td>
</tr>
<tr>
<td>CLC students receive constant feedback from their teachers. This feedback relates directly to learning progress. The CLC uses a variety of assessment tools to gauge student progress. Such tools include project rubrics, Knowlecules, state standard assessments, etc.</td>
</tr>
</tbody>
</table>


**CLC and Self-Esteem**

The CLC does not employ one specific self-esteem enhancement program, but rather engages students in an environment that approaches self-esteem systemically.

It is this type of approach that the International Council for Self-Esteem predicts the most effective in nurturing self-esteem. Table 2.4 provides evidence of how the CLC combines aspects of the five approaches for nurturing self-esteem that were discussed earlier in this chapter.
Table 2.4

*The CLC’s systemic approach to nurturing self-esteem.*

<table>
<thead>
<tr>
<th>Approach</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive Approach</strong></td>
<td>CLC projects often involve making presentations to peers and teachers. After each presentation, both teacher and students provide feedback. The teachers model how to provide constructive feedback that will help students learn how to improve their projects while still feeling proud of their accomplishments. This modeling behavior helps students learn how to both give and receive feedback.</td>
</tr>
<tr>
<td><strong>Behavioral Approach</strong></td>
<td>Making class presentations also helps students develop particular behaviors that will better serve them to present themselves confidently in the future. Students are reminded by peers and teachers of the appropriate behaviors for professional events; posture, voice, etiquette. CLC students have presented at graduate school poster sessions, regional, and state conferences. On all occasions, they kept up with, if not out did, their adult counterparts.</td>
</tr>
<tr>
<td><strong>Experiential Approach</strong></td>
<td>CLC teachers design projects and learning experiences that meet the needs of each individual student. In addition, the students and teachers work together to design rubrics to assess each completed project. The collaborative design of the rubric allows students to know what is expected of them before they get started. The design of projects geared to the needs of individual students coupled with the use of collaboratively generated rubrics provides students the opportunity to show their strengths to receive positive feedback.</td>
</tr>
<tr>
<td><strong>Skill development Approach</strong></td>
<td>The integrated project-based nature of the CLC provides students to learn many skills throughout the completion of one project. Students are responsible for taking a project from goal setting all the way through evaluation. Students may have the opportunity to encounter a variety of skills throughout that process, including: goal setting skills, project management skills, communication skills, research skills, reading skills, math skills, critical thinking skills, problem-solving skills, technology skills, presentation skills, etc. The acquisition and practicing of such skills enables students to function at a higher level, achieve greater success, and enhance their self-esteem.</td>
</tr>
<tr>
<td><strong>Environment Approach</strong></td>
<td>The CLC focuses on fostering a caring environment in which all children can grow and succeed. Each and every student is encouraged to be an individual and to respect his- or herself as well as others.</td>
</tr>
</tbody>
</table>
The Non-Charter Public School Environment

The Non-Charter Public school is a public school system serving students in
grades K-12. Students in grades K-5 attend one of eleven elementary schools
throughout the district’s 150 square miles. Students in grades six through eight attend
one of two middle schools.

*Elementary School Environment*

At the elementary level, the NCPS emphasizes respect for self and others,
celebrating diversity, and providing a nurturing environment. Teachers throughout the
elementary schools do not use textbooks, but rather use a district-designed
curriculum. Although students in grades K-2 are not given letter grades, all students
are held to high academic and behavioral standards.

*Middle School Environment*

Approximately 1800 students are served by the NCPS’s two middle schools.
The middle schools are comprised of interdisciplinary teams of five teachers working
with heterogeneous groups of students. The discipline-based core curriculum is
supplemented by course offerings in Family and Consumer Sciences, Technology
Education, Foreign Language Education, Health, and Physical Education.

*Teacher-Student Relationships*

NCPS students in grades five and six work with one teacher for the duration
of one school year, while students in grades seven and eight work on interdisciplinary
teams of five teachers. Students may have the chance of studying with particular
students from year to year, but by design the process of assigning students to teams does not involve keeping students and teachers together for multiple years.

*Self-Management*

Over the years, middle school students at the NCPS have been provided with study skills packets that provide them with tips on time management, how to study, etc. Although the packet has been well received, not all students use the packets. Therefore, currently teachers and curriculum coordinators are working to better integrate these self-management into the curriculum.

*NCPS and Learner-Centered Practices*

According to McCombs (2001), “Learner-centeredness is not solely a function of particular instructional practices or programs. Rather it is a complex interaction of qualities of the teacher in combination with characteristics of instructional practices as perceived by individual learners” (p.186). The NCPS has made valiant efforts at designing curricula that focus on the learner. Administrators and teachers have worked closely with Jay McTighe, co-author of Understanding by Design (1998), to create curricula that take each student beyond textbook knowledge and skill to a state of truly understanding what they are learning. Table 2.5 illustrates ways in which the NCPS embodies the Learner-Centered Practices.
Table 2.5

Illustration of the NCP’s alignment with the Learner-Centered Practices

<table>
<thead>
<tr>
<th>Learner-Centered Psychological Principles</th>
<th>What NCP is Doing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COGNITIVE AND METACOGNITIVE FACTORS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Principle 1: Nature of the learning process.</strong>  The learning of complex subject matter is most effective when it is an intentional process of constructing meaning from information and experience.</td>
<td>Students in grades 5 and 6 in the NCPS are engaged in interdisciplinary projects that encourage them to develop understanding rather than simply memorizing facts. Although the curricula for grades 7 and 8 are more discipline-based, students are often presented with opportunities to work across disciplines to make connections.</td>
</tr>
<tr>
<td><strong>Principle 2: Goals of the learning process.</strong>  The successful learner, over time and with support and instructional guidance, can create meaningful, coherent representations of knowledge.</td>
<td>The NCPS has recently redesigned their assessment system in an effort to provide students and parents with information that will enable students to improve and continue their learning processes. The redesign still includes letter grades; however, the new system allows for the addition of comments unique to the individual student.</td>
</tr>
</tbody>
</table>
| **Principle 3: Construction of knowledge**<br>The successful learner can link new information with existing knowledge in meaningful ways. | The NCPS is utilizing the Understanding by Design methods for developing their curricula for grades 7 and 8. Therefore, projects are driven by thinking and research rather than “fact and craft”.

Although the curricula of the NCPS for grades 7 and 8 is discipline-based, efforts are made to help students develop skills that can cross disciplines and assist students in creating meaning. Research skills are one such set of skills fostered. Students learn basic research skills and have the opportunity to demonstrate those skills in various types of research and across multiple disciplines. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principle 4: Strategic thinking</strong>&lt;br&gt;The successful learner can create and use a repertoire of thinking and reasoning strategies to achieve complex learning goals.</td>
<td>Currently, NCPS students are provided with a study skills packet that outlines strategies that can enhance their learning. The district is hoping to embed those strategies and skills into the curricula.</td>
</tr>
<tr>
<td><strong>Principle 5: Thinking about thinking</strong>&lt;br&gt;Higher order strategies for selecting and monitoring mental operations facilitate creative and critical thinking.</td>
<td>One example of the NCPS’s efforts to foster higher order thinking among their 6th - 8th grade students is the Connected Math Series, an inquiry-based math program adopted by the school district. By design this math program requires that students reflect on what they are doing, learning, and discovering.</td>
</tr>
<tr>
<td>Principle 6: Context of learning</td>
<td>The NCPS works diligently to ensure that aspects of the learning environment, school culture, and instructional practices fit together to best meet the needs of the learner. When the opportunity arose for the NCPS to build a new middle school facility, educators and administrators worked closely to design an environment that would not only provide for the feeling of safety and nurturing for students, but would also compliment their team-based interdisciplinary learning style.</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Learning is influenced by environmental factors, including culture, technology, and instructional practices.</td>
<td></td>
</tr>
</tbody>
</table>
| **MOTIVATIONAL AND AFFECTIVE FACTORS** | **Principle 7: Motivational and emotional influences on learning**
What and how much is learned is influenced by the learner’s motivation. Motivation to learn, in turn, is influenced by the individual’s emotional states, beliefs, interests and goals, and habits of thinking. | 
| During the last period of each day, students in grades 7 and 8 participate in A.R.E.A. (Activities, Remediation, Enrichment, and Advising). Students make the decision of how they will spend this time each day. For each 6-week cycle, students can choose to engage in an activity such as student council, math olympiad, volleyball club, or musical ensemble, to name a few, or students can use the time to meet with a teacher for extra help with assignments or to make up missed work. Teachers believe provision of choice increases students motivation to participate in activities and set personal goals. |
| **Principle 8: Intrinsic motivation to learn**
The learner’s creativity, higher order thinking, and natural curiosity all contribute to motivation to learn. Intrinsic motivation is stimulated by tasks of optimal novelty and difficulty, relevant to personal interests, and providing for personal choice and control. | Through the curriculum and the provision of choice, the NCPS tries to nurture intrinsic motivation. However, the nature of their grading system shifts focus to the external reward systems. Despite grading methods, students are provided the opportunity to choose projects in which to engage, books to read, etc. |
**Principle 9: Effects of motivation on effort**
Acquisition of complex knowledge and skills requires extended learner effort and guided practice. Without learners’ motivation to learn, the willingness to exert this effort is unlikely without coercion.

Although the traditional grading system provides a challenge for the promotion of intrinsic motivation, given that the NCPS is part of a college town, school personnel find that students by nature are highly motivated and eager to learn.

## DEVELOPMENTAL AND SOCIAL FACTORS

<table>
<thead>
<tr>
<th>Principle 10: Developmental influence on learning</th>
</tr>
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<tr>
<td>As individuals develop, they encounter different opportunities and experience different constraints for learning. Learning is most effective when differential development within and across physical, intellectual, emotional, and social domains is taken into account.</td>
</tr>
</tbody>
</table>

In an effort to meet the individual differences of learners, students in the NCPS are homogeneously grouped for their English and math programs. Additionally, the team-based approach for 7th and 8th grades allows five teachers to work together to best determine how to meet the needs of students at various developmental levels.

<table>
<thead>
<tr>
<th>Principle 11: Social influences on learning</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

The NCPS addresses the social influences of learning from both professional development and curricular standpoints. During their induction, new teachers are engaged in activities and discussions regarding the need to create a warm, welcoming, orderly, and nurturing environment for their students. Additionally, the curricula are designed to encourage the acceptance of individual differences.
## Individual Differences Factors

**Principle 12: Individual differences in learning**

Learners have different strategies, approaches, and capabilities for learning that are a function of prior experience and heredity. Students in 5th and 6th grade are placed in classes of approximately 25 students each. Those 25 students work closely with one teacher over the course of the year, thus providing teachers with the opportunity to be attuned to the individual needs of students. In an effort to counteract the effects of scale at the seventh and eighth grade levels, the NCPS forms interdisciplinary teams that allow five teachers to work with approximately 125 students. This design allows teachers to better address the individual differences of their students.

**Principle 13: Learning and diversity**

Learning is most effective when differences in learners’ linguistic, cultural, and social backgrounds are taken into account. The NCPS has numerous programs for students of all ages that address diversity, conflict resolution, and anti-bullying. The elementary’s Passports for Understanding curriculum is an award winning multicultural literature project. At the middle school level, the NCPS’s Project PRIDE and Planet PEACE have been recognized by Dateline NBC as quality anti-bullying programs.

**Principle 14: Standards and assessment**

Setting appropriately high and challenging standards and assessing the learner and learning progress—including diagnostic, process, and outcome assessment—are integral parts of the learning process. Currently the NCPS relies on the traditional letter grading system. However, a redesign of their assessment system is underway. The new system will include unique comments, attention to student work habits, and student progress according to the state standards.

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Note: Information on the NCPS made available through personal correspondence and the NCPS website ([http://www.scasd.k12.pa.us](http://www.scasd.k12.pa.us)).
NCPS and Self-Esteem

The NCPS does not address self-esteem specifically, but rather works to provide an overall nurturing environment for their students.

Conclusion

The literature has shown that self-esteem is a valuable construct (Coopersmith, 1967; Rosenberg, 1986; Coopersmith, 1990; Branden, 1994; Mruk, 1999). Coopersmith (1967; 1990) goes so far as declaring that self-esteem is an integral part of overall school learning. Despite the importance of self-esteem, studies have shown that the transition to middle school can have a negative impact on students’ self-esteem (Rosenberg, 1986; Simmons and Blyth, 1987; Eccles and Midgley, 1990; Harter, 1990; Hirsch and Rapkin, 1992; Branden, 1994). More importantly, it was discovered that beyond the impact of school transition, it is specific aspects of the middle school environment that negatively impact self-beliefs (Eccles, Midgley et al., 1984; Midgley, Feldlaufer et al., 1988; Eccles and Midgley, 1989; Eccles and Midgley, 1990; Eccles, Wigfield et al., 1993). In contrast, McCombs and colleagues (McCombs and Lauer, 1997; McCombs and Whisler, 1997; McCombs, 1999; McCombs, 2001; McCombs, 2001; Weinberger and McCombs, 2001), indicate that environments based on the Learner-Centered Principles – both in design and everyday functionality – can have positive effects on cognitive and non-cognitive aspects of the student.

The Centre Learning Community Charter School is not a traditional middle school. When the CLC design was assessed in relation to the negative aspects of
traditional middle schools as identified by Eccles and colleagues (Eccles, Midgley et al., 1984; Midgley, Feldlaufer et al., 1988; Eccles and Midgley, 1989; Eccles and Midgley, 1990; Eccles, Wigfield et al., 1993), it appears that the CLC consciously addresses those conditions jeopardizing the maintenance of self-beliefs during the middle school years. Additionally, the CLC’s design aligns with the Learner-Centered Psychological Principles outlined by the APA (1997), which provides a solid base for assessing the impact of the learning environment on the learner. Finally, the CLC has taken a systemic approach to nurturing the self-esteem of its students – an approach that has not been researched.

From the review of the literature we can conclude that: 1) self-esteem is important in education; 2) aspects of traditional middle schools negatively impact students self-beliefs; 3) an environment based on learner-centered principles can have positive effects on cognitive and non-cognitive aspects of the student; and 4) programs developed according to five different approaches to nurturing self-esteem have been successful. However, what remains unknown is how the self-esteem of middle school students is impacted when engaged in an environment such as the CLC, which is aligned with learner-centered principles and approaches self-esteem systemically.

The following chapter will discuss the methodology for this research study. Additionally, the instruments used in the study will be described.
Chapter 3

Methodology

Introduction

This study measured the correlation between the learner-centeredness perceived by students and self-esteem of two learning environments. To this end, the Assessment of Learner-Centered Practices Student Survey (ALCP) and the Coopersmith Self-esteem Inventory (SEI) were used to measure learner-centeredness and self-esteem. As illustrated in Table 3.1, the ALCP is a self-assessment of the degree to which classroom practices are aligned with the APA Learner-Centered Principles along four research-validated domains: (1) metacognitive and cognitive factors; (2) affective and motivational factors; (3) developmental and social factors; and (4) individual difference factors (McCombs, 2001).
Table 3.1

*The Learner-Centered Psychological Principals*

<table>
<thead>
<tr>
<th>COGNITIVE AND METACOGNITIVE FACTORS</th>
<th>DEVELOPMENTAL AND SOCIAL FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principle 1: Nature of the learning process.</td>
<td>Principle 10: Developmental influence on learning</td>
</tr>
<tr>
<td>Principle 2: Goals of the learning process.</td>
<td>Principle 11: Social influences on learning</td>
</tr>
<tr>
<td>Principle 3: Construction of knowledge.</td>
<td>Principle 4: Strategic thinking</td>
</tr>
<tr>
<td>Principle 5: Thinking about thinking</td>
<td>Principle 6: Context of learning</td>
</tr>
<tr>
<td>Principle 7: Motivational and emotional influences on learning</td>
<td>Principle 13: Learning and diversity</td>
</tr>
<tr>
<td>Principle 8: Intrinsic motivation to learn</td>
<td>Principle 14: Standards and assessment</td>
</tr>
<tr>
<td>Principle 9: Effects of motivation on effort</td>
<td></td>
</tr>
</tbody>
</table>


The SEI measures students’ evaluative attitudes toward the self in four areas: (1) social; (2) academic; (3) family; and (4) personal. A Lie Scale is provided to indicate the probable level of socialized or defensive responses (Coopersmith, 1990). The Lie Scale is scored separately and the responses to the items are not included in the total self-esteem score.

**Variables and Data Sets**

The following sections describe the independent and dependent variables for this study. The variable learner-centeredness in some analyses is an independent, but in other analyses a dependent variable.
Independent Variables

The independent variables for this study were the learning environment (school) in which students were enrolled and the learner-centeredness of the learning environment as measured by the ALCP. There were three levels of the learning environment independent variable: the CLC, non-charter public school (NCP), and national norms.

Dependent Variables

The dependent variables for this study were the degree of learner-centeredness as measured by the ALCP and self-esteem as measured by the SEI. Specifically, the research looked at the change in SEI scores from the beginning to the middle of the school year and the relationship between the perception of learner-centeredness and the self-esteem scores.

Subjects

Experimental Subjects

The experimental subjects for this investigation were 87 students enrolled in the Centre Learning Community Charter School. In order for a student to be included in the experiment, they needed to be enrolled in the CLC from at least October 2001 to January 2002. In accordance with the Pennsylvania Charter School Law, students admitted to the CLC were chosen based on a lottery.
Table 3.2

*CLC Subjects by Grade and Gender*

<table>
<thead>
<tr>
<th>Grade</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>9</td>
<td>0</td>
<td>17</td>
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<tr>
<td>Total</td>
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<td>0</td>
<td>10</td>
<td>15</td>
<td>4</td>
<td>13</td>
<td>1</td>
<td>23</td>
<td>87</td>
</tr>
</tbody>
</table>

*Control Subjects*

The control subjects for this research study were a random sample of 77 students enrolled in a non-charter public school in Central Pennsylvania.

Table 3.3

*Control Subjects by Grade and Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>1st yr</th>
<th>Non 1st yr</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>11</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>14</td>
<td>43</td>
</tr>
<tr>
<td>Boys</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>2</td>
<td>8</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>18</td>
<td>14</td>
<td>1</td>
<td>3</td>
<td>16</td>
<td>2</td>
<td>22</td>
<td>77</td>
</tr>
</tbody>
</table>
Instruments and Norms

Coopersmith Self-Esteem Inventory

Coopersmith’s SEI measures four subscales: (1) general self; (2) social-self-peers; (3) home-parents; and (4) school-academic. Each question asks the student to state whether the statement is “like me” or “unlike me.” The general self subscale is measured through 26 questions. The social-self, home-parents, and school-academic subscales are measured through eight questions each. The Total Self Score is a sum of the number of self-esteem items answered correctly and multiplied by two for a maximum possible score of 100 (Coopersmith, 1990). The Lie Score is the sum of the points awarded on the eight items on the Lie Scale (maximum of 8). A high Lie Score indicates defensiveness in student responses. Figure 3.1 provides an example question from the SEI.
Coopersmith Self-Esteem Inventory – School Form

by Stanley Coopersmith, Ph.D.

You will find here a list of statements about feelings. If a statement describes how you usually feel, put an X in the column “Like Me.” If the statement does not describe how you usually feel, put an X in the column “Unlike Me.” There are no right or wrong answers.

<table>
<thead>
<tr>
<th>General Self</th>
<th>Like Me</th>
<th>Unlike Me</th>
<th>1. Things usually don’t bother me.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Self-Peers</td>
<td>Like Me</td>
<td>Unlike Me</td>
<td>2. Kids usually follow my ideas.</td>
</tr>
<tr>
<td>Home-Parents</td>
<td>Like Me</td>
<td>Unlike Me</td>
<td>3. I usually feel as if my parents are pushing me.</td>
</tr>
<tr>
<td>School-Academic</td>
<td>Like Me</td>
<td>Unlike Me</td>
<td>4. I like to be called on in class.</td>
</tr>
</tbody>
</table>

From the Coopersmith Self-Esteem Inventory – School Form by Stanley Coopersmith, Ph.D.

Copyright 1967 by W. H. Freeman & Co. All rights reserved. Note: Reproduced by special permission of the Publisher, Consulting Psychologists Press, Inc., Palo Alto, CA 94303 from Coopersmith Self-Esteem Inventory School-Form by Stanley Coopersmith, Ph.D. Copyright 1981 by Consulting Psychologists Press, Inc. All rights reserved. Further reproduction is prohibited without the Publisher’s written consent.

Figure 3.1 Example Questions from Coopersmith SEI

Reliability

The Coopersmith SEI Manual (1990) reports the findings of various studies on reliability. With regard to internal consistency, the work of Kimball (1972) obtained coefficients ranging from .87 to .92 using the Kuder Richardson Formula 20. The coefficients for the approximately 7600 students surveyed in grades 4 through 8 are listed in Table 3.4 below.
Table 3.4

*Internal Consistencies for Coopersmith Self-Esteem Inventory*

<table>
<thead>
<tr>
<th>Grade</th>
<th>r</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>.92</td>
<td>1502</td>
</tr>
<tr>
<td>5</td>
<td>.87</td>
<td>1407</td>
</tr>
<tr>
<td>6</td>
<td>.88</td>
<td>1650</td>
</tr>
<tr>
<td>7</td>
<td>.89</td>
<td>1539</td>
</tr>
<tr>
<td>8</td>
<td>.90</td>
<td>1495</td>
</tr>
</tbody>
</table>


The work of Donaldson (1974) is cited in the SEI Manual with regard to subscale and item intercorrelations. From the surveying of 643 students in grades 3-8 coefficients ranging from .02 to .52 were obtained. See Table 3.5.

Table 3.5

*Subscale Intercorrelations for Coopersmith Self-Esteem Inventory*

<table>
<thead>
<tr>
<th></th>
<th>General Self</th>
<th>Social Self-Peers</th>
<th>Home-Parents</th>
<th>School – Academic</th>
<th>Lie Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Self</td>
<td>--</td>
<td>.49</td>
<td>.52</td>
<td>.42</td>
<td>-.02</td>
</tr>
<tr>
<td>Social Self-Peers</td>
<td>--</td>
<td>.28</td>
<td>.29</td>
<td>-.09</td>
<td></td>
</tr>
<tr>
<td>Home-Parents</td>
<td>--</td>
<td></td>
<td>.45</td>
<td>-.04</td>
<td></td>
</tr>
<tr>
<td>School Academic</td>
<td>--</td>
<td></td>
<td></td>
<td>-.12</td>
<td></td>
</tr>
</tbody>
</table>

Note. High Lie Scale scores suggest defensiveness. N = 643 children in grades 3-8 r = .12, p<.01; r = .08, p<.05. From Coopersmith Self-Esteem Inventory Manual (Coopersmith, 1990).
Coopersmith (1967) reports test-retest reliability for both five-week and three-year intervals. A sample of fifth graders surveyed at a five-week interval yielded test-retest reliability of .88 and for a three year period yielded .70.

Norms

Figure 3.2 presents the change in means from 4th grade to 8th grade for self-esteem as measured by the Coopersmith Self-Esteem Inventory. These norms were established from a sample of 2,878 students ages eight through thirteen from both rural and urban areas in the central region of the United States (See Table 3.6). A drop in self-esteem between grades five and six is indicated as well as a gradual drop across grades seven and eight.

Table 3.6

Mean Self-Esteem Scores by Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>896</td>
<td>70.2</td>
</tr>
<tr>
<td>5</td>
<td>982</td>
<td>70.4</td>
</tr>
<tr>
<td>6</td>
<td>635</td>
<td>68.8</td>
</tr>
<tr>
<td>7</td>
<td>164</td>
<td>68.6</td>
</tr>
<tr>
<td>8</td>
<td>201</td>
<td>68.5</td>
</tr>
</tbody>
</table>

Assessment of Learner-Centered Practices

The ALCP is a self-assessment of the degree to which classroom practices are aligned with the APA Learner-Centered Principles along four research-validated domains: (1) metacognitive and cognitive factors; (2) affective and motivational factors; (3) developmental and social factors; and (4) individual difference factors (McCombs, 2001). The ALCP is comprised of 72 questions. The first three domains
are addressed by six questions each. Seven questions inform the fourth domain. The remaining 47 questions address the seven indicators of student motivation: self-efficacy; epistemic curiosity, active learning strategies, effort avoidance strategies, task mastery goals, performance oriented goals, and work avoidance goals.

Reliability

McCombs and Lauer (1997) used the Cronbach alpha to assess the reliability of the subscales measuring learner-centeredness. Of the four subscales, positive relationship, student voice, and higher order thinking skills had Cronbach alpha coefficients of .91, .84, and .85 respectively. The fourth factor, individual differences, had a Cronbach alpha of .70. Table 3.7 shows that more recent Cronbach alpha coefficients are slightly lower than those reported by McCombs and Lauer in 1997.

Validity

McCombs and Lauer (1997) conducted a two-phase validation of the Learner-Centered Battery. Phase one of the validation focused on establishing internal consistency reliability and factor structures. According to McCombs and Lauer (1997), “all surveys in the validation study demonstrated moderate to high internal consistencies (alpha coefficients ranged from .67 to .96) and factor structures that were conceptually consistent with the Learner-Centered Psychological Principles” (1993, p.9). Phase two of the validation focused on establishing concurrent validity by examining the association of the ALCP with existing measures of teachers’ attitudes and students’ motivation. In addition, predictive validity was measured. The
results of the second phase of the validation supported the ALCP’s statistical, concurrent, and predictive validity.

Norms

A sample of 3,470 students from rural, urban, and suburban school sites were selected for the purposes of compiling normative data for the ALCP. These sites were from geographic regions in the southwest, midwest, northeast, east, and southeast. The means and standard deviations for each student variable of the ALCP are listed in Table 3.7 below.

Table 3.7

ALCP Means and Standard Deviations by Student Variable

<table>
<thead>
<tr>
<th>Student Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Relationships</td>
<td>2.82</td>
<td>.78</td>
<td>.81</td>
</tr>
<tr>
<td>Student Voice</td>
<td>2.73</td>
<td>.67</td>
<td>.69</td>
</tr>
<tr>
<td>Higher Order Thinking</td>
<td>2.97</td>
<td>.67</td>
<td>.73</td>
</tr>
<tr>
<td>Individual Differences</td>
<td>2.68</td>
<td>.62</td>
<td>.66</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>3.05</td>
<td>.62</td>
<td>.73</td>
</tr>
<tr>
<td>Epistemic Curiosity</td>
<td>2.80</td>
<td>.54</td>
<td>.56</td>
</tr>
<tr>
<td>Active Learning Strategies</td>
<td>2.84</td>
<td>.60</td>
<td>.74</td>
</tr>
<tr>
<td>Effort Avoidance Strategies</td>
<td>2.14</td>
<td>.60</td>
<td>.67</td>
</tr>
<tr>
<td>Task Mastery Goals</td>
<td>3.09</td>
<td>.68</td>
<td>.77</td>
</tr>
<tr>
<td>Performance Oriented Goals</td>
<td>2.68</td>
<td>.71</td>
<td>.68</td>
</tr>
<tr>
<td>Work Avoidance Goals</td>
<td>2.30</td>
<td>.66</td>
<td>.64</td>
</tr>
</tbody>
</table>

Procedures

The procedures for the experimental and control groups were the same; however, the researcher’s participation in the process differed between the two groups. The CLC administered the two surveys according to the research procedures as part of their yearly assessment plan. The Coopersmith SEI was administered twice, first at the beginning of October and again in early January. The ALCP was administered once in early January. The CLC administered all instruments, collected data, and provided the secondary data to the researcher. Although the CLC students were not being asked to complete any surveys beyond those required under their approved school assessment plan, in the name of fairness, the principal investigator provided each CLC student with an ice cream coupon (the same incentive offered to control subjects) as a token of thanks for allowing the use of their data.

The participants in the control group were selected randomly from all students in grades five through eight in the non-charter public school district (NCP). The first packet prepared by the researcher included Parent and Student Informed Consent Forms, the Coopersmith SEI, and a reminder that full participation in the study would be rewarded with a coupon for an ice cream cone. Packets were addressed by a NCP official and mailed to a random sample of 250 students at the beginning of October. Participants completed the surveys and returned them via U.S. mail. Within two weeks of the first mailing, it was clear that the number of responses received was not going to be sufficient. Although there was no clear evidence as to why surveys were not being completed and returned, we speculated that the fact that the mailing corresponded with the postal anthrax scares contributed to the low return rate.
Therefore, a second random sample of 100 students from grades five through eight was made, the researcher prepared packets, and the NCP official addressed and sent the packets. Consent forms and the first SEI were received from twenty-seven percent of the total random sample. Between the first and second mailing, the researcher sent a list of participant names to the NCP official who in turn assigned each student participant with a number code to protect their identity. Second mailings were made in early January to the 94 subjects from round one. The researcher prepared the second packet, which included the Coopersmith SEI, the ALCP, and the participants signed copies of the consent forms. The researcher wrote the student numbers assigned by the NCP official on the front of the envelopes. The NCP official then matched each number with the appropriate mailing label and sent the packets. A follow-up reminder postcard was sent two-weeks after the mailing to those participants who had not yet responded to the second mailing. Again the instruments were returned to the researcher via U.S. mail.

Data Analysis

Minitab version 10.5 and EQS (A Structural Equations Program) version 5.6 were used to conduct all statistical analyses. Descriptions of data analysis procedures for this study’s hypotheses follow.
T-Test

One-sample t-tests were computed to test Hypothesis Three. A t-test was chosen due to the fact that we were examining the differences between the means of the first and second administrations of the SEI.

ANOVA

Analysis of Variance (ANOVA) was used to test Hypotheses One, Two, Four, and Six. ANOVA was chosen over simple t-tests to account for the comparison of multiple conditions. As described by Krathwohl (1998),

Analysis of variance (ANOVA) allows for more precise inference by estimating and removing the variance due to factors built into the design. [Additionally] it allows the testing of the statistical significance of each variable in the design as well as the combined effect of these variables. (p. 491)

Given that two independent variables were involved in the analyses of Hypotheses Two, a two-way ANOVA was used. One-way Analysis of Variance (ANOVA) procedure was used to test Hypotheses One, Four and Six.

Analysis of Covariance (ANCOVA) was used to test Hypothesis Five. ANCOVA was used to measure the interaction effect of grade while controlling for the first self-esteem score. This procedure allowed us to control for the level of self-esteem students had earlier in the school year and upon entering their respective learning environments.
*Path Analysis*

To test Hypothesis Seven as well as the overarching research question, path analysis was used to test the causal relationships of learner-centeredness, self-esteem, school, grade, and gender. According to Gall, Borg, and Gall (1996), path analysis tests “theories about hypothesized causal links between variables” as opposed to other multivariate methods that are “designed to maximize the correlation between various combinations of variables” (p. 442). We chose path analysis in an effort to produce more meaningful results.

The first step of the path analysis was to formulate hypotheses that causally linked the variables of interest. Based on the findings in the literature (McCombs, 1999; McCombs, 1997; Weinberger, 2001), it was hypothesized that environments with greater perceived learner-centeredness will result in higher self-belief scores. Understanding that there are other factors that contribute to the formation of self-beliefs, other variables had to be included in the analysis. A review of all of this contributing information resulted in a formation of the initial path diagram (See Figure 3.3). Hypothesis Seven states that environments with a greater perceived learner-centeredness will result in higher scores of self-esteem than those with a lower perception of learner-centeredness. The path diagram depicts this relationship while taking into consideration the impacts of school, grade, gender, and the two measures of self-esteem. More specifically, the path illustrates that the first measure of self-esteem will be impacted by both grade and gender. The first measure of self-esteem will in turn impact both perceived learner-centeredness and the second measure of self-esteem. Based on the literature, it was believed that in addition to the
impact of the first measure of self-esteem on learner-centeredness, the school in which a student is enrolled will impact the perceived learner-centeredness. Finally, the perceived learner-centeredness will impact the second measure of self-esteem.

Figure 3.3 Initial Path Diagram

After data were collected and entered into Minitab, the next step of the path analysis involved the creation of a covariance matrix (see Chapter Four). The covariance matrix was entered into EQS and the first iteration of analysis was completed. With each iteration of the path analysis, relevant causal variables were included while extraneous variables were eliminated. The standardized solution was reached after three iterations. The detail of that solution is presented in Chapter Four.
Correlations

Product-moment correlation coefficients were computed to determine the relationship between self-esteem and the four domain subscales of the ALCP. The Pearson r was deemed the appropriate measure of the magnitude of the relationship since both variables were expressed as continuous scores.

Conclusion

This chapter reviewed the methodology used in this study including information on the reliability and validity of the instruments used, normative data, research procedures, and analysis procedures followed. Chapter Four will provide the results of this study.
Chapter 4

Results

Introduction

This chapter reports the results of the analyses of this study. The presentation of descriptive statistics will be followed by the analysis for each of the study’s hypotheses. Minitab version 10.5 and EQS (A Structural Equations Program) version 5.6 were used to conduct all statistical analyses.

Data from 164 subjects was used for this study. Incomplete data were obtained from an additional 58 subjects. Five students left the CLC, eleven students entered the CLC mid-year and did not have October SE scores, fifteen students from the NCP dropped out of the study, and twenty-seven students submitted surveys that were either incomplete or unscoreable. The surveys that could not be scored involved students creating their own response column or writing in answers. All of these unscoreable surveys were received from students at the CLC.. Each of the research and null hypotheses presented in Chapter One were tested. The data related to each hypothesis and the overarching research question are presented below.

Self-Esteem

Tables 4.1-4.5 present the descriptive statistics by grade for the first and second administration of the Coopersmith Self-Esteem Inventory as well as the SE change score. The change score was computed by subtracting SE1 from SE2.
Table 4.1

*Grades 5-8 Descriptive Statistics for Self-Esteem Scores for CLC Charter School, Non-Charter Public School, and National Norms*

<table>
<thead>
<tr>
<th></th>
<th>SE1</th>
<th>SE2</th>
<th>Change Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CLC</td>
<td>87</td>
<td>80.00</td>
<td>13.41</td>
</tr>
<tr>
<td>NCP</td>
<td>77</td>
<td>62.65</td>
<td>7.39</td>
</tr>
<tr>
<td>National</td>
<td>2878</td>
<td>69.08</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.2

*Fifth Grade Descriptive Statistics for Self-Esteem Scores for CLC Charter School, Non-Charter Public School, and National Norms*

<table>
<thead>
<tr>
<th></th>
<th>SE1</th>
<th>SE2</th>
<th>Change Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CLC</td>
<td>21</td>
<td>82.57</td>
<td>12.07</td>
</tr>
<tr>
<td>NCP</td>
<td>19</td>
<td>63.47</td>
<td>4.66</td>
</tr>
<tr>
<td>National</td>
<td>982</td>
<td>70.40</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.3

*Sixth Grade Descriptive Statistics for Self-Esteem Scores for CLC Charter School, Non-Charter Public School, and National Norms*

<table>
<thead>
<tr>
<th></th>
<th>SE1 N</th>
<th>M</th>
<th>SD</th>
<th>SE2 M</th>
<th>SD</th>
<th>Change M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLC</td>
<td>25</td>
<td>72.88</td>
<td>14.58</td>
<td>70.48</td>
<td>14.49</td>
<td>-2.40</td>
<td>12.97</td>
</tr>
<tr>
<td>NCP</td>
<td>15</td>
<td>64.67</td>
<td>5.43</td>
<td>62.53</td>
<td>7.46</td>
<td>-2.13</td>
<td>6.52</td>
</tr>
<tr>
<td>National</td>
<td>635</td>
<td>68.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4

*Seventh Grade Descriptive Statistics for Self-Esteem Scores for CLC Charter School, Non-Charter Public School, and National Norms*

<table>
<thead>
<tr>
<th></th>
<th>SE1 N</th>
<th>M</th>
<th>SD</th>
<th>SE2 M</th>
<th>SD</th>
<th>Change M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLC</td>
<td>17</td>
<td>80.35</td>
<td>11.38</td>
<td>76.59</td>
<td>16.71</td>
<td>-3.76</td>
<td>17.01</td>
</tr>
<tr>
<td>NCP</td>
<td>19</td>
<td>61.79</td>
<td>8.08</td>
<td>62.32</td>
<td>7.95</td>
<td>0.53</td>
<td>7.05</td>
</tr>
<tr>
<td>National</td>
<td>164</td>
<td>68.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.5

_Eighth Grade Descriptive Statistics for Self-Esteem Scores for CLC Charter School, Non-Charter Public School, and National Norms_

<table>
<thead>
<tr>
<th></th>
<th>SE1</th>
<th></th>
<th>SE2</th>
<th></th>
<th>Change Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CLC</td>
<td>24</td>
<td>84.92</td>
<td>12.13</td>
<td>80.00</td>
<td>15.22</td>
</tr>
<tr>
<td>NCP</td>
<td>24</td>
<td>61.42</td>
<td>9.43</td>
<td>61.00</td>
<td>9.53</td>
</tr>
<tr>
<td>National</td>
<td>201</td>
<td>68.5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

_H1: There will be no difference in self-esteem scores between the CLC students, non-charter public school students, and the national norms on either the first or second assessment._

Two one-way ANOVAs were run to determine if the mean self-esteem scores of the CLC and NCP students were significantly different for both the first and second administration of the SEI. Table 4.6 shows that the CLC mean SE1 score of 80.00 (13.41) was significantly different than that of the NCP mean score of 62.65 (7.39). Table 4.7 shows that the CLC mean SE2 score of 75.70 (16.15) was also significantly different than that of the NCP mean SE2 score of 62.26 (7.44). Figures 4.1-4.4 illustrate the differences in these scores for each grade.

The national mean score (M = 69.08) falls outside the 95% confidence intervals of the CLC for both the mean SE1 score (M = 80.00) with a 95% CI 77.14, 82.26 and the mean SE2 score (M = 75.70) with a 95% CI 72.26, 79.14. The national
mean score (M = 69.08) falls outside the 95% confidence intervals of the NCP for both the mean SE1 score (M = 62.65) with a 95% CI 60.97, 64.33 and the mean SE2 score (M = 62.26) with a 95% CI 60.57, 63.95.

Table 4.6

*Analysis of Variance for SE1 Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>101.58</td>
<td>0.00*</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(121)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05

Table 4.7

*Analysis of Variance for SE2 Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>44.85</td>
<td>0.00*</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(165)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05
Figure 4.1 Grade 5 Mean SE1 and SE2 scores by school

Figure 4.2 Grade 6 Mean SE Scores by School
Figure 4.3 Grade 7 Mean SE Scores by School

Figure 4.4 Grade 8 Mean SE Scores by School
H2: The change in self-esteem exhibited by CLC students will be significantly different than that of the students in the non-charter public school.

The results of the two-way ANOVA (See Table 4.8) confirm the research hypothesis, showing that the change in self-esteem score exhibited by the CLC students ($M = -4.30, SD = 12.66$) was significantly different than that of the students in the non-charter school ($M = -0.39, SD = 6.27$). However, although approaching statistically significant levels, the results of the two-way ANOVA (Table 4.8) and one-way ANOVAs computed for each grade (Tables 4.9 – 4.12) indicate that the change scores were not significantly different by grade.

Table 4.8

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>5.95</td>
<td>0.02*</td>
</tr>
<tr>
<td>Grade</td>
<td>3</td>
<td>0.20</td>
<td>0.90</td>
</tr>
<tr>
<td>Error</td>
<td>159</td>
<td>(105)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05
Table 4.9

*Analysis of Variance for Fifth Grade Self-Esteem Change Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>3.46</td>
<td>0.07</td>
</tr>
<tr>
<td>Error</td>
<td>38</td>
<td>(118)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05

Table 4.10

*Analysis of Variance for Sixth Grade Self-Esteem Change Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>0.01</td>
<td>0.94</td>
</tr>
<tr>
<td>Error</td>
<td>38</td>
<td>(122)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05

Table 4.11

*Analysis of Variance for Seventh Grade Self-Esteem Change Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>1.02</td>
<td>0.32</td>
</tr>
<tr>
<td>Error</td>
<td>34</td>
<td>(163)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05
Table 4.12

*Analysis of Variance for Eighth Grade Self-Esteem Change Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>3.96</td>
<td>0.05</td>
</tr>
<tr>
<td>Error</td>
<td>46</td>
<td>(42.3)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05

*Ho3: There will be no significant difference in SE1 and SE2 self-esteem scores in students in their first year at the CLC.*

Table 4.13 provides descriptive statistics by years enrolled in the CLC for SE1, SE2 and SE change score.
Table 4.13

*Grades 5-8 Descriptive Statistics for Self-Esteem Scores for First-Year and Non-First Year CLC Students*

<table>
<thead>
<tr>
<th></th>
<th>SE1</th>
<th></th>
<th>SE2</th>
<th></th>
<th>Change</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>First Year</td>
<td></td>
<td>36</td>
<td>80.00</td>
<td>12.43</td>
<td>75.89</td>
<td>15.76</td>
</tr>
<tr>
<td>Returning</td>
<td></td>
<td>51</td>
<td>80.00</td>
<td>14.18</td>
<td>75.57</td>
<td>16.58</td>
</tr>
<tr>
<td>5th Grd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year</td>
<td></td>
<td>21</td>
<td>82.57</td>
<td>12.07</td>
<td>76.29</td>
<td>17.97</td>
</tr>
<tr>
<td>Returning</td>
<td></td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6th Grd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year</td>
<td></td>
<td>10</td>
<td>74.40</td>
<td>13.91</td>
<td>75.60</td>
<td>11.81</td>
</tr>
<tr>
<td>Returning</td>
<td></td>
<td>15</td>
<td>71.87</td>
<td>15.41</td>
<td>67.07</td>
<td>15.47</td>
</tr>
<tr>
<td>7th Grd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year</td>
<td></td>
<td>4</td>
<td>77.00</td>
<td>4.76</td>
<td>70.50</td>
<td>14.18</td>
</tr>
<tr>
<td>Returning</td>
<td></td>
<td>13</td>
<td>81.38</td>
<td>12.74</td>
<td>78.46</td>
<td>17.50</td>
</tr>
<tr>
<td>8th Grd.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year</td>
<td></td>
<td>1</td>
<td>94.00</td>
<td>--</td>
<td>92.00</td>
<td>--</td>
</tr>
<tr>
<td>Returning</td>
<td></td>
<td>23</td>
<td>84.52</td>
<td>12.24</td>
<td>79.48</td>
<td>15.34</td>
</tr>
</tbody>
</table>

The results of the t-test do not support the rejection of this null hypothesis.

The SE1 scores of the 36 students in their first year at the CLC ($M = 80.00$, $SD = 12.43$) were not significantly different than the SE2 scores for the same group of students ($M = 75.889$, $SD = 15.76$), $t (36) = -1.56$, $p = 0.13$ (two-tailed).
H4: There will be a greater change in self-esteem scores of students in their first year at CLC than students in their second, third, and fourth years at the CLC.

Table 4.13 presents the descriptive statistics for first year and returning students of the CLC. Table 4.14 presents the results of the one-way ANOVA that does not provide support for this research hypothesis. The 36 students in their first year at the CLC did not exhibit a greater mean self-esteem change score \(M = -4.11, SD = 12.97\) than those students in their second, third, and fourth years at the CLC \(M = -4.43, SD = 12.56\).

Table 4.14

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>1</td>
<td>0.01</td>
<td>0.908</td>
</tr>
<tr>
<td>Error</td>
<td>85</td>
<td>(162)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>86</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error.
H5: There will be no significant difference in SE2 self-esteem scores across grades 5, 6, 7, and 8 at the CLC and the non-charter public school when controlling for initial self-esteem.

Tables 4.2, 4.3, 4.4, and 4.5 show the means and standard deviations for grades five, six, seven, and eight, respectively. The results of the ANCOVA, as presented in Table 4.15, supports this research hypothesis. When controlling for the initial self-esteem (SE1) of the students, the self-esteem scores across grades were not significantly different.

Table 4.15

Analysis of Covariance for Self-Esteem 2

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covariate</td>
<td>1</td>
<td>186.88</td>
<td>0.00*</td>
</tr>
<tr>
<td>Grade</td>
<td>3</td>
<td>0.09</td>
<td>0.97</td>
</tr>
<tr>
<td>Error</td>
<td>159</td>
<td>(97.7)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Value enclosed in parentheses represents mean square error. *p < .05.
Learner-Centeredness

H6: There will be no significant difference in the level of learner-centeredness between the CLC, the non-charter public school and the national norms, in the total nor any of the four subscales.

The descriptive statistics for the Assessment of Learner-Centered Practices are presented in Table 4.16. The mean total scores are presented as well as the means for each of the four domain subscales.

Table 4.16

*Descriptive Statistics for Learner-Centered Scores for National Norms, CLC Charter School, and Non-Charter Public School*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pos Rel</th>
<th>Std Voice</th>
<th>Hghr Ordr</th>
<th>Indiv Diff</th>
<th>Total LC</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>n</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Nat’l</td>
<td>3470</td>
<td>3.07</td>
<td>.780</td>
<td>2.92</td>
<td>.670</td>
</tr>
<tr>
<td>CLC</td>
<td>87</td>
<td>3.21</td>
<td>.602</td>
<td>3.12</td>
<td>.609</td>
</tr>
<tr>
<td>NCP</td>
<td>77</td>
<td>3.02</td>
<td>.696</td>
<td>2.86</td>
<td>.707</td>
</tr>
</tbody>
</table>

Note: National Norms from McCombs (2001) Unpublished manuscript. Used with permission of author.

Table 4.17 indicates that there is a significant difference in mean total learner-centeredness scores of the students in the CLC ($M = 3.08, SD = .55$) and the non-
charter public school ($M = 2.89, SD = .66$). A comparison of the mean score for the national norms ($M = 2.80, SD = .685$) to the 95% confidence intervals for the mean total learner-centeredness scores for the CLC (2.9603, 3.1963) and the non-charter public school (2.7395, 3.0393) reveals that the mean score for the national norms falls outside of the confidence interval for the CLC while it falls within the confidence interval of the non-charter public school. From this finding we can speculate that there is a significant difference in total learner-centeredness between the CLC and the national norms.

Table 4.17

*Analysis of Variance on Total Learner-Centeredness*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>3.97</td>
<td>0.048*</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(0.367)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05.

Table 4.18 provides the statistical output of an ANOVA indicating that there is no significant difference in mean scores on the positive relationships subscale of the ALCP of the students in the CLC ($M = 3.21, SD = .60$) and the non-charter public school ($M = 3.02, SD = .70$). A comparison of the mean score for the national norms ($M = 3.07, SD = .78$) to the 95% confidence intervals for the mean learner-centeredness scores for the CLC (3.08, 3.34) and the non-charter public school (2.86,
3.18) reveals that the mean score for the national norms falls outside of the confidence interval for the CLC while it falls within the confidence interval of the non-charter public school. From this finding we can speculate that there is a significant difference in the positive relationships subscale between the CLC and the national norms.

Table 4.18

*Analysis of Variance on Positive Relationships Subscale of Learner-Centeredness*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>3.46</td>
<td>0.065</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(0.420)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05.

The ANOVA reported in Table 4.19 indicates that there is a significant difference in mean scores of the student voice subscale for the ALCP between the students in the CLC ($M = 3.12, \text{SD} = 0.61$) and the non-charter public school ($M = 2.86, \text{SD} = .71$). A comparison of the mean score for the national norms ($M = 2.92, \text{SD} = .67$) to the 95% confidence intervals for the mean learner-centeredness scores for the CLC (2.99, 3.25) and the non-charter public school (2.70, 3.02) reveals that the mean score for the national norms falls outside of the confidence interval for the CLC while it falls within the confidence interval of the non-charter public school.
From this finding we can speculate that there is a significant difference in the student voice subscale between the CLC and the national norms.

Table 4.19

*Analysis of Variance on Student Voice Subscale of Learner-Centeredness*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>6.47</td>
<td>0.012*</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(0.432)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05.

Table 4.20 indicates that there is no significant difference in mean scores of the higher order thinking subscale for the ALCP between the students in the CLC ($M = 3.19, SD = .63$) and the non-charter public school ($M = 2.98, SD = .74$). A comparison of the mean score for the national norms ($M = 3.13, SD = .67$) to the 95% confidence intervals for the mean learner-centeredness scores for the CLC (3.05, 3.32) and the non-charter public school (2.81, 3.14) reveals that the mean score for the national norms falls within the confidence intervals of the CLC and the non-charter public school. From this finding we can speculate that there is no significant difference in the higher-order thinking subscale between the CLC and the national norms or the NCP and the national norms.
Table 4.20

*Analysis of Variance on Higher Order Thinking Subscale of Learner-Centeredness*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>3.87</td>
<td>0.051</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(0.463)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05.

Table 4.21 indicates that there is no significant difference in mean scores of the individual differences subscale of the ALCP of the students in the CLC ($M = 2.80$, $SD = .64$) and the non-charter public school ($M = 2.71$, $SD = .71$). A comparison of the mean score for the national norms ($M = 2.80$, $SD = .62$) to the 95% confidence intervals for the mean learner-centeredness scores for the CLC (2.67, 2.94) and the non-charter public school (2.55, 2.87) reveals that the mean score for the national norms falls within the confidence intervals of the CLC and the non-charter public school. From this finding we can speculate that there is no significant difference in the individual differences subscale between the CLC and the national norms or the NCP and the national norms.
Table 4.21

*Analysis of Variance on Individual Differences Subscale of Learner-Centeredness*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>1</td>
<td>0.84</td>
<td>0.360</td>
</tr>
<tr>
<td>Error</td>
<td>162</td>
<td>(0.449)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05.

**Learner-Centeredness and Self-Esteem**

The null hypotheses (Ho^8, Ho^9, Ho^10, Ho^11) stating that there will be no significant correlation between self-esteem and the four domains of the Assessment of Learner-Centered Practices can be rejected based on the results of the Pearson correlations calculated. As the p-values indicate, the relationship between self-esteem and each of the four domains is statistically significant, but relatively weak (Campbell, 1997). The matrix of Pearson Correlations for self-esteem and the four domains of the ALCP can be found in Table 4.22.
Table 4.22

*Pearson Correlations for Self-Esteem and Four Domains of ALCP*

<table>
<thead>
<tr>
<th></th>
<th>PosRel</th>
<th>StuVoi</th>
<th>HiOrd</th>
<th>IndDif</th>
</tr>
</thead>
<tbody>
<tr>
<td>StuVoi</td>
<td>0.74*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HiOrd</td>
<td>0.84*</td>
<td>0.78*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IndDif</td>
<td>0.74*</td>
<td>0.76*</td>
<td>0.82*</td>
<td></td>
</tr>
<tr>
<td>SE2</td>
<td>0.33*</td>
<td>0.32*</td>
<td>0.30*</td>
<td>0.28*</td>
</tr>
</tbody>
</table>

Note. PosRel = Perception of Creating Positive Relationships; StuVoi = Perception of Honoring Student Voice; HiOrd = Perception of Attention to Higher Order Thinking Skills; IndDif = Perception of Attention to Individual Differences; SE2 = Self-Esteem Score 2. *p<.05.

*H7: Environments with a greater perception of learner-centeredness will be associated with more positive self-esteem scores than those with a lower perception of learner-centeredness.*

A path analysis depicted in Figure 4.5 illustrates that the school in which a student is enrolled indirectly impacts the perception of learner-centeredness which in turn impacts self-esteem scores. In addition, the path analysis shows that the school in which a student is enrolled is correlated (r = .621) with SE1 scores. The SE1 scores impact SE2 scores (r = .706) and perceived learner-centeredness (r = .328). In addition to SE1, learner-centeredness (r = .103) and gender (r = -.084) impact SE2 scores.
A number of assumptions made in the original path model (Figure 3.3) were found to be untrue through the standardized solution. First, the standardized solution indicated that the grade in which a student is enrolled has no relationship to self-esteem. Therefore, grade was eliminated from the path diagram representing the standardized solution. Second, the prediction that gender is related to SE1 was not substantiated. The standardized solution indicated that girls ($r = -.084$) are slightly more likely to have higher self-esteem scores at the second measure. Finally, the standardized solution revealed that school is not directly linked to learner-centeredness, but rather is indirectly linked to learner-centeredness through SE1.
In an effort to support the results of the path analysis, a t-test was run to determine if the SE1 scores for the CLC students were reflective of school design or rather the self-esteem that students brought with them to the school. The results of the t-test indicate that there is no significant difference between the mean SE1 scores of CLC students in their first year at the school \( (M = 80.00, SD = 12.43) \) and those not in their first year at the CLC \( (M = 80.00, SD = 14.18), t(36) = 0.00, p = 1.00 \) (two-tailed). Had the means been significantly different, we might conclude that the CLC was improving self-esteem. However, the lack of significant difference between the mean SE1 scores of first year and non-first year CLC students provides no real information on whether students came with different levels of self-esteem or if self-esteem changed before the initial assessment of this study which took place approximately six weeks after school had begun.

**Conclusion**

This chapter presented the results of the study. Chapter Five will provide a discussion of these findings, limitations of this study, and implications for future research.
Chapter 5
Discussion

Introduction

This chapter will provide a discussion of the results of this research study. An overview of the findings of this research study will be followed by a discussion of the implications of the findings for educational systems design, a discussion of the limitations of this research study, and suggestions for future research.

Overview of Findings

The purpose of this study was to investigate the effects of the implementation of a program designed to help ward off the dip in self-esteem that is common in adolescents. Additionally, the study investigated the relationship between the learner-centeredness of a learning environment and the self-esteem of students enrolled in those environments.

Self-esteem was measured through the Coopersmith Self-Esteem Inventory administered early in the school year and again during the middle of the school year. Students’ perceptions of learner-centeredness were measured by the Assessment of Learner-Centered Practices (ALCP) (McCombs & Lauer, 1997) during the middle of the school year. The ALCP measures learner-centeredness across four domains of classroom practice: (1) creating a positive classroom climate and relationships with students, (2) honoring student voice and providing individual learning challenges, (3)
encouraging higher order thinking and learning skills, and (4) adapting to a variety of individual developmental differences (McCombs, 2001).

Findings related to the hypotheses for this study and a discussion of these results are also provided below. The summary is followed by a discussion of the implications of the findings for educational systems design.

**Self-Esteem**

*Self-esteem scores of students at the CLC are significantly different than the self-esteem scores of the non-charter public school students and the national norms.*

Due to a lack of evidence in the literature that would support CLC students having significantly higher self-esteem scores than the NCP, it was hypothesized that there would be no significant difference in the self-esteem scores of the CLC and NCP. The results as evidenced in Tables 4.6 and 4.7 show that the CLC scores were significantly higher than the NCP. Examination of the confidence intervals for the CLC scores and the national mean score allow us to presume that the CLC scores are significantly higher than the national norms, as well. The findings of this study suggest that the CLC design is not harmful to student self-esteem.

The officials from the NCP also describe their school as being nurturing of self-esteem. They cite programs such as Project PRIDE/Planet PEACE and A.R.E.A. (Activities, Remediation, Enrichment, and Advising) as evidence of steps taken to enhance students’ beliefs in themselves. The findings of this study may be seen as reason to speculate that such programs may not be as effective as other, more
systemic changes to the school culture. Not only are the NCP’s self-esteem scores significantly lower than the CLC, they are also lower than the national norms. This may be due to an unfortunate sample selection or imbalanced subject attrition, but because the subjects were selected randomly and subjects with high self-esteem would probably be less likely to drop out, this does not appear to be the case.

The International Council for Self-Esteem (2001) identifies five categories of self-esteem nurturing programs that have been found to be highly effective. The ICSE predicts that a more effective way to nurture self-esteem would be a mix of the five approaches. The CLC has taken a systemic approach to nurturing self-esteem that mixes the five approaches as outlined by the ICSE. The findings of this study showing that the self-esteem scores of the CLC were significantly different than the scores of the NCP and the national norms could be used to speculate that a systemic program for nurturing self-esteem is effective.

The self-esteem change scores of the CLC are significantly different than the change scores for the non-charter public school.

Based on studies (i.e. Piers & Harris, 1964; Simmons, Rosenberg & Rosenberg, 1973; Eccles, 1984; Hill, 1983; Rosenberg, 1986; Simmons, 1987; Hirsch and Rapkin, 1992) indicating a change in students’ self-esteem upon the transition to a traditional middle school environment, it was predicted that students enrolled in a non-traditional middle school environment such as the CLC would have self-esteem scores that were more resistant to this decline than those students enrolled in a non-charter middle school. The findings of this study support the hypothesis that the
change scores of the CLC would be significantly different than the scores for the NCP, but they changed more, not less. The scores for both the CLC and the NCP dropped; however, the drops in scores of the CLC were greater. Despite the drop exhibited by the CLC, the mean scores of the CLC were still significantly higher than both the NCP and the national norms. Given the significantly higher scores of the CLC and the significantly lower scores of the NCP, the drop in SE exhibited by the CLC and the lack of a continued drop in the NCP, might both be attributable to regression toward the mean (Lane, 2002).

The SE1 and SE2 scores of students in their first year at the CLC are not significantly different.

Although there is evidence in the literature supporting the idea that enrolling students in a highly learner-centered environment has a positive effect on student self-beliefs (McCombs, 1999; McCombs, 1997; Weinberger and McCombs, 2001), there is also evidence (Coopersmith, 1967; Harter, 1990; Rosenberg, 1965) that there is a drop in student self-esteem during adolescence. Therefore, we hypothesized that there would be no difference in SE1 and SE2 scores for students in their first year at the CLC. The findings of this study supported this hypothesis.

The findings of this study with regard to this hypothesis may have been different if the SEI had been administered on day one of the school year and if self-esteem had been assessed at both the middle and end of the school year. Not only would these modifications provide data on the self-esteem with which students enter
the school, but in addition it would lengthen the interval between measures, thus allowing us to better determine if changes in self-esteem were attributable to the nature of the school environment.

*The self-esteem change scores of the students in their first year at the CLC are not significantly greater than the change scores of returning students.*

Relying on the findings of studies investigating the impact of school transitions studies (i.e. Piers & Harris, 1964; Simmons, Rosenberg & Rosenberg, 1973; Eccles, 1984; Hill, 1983; Rosenberg, 1986; Simmons, 1987) and the theory that due to adolescent development self-esteem takes a dip between grades five and six, it was predicted that the self-esteem change scores for first year CLC students would be significantly greater than the change scores for returning students. The results of this study do not support this hypothesis. Table 4.18 showed that the change scores for first year and returning students are not significantly different.

One possible explanation for this lack of significant difference in scores between first year and returning students is that the initial self-esteem assessment took place six weeks into the school year. Therefore, we did not have a self-esteem score representative of the self-esteem of first year students upon entry into the new school. Another possible explanation for the lack of significant difference is the fact that over half of the first year students were fifth graders who were making the transition between grades four and five, a time when a dip in self-esteem in not expected.
Self-Esteem scores for both the CLC and the non-charter public school are not significantly different across grade.

Relying on the theory that self-esteem is a fairly stable construct, it was predicted that there would be no significant difference in self-esteem for students in each of the four grades represented in the sample for this study. The findings of this study support this hypothesis that the self-esteem scores of the CLC and NCP students are not significantly different across grade.

Although the findings are aligned with the theory that self-esteem is a fairly stable construct, they do not fully represent the dip in self-esteem that is often associated with adolescence. The self-esteem scores for the NCP across grades five through eight are quite similar and a dip is not recognizable. On the other hand, although not significantly different, the CLC self-esteem scores across grades five through eight depict the dip in self-esteem between grades five and six in both SE1 and SE2 scores.

Learner-Centeredness

There is a significant difference in perception of learner-centeredness between the CLC and the non-charter middle school.

The findings of this study indicate that the students enrolled in the CLC perceive their learning environment as being more learner-centered than do the students of the non-charter middle school. The learner-centeredness of the CLC is significantly higher than both the non-charter middle school and the national norms, which are not significantly different than the NCP.
McCombs (2001) explains that learner-centeredness does not lie in the program design alone. It is important to consider the possible impact of other factors such as individual teacher qualities, physical structure of the school, learners’ prior experiences, etc. While this study’s findings suggest that a program designed in accordance with the APA’s Learner Centered Principles can attain higher learner-centeredness scores than one which is not aligned with the principles, other factors no-doubt contribute as well.

Results of the analyses for each subscale of the ALCP provide some stepping-stones for further investigation. Table 4.19 showed that the CLC and NCP scores on the Student Voice subscale were significantly different and Table 4.18 and 4.20 showed that scores on the Positive Relationships subscale and the Higher Order Thinking Subscale respectively are approaching significant differences. From these findings can we presume that the CLC provides more opportunities for students to have a voice in the school? Do students have more opportunities to engage in higher order thinking? Are the relationships developed more positive? Are there other factors that impact the perceptions of student voice, higher order thinking, or positive relationships?

Table 4.21 showed that the CLC and NCP scores on the Individual Differences subscale of the ALCP were not significantly different. These findings provide potentially valuable information for teachers at both the CLC and the NCP. By design, the ALCP instruments can be used to assess student perceptions of learner-centeredness against the perceptions of those students’ teacher. In a conversation with a CLC teacher, it became apparent that she was shocked to read the
responses of her students on items related to attention to individual differences. This teacher felt that she was being sensitive to the individual needs of her students; however, some students did not perceive it that way.

**Learner-Centeredness and Self-Esteem**

*Self-esteem is significantly correlated with the four subscales of the ALCP.*

Learner-centeredness has been related to motivation, learning, and achievement (McCombs, 1999, 2001; McCombs & Lauer, 1997; McCombs & Whisler, 1997; Weinberger & McCombs, 2001). The findings of this research study provide evidence that learner-centeredness is related to self-esteem, too. Not only do the results of the path analysis indicate a direct relationship between learner-centeredness and self-esteem, the correlations between self-esteem and the four subscales of the ALCP also show a relationship.

Although there is a significant relationship between learner-centeredness and self-esteem, the relationship is fairly weak. Therefore, it is imperative that further investigations be made to determine other factors contributing to self-esteem as well as the impact of various learning environments on the relationship between learner-centeredness and self-esteem.

*Environments with a higher perception of learner-centeredness also have higher self-esteem scores.*

Studies (McCombs, 1999; McCombs, 1997; Weinberger and McCombs, 2001) have shown that environments with a greater degree of learner-centeredness
result in more positive self-beliefs. Based on that information, it was predicted that a
greater degree of learner-centeredness would result in more positive self-esteem
scores. The findings of this study support this prediction.

As shown in Tables 4.6, 4.7, and 4.21, students in the CLC had higher
perceived learner-centeredness and higher self-esteem scores. These findings are
supported by the standardized solution of the path analysis (See Figure 4.3) that
shows that the school in which a student is enrolled indirectly impacts perceived
learner-centeredness which in turn impacts self-esteem.

Although, the lack of significant difference between the mean SE1 scores of
first year and non-first year CLC students provides no real information on whether
students came with different levels of self-esteem or if self-esteem changed before the
initial assessment of this study, findings of a previous research study by the principal
researcher speak to the impact of the CLC on student self-esteem. Moore (2000)
found that CLC students chose to enroll in the charter school because they were
ostracized and picked on in the non-charter public school. Based on this treatment,
these students came to the CLC questioning themselves and their self-worth. The
students expressed that they liked the CLC because everyone gets along and there
aren’t any cliques in the school. Additionally, the students expressed that they liked
being a member of the CLC because each person is valued for who he is and what he
can contribute to the community.
Implications for School Design

A number of implications for School Design can be drawn from this study. First, an examination of the results of this study indicate that aligning an educational program’s design with the APA’s Learner-Centered Principles may facilitate the perceived learner-centeredness of the environment. Second, designers may want to consider not focusing narrowly on the design of their learning environment, but rather taking a systemic approach, considering individual teacher qualities, physical structure of the school, learners’ prior experiences, etc. Finally, educational systems designers may want to take into consideration the integration of holistic approaches to nurturing self-esteem.

Limitations of Study

A number of limitations of this study were observed. The limitations are discussed below as well as suggestions for overcoming such issues in the future. Time was the most prominent limitation of this study. First, due to constraints on the researcher by the schools, the SEI could not be administered at the very beginning of the school year. Both of the schools requested that no surveys be administered during the first or last month of the school year. The second time constraint related to the amount of time lapsed between the two administrations of the SEI. The first SEI was sent at the beginning of October and the second SEI was sent in early January. A longer lapse in time or even an earlier initial assessment may have shown greater effects.
Another limitation of this study was the small number of subjects in each of the grades. A larger number of subjects representing each grade would have provided for a more powerful analysis of the differences in self-esteem and learner-centeredness across grade.

A third limitation involves how well the random sample represents the population based on the students who chose to participate in the study. In other words, the question arises as to the characteristics of the students who chose to participate. Were the students with high self-esteem more likely to participate?

**Suggestions for Future Research**

Further research is suggested to investigate the relationship between learner-centeredness and self-esteem among a larger variety of learning environments and a more heterogeneous sample of students. This study showed that students from one charter school, designed in keeping with the APA’s Learner-Centered Principles, had higher perceptions of learner-centeredness and higher self-esteem scores. Future studies could benefit from investigating schools with different designs and missions who serve students with more heterogeneous populations.

The CLC serves a much smaller population than does the non-charter middle school featured in this study. Given the renewed focus on school size (Allen, 2002; Johnson, 2002; Wasley, 2002), future studies could benefit from an investigation into the relationship of learner-centeredness and school size.

One interesting finding of this research was the significantly higher first round self-esteem of the students at the CLC. In light of the strong school choice movement,
it would be beneficial to further investigate the self-esteem of the students at the charter school. Studies could address the relationship between self-esteem and choices made regarding which school to attend.

Another suggestion for further research involves gathering data on learner-centeredness to correspond with each of the measures of self-esteem. Results of a measure of learner-centeredness corresponding to the first measure of self-esteem may have provided valuable information that could speak to the relationship of self-esteem and learner-centeredness as well as the stability of the two constructs.
References


Covariance Matrix

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Appendix B

GOODNESS OF FIT SUMMARY

INDEPENDENCE MODEL CHI-SQUARE = 243.276 ON 15 DEGREES OF FREEDOM

INDEPENDENCE AIC = 213.27585 INDEPENDENCE CAIC = 151.68667
MODEL AIC = -9.62185 MODEL CAIC = -50.68131

CHI-SQUARE = 10.378 BASED ON 10 DEGREES OF FREEDOM
PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS 0.40797
THE NORMAL THEORY RLS CHI-SQUARE FOR THIS ML SOLUTION IS 9.811.

BENTLER-BONETT NORMED FIT INDEX = 0.957
BENTLER-BONETT NONNORMED FIT INDEX = 0.998
COMPARATIVE FIT INDEX (CFI) = 0.998
BOLLEN (IFI) FIT INDEX = 0.998
McDonald (MFI) FIT INDEX = 0.999
LISREL GFI FIT INDEX = 0.961
LISREL AGFI FIT INDEX = 0.918
ROOT MEAN SQUARED RESIDUAL (RMR) = 0.977
STANDARDIZED RMR = 0.064
ROOT MEAN SQ. ERROR OF APP. (RMSEA) = 0.016
90% CONFIDENCE INTERVAL OF RMSEA (0.000, 0.087)
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Education

Pennsylvania State University
Doctor of Philosophy, Scheduled, May 2002: Instructional Systems
Minor Emphasis: Educational Administration
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Professional Experience

2000-present  eLearning Coordinator, Solutions Institute, School of Information Sciences and Technology, Pennsylvania State University
2000-2001  Grader, INSYS 400 World Campus, Pennsylvania State University
1999-2000  Senior Project Associate, College of Education, Pennsylvania State University,
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Spring 2000  Instructor, INSYS 400, Introduction to Instructional Technology for Educators, Penn State Altoona
1997-1998  Instructional Designer, Link-to-Learn Professional Development, Penn State University
1991-present  Legal Clerk/Technology Consultant, Moore Law Offices
Spring 1997  Graduate Intern, Human Resource Development Center, Penn State University
1995-1997  Special Agent, Northwestern Mutual Life

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1998  Pi Lambda Theta Alpha Kappa Chapter, inductee
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1999  Graduate Student Travel Grant
     (Penn State University College of Education)
2000  Mark Davidson Travel Award
     (Penn State University College of Education)
2002  Alumni Society Graduate Student Research Initiation Grant
     (Penn State University College of Education)