ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

SELF-CONCEPT AND ACADEMIC INTRINSIC MOTIVATION AS RELATED TO ACADEMIC ACHIEVEMENT OF PREPARATORY PROGRAM STUDENTS IN WESTERN SHOA ZONE

BY
GARUMA DESALEGN

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ABSTRACT

This study examined the relationship between different dimensions of self-concept and academic achievement, and relationship between academic intrinsic motivation and academic achievement of preparatory program students in Western Shoa Zone. Selection of 408 subjects (50% males and 50% females) was done by using stratified random sampling on the basis of equal allocation. The subjects' self-concept was measured using a 33-item adapted from SDQII-S (Ellis, Marsh and Richards, 2002), and their academic intrinsic motivation was measured by a 30- item drawn and adapted from Academic Intrinsic Motivation Inventory (Shia, 2001). Their first semester average score of all school subjects measured academic achievement of the subjects. The data collected through these instruments were analyzed by Pearson product moment correlation, t-test, multiple and stepwise regression statistical techniques.

The study revealed that a positive and significant relationship was found between academic self-concept and academic achievement, between total self-concept and academic achievement, and between academic intrinsic motivation and academic achievement of all respondents in general and female respondents in particular. Total non-academic self-concept, on the other hand, negatively and significantly correlated with academic achievement of all respondents as well as male respondents. Academic self-concept was found to be significantly a positive predictor of academic achievement, whereas a total non-academic self-concept was significantly a negative predictor of academic achievement for all respondents and for male respondents. Moreover, both total self-concept and academic intrinsic motivation were independently significant predictors of academic achievement. A significant difference in academic achievement was also found between males and females, and between respondents belonging with high and low levels of academic self-concept, total self-concept and academic intrinsic motivation.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Problem

The learner's self-concept and academic intrinsic motivation are crucial factors in learning and school achievement. A self-concept is a complex, continuously active system of subjective beliefs about personal existence. It serves to guide behavior and to enable each individual to assume particular roles in life (Purkey and Novak, 1984), besides initiating activity; self-concept serves as a perceptual filter and guides the direction of behavior.

The attainment of a positive self-concept positively affects academic achievement, school retention, academic aspirations and choices, such as going on to university (Redd et al., 2001). High self-concept of ability may be a favorable precondition for the initiation and persistence of effort in learning and achievement situations. Maltz (1972), for example, suggested that students who have a poor self-concept lose their hope and will fail in their learning. Thus, pupil's subjective self-perceptions of himself or herself have a dominant influence on his/her success in school.

Student's academic motivation naturally has to do with their desire to participate in learning process. Skinner and Belmont (1991) noted that students who are motivated to engage in school select tasks at the border of

their competence, initiate action when given the opportunity and exert intense effort and concentration of learning tasks. They show generally positive emotions during on going action, including enthusiasm, optimism, curiosity and interest. Less motivated students, on the other hand, are passive, do not try hard, and give up easily in the face of challenges (Skinner and Belmont, 1991).

An intrinsically motivated student studies because he/she wants to study. The material is interesting, challenging and rewarding and the student receives some kind of satisfaction from learning rather in order to receive a reward, like passing a test or graduating from school (Lumsden, 1994).

Thus, the main purposes of this study is to see the relationship between different dimensions of self-concept and academic achievement, and relationship between academic intrinsic motivation and academic achievement of preparatory program students in Western Shoa Zone.

1.1.1. Conceptual and Theoretical Background of the Problem

a) Concept and Characteristics of Self-Concept

Various researchers define the term self-concept in different ways. In spite of the imprecision and variability of the informal and intuitive self-concept definitions many self-concept definitions overlap in several ways. Because an individual is well placed for observing his/her behavior, he/she comes to know a good deal about himself or herself. In their study Gordon and Gergen [1968) suggested that what the individual takes himself/ herself to be as a person is

his/her self-concept, since he/she acts in the light of what he or she knows about himself/herself makes a difference in what he or she does.

Of all the perceptions we learn, none seems to reflect our search for personal significance and identity more than our self perception-our view of who we are and how we fit into the world (Purkey and Novak, 1984). They suggest that the development and structure of self-awareness is life long and the ever-widening experiences of the developing person constantly modify the self-concept. Thus, gradually each individual forges a self-concept, complete with a complex hierarchy of attributes and categories.

Rogers (1951) says that people behave in a manner, which is consistent with the way they view themselves. He notes the self as a differentiated portion of the phenomenal field consisting of a pattern of conscious perceptions and values of the "I" or "me". Further, Coppersmith and Feldman (1974) described self-concept as consisting of beliefs, hypotheses, and assumptions that the individual has about himself or herself. In other words, self-concept is the person's view of himself or herself as conceived and organized from his/her inner vantage and/or includes the person's ideas of the kind of person she/he is, the characteristics that she/he possesses and her/his most important and striking traits (Pajares and Schunk, 2001). Thus, one's self-concept provides structure, coherence and meaning to one's personal existence.

Demoulin (cited in Huitt, 2004) viewed self-concept as the sum total of all experiences we are exposed to overtime and the negative or positive weights we assign to those experiences. The perceptions that we hold about ourselves are derived from our social environment and are believed to provide the culminating force in directing our behavior; this behavior, in turn, influences the ways we perceive ourselves (Byrne, 1984; Pietsch, Walker and Chapman, 2003). These perceptions are formed through one's experience with and interpretations of one's environment and are influenced especially by reinforcements, evaluations by significant others, such as parents, teachers, peers and one's attributions for one's own behavior (Shaverson et al., 1976; Hattie, 1992; Sanchez and Roda, 2004).

In sum, self-concept is a product of all the beliefs and evaluations one has about one self and includes one's behavioral tendencies. It is the basis for all motivated behavior and that gives rise to possible selves, and it is possible selves that create the motivation for behavior. In general terms, self-concept is our perception of ourselves and in specific terms, it is our attitudes, feelings and knowledge about our abilities, skills, appearance and social relations.

Self-concept as a component of human personality development has its own nature and peculiarity. Many researchers (e.g., Shavelson, Hubner and Stanton, 1976) have specified the nature of self-concept. They look at it as a compendium of seven characteristics or fundamental aspects, such as organized, multifaceted, hierarchical, stable, developmental, evaluative and differentiable.

Self-concept is organized. Most researchers agree that self-concept is characterized by orderliness and harmony (Shavelson et al., 1976; Shavelson and Bolus, 1982). Accordingly, each person maintains countless perceptions regarding one's personal existence, and each perception is orchestrated with all the others.

The second characteristic of self-concept is that it is multifaceted and the particular facets reflect the category system adopted by the particular individual and/or shared by a group.

A third feature is that the multifaceted structure of self-concept may be hierarchical on a dimension of generality, with perceptions of behavior at the base moving to inferences about self in sub areas (e.g., academic- English, Math, etc), then to inferences about self in academic and nonacademic areas and then to inferences about self in general (Shavelson and Bolus, 1982; Byrne, 1984 and Shavelson et al., 1976).Stability is the fourth feature of self-concept. Self-concept at apex is more stable than at the base [Shavelson, Hubnor and Stanton, 1976]

The fifth feature of self-concept is its developmental aspect. Infants tend not to differentiate themselves from their environment. As they get matured and learned from their increasing store of experiences, differentiation of self from environment begins (Shavelson et al., 1976). In short, self-concept becomes

increasingly multifaceted as the individual develops from infancy to adulthood and therefore, it has developmental aspect.

A Sixth feature is that self-concept has evaluative character. Not only does the individual develop a description of himself/herself in a particular situation or class of situations, he/she also forms evaluations of himself/herself in these situations (Shavelson et al., 1976; Shavelson and Bolus, 1982). The seventh characteristic of self-concept is that it is differential from other constructs, such as academic achievement.

b) Theory Related to Self-Concept

Self-concept comprises various dimensions, some of which are more related to personality aspects while others appear to be more linked to academic areas. Several researchers (e.g., Chan, 1997; Byrne and Gavin, 1996; Marsh and Yeung, 1997a; Epestin, 1973; Byrne, 1984; Song and Hattie, 1984; Shavelson and Bolus, 1982) support the multi-faceted structure of self-concept and suggest that self-concept cannot be adequately understood if its multidimensionality is ignored.

This study was based on a theoretical model of self-concept which was proposed by Shavelson, Hubner and Stanton (1976). According to this model, general self-concept is divided into academic and non-academic self-concepts. In turn, academic self-concept is categorized into self-concepts in particular subject areas. In similar manner, non-academic self-concept is divided into

social self-concept, which is subdivided into relations with opposite-sex, same-sex and with significant others, honesty/trustworthiness self-concepts and physical self-concept, which is subdivided into physical ability and physical appearance.

Shavelson et al. (1976)'s theoretical model argues that academic self-concept relates more positively with school performance than general self-concept and non-academic self-concept, and general self-concept highly associates with academic achievement than non-academic self-concept.

c] Concept of Academic Intrinsic Motivation

As a quantitative variable, motivation is equated with concepts such as activity, energy and persistence and is often inferred from performance levels (Ames and Ames, 1984). On the other hand, motivation can be conceptualized as a qualitative variable that represents different ways of processing or attending to information and different cognitions about one's performance. It involves how students think including their perceptions, interpretations and patterns of self-regulation (Ibid). These cognitions, in turn, influence how students approach a task, how they attend to salient features of the situation and how they interpreted their performance.

The term intrinsic motivation to learn has different meanings. It was described by Dev (1997) as participation in activity purely out of curiosity, that is, for a need to

know about something, the desire to engage in activity for the sake of participating in and completing a task. Intrinsic motivation requires much persistence and effort put forth by an individual student. Students with intrinsic motivation would develop the goal to learn and the goal to achieve (Shia, 2001).

Intrinsic motivation is the tendency to engage in learning because one finds it interesting, challenging and satisfying. It also refers to choosing to do and then doing an activity for its own sake rather than for extrinsic reasons (Deci and Ryan, 1985). A student, who is academically motivated wants to learn, likes learning related activities and believes school is important.

Motivation is a state rather than a trait (Thomas, 1980). He suggests that what derives individuals to seek out or avoid learning activities are the learners' perceptions of themselves, their perceptions of the value associated with the successful completion of the task and their perceptions of the extent to which effort will result in achieving success.

Therefore, academic intrinsic motivation should be associated with pleasure derived from learning process itself, curiosity, value/usefulness of learning, of challenging and difficulty tasks, persistence, mastery orientation and a high degree of task involvement.

d) Theory Related to Academic Intrinsic Motivation

With regard to academic achievement, self-determination theory suggests that students pursue goals and strive for success in the classroom and makes a critical distinction between tasks that are performed because they have value to the students in themselves (Deci and Ryan, 1985 and 2000).

Students who are intrinsically motivated receive satisfaction and pleasure from learning or accomplishing things, or from the stimulation they get from pursuing a task. They undertake an activity for their own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes (Lepper, 1988). According to self-determination theory, behavior that is intrinsically motivated represents the most self-determined form of action (Deci and Ryan, 2000).

A close relationship between perceived competence and intrinsic motivation will exist in such that the more competent a learner perceives himself/herself in learning, the more intrinsically motivated he/she will be in learning (Stipeck, 1988). Accordingly, academic intrinsic motivation concerns enjoyment of school learning and orientation to master challenging tasks. It positively relates to academic achievement and effective school functioning (Gottfried, 1985 and 1990). He also proposed that academic achievement is pervasively related to general academic intrinsic motivation.

Intrinsic motivation is a central feature of mastery goal orientation. Students approaching tasks with a mastery goal have shown to deploy cognitive processing strategy, such as linking new material with previous knowledge, and attempting to understand complex tasks (Anderman and Maehr, 1994). As a result, mastery oriented students may be more likely to succeed in academic situations. It is reasonable to speculate in these circumstances that mastery oriented students may feel successful as student and hence, possess academic intrinsic motivation.

1.1.2 Review of Related Studies

a] Studies Related to Self-Concept and Academic Achievement

Differences in self-concept should be reflected in how persons categorize incoming information, that is, how they interpret the nature of a performance situation. The findings of Ames and Felker (1979) demonstrated that children who differ in self-concept could have divergent causal interpretations of positive achievement outcomes. Accordingly, children with high self-concept seemed to be predominantly success oriented in that they causally related success to their skill and reacted with positive self-reinforcement.

Further, students with high self-concept tend to approach school related task with confidence, and success on these tasks that reinforces this confidence and the opposite pattern is likely to occur for students with low academic self-concepts (Derlega and Janda, 1986 and Hamachek, 1995).

An investigation into the teachers' perception about students with high self-concept and low self-concept was made by Hay (1997). It was found that students with high self-concept were more popular, cooperative, persistent in class work with lower anxiety levels, form more supportive families and higher expectations of future success than the students with low self-concept as perceived by their teachers.

Students have varying levels of self-concept, which in turn affect their performance in school. These imply a view that a person holds of himself, in terms of his adequacies and inadequacies, in terms of his values and in terms of his desires (Cambell, 1967). The concern with levels of self-concept, on the other hand, implies a dissatisfaction with the self-picture, which does not motivate for change because of fear of failures (Cambell, 1967).

In another study Reeder (cited in Cambell, 1967) found that children achieve lower in terms of their potential if they have low self-concept. Cambell (1967) also reported that bright boys who are low achievers perceive themselves as defensive and limited in communication with their environment.

Experimental studies have demonstrated that a poor self-concept is related to poor achievement in school (Derlega and Janda, 1986). They suggest that this relationship begins at a very early age and their self-concepts can have an effect on their performances in school in the early grades. Then by the time

children reach high school; there are clear differences between achievers and under achievers (Ibid).For peer acceptance, average achieving or higher achieving students' scores were higher than lower achieving students' scores (Vaughn, Hogan, Haager and Kouze Kanani, 1992).

Everett (1991) studied the self-concept configurations of high, medium and low academic achievers using a sample of 59 female students. The result from this study showed that meaningful and consistent differences did exist between the self-concept configurations of high, medium and low academic achievers. However, in experimental study in which children were divided in to high or low self-concept scores, both boys and girls in the top quartile for self-concept obtained significantly low scores at school testing (Alban Metcalfe, 1981).

Purkey (1970) surveyed many early researches and concluded that the student's subjective and personal evaluation of himself or herself has a dominant influence on his/her success in school. Supporting this, Maltz (1972) after his twenty-five years of study, comes to the conclusion that old people who have poor self-concept will fail in their activities. However, if they change their self-concept into a positive self-concept, they will succeed and will become creative people.

b) Studies Related to Academic Self Concept and Academic Achievement

In the most extensive meta-analysis of the academic achievement and academic self-concept relationship, Hansford and Hattie (1982) found that measures of performance correlated about .20 with measures of general self-concept. Bachman (1970) also reported that IQ correlated .46 with academic self-concept but only .14 with general self-concept. Moreover, in a review of studies relating to self-concept and academic achievement, it was found that nearly all studies report that self-concept is positively correlated with academic achievement while many find academic achievement to be correlated strongly with academic self-concept (Byrne, 1984; Arul, 1972).

With regard to specific subject areas, Marsh and O'Neill (1984) found that mathematics achievement correlated .27 with academic self-concept, whereas English achievement correlated .24 with academic self-concept. In another study, response by Canadian high school students to four Self-Description Questionnaire II scales (Mathematics, verbal, academic and general self-concept) was related to grades in mathematics and English. Accordingly, mathematics achievement correlated .55 and .34 with mathematics self-concept and academic self-concepts, whereas English achievement correlated .24, and .47 with verbal self-concept and academic self-concepts, respectively (Marsh, Byrne and Shavelson, 1988).

Thus, school performance is significantly correlated with self-concept in academic area and most directly related to the specific area of academic achievement (Marsh, Relich and Smith, 1983 and Byrne, 1984).

Hamachek (1995) reviewed investigations related to self-concept and academic achievement. According to his survey, there is a reciprocal relationship between self-concept and school achievement. Accordingly, each is mutually reinforcing to the extent that a positive or negative change in one causes change in another one. The reciprocity of the relationship between them is particularly noticeable by the middle school years, when children are better able to interpret feedback from their academic performance (Derlega and Janda, 1986; Hamachek, 1995).

However, there is disagreement among researchers in the direction of the causal relationship between academic self-concept and academic achievement. Byrne (1984), for example, noted that much of the interest in the self-concept and achievement relationship stems from the beliefs that academic self-concept has motivational properties such that changes in academic self-concept will lead to changes in subsequent academic achievement. Moreover, on longitudinal panel studies of grade 10, 11 and 12 Marsh (1990a) found that reported grade averages in grade 11 and 12 were significantly affected by academic self-concept whereas prior reported grades had no effect on subsequent measures of academic self-concept. Shavelson and Bolus (1982) also concluded that causal predominance of self-concept over academic achievement, but Byrne (1982 cited in Byrne, 1984) was unable to determine this causal predominance.

In contrast, within the school domain, studies have suggested that prior academic achievement may be an important influence on adolescents' academic self-concepts. For instance, Marsh and Yeung (1997a) found that not only can adolescent's levels of academic self-concept affect their later performance in school; their self-concepts are also influenced by their prior academic achievement as indicated by their grades and test scores. Supporting this, Calsyn and Kenny (1977) in their investigation of high school students found that the causal direction to flow from academic achievement to self-concept. Hence, the relationship between academic self-concept and academic achievement seems to be reciprocal in nature with each affecting the other.

Students who attribute academic success to ability and efforts and who do not attribute failure to a lack of ability and to a lesser extent not to a lack of effort were found to have better academic self-concepts and better academic achievement (Marsh, 1984).

Marsh, Cairns et al. (1984) found that academic self-concept was substantially positively correlated with success/ability (.59) and with success/effort attributions (.55), and was substantially negatively correlated with failure/ability attributions (-.48), but was less substantially negatively correlated with failure/ effort attributions (-.04). In another study, it was found that total academic self-concept correlates .52, .70 and -.45 with success/ability, success/effort, and failure/ability, respectively, but correlates only -.30 with failure/ effort which is

significantly smaller than the above value of each of the other correlations (Marsh, 1984). In sum, there is a relationship between academic self-concept and self-attribution variables.

c) Studies Related to Non-academic Self-Concept and Academic Achievemen

Nonacademic self-concept is the other dimension of general self-concept, which relates to academic achievement. Winne and Marx (cited in Byrne, 1984) found that students who were relatively less successful academically tended to perceive themselves as relatively more successful on the physical and social facets of self-concept. In other words, a lack of self-perceived success and satisfaction in one area tends to be associated with one's perceptions of success and satisfaction in another area.

In a study on relationship between self-concept and academic achievement study, Sanchez and Roda (2004) found that the total nonacademic self-concept does not correlate significantly with measures of academic performance and when it does, it is in negative sense, and not very significant. Confirming this idea, Marsh, Parker and Smith (1983) found in their study that self-concept scores on physical appearance, peer relations and relation with parents to be virtually uncorrelated with academic measures. Moreover, Arul (1972) found that the general self-concept as well as self-concepts on sociability, temperament, morality and physical appearance was found to correlate negatively but not statistically significant with academic achievement.

One important component of our self-concept is how we view our bodies. Feelings of dissatisfaction with one's body are more common among females than males (Derlega and Janda, 1986). They found that 55 percent of the men were either "quite" or "extremely" satisfied with their overall appearance, while only 45 percent of the women felt the same way.

A person's body characteristics as she/he perceives them might exert a central influence on the development of her/his self-concept (Wylie, 1961). It seems that body characteristics which are lowly valued by subject may be expected to undermine her/his general self-regard while highly valued body characteristics should enhance self-regard. Presumably, the influence of body characteristics might be especially noticeable at adolescence when body changes are important for social functioning.

Rogers, Smith and Coleman (1978) claimed that the self-concept and academic achievement relation could best be understood within the context of the student's immediate social environment. Researchers (Marsh, Smith and Barnes, 1985) indicated that students compare the self-perceptions of their own academic ability with the perceived abilities of other students within their school or their reference group, and that they use this relativistic impression of their academic ability as one basis for forming their academic self-concept. The process of external comparison would predict that equally able students would have lower academic self-concept when they compare themselves with more

able students and higher academic self-concept when they compare themselves with less able students (Skaalvik and Rankin, 1990).

Research findings also revealed that there is a relation between students' educational aspiration and their self-concept. For instance, Redd et al. (2001) reviewed many studies and concluded that adolescents who perceived their peers as holding higher educational aspirations in grade seven hold higher academic self-concepts in grade nine than those who perceived their peers as holding lower educational aspirations. This may tell us more about the benefit of adolescents' perceiving their peers as holding high aspirations as much the benefit of adolescents associating with peers who hold high aspirations.

In sum, adolescents' self-concepts appear to be influenced by their academic achievement with those who have higher levels of achievement also tending to have higher levels of academic self-concept (Redd et al., 2001). They also indicated after reviewing several researches that students whose classmates have higher average levels of achievement tend to hold lower levels of academic self-concept than those whose classmates have lower achievement levels. This effect suggests adolescents who are surrounded by more advanced students, have low self-concept, because they are less likely to compare favorably to their classmates.

Most people adopt the life style of other important people in their life. Important people are those who have outstanding characteristics in the eyes of a person, and the person wishes to live and behave like them (Mirkamali, 2001). Among the important persons, parents of the students may be one of them. Personality theorists who are concerned with construct involving the self-accord great importance to parent-child interaction in the development of the self-concept (Wylie, 1961). This notion follows from such general ideas, as the self-concept is a learned, consultation of perceptions and values. The parents are the persons who are present earliest and most consistently with their children. Self-concept in relationship to parents acts as a positive predictor of general academic performance (Sanchez and Roda, 2004). For this reason and because of the child's dependence on them and his or her affection for them, the parents have a unique opportunity to reinforce selectively the child's learning (Wylie, 1961).

In general, the parent can influence the development such aspects of self-concept as the generalized level of self-regard by being loved and accepted, the child comes to love himself, and through acquisition of accepted or reinforced behaviors he/she comes to respect him/her own functioning.

d) Studies Related to Academic Self-Concept, Non-academic Self-Concept, General Self-Concept and Academic Achievement

A notion that is central to a number of self-concept theories (Combs and Snygg, 1949 and Rogers, 1951) is that global self-concept, an overall or general view of the self, is a critical factor in determining human behavior.

Researchers (Harter, 1982; Marsh, Smith and Barnes, 1985) distinguished between three implicit definitions of the term general self-concept as a total score across a broad collection of self-report items, a higher order factor inferred to be the apex of a hierarchy of more specific self-concept factors; and a separate distinguishable fact that is viewed as a super ordinate dimension.

The relationship between academic self-concept and academic achievement is stronger than that of between general self-concept and academic achievement, which in turn, stronger than between non-academic self-concept and academic achievement (Shavelson et al., 1976; Marsh, 1990a; Marsh, Byrne and Shavelson, 1988). Marsh (1993b) summarized a number of studies showing that academic achievement is substantially related to academic self-concept but almost uncorrelated to general and non-academic self-concept. In another study Marsh (1992) found that general self-concept and non-academic aspects of self-concept are not related to academic work, whereas general academic achievement measures are related moderately to academic success. The findings of Byrne (1984) also confirms that the relationship between academic self-concept and academic achievement (r= .41) was found to be the strongest, followed by that of general self-concept and academic achievement (r= .38), and non-academic self-concept and academic achievement (r= .16), respectively.

Jordan (1981) found that after removing the effect of verbal ability, the proportion of variance in academic achievement accounted for by global self-

concept, academic self-concept and need for academic competence attained significance. In the same study, it was indicated that commonalties of global self-concept with the other variables (academic self-concept, need for academic competence and verbal ability) where also quite small and the global self-concept did not account substantially for the variance in academic achievement through either its unique contributions or its overlap with other variables.

Researchers also examined the relationship between academic achievement and the academic, social and physical dimensions of self-concept. For example, Marsh, Parker and Smith (1983) found that wherever the nonacademic facets were inversely related to academic achievement, academic self-concept was positively related.

e) Studies Related to Gender Difference in Self-Concept and Academic Achievement

Researchers investigated that gender is weakly related to overall or total self-concept. This lack of relation, however, reflects well defined gender differences in specific areas of self-concept, some favoring women and some favoring men that cancel each other in the formation of total scores (Marsh, 1989). For example, correlations between sex, achievement scores and the multiple dimensions of self-concept have been found that girls had significantly lower self-concepts than did boys in physical abilities, physical appearance and mathematics, but did not differ significantly from boys for peer relations, parent relations, general school and general self (Marsh, Smith and Barnes, 1985).

Jordan (1981) found that the relation of academic self-concept with academic achievement was .45 and .41 for male and female students respectively. By continuing, he pointed out that the unique proportion of variance in academic achievement accounted for by global self-concept failed to achieve significance in both female and male students. Similarly, with data from over one thousand urban grade seventh students, Brooker and Thomas (cited in Scheirer and Kraut, 1979) found that the correlation between grade point average and self-concept of ability is .42 for boys and .39 for girls after controlling for measured intelligence.

Wylie (1979) in her study reported no gender differences in global self-concept scores. Supporting this, Marsh (1989) analysis of the normative archive responses to the three Self Description Questionnaire instrument covering the preadolescent to young adult age range also showed statistically significant but small gender differences in most self description questionnaire scales, some favoring girls but more favoring boys. Further he revealed that the gender differences in specific scales tended to be consistent with traditional gender stereotypes that boys had higher self-concepts for physical ability, physical appearance, emotional stability, problem solving and general esteem; however, girls tended to have higher self-concepts for honesty/trustworthiness. In their analyzes, Marsh and Ayotte (2003) reported small but consistent differences in global self-concept favoring boys, which grow larger from early school years through high school and then declined in adulthood. However, Alban Metcalfe

(1981), and Shiffler, Lynch-Saver and Nadelman (1977) found no significant differences in the mean self-concept scores for the group of boys and girls. In general, reliance on an overall measure of self-concept does not accurately reflect content-specific gender differences in multiple dimensions of self-concept.

f) Factors Affecting Academic Intrinsic Motivation

According to cognitive theory, there are two psychological processes through which rewards or other situational factors can affect a student's intrinsic motivation.

The first process is referred to a change in perceived locus causality. When pupils are intrinsically motivated from an activity, the perceived locus of causality is internal and they feel self-determining (Deci, Nezlek and Sheinman, 1981).

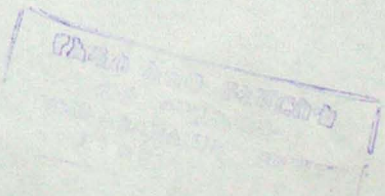
The second process through which intrinsic motivation can be affected is a change in perceived competence. If pupils' perceptions and feelings of competence are enhanced, their intrinsic motivation will be increased, if their perceptions and feelings of competence are diminished, their intrinsic motivation will be decreased (Deci, Nazlek and Sheinman, 1981). Typically, success experiences leave people feeling and perceiving themselves to be more competent, whereas failure experiences leave them feeling less so. Thus, one's perceived competence appears to affect one's intrinsic motivation.

Students are intrinsically motivated to work when the threat of negative external evaluation is not salient and when their attention is not focused on extrinsic reasons for completing tasks (Stipek, 1984). She suggests that they will also feel more competent and proud, and thus more intrinsically interested in tasks, when they can take responsibility for their success. Therefore, we can say that external threat can enhance learners' intrinsic motivation to learn and thereby increase their achievement.

In general, student's motivation is influenced not only by performance expectations, but also by the expectations students keep for their own performances. Students frequently explain outcomes by referring to effort, ability, task factors, luck and each of these attributions has different motivational consequences (Weiner, 1989).

Family factors have also an influence on students' academic intrinsic motivation. Regarding this Ginsburg and Bronstein (1993) found that parental encouragement in response to grades children received was associated with an intrinsic motivational orientation and autonomy supporting family styles was also associated with intrinsic motivation and higher academic performance.

Deci and Ryan (1985) have also proposed that environment which provides optimal challenge, competence-promoting feedback, and support for autonomous behavior will facilitate the development of intrinsic motivation.



Some studies have indicated that the effect of academic achievement on motivation is mediated through academic self-concept (Norwich, 1987).

g) Studies Related to Academic Intrinsic Motivation and Academic Achievement

Research findings showed that students who are intrinsically motivated persist longer, conquer more challenges, and demonstrate accomplishments in their academic endeavors (Ames, 1992; Deci and Ryan, 1985; Pintrich and DeGroot, 1990). The desired outcome for intrinsic student is in larger part tied to the effort expanded in performing the activity and the satisfaction gained from mastery over task components (Boggiano and Barrett, 1985).

Intrinsically motivated students actively engage themselves in learning out of curiosity, interest, or enjoyment, or in order to achieve their own intellectual and personal goals. According to Dev (1997), a student who is intrinsically motivated will not need any type of reward or incentive to initiate or complete a task.

While any kind of motivation seems preferable to none, there is compelling evidence that student who is more intrinsically than extrinsically motivated fare better (Brooks et al., 1998; Lumsden, 1994). In fact, some researches demonstrate that using extrinsic motivation to engage students in learning can both lower achievement and negatively affect student motivation (Dev, 1997; Lumsden, 1994).

Intrinsically motivated students earn high academic achievement and grade on average than extrinsically motivated students (Dev, 1997) and they are more logical in information gathering and decision making, more likely to engage in tasks that are moderately challenging (Lumsden, 1994). Supporting this, Gottfried (1985) found that academic intrinsic motivation is positively and significantly related to children's school achievement as measured by both standardized achievement tests and teacher grades. In the same study, multiple regressions showed that academic achievement in every subject areas (e.g., Reading, Mathematics and Science) was significantly correlated with academic intrinsic motivation score with correlations ranging from 0.24 to 0.44 and it accounted for up to approximately 20% of the variance in school achievement.

Other studies also found the existence of a positive relationship between intrinsic intellectual motivation and scholastic achievement, whereas need achievement indicated no relationship (Loyd and Barenblatt, 1984). Their findings revealed out that intrinsic intellectual motivation contributes significantly to academic achievement in addition to and independent of IQ.

In contrast to the findings of Gottfried (1985), Workineh (2004) conducted a research on elementary school students and found almost no relationships between academic intrinsic motivation and achievement.

Students' academic intrinsic motivation relates to their perception of competence. Gottfried (1985 and 1990) for example, indicated that children with higher intrinsic motivation in specific subject areas perceived themselves as more competent within that subject area compared with children with lower academic intrinsic motivation.

There is evidence that academic intrinsic motivation significantly and positively predicts subsequent motivation and academic achievement (Gottfried, 1985 and 1990; Gottfried, Fleming and Gottfried, 1994). They found that academic intrinsic motivation at age nine years predicted motivation and academic achievement at age ten.

In sum, there is strong positive relationship between students' academic intrinsic motivation and school performance. Moreover, intrinsic motivation relates with learners' perception of academic competence and also can predict later academic achievement.

Some studies have found that the use of external rewards actually decrease motivation for a task for which the student initially is motivated. For example in examination of 128 studies that investigated the external rewards on intrinsic motivation, (Deci, Koestner and Ryan, 1999) concluded that rewards tend to have substantially negative effect on intrinsic motivation by undermining-people's taking responsibility for motivating or regulating themselves

h) Studies Related to Gender Difference in Academic Intrinsic Motivation and Academic Achievement

Gender is one of the personal variables that may relate with differences found in motivational functioning. Different research has demonstrated the existence of different attribution patterns in boys and girls, such that while girls tend to give more emphasis to effort when explaining their performance (Lightbody et al, 1996; Gorgeious, 1999), boys appeal more to ability and luck as causes of their academic achievement (Burgner and Hewstone, 1993).

Research has also pointed out that girls usually make external attributions for successes and failures, and that went they make internal attributions, these refer not so much to effort, but to ability. However, boys usually attribute successes to stable internal causes such as ability, while failure is attributed to unstable external causes like luck or internal causes like effort, thus showing an attribution pattern which enables them to enhance their own image of themselves (Smith, Sinclair and Chapman, 2002).

As for the academic motivation pursued by boys and girls, studies have shown that boys show a greater degree of extrinsic motivational orientation (Roeser, Midgley and Urdan, 1996), while girls show a greater intrinsic motivation (Meece and Holt, 1993). On the other hand, Rusillo and Arias (2004) haven't found a difference in levels of intrinsic motivation between boys and girls.

i) Studies Related to Self-Concept, Academic Intrinsic Motivation and Academic Achievement

Ames (1990) conducted a study in which mastery goals were fostered amongst primarily school children and after one year found that students demonstrated stronger performance for challenging tasks, enhanced intrinsic motivations and higher self-concept of ability (Skaalvik and Rankin, 1990). As a result, mastery oriented students may be likely to succeed in academic situations.

Positive self-perceptions of ability have been shown to relate with intrinsic motivation (Meece, Blumenfeld and Hoyle, 1988; Gottfried, 1990; Skaalvik and Rankin, 1990). It has found that students with positive self-perceptions persevere when confronted with challenging tasks and eventually succeed (Bouffard- Bouchard and Pinard, 1988: Harter, 1982). Additionally, high self-concept of ability may be a favorable precondition for initiation and persistence of effort in learning and achievement situations (Helmke, 1989).

On the other hand, students with low self-concept may avoid dangerous learning situations that could further threaten their self-concept (Baumeister, Tice and Hutton, 1989; Thompson, 1994). Thus, students with negative self-perceptions tend to give up, or engage in avoidance, when confronted with challenging tasks (Ames, 1992; Dweck and Leggett, 1988). In sum, students with high self-concept and intrinsic motivation have high mastery goal and academic achievement.

1.2. Practical Consideration

The findings of this study may provide schools with important insights about their students' self-concept and academic intrinsic motivation in relation to academic performance.

Counselors can also be benefited from the findings in getting important information to help their students especially those who are suffering from distorted self-perception and related problems in academic and non-academic areas. Further, curriculum experts may increase their knowledge about the contribution of self-concept and academic intrinsic motivations in education and as result include them in learning materials of students.

The results of this research also may indicate the importance of parents in the development of students' self-concept and academic intrinsic motivation since they are with them starting from the beginning of their life. Moreover, the findings may be helpful for students to evaluate the different dimensions of their self-concept and academic intrinsic motivation. Finally the present findings of the study may be used as a source of reference for investigators who are interested to do research in similar area.

1.3. Statement of the Problems

The cognitive factor like student's motivation and non-cognitive variable self-concept are important determinants of learning outcomes. Intrinsic motivation, deriving from within the student or from the learning itself, positively affects behavior, performance and student's well being (Deci and Ryan, 2000). Students who are intrinsically motivated persist longer and demonstrate accomplishments in their academic endeavors (Ames, 1992; Deci and Ryan, 1985; Pintrich and Degroot, 1990) and they also receive satisfaction and pleasure from learning (Redd et al., 2001).

In the same vein, the attainment of a positive self-concept positively affects school retention and academic aspirations (Redd et al., 2001). Implicit in this assumption is that feeling good about one's abilities in an academic area fosters academic striving behaviors, such as persistence that can maximize academic achievement. Byrne (1984), for instance, suggested that changes in academic self-concept would lead to changes in school performance. With this in mind an attempt has been made to investigate the relationship of self-concept and academic intrinsic motivation with academic achievement of preparatory program students in Western Shoa Zone. Thus, the researcher raised the following leading questions to be answered at the end of the study.

1. Does academic achievement of students belonging to high and low levels of each independent variable (academic self-concept, total non-academic

self-concept, total self-concept, and academic intrinsic motivation) differ significantly?

2. Does academic achievement of male students significantly differ from female students?
3. Do the different dimensions of self-concept (academic self-concept, total non-academic self-concept and total self-concept) positively and significantly relate with the academic achievement of preparatory program students in general, and male and female students in particular?
4. Do the different facets of non-academic self-concept positively and significantly relate with academic achievement of preparatory program students in general, as well as for males and females in particular?
5. How far we can predict the academic achievement of preparatory program students in western Shoa Zone on the basis of their academic self-concept and total non-academic self-concept?
6. Does academic intrinsic motivation positively and significantly relate with the academic achievement of preparatory program students in general, as well as for male and female students in particular?
7. How far we can predict the academic achievement of preparatory program students in Western Shoa Zone on the basis of their total self-concept and academic intrinsic motivation?

1.4. Objectives of the Research

The general objective of the present study is to investigate the relationship between self-concept and academic achievement; academic intrinsic motivation and academic achievement of preparatory program students in Western Shoa Zone. More specifically, the purposes of this research are:

- To see whether or not the mean academic achievement of students in levels of each independent variable differ significantly
- To see whether or not the mean academic achievement between male and female preparatory program students differ significantly
- To see the relationship between different dimension of self-concept (academic self-concept, total non-academic self-concept and total self-concept) and academic achievement of preparatory program students in general.
- To see the relationship between different dimensions of self-concept (academic self-concept, total non-academic self-concept and total self-concept) and academic achievement of preparatory program male students
- To see the relationship between different dimensions of self-concept (academic self-concept, total non-academic self-concept and total self-concept) and academic achievement of female students
- To see the relationship between different dimensions of non-academic self-concept and academic achievement of preparatory program students in general

- To see the relationship between different dimensions of non-academic self-concept and academic achievement of preparatory program male students
- To see the relationship between different dimensions of non-academic self-concept and academic achievement of preparatory program female students
- To predict academic achievement on the basis of academic self-concept and total non-academic self-concept
- To see the association of academic intrinsic motivation with academic achievement of preparatory program students in general.
- To see the relationship between academic intrinsic motivation and academic achievement of preparatory program male students
- To see the relationship between academic intrinsic motivation and academic achievement of preparatory program female students
- To predict academic achievement of preparatory program students' on the basis their total self-concept and academic intrinsic motivation.

1.5. Operational Definitions of Terms

Key terms used in this study were defined as follows:

- ***Academic self-concept***: It refers to how an individual student views himself/herself concerning overall school subjects
- ***Non-academic self-concept***: It refers to how an individual student view himself/herself concerning his/her peers and parents, honesty/ trustworthiness, physical abilities, physical appearance, relations with peers and parents.
- ***Self-concept***: refers to the perception each student has about himself or herself regarding his/her non-academic and academic areas in general.
- ***Academic intrinsic motivation***: It refers to a student's motivation from within for learning school subjects.
- ***Academic achievement***: It stands for student's first semester average score of all school subjects as assessed by teachers.
- ***Preparatory program***: It refers to the second cycle of general secondary school education (which includes grade 11 and 12) and will enable students to choose subjects or areas that will prepare them adequately for higher education.

1.6. Delimitations of the Research

Keeping in view the resources available and the constraints for the present study, the following delimitations were applied in the present research.

1. The study was confined to preparatory program students of Western Shoa Zone. Further, it was delimited to selected preparatory program schools of Holeta, Genchi and Ambo.
2. Those students who do not attend the selected schools did not form the part of the study.
3. The sample was restricted to 408 preparatory program students of which 50% were males and 50% were females.
4. The study was confined to two major independent variables (i.e, self-concept and academic intrinsic motivation) and one dependent variable, which is the academic achievement of preparatory program students.
5. Data for the study were collected through self-Description Questionnaire II-Short and Academic Intrinsic Motivation Inventory. In addition to these, archive i.e., the academic achievement of preparatory program students was used.

CHAPTER TWO

METHODOLOGY

2.1. Method of the Research

Correlational survey research was used for this study because the researcher was interested to see the relationship between self-concept and academic achievement, and academic intrinsic motivation and academic achievement of preparatory program students and to see whether or not significance differences exists between academic achievement of different sub groups. Student's self-concept, academic intrinsic motivation and gender were considered as the independent variables, whereas academic achievement of the students was dependent variable.

The dimensions of self-concept considered in this study are academic self-concept, total non-academic self-concept and total self-concept. Moreover, the different components of non-academic self-concepts are self-concept on physical abilities, physical appearance, same-sex relations, opposite-sex relations, parent relations and honesty/trustworthiness.

2.2. Research Site

The research area is Western Shoa Zone, one of the 14 Zones in Oromia Regional state. This zone comprises six government preparatory program schools: Holota, Genchi, Gendeberet, Ambo, Gedo and Bako preparatory program school.

2.3. Population

There were 1425 grade 11 and 1692 grade 12 students attending their education in preparatory program schools of Western Shoa Zone in 2004/5 academic years. Of the 3117 students from both grade levels, 1016 were females and 2101 were males. The Majority of them came from similar family background.

2.4. Sample

A sample is a smaller representation of the larger population. Selecting an appropriate sampling design is also a very sensitive issue. Keeping in mind this idea, for the present study 408 preparatory program students studying in grade 11 and 12 from the three randomly selected government preparatory program schools (i.e., Holeta, Genchi and Ambo) out of six preparatory program schools of Western Shoa Zone were selected using stratified random sampling on the basis of equal allocation. There were 204 females and 204 males in the sample. This method of sampling was chosen in order to reduce gender bias that may be introduced as result of unequal number of males and females. The mean age of the sample was 18.5 years (standard deviations 1.5), ranging from 17 to 20 years.

2.5. Instruments

Research is based on the collected data. These data are gathered by applying certain tools. A researcher goes in for a particular type of instrument after judging

its criteria like validity, reliability, practicability, etc. keeping in mind these criteria, the researcher decided to use the following tools.

2.5.1. Self Description Questionnaire II- Short (SDQII-S)

2.5.2. Academic Intrinsic Motivation Inventory

2.5.3. Archive or Recording

2.5.1. Self-Description Questionnaire II-Short (SDQII-S)

Self-concept items are adapted from SDQII-S (Ellis, Marsh and Richards, 2002) designed for high school students on the basis of Shavelson model of self-concept. For the present study, the adapted SDQII-S consists of a 33-item measuring six areas of non-academic self-concept (physical ability, physical appearance, same-sex relations, opposite-sex relations, parent relations and honesty/trustworthiness) and one area in academics generally. 22 of the items are positively worded and the rest 11 items are negatively worded and arranged randomly. The response format of SDQII-S items is a five-point Likert type with responses ranging from mostly false (1) to mostly true (5).

a) Scoring of SDQII-S

For scoring of the SDQII-S items two approaches were used i.e., one for the positively worded items and other for the negatively worded items. A positive item carried the weights of 1,2,3,4 and 5 for the response categories of mostly false, false, neither false nor true, true and mostly true, respectively. However, for a negative item a weight of 5,4,3,2 and 1 was assigned for the response

categories of mostly false, false, neither false nor true, true and mostly true, respectively. Finally, all the positive and the negative item scores were sum up to obtain either the score for the subscale or total score.

The total self-concept score was obtained by summing total non-academic self-concept and general academic self-concept scores together, whereas total non-academic self-concept score was the summation of all the six subscales of non-academic self-concept scores.

The minimum possible score obtained for total self-concept could be 33 and the maximum score could be 165. Similarly, the minimum possible score for total non-academic self-concept could be 27 and the maximum score was 135. Moreover, academic self-concept has a minimum score of 6 and maximum score of 30. Besides, there are scores for each six-sub scales of non-academic self-concept. The highest score in subscale or total scale shows that the individual student possesses high self-concept.

b) Factor Analysis of SDQII-S

The SDQII-S items were pilot-tested to check their target factor loadings using factor analysis before used for the final study over 60 (50% males and 50% females) Genderberet preparatory program school students. Accordingly, the factors loadings for variables adapted to measure each factor were substantial. The range of target loadings was from .48 to .79 with the median target loading

of .65, whereas the non-target loadings were smaller and none of them was greater than .31[see appendix-v]

These findings are consistent with the findings of Ellis, Marsh and Richards (2002). These researchers found that all target factor loadings of SDQII-S were statistically significant (varying from .41 to .94; median = .71). These statistics provide support for the distinctive nature of each factor.

c) Reliability of SDQII-S

The reliability estimate for academic self-concept in the pilot-test, using Cronbach Alpha method was .85. Similarly, the reliability coefficient for each of the non-academic self-concept subscale i.e., physical ability (.74), physical appearance (.82), same-sex relations (.71), opposite-sex relations (.60), parent relations (.95), and honesty/trustworthiness was .68. The researcher obtained an alpha coefficient of .75 for total non-academic self-concept and .76 for total self-concept [see appendix-VI]. These reliability estimate values were nearly same with the Alpha coefficient of SDQII-S subscales ranging .77 to .90 with median .82 (Ellis, Marsh and Richards, 2002) .

2.5.2. Academic Intrinsic Motivation Inventory (AIMI)

This inventory was adapted from Shia (2001) to measure the academic intrinsic motivation of preparatory program students. It consists of 30 positively worded items and with a five-point Likert type responses ranging from mostly false (1) to mostly true (5).

a) Scoring of Academic Intrinsic Motivation Inventory

Each of a 30-item academic intrinsic motivation inventory was scored individually based on the five-point Likert scale and finally sum up to obtain academic intrinsic motivation score. The minimum score for the inventory is 30 and the maximum score is 150. The highest score shows that the individual student has high academic intrinsic motivation.

b) Validity of Academic Intrinsic Motivation Inventory

The academic intrinsic motivation inventory demonstrated construct validity. When compared to the motivated strategies for learning questionnaire (MSLQ), it was found to be positively correlated to the total MSLQ intrinsic motivation score and negatively correlated to the total MSLQ extrinsic motivation score (Shia, 2001).

c) Reliability of Academic Intrinsic Motivation Inventory

The reliability estimate for the adapted AIMI over 60 (50% males and 50% females) preparatory program students in the pilot test was .80, which is more than alpha coefficient of .77 obtained for the original Academic Intrinsic Motivation Inventory by Shia (2001).

2.5.3. Archive/Recording Academic Achievement

Based on marks given to each student by his/her teachers for all school subjects, an average score of first semester was collected from official school

records (archive) to be used as academic achievement of students. There is research evidence to support that teacher evaluations of their students are a sufficiently valid and reliable criterion of student performance. For example, Marsh, Smith and Barnes (1985) have used teacher evaluations of students as criterion of school performance, obtaining high coefficient of consistency between different evaluations at different sessions.

2.6. Data Gathering Procedure

After taking due permission from the concerned authorities, the researcher obtained initially first semester roster of each section of grade 11 and 12 students from the record office of the three schools selected for the study. The students were stratified according to their gender within the respective section of both grade levels and randomly selected from the roster. Then, all the necessary information, such as sex, average mark, roll number, grade level and section of the respondents presented on the roster was encoded systematically on the attached (clipped) Self-Description Questionnaire II-Short and Academic Intrinsic Motivation Inventory before the administration of above mentioned tools. Moreover, Afan Oromo versions of both tools were used for better understanding of the subjects. Further, they were assured of the anonymity of their responses.

Finally, the researcher to the respondents administered the Self Description Questionnaire II-Short and Academic Intrinsic Motivation Inventory during their

normal class period. They were instructed and directed to complete the SDQII- S within 16 minutes and Academic Intrinsic Motivation Inventory within 30 minutes. At the end among 408 student respondents received the questionnaire papers only 404 of them completed appropriately and returned back.

2.7. Methods of Data Analysis

The response obtained from the respondents and their academic achievement was analyzed using SPSS 10.

Preliminary intercorrelations among the independent variables were computed to check the nature of relationship that may exist between the variables.

Pearson correlation analysis was employed to examine the relationship between different dimensions of self-concept and academic achievement, and relationship between academic intrinsic motivation and academic achievement. The t-test was used to see whether or not there is significant difference in academic achievement between students belonging to high and low levels of academic self-concept, total non-academic self-concept, total self-concept, academic intrinsic motivation, and also between males and females.

In addition, multiple regression analysis was conducted in order to explain the degree to which academic achievement of preparatory program students can be predicted by their academic self-concept and total non-academic self-concept.

Similarly, it was used to see how far academic achievement could be predicted on the basis of total self-concept and academic intrinsic motivation. Moreover, stepwise regression analysis was applied to determine the proportion of variance in academic achievement accounted for by each of the independent variables considered in this study.

All analyses were conducted for the total sample, as well as separately for the females and males, in order to investigate the influence of gender on the relationship between different components of self-concept and academic achievement, and relationship between academic intrinsic motivation and academic achievement. Test of significance for all cases were performed at level of alpha .05.

CHAPTER THREE

RESULTS AND DISCUSSIONS

The collected data on the present research problem were subjected to the different statistical treatment as mentioned in the previous chapter. In this chapter, in the first section results have been presented in tabular form, which is followed by statistical interpretation and in the second section results have been discussed in the light of previous findings and theories.

SECTION -I

RESULTS

Table 3.1.1

Intercorrelation Coefficients among Independent Variables for all Respondents (n= 404)

Variable	1	2	3	4
1. Academic self-concept	1.00			
2. Total non-academic self-concept	.361*	1.00		
3. Total self-concept	.632*	.945*	1.00	
4. Academic intrinsic motivation	.377*	.249*	.343*	1.00

**P<. 05, two tailed*

Table 3.1.1 shows that most of the correlations among independent variables are less than .70 except for the relationship between total self-concept and total non-academic self-concept, which is .945. If two independent variables are correlated at level greater than r= .70, most authors (e.g., Zizzi, 2005) suggest removing one of the variables from multiple regression analysis. Thus, in this

study the two variables are not used together since they were highly correlated and attempted to account for the same variance in academic achievement.

Table 3.1.2

Intercorrelation Coefficients Among four Independent Variables for Females and Males

Variable	1	2	3	4
1. Academic self-concept		.349*	.614*	.393*
2. Total non-academic self-concept	.366*		.947*	.176*
3. Total self-concept	.630*	.950*		.297*
4. Academic intrinsic motivation	.318*	.331*	.375*	

Note: Females appear above diagonal, males below
Females n = 202; males n = 202
** P< .05, two tailed*

The above Table 3.1.2 indicated that all the correlation coefficients found among the independent variables was statistically significant at alpha level of .05 for males as well as for females. The relationship observed between total self-concept and total non-academic self-concept was very high. This shows the two variables account for the same variance and as a result have high multicollinearity.

Table 3.1.3

Means, Standard Deviations and t-tests of Academic Achievement at Different Levels of the Independent Variables

Variable	Levels	Mean (X)	SD	n	t
ASC	High	78.96	8.14	199	7.01*
	Low	73.52	7.42	205	
TNASC	High	76.37	8.16	206	.414
	Low	76.03	8.33	198	
TSC	High	77.36	8.18	194	2.75*
	Low	75.12	8.17	210	
AIM	High	77.53	7.97	205	3.33*
	Low	74.83	8.31	199	
Gender	Male	78.83	8.67	202	6.765*
	Female	73.56	6.87	202	

** P< .05*

As can be seen from Table 3.1.3 the difference in academic achievement between respondents with high and low level of academic self-concept is statistically significant. The mean academic achievement of students with high level of academic self-concept ($\bar{X}$ = 78.96) is significantly higher than the mean academic achievement ($\bar{X}$ = 73.52) of respondent students possessing low academic self-concept. Similarly, respondents with high level of total self-concept have mean academic achievement of 77.36, which is significantly greater than the mean academic achievement of respondents with low total self-concept ($\bar{X}$ = 75.12).

The mean academic achievement difference between male and female respondents was also found to be statistically significant (t = 6.765, P<. 05) in favor of male students. Similarly, the academic achievement difference between highly intrinsic motivated and lowly intrinsic motivated respondents was statistically significant. In other words, the calculated t-value i.e. 3.33 for highly intrinsic motivated and lowly intrinsic motivated respondents was more than the critical value i.e. 1.96 at .05 level of significance. However, the mean difference in academic achievement between students with high level of total non-academic self-concept and those with low total non-academic self-concept was non-significant at alpha level of .05.

Table 3.1.4

Pearson Correlation Coefficients between Different Dimensions of Self-concept and Academic Achievement for all Respondents (n= 404)

Dimensions of self-concept	Academic Achievement
Academic self-concept	.386*
Total non-academic self-concept	-.113*
Total self-concept	.161*

** P< .05*

Table 3.1.4 indicated that positively a significant correlation was obtained between academic self-concept and academic achievement (r = .386, df = 402; p < .05). between total self-concept and academic achievement (r = .161, df = 402; p< .05).

On the other hand, the total non-academic self-concept was found to relate negatively and significantly with academic achievement (r = -.113, df = 402; p< .05).

Table 3.1.5

Pearson Correlation Coefficients between Different Dimensions of self-concept and Academic Achievement for Males and Females

Dimensions of self-concept	Academic Achievement	
	Males (n= 202)	Females (n= 202)
Academic self-concept	.413*	.239*
Total non-academic self-concept	-.141*	.059
Total self-concept	.104	.139*

* P< .05

The results in Table 3.1.5 showed that a negatively significant correlation between total non-academic self-concept and academic achievement (r= -.141, df= 200; p< .05); but a positive and significant relationship was found between academic self-concept and academic achievement (r= .413, df = 200; p < 05) for males.

In similar manner, for female respondents a significant correlation was found between academic self-concept and academic achievement (r = .239, df = 200; p < .05), between total self-concept and academic achievement (r = .139, df = 200; p< .05). However, the correlation between total non-academic self-concept and academic achievement (r = .059, df = 200; p> .05) was not statistically significant for females.

Table 3.1.6

Correlation Coefficients between Different Dimensions of Non-academic Self-Concept and Academic Achievement for all Respondents (n = 404)

Non-academic self-concept measure	Academic achievement
Physical abilities	.01*
Physical appearance	-.06*
Same-sex relations	.03*
Opposite-sex relations	-.08*
Parent relations	.08*
Honesty/trustworthiness	-.08*

** P> .05*

As indicated in the Table 3.1.6, self-concept on physical abilities, same-sex relations and parent relations were found to correlate positively with academic achievement, whereas the self-concept on physical appearance, opposite sex relations and honesty/trustworthiness were related negatively with academic achievement. All of the correlations obtained between different dimensions of non-academic self-concept, however, did not show a statistically significant relationship with academic achievement at alpha level of .05 for all respondents.

Table 3.1.7

Correlation Coefficients between Different Dimensions of Non-academic Self-Concept and Academic Achievement for Males and Females

Non-academic self-concept measure	Academic Achievement	
	Males (n = 202)	Females (n = 202)
Physical abilities	.06	-.05
Physical appearance	.02	-.06
Same-sex relations	.02	.04
Opposite-sex relations	-.09	-.04
Parent relations	.03	.16*
Honesty/trustworthiness	-.12	.06

** P< .05*

The relationship between the different dimensions of non-academic self-concept and academic achievement shown in the Table 3.1.7 revealed that self-concept on physical abilities and physical appearance were positively but not significantly correlated with academic achievement for male respondents, whereas they were related negatively with academic achievement for female respondents.

For male respondents, the relationship between self-concept on opposite-sex relations and academic achievement (r =-.09), and between self-concept on honesty/trust worthiness and academic achievement (r = -.12) were negative and not attained a statistical significance at alpha level of .05. However, the relationship between self-concept on honesty/trustworthiness with academic achievement was found to be positive for female respondents. The relationship

between self-concept on same-sex relations with academic achievement and between self-concept on parent relations and academic achievement were found to be positive for males as well as for female respondents.

Table 3.1.8

Summary of Multiple Regression Analysis of Predicting Academic Achievement Using Academic Self-Concept and Total Non-academic Self-Concept for all Respondents (n = 404)

Criterion Variable	Predictor Variable	B	Std. Error	t	Std. Error	F	R	R^2
Academic achievement (AA)	Academic self-concept (ASC)	.809	.092	8.82*	7.57	39.094*	.404	.16
	Total non-academic self-concept (TNASC)	-.096	.037	-2.62*				

** P < .05 Constant = 68.55*

The prediction Equation is:

Academic Achievement= .809 ASC -.096 TNASC+68.55

The results obtained in Table 3.1.8 show that the use of respondents' academic self-concept and total non-academic self-concept to predict academic achievement yielded a coefficient of multiple correlation (R) of .404 and (R^2) of .163. That is, the percentage of variance in the academic achievement accounted for by the combination of the two-predictor variables was 16.3. This proportion of variance is statistically significant at alpha level of .05 and $F_{2, 400} = 3.02$.

The t –values in Table 3.1.8 indicate the strength of the independent contribution of each predictor variable in the prediction equation. The analysis of this strength indicates that academic self-concept (with significant t-value of 8.82) is positively a significant predictor of academic achievement. However, total non-academic self-concept (with significant t- value of -2.62) is negatively a significant predictor of the respondent's academic achievement as shown in the regression equation at the bottom of Table 3.1.8.

Table 3.1.9

Summary of Stepwise Regression Analysis of the Proportion of Variance Accounted by Academic Self-Concept and Total Non-academic Self-Concept in Academic Achievement for all Respondents (n = 404)

Step	Variable	R	R^2	AR^2	Change in R^2	F-ratio
1	Academic self-concept	.386	.149	.147	-	70.309*
2	Total non-academic self-concept	.404	.163	.159	.014	39.094*

*$P < .05$

The results in Table 3.1.9 show that academic self-concept has entered first in to the stepwise regression with a contribution of 14.9% of a variance in the academic achievement. In the second step, total non-academic self-concept entered in to the stepwise regression model accounting only about 1.4% of the variance in the academic achievement of the respondents. The independent contribution of the proportion of the variance in academic achievement by each predictor was statistically significant.

Table 3.1.10

Summary of Multiple Regression Analysis of Predicting Academic Achievement Using Academic Self-Concept and Total Non-academic Self-Concept for Males (n = 202)

Criterion variables	Predictor variable	B	Std. error	t	Std. error	F	R	R^2
Academic Achievement (AA)	Academic self-concept (ASC)	1.081	.148	7.323*	7.73	27.02*	.462	.214
	Total non-academic self-concept (TNASC)	-.187	.057	-3.286*				

- *P < .05, constant = 73.08*

The prediction equation for males is:

Academic Achievement = 1.081 ASC -.187 TNASC + 73.08. The results obtained in Table 3.1.10 showed that the use of academic self-concept and total non-academic self-concept to predict academic achievement of male respondents produced a coefficient of multiple correlation (R) .462 and R^2 of .214 (meaning that only 21.4% of the total variance in academic achievement is explained by the combination of the two predictor variables). The analysis of variance for the regression result produced an F- ratio of 27.02, which was significant at .05 alpha level.

The t-values in Table 3.1.10 indicate that academic self-concept (with significant t-value of 7.323) is positively a significant predictor of academic achievement, whereas total non-academic self-concept (with significant t-value of -3.286) is negatively a significant predictor of academic achievement of male

respondents. In other words, the regression coefficient of academic achievement with academic self-concept is 1.081 and with total non-academic self-concept is -.187

Table 3.1.11

Summary of Multiple Regression Analysis of Predicting Academic Achievement Using Academic Self-Concept and Total Non-academic Self-Concept for Females (n = 202)

Criterion Variable	Predictor Variable	B	Std. Error	t	Std. Error	F	R	R^2
Academic Achievement (AA)	Academic self-concept (ASC)	.381	.113	3.384*	6.721	6.088*	.240	.058
	Total non-academic self-concept (TNASC)	-.168	.044	-.383				

** P < .05, Constant = 67.608*

The prediction Equation for Females is:

Academic Achievement = .381 ASC -.168 TNASC +. 67.608

The results in Table 3.1.11 indicate that the proportion of variance in academic achievement accounted for by the combination of female respondents' academic self-concept and total non-academic self-concept is .058. This variance was found to be statistically significant at F_2, 199 = 3.04 and α = .05. However, the t– values in Table 3.1.11 indicate that only academic self-concept (with significant t-value of 3.384) is positively a significant predictor of academic achievement. The other variable, total non-academic self-concept (with a

non-significant t-value of -.383) is negatively and non-significantly a predictor of academic achievement for female respondents.

Table 3.1.12

Pearson Correlation Coefficients between Academic Intrinsic Motivation and Academic Achievement

Variable	Academic Achievement		
	All respondents (n= 404)	**Males (n= 202)**	**Females (n= 202)**
Academic Intrinsic motivation	.162*	.059	.215*

* P< .05

The above Table 3.1.12 showed that a significant correlation was obtained between academic intrinsic motivation and academic achievement for all respondents as well as for female respondents. However, for males the relationship observed between academic intrinsic motivation and academic achievement was not significant at .05 alpha level.

Table 3.1.13

Summary of Multiple Regression Analysis of Predicting Academic Achievement Using Academic Intrinsic Motivation and Total Self-Concept for all Respondents (n= 404)

Criterion Variable	Predictor Variable	B	Std. Error	t	Std. Error	F	R	R^2
Academic Achievement (AA)	Academic Intrinsic motivation(AIM)	.095	.041	2.325*	8.11	8.092*	.192	.039
	Total Self-Concept (TSC)	.075	.033	2.285*				

** P < .05, constant = 56.134*

The prediction equation is:

Academic Achievement = 56.134+ .095 AIM + .075 TSC.

The results obtained in Table 3.1.13 showed that the use of academic intrinsic motivation and total self-concept to predict academic achievement, entered into the regression equation, yielded a coefficient of multiple correlation (R) of .192 and R^2 of .039. This means, the percentage of variance in the dependent variable explained by the combination of the two predictor variables was 3.9. The analysis of variance for the regression (prediction) result produced an F-ratio of 8.092 which was significant at .05 alpha level. This result means that students' academic intrinsic motivation in combination with total self-concept is a significant predictor of academic achievement using the prediction equation shown at the bottom of Table 3.1.13. This result also implies that the more students' academic intrinsic motivation and total self-concept, the more likely they score academic achievement.

The t-values indicate that academic intrinsic motivation (with significant t-value of 2.325) and total self-concept (with significant t-value of 2.285) are significant predictors of academic achievement.

Table 3.1.14

Summary of Stepwise Regression Analysis of the Proportion of Variance Accounted by Academic Intrinsic Motivation and Total Self-Concept in Academic Achievement for all Respondents (n = 404)

Step	Variable	R	R^2	AR^2	Change in R^2	F
1	Academic intrinsic motivation	.162	.026	.024	-	10.848*
2	Total self-concept	.197	.039	.034	.013	8.092*

** P< .05*

The results of stepwise regression analysis showed in Table 14 revealed out that academic intrinsic motivation has entered first in to the regression model with an independent contribution of .024 (accounting 2.4% of the variance in academic achievement) and then total self-concept which accounted 1.3% of the variance in academic achievement. These proportions of variance accounted by each of the predictor variables are statistically significant.

SECTION-II

DISCUSSIONS

On the basis of the principal questions raised in the study, the results will be discussed in the following sequence: academic self-concept and academic achievement, non-academic self-concept and academic achievement, gender difference in self-concept and academic achievement, academic achievement in self-concept levels, academic intrinsic motivation and academic achievement

3.2.1. Academic Self-Concept and Academic Achievement

In this study, the researcher found a positive and significant relationship between academic self-concept and academic achievement of respondents (See Table 3.1.4). This means, the self-concept that an individual student has concerning academics generally relates directly with his or her average score of all school subjects.

The analysis of the multiple and stepwise regression results also showed that academic self-concept is a significant predictor of academic achievement and accounted for about 14.7% of the variance in academic achievement.

The result of this study is in agreement with the findings of Marsh, Relich and Smith (1983), Marsh and O' Neill (1984), Marsh, Byrne and Shavelson (1988), Hamachek (1995), Chapman and Tunmer (1997), Helmke and Van Aken (1995), Marsh and Yeung (1997a), Yeung and Lee (1999). These researchers found out

in their different studies that a close and a positive relationship between academic self-concept and academic achievement of students. Sanchez and Roda (2004) indicated that academic self-concept powerfully and positively predicts general academic performance of students. Results found in this study also in line with Marsh (1990) that indicated the relationship between academic self-concept and performance is stronger with age and significant at age of adolescence. Another study similar to the previous one reports that academic self-concept proves itself favorably associated with academic performance (Caster, 1997 cited in Sanchez and Roda, 2004).

In sum the perceptions, feelings and beliefs that student has towards his or her academic performance in school has a positive relationship with academic achievement.

3.2.2. Non-academic Self-Concept and Academic Achievement

The results of the Pearson product moment correlation analysis revealed that a negative relationship was observed between total non-academic self-concept and academic achievement of the respondents. Further, the multiple and stepwise regression analyses also indicated that total non-academic self-concept predicts negatively academic achievement and it accounted only for about 1.4% of the variance in academic achievement.

Similarly, the relationships that were obtained between the different dimensions of non-academic self-concept with academic achievement were almost zero (see Table 3.1.6). Among the six facets of non-academic self-concepts only three (Physical abilities, same-sex relation and parent relations) of them were found to relate positively with academic achievement.

Inconsistent with the finding of this study, Sanchez and Roda (2004) in their study found that total non-academic self-concept does not correlate significantly with the academic performance. However, their findings agree with the present result in that non-academic self-concept negatively predicts general academic performance and self-concept on parents' relations relates positively with general academic performance. This may be because of the student's dependence and his or her affection for them, and the parents have a privilege of unique opportunity to reinforce the student's learning.

The possible relationships observed between different components of non-academic self-concept and academic achievement in this study agree with the findings of Marsh, Parker and Smith (1983) that self-concept score on physical appearance and peer relations to be virtually uncorrelated with academic performance. Moreover, Arul (1972) obtained that self-concept on physical appearance was found to correlate negatively but not statistically significant with academic achievement.

3.2.3. Academic Self-Concept, Non-academic Self-Concept, General self-Concept and Academic Achievement

Results of the correlation analyses have indicated that the relationship between academic self-concept and academic achievement was found to be stronger and statistically significant than that of between total self-concept and academic achievement, which in turn, stronger than the relationship obtained between total non-academic self-concept and academic achievement (see Table 3.1.4).

The multiple and stepwise regression analyses also indicated that while academic self-concept positively and significantly contribute to predict academic achievement of the respondents, total non-academic self-concept negatively and significantly contribute to predict academic achievement of the respondents. Of the two predictors, academic self-concept accounted the largest proportion of explained variance in academic achievement. However, total non-academic self-concept independently contributed little proportion of variance in the academic achievement.

The finding of this study supports the Shavelson et al. (1976)'s theoretical model of self-concept that proposed academic performance relates more with academic self-concept than with total self-concept and non-academic self-concept. It also confirms the findings of other researchers (Marsh, Byrne and Shavelson, 1988; Marsh, 1990a; Marsh, 1992 and 1993, and Byrne, 1984). Marsh, Byrne and Shavelson (1988) found that the association between academic self-concept and

academic achievement is stronger than that of between general self-concept and academic achievement, non-academic self-concept and academic achievement.

This finding also strengthens the research results of Marsh (1992 and 1993) that found academic achievement is substantially related to academic self-concept but correlated little to general and non-academic self-concepts. Byrne (1984) in her study also revealed that the relationship between academic self concept and academic achievement (r=.41) was found to be the strongest, followed by that of general self-concept and academic achievement (r=.38), and non-academic self-concept and academic achievement (r=.16).

3.2.4. Gender Difference in Self-Concept and Academic Achievement

The mean difference in academic achievement between male and female respondents was statistically significant in favor of males. This means, males have high academic achievement than females in overall school subject. Similarly, the finding of this study found a positive and strong relationship between academic achievement and academic self-concept for males than for females even though for both it was statistically significant. However, total self-concept was found to correlate significantly with academic achievement for female respondents, but it was non-significantly related with academic achievement for male respondents. The relationship that observed between total non-academic self-concept and academic achievement was negative for males whereas for females it was positive.

Regarding the relationship between different dimensions of non-academic self-concept and academic achievement of the respondents, this study obtained that academic achievement was found to relate positively with self-concept on physical abilities and physical appearance for male respondents but negatively for female respondents. However, self-concept on honesty/trustworthiness was positively related with academic achievement for females, whereas it was correlated negatively with academic achievement for male respondents (See Table 3.1.7). A positive relationship between self-concept on same-sex relations and parent relations with academic achievement were observed for both sexes but there was a negative association appeared between self-concept on opposite-sex relations with academic achievement for both male and female students. This may be for the reason that our traditional culture doesn't encourage relationship between opposite sexes and give more acceptances for the relationship that develop within same sex.

The multiple regression model used to examine the combined effect of academic self- concept and total nonacademic self-concept on academic achievement revealed that these variables together accounted for about 21.4% of the explained variance in academic achievement for male respondents and 5.8% for females (See Table 3.1.10 and 3.1.11).

Each of the predictor variables significantly contributes to predict academic achievement of male respondents. However, it was only academic self-concept that

Significantly contributed to predict academic achievement for female respondents. Academic self-concept and total self-concept predict independently and positively academic achievement, whereas total nonacademic self-concept negatively predicts academic achievement for both gender differences.

The result showing males perform higher than females academically is consistent with other research works. Findings under taken on gender difference in academic performance in Ethiopian context reported superior academic performance of male students as compared to their female counterparts (Genet, 1998; Markos, 1996 and Kifle, 2004). This may be for the reason that females are very busy in house work than males.

The finding of this study is also in agreement with the Jordan's (1981) finding that the relationship of academic self-concept with academic achievement (r=. 45) and (r=. 41) for male and for female respondents, respectively. Further, Brooker and Thomas as cited in Scheirer and Kraut (1997) also obtained that the relationship between grade point average and self-concept of ability is .42 for boys and .39 for girls after controlling for measured intelligence.

The relatively high and positive relationship between some dimensions of non-academic self-concept and academic achievement for males but negative relationship between other dimensions of the non-academic self-concept and academic achievement for females in this study support the findings that girls

had lower self-concept than did boys in physical abilities and physical appearance (Marsh, Smith and Barnes, 1985),positive relationship between self-concept on honesty/trustworthiness for females but negative for males (Marsh, 1989). However, it contradicts results that revealed small but consistent differences in global self-concept favoring boys than females (Marsh and Ayotte, 2003).

3.2.5. Academic Achievement in Self-Concept Levels

The researcher found a statistically significant difference in the mean of academic achievement between respondents possessing high and low levels of academic self-concept as well as between those who have high and low total self-concept. On the other hand, even though respondents with high total non-academic self-concept have higher mean academic achievement than those who possess low total non-academic self-concept, the difference is not statistically significant (See Table 3.1.3).

The finding of this study agrees with the findings obtained in other studies. Students with high self-concept tend to approach school related task with confidence, and success on these tasks reinforces this confidence and the opposite pattern is likely to occur for students with low academic self-concepts (Hamachek, 1995). Derlega and Janda (1986) also have demonstrated that a poor self-concept is related to poor achievement in school. The student's

subjective and personal evaluation of himself or herself has a dominant influence on his/her success in school (Purkey, 1970).

Baumeister, Tice and Hutton (1989) and Thompson (1994) also found that students with low self-concept avoid difficult learning situations that could further threaten their self-concept. Additionally, students with negative self-perceptions tend to give up or engage in avoidance, when confronted with challenging tasks (Ames, 1992, Dweck and Leggett, 1988). Maltz (1972) concluded that people who have poor self-concept will fail in their activities; however, if they change their self-concept in to positive, they will succeed and will become creative pupils.

In sum, students' self-concept and academic achievement seem to be associated, with those who have higher levels of academic self-concept and total self-concept also tending to have higher academic achievement.

3.2.6. Academic Intrinsic Motivation and Academic Achievement

A positive and statistically significant relationship was obtained between academic intrinsic motivation and academic achievement for the total respondents and for the female respondents. On other hands, a positive but not statistically significant relationship was found between academic intrinsic motivation and academic achievement for male respondents.

In this study, an investigation was also made to see the combined predictive power of academic intrinsic motivation and total self-concept on academic achievement. The results of the multiple regression analysis have shown that both predictors together accounted for about 3.9% of the explained variance in academic achievement (See Table 3.1.14). Each of the academic intrinsic motivation and total self-concept positively predicts academic achievement with accounting 2.6% and 1.3% of the variance in academic achievement, respectively.

There are several findings of other studies that line with the present findings. Positive self- perceptions of ability have been found to relate with intrinsic motivation (Meece, Blumenfeld and Hoyle, 1988; Gottfried, 1990; Skaalvik and Rankin, 1990). It has also found that students with high self-concept like intrinsically motivated students persevere when confronted with challenging tasks and eventually succeed (Bouffard- Bouchard and Pinard, 1988; Harter, 1982).

The results of this study support Gottfried's (1985) findings that academic intrinsic motivation positively and significantly related with students school achievement as measured by both standardized achievement tests and teacher grades. Further it confirms evidence that academic intrinsic motivation significantly and positively predicts academic achievement of students (Gottfried, 1985 and 1990; Gottfried, Fleming and Gottfried, 1994).

Similarly, Loyd and Barenblatt (1984) revealed that intrinsic intellectual motivation contributes significantly to academic achievement in addition to and independent of IQ the students.

The significant relationship observed between academic intrinsic motivation and academic achievement for female respondents in this study is consistent with studies that have found boys show less intrinsic motivational orientation (Roeser, Midgley and Urdan, 1996), while girls show a greater intrinsic motivation (Meece and Holt, 1993). In contradict with this finding, Rusillo and Arias (2004) haven't found a difference between boys and girls in the relationship between intrinsic motivation and academic achievement.

In contrast to the present findings, Workineh (2004) found almost no relationships between academic intrinsic motivation and achievement of Elementary school students in Ethiopia. He considered intrinsic motivation for specific subjects at elementary school level, however, the present study only focused on academic intrinsic motivation for general learning or general school subjects.

CHAPTER FOUR

SUMMARY, CONCLUSIONS AND SUGGESTIONS

4.1. Summary

The general purpose of this study was to investigate the degree of relationships between different components of self-concept and academic achievement, and between academic intrinsic motivation and academic achievement of preparatory program students in Western Shoa Zone. Moreover, the objective of this study was to see the relatively independent contribution of academic self-concept and total non- academic self-concept to the variation in academic achievement in one line and also to find out the relatively independent contribution of academic intrinsic motivation and total self-concept to the variation of preparatory program students' academic achievement in other side.

Four hundred eight students (204 females and 204 males) were selected through stratified random sampling (equal allocation) from three preparatory program schools (i.e., Holeta, Genchi and Ambo) among six government preparatory program schools selected from Western Shoa Zone.

Data were collected for self-concept by using a 33- item drawn and adapted from self Description Questionnaire II-Short inventory, and the subjects' academic intrinsic motivation was measured by a 30-item adapted from academic intrinsic motivation inventory of Shia (2001). The items adapted from the two inventories were translated in to their equivalent Afan Oromo version

with the consultation of language experts. The subjects' academic achievement was obtained from school record office.

The Pearson product moment correlation, t-test, multiple and stepwise regression analysis were employed to analyze the collected data. The major findings can be summarized as follows:

Pearson correlation indicated that there is a positive and significant relationship between academic achievement and academic self-concept, total self-concept and academic achievement, academic intrinsic motivation and academic achievement for all respondents. However, total non-academic self-concept as well as some of the different facets of non-academic self-concept was found to relate negatively with academic achievement of the respondents.

Self-concept on physical abilities, same-sex relations and parent relations were correlated positively with academic achievement. On the other hand, self-concept on physical appearance, opposite-sex relations and honesty/trustworthiness was found to relate negatively with the academic achievement of the respondents.

The relationship between self-concept on physical abilities and physical appearance with academic achievement was positive for male respondents but negative for female respondents. Self-concept on same-sex relations and parent relation were found to relate positively with academic achievement for both

male and female respondents. However, the association between self-concept on opposite-sex relations with academic achievement for both sexes was negative. Self-concept on honesty/trustworthiness was found to relate positively with academic achievement of female respondents but negatively with academic achievement of male respondents. Among all the relationships observed between the dimensions of non-academic self-concept with academic achievement, only self-concept on parent relations correlated significantly with academic achievement of female respondents.

Respondents with high level of academic self-concept have high mean academic achievement than those with low level of academic self-concept. Similarly, respondents with high level of total self-concept and high level of academic intrinsic motivation were found to have high mean academic achievement than those with low level of total self-concept and low level of academic intrinsic motivation, respectively. There was also a significant mean academic achievement difference observed between male and female respondents. However, the academic achievement of respondents with high level of total non-academic self-concept was not significantly different from those respondents who possessed low level of total non-academic self-concept.

The multiple regression analysis technique used to see the relative contribution of academic self-concept and total non-academic self-concept on academic achievement showed that academic self-concept contributed positively and

significantly to the prediction of respondents' academic achievement, whereas total non-academic self-concept contributed negatively and significantly to the prediction of academic achievement for all respondents in general.

The stepwise regression analysis has also revealed that academic self-concept independently contributed R^2 of .149 and total non-academic self-concept contributed R^2 of .014, to the total coefficient of multiple correlation (R^2) of .163 in academic achievement for all respondents.

Academic intrinsic motivation and total self-concept together accounted only 3.9% of the variance in academic achievement of respondents. Academic intrinsic motivation independently and significantly contributed 2.6% of the variance in academic achievement, while total self-concept accounted for about 1.3% of the variance in academic achievement.

The multiple regression analysis for gender group showed that the combined effect of academic self-concept and total non-academic self-concept accounted 21.4% and 5.8% of the variance in academic achievement for male and for female respondents, respectively. For both males and females, academic self-concept was positively a significant predictor of their academic achievement. However, total non-academic self-concept was negatively a significant predictor of academic achievement of male respondents but it was a non-significant predictor of academic achievement for female respondents.

4.2. Conclusions

As this study is a correlational type survey research, it is very difficult to establish the cause and effect relationship between variables because the variables are already occurred or manifested naturally.

While the results of this study support the conclusion that students' academic self-concept and academic intrinsic motivation positively relate to their academic performance, the magnitude of these relationships suggests that there are other unmeasured factors involved. In sum, the following conclusions were made based on the findings of this study:

1. The relationship observed between academic self-concept and academic achievement was found to be stronger than the relationship obtained between total self-concept and academic achievement, which in turn higher than the association of total non-academic self-concept with academic achievement for all respondents.
2. Academic self-concept was found to predict positively and significantly academic achievement, whereas total non-academic self-concept negatively predicted academic achievement. Moreover, academic intrinsic motivation and total self-concept were found to predict positively academic achievement of all respondents.
3. Academic intrinsic motivation was significantly correlated with academic achievement for female students.

4. Academic self-concept and total non-academic self-concept were independently the significant predictors of academic achievement for males; however, for female respondents it was only the academic self-concept that is a significant predictor of academic achievement.
5. The relationship observed between different facets of non-academic self-concept and academic achievements were almost null. Some of the dimensions of non-academic self-concept were positively related with academic achievement, while other dimensions of the non-academic self-concept were found to be negatively associated with academic achievement of the respondent students in general, and for females and for males in particular.
6. Students with high academic self-concept, total self-concept and academic intrinsic motivation were found to have high academic achievement than students belonging to low level of academic self-concept, total self-concept and academic intrinsic motivation. Similarly, a significant difference in academic achievement was found between males and females.

4.3. Suggestions

Based on the findings of this study, the following suggestions were made for teachers and for further research.

4.3.1. Suggestions for Teachers

1. At school, training and development in the areas of the pupil's self-concept should be addressed through the teachers' developmental plans. Most definitely, the researcher feels that it is necessary to give adequate and sufficient attention for development of positive self-concept for which the teachers should be offered methodological guidance in order to work on these throughout the educational process.
2. Schools must work to identify their students' inaccurate self-concept and design and implement intervention strategies to improve them. For example, teachers can provide students with proximal rather than distal goals, employ peers who share similar attributes to their students as teaching and learning model, and furnish effort, attributions and feed back to enhance students' self-concept and ensuring school performance.
3. The relationship between self-concept and academic achievement of preparatory program students does not end with their schooling. Thus, schools have the added responsibility of preparing self-assured and fully functioning students capable of pursuing their hopes and their ambitions.
4. Preparatory program schoolteachers should optimize the academic intrinsic motivation of their students' by making the learning tasks

meaningful and relevant to the learner, appropriate level of challenge for students' age and ability.

5. Preparatory program school teachers would better use self-determination instruction as a way to intrinsically motivate students in a better manner and enable them to more fully accept responsibility for their learning.

4.3.2. Suggestions for Further Research

1. Further research should include additional variables such as age, locus of control and parental involvement in the linkage between self-concept, academic intrinsic motivation and academic achievement.
2. In depth research should be conducted on the relationship between specific facets of academic self-concept and subject specific academic achievement.
3. A standardized self-concept inventory and academic intrinsic motivation inventory for preparatory program students should be developed in Ethiopian context.
4. Further research should consider both intrinsic motivation and extrinsic motivation while dealing with academic achievement.
5. Further studies in other zones of Ethiopia should be undertaken.

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APPENDICES

APPENDIX I

Self-Description Questionnaire II-Short Inventory

Direction:

Read each of the following questions carefully and choose one of the numbers given among 1-5 scales on the basis of the extent to which each sentence best describes you. There are no right and wrong answers. Simply, if the sentence is:

- Mostly false for you, choose 1
- False for you, choose 2
- Neither false nor true for you, 3
- True for you, choose 4 and
- Mostly true for you, choose 5

and indicate your choice by marking "X" under the number that you have chosen just in front of each sentence.

Thank you in Advance

Item No	Item	Response Categories				
		1	2	3	4	5
1	I enjoy things like sports, gym and dance					
2	I have a nice looking face					
3*	It is difficult to make friends with members of my own sex					
4*	I am not popular with members of my opposite sex					
5	I am an honest person					
6	I get along well with my parents					
7*	I get poor marks in most school subjects					
8	I am good at sports, gym and dances					
9	I am good looking					

10	I make friends easily with members of my opposite sex					
11	Members of my opposite sex wants me to be their friends					
12*	I often tell lies					
13	My parents treat me fairly					
14	I learn things quickly in most school subjects					
15	I am better than most of my friends at sports, gym and dance					
16	Other people think I am good looking					
17	Other persons of my own sex want me to be their friends					
18	I make friendship easily with my opposite sex					
19*	I sometimes cheat					
20	My parents understand me					
21	I am good at most school subjects					
22*	I am awkward at things like sports, gym and dance					
23	I have nice features (e.g., eye, nose, etc)					
24*	I don't get along very well with members of my own sex					
25*	I don't get along very well with my opposite sex					
26*	I some times tell lies to stay out of trouble					
27*	I don't like my parents very much					
28	Other students come to me for help in most school subjects.					
29*	I am not popular with members of my own sex					
30	I am a person valued by my peers					
31	Compared to other students, I am good at most school subjects					
32	I am a trustworthy person					
33	Work in most school subjects is easy for me					

Name of School _____
Grade Level _____ Section _____, Roll No _____
Sex: Male _____ Female _____
First Semester Average Mark _____

APPENDIX II

Academic Intrinsic Motivation Inventory

Direction:

Read each of the following questions carefully and choose one of the numbers given among 1-5 scales on the basis of the extent to which each sentence best describes you. There are no right and wrong answers. Simply, if the sentence is:

- Mostly false for you, choose 1
- False for you, choose 2
- Neither false nor true for you, 3
- True for you, choose 4 and
- Mostly true for you, choose 5

and indicate your choice by marking "X" under the number that you have chosen just in front of each sentence.

Thank you in Advance

Item No	Item	Response Categories				
		1	2	3	4	5
1	I want to learn every thing I need to learn					
2	No matter how much I like or dislike a class I still try to learn from it					
3	I believe learning could be of some value to me					
4	I feel that challenging assignments can be great learning experiences					
5	Preparatory program school helps me to get valuable knowledge					
6	I like to do more school work than I have to					
7	Sometimes I do more than I have to for an assignment to help me understanding the subjects mastery					

8	I learn simply for the sake of learning					
9	I feel good about myself when others do not understand material that is clear to me					
10	I prefer difficult tasks as opposed to moderate tasks					
11	I never boast of my grades					
12	I think learning is am important activity					
13	When I get bored, I look for new things to learn in school subjects					
14	I do all that I can to make my assignments turn out perfectly					
15	I keep working on a problem until I understand it					
16	I sign up for the class that prepare me for the future					
17	I have high expectations of my self					
18	I see myself as well-informed in many academic areas					
19	When I learn, I think about how much I enjoy it					
20	I find my ability to be higher than most of my peers					
21	I enjoy learning about various subjects					
22	I feel good about myself when I finish a difficult assignment					
23	I like to spend time reading about things that interest me					
24	I try to do my best on every assignments					
25	I set high goals for myself					
26	I wait till the last minute to complete my assignment					
27	I would only sign up for a club if it helped me to reach a long term goal					
28	Learning holds my attention at all					
29	After learning for a while, I feel pretty competent					
30	I enjoy doing hard examination					

Name of School _____

Grade Level _____ Section _____, Roll No _____

Sex: Male _____ Female _____

First Semester Average Mark _____

APPENDIX III

Inventarii Gaaffilee Ibsa Mataa Ofi II- Gabaabaa

Qajeelfama:

Himoota armaan gadii gadi fageenyaan erga dubbisteen booda tokko tokkoon isaanii hagam akka sirriitti si ibsan lakkoofsa 1-5 kennaman keessaa tokko filadluu agarsiisi. Deebiiwwaan sirrii ta'an yookiin soba ta'an tokkollee hinijiru. Walumaa galatti, yoo himichi waa'ee kee ibsurratti:

- baayyee soba ta'e 1
- soba ta'e, 2
- sobas, dhugaas miti ta'e, 3
- dhugaadha ta'e, 4 fi
- baayyee dhugaadha ta'e immoo 5

filachuun deebii kee mallattoo "X" lakkoofsa filatte jalatti qixa himichatiin barreessuun agarsiisi.

Galatoomi !!

Lakk. Hima	Hima	Gareewwn Deebii				
		1	2	3	4	5
1	Waantonni akka ispoortii, jamanaastikii fi raganni na bashannansiisu					
2	Ani fuula bareeda					
3*	Namoota saalaan na fakkaatan hiriyyomsachuun natti ulfaata					
4*	Ani namoota saa'aan faallaa koo ta'an biratti beekamaa miti					
5	Ani nama garraamiidha					
6	Ani waarra koo waliin akka gaariitti walii gala					
7*	Ani gosa barnoota irra caalaa isaaniitti qabxii gad-aanaa fida					

8	Ani waantota akka ispoortiitti,jamanaastikiifi ragadatti cimaadha					
9	Ani bareedaadha					
10	Ani namoota saalaan na fakkaatan salphaattiin hiriyyaa isaan godha					
11	Namoonni saalaan faallaa koo ta`an hiriyyummaa na baafachuu fedhu					
12*	Ani yeroo hedduu nan soba					
13	Warri koo haala gaariin na kunuunsu					
14	Ani gosa barnoota irra caalaa keessatti waanta tokko dafeen baradha					
15	Ani hiriyyoota koo waantota akka ispoortiitti,jamanaastikiifi ragadatti baayyeen isaan caala					
16	Namoonni biroon ati bareedaadha naan jedhu					
17	Namoonni saalaan na fakkaatan na hiriyyoomsachuu barbaadu					
18	Ani namoota saalaan faallaa koo ta`an salphaatti hiriyyaa isaan baafadha					
19*	Ani yeroo tokko tokkoo nama gowwomsa					
20	Warri koo yaada koo na qalbeeffatu					
21	Ani gosa barnoota irra caalaatti cimaadhaa					
22*	Ani waantota akka ispoortiitti, jamanaastikiifi ragadatti dandeetti hinqabu					
23	Ani qaama bareedaa [akka ijaa,funyaan,kkf] qaba					
24*	Ani namoota saalaan na fakkaatan wajjin akka gaaritti walii hingalu					
25*	Ani namoota saalaan faallaa koo ta`an wajjin akka gaariitti walii hingalu					
26*	Ani yeroo tokko tokkoo rakkina jalaa bahuuf na soba					
27*	Ani warra koo baayyee hinjaalladhu					
28	Barattoonni biroon gosa barnoota irra caalaatti gargaarsa argachuuf na bira dhifu					
29*	Ani namoota saaıaan na fakkaatan biratti beekamaa miti					
30	Ani hirriyyoota koo biratti nama fudhatama qabudha					
31	Ani barattoota biroo wajjin barnootarratti yoon of madaalu, gosa barnoota baayyeetti cimaadha					
32	Ani nama amanamaadha					
33	Gosa barnoota irra caalaa keessatti barumsi baradhu naaf salphaadha					

Maqaa m/barumsaa----------kutaa-------lakk.galmee-----

Saala: Dhiiira---------

Dhalaa--------

Qabxii avarejii simisteera 1ffaa----------

APPENDIX IV

Inventarii Kakka'umsa Keessa Ofi Barnootaaf

Qajeelfama:

Himoota armaan gadii gadi fageenyaan erga dubbisteen booda tokko tokkoon isaanii hagam akka sirriitti si ibsan lakkoofsa 1-5 kennaman keessaa tokko filadluu agarsiisi. Deebiiwwaan sirrii ta'an yookiin soba ta'an tokkollee hinijiru. Walumaa galatti, yoo himichi waa'ee kee ibsurratti:

- baayyee soba ta'e 1
- soba ta'e, 2
- sobas, dhugaas miti ta'e, 3
- dhugaadha ta'e, 4 fi
- baayyee dhugaadha ta'e immoo 5

filachuun deebii kee mallattoo "X" lakkoofsa filatte jalatti qixa himichatiin barreessuun agarsiisi.

Galatoomi !!

Lakk. Hima	Hima	Gareewwan Deebii				
		1	2	3	4	5
1	Ani barachuu waan qabu hunda barachuun fedha					
2	Kutaa galee barachuu jalladhus,jibbus ani yoomillee irra barachuuf nan carraaqa					
3	Barumsi akka bu'aa naaf qabu nan amana					
4	Hojii-manaa ulfaataarraa barumsa gaarii akka argadhutu natti dhaga'ama					
5	M/barumsaa qophaa'inaa beekumsa faayidaa qabeessa argachuuf na gargaara					
6	Barnoota barachuu qabu caalaa barachuu jaalladha					

7	Barnoonni akka sirriitti naa galuuf yeroo tokko tokkoo hojii-manaa hojjedhuu qabu caalaa hojjedha					
8	Barnoonni waan jiruumaaf baradha					
9	Barnoonni naaf gale yoo barattoota biraaf galuu dide gammachuutu natti dhaga`ama					
10	Hojii ulffinni isaa gidduugaleessarra hojii ulfaataa filadha					
11	Ani qabxii argadhutti gonkumaa hinboonu					
12	Barumsi hojii gaariidha jedheen yaada					
13	Yeroon mukaa`u waantota haaraa barachuun barbaada					
14	Hojii manaa koo gaarii taasisuuf waan danda`u hunda godha					
15	Hanga gaaffiin tokko sirriitti naa galutti hojjechuu ittuma fufa					
16	Ani barnoota gara fuulduraaf na qopheessu filadha					
17	Ani waan guddaaf of abdadha					
18	Gama barnootaan odeeffannoo gaarii akkan qabutti of ilaala					
19	Barachaarra osoon jiruu kan baradhu sun hagam akka na gammachisu yaada					
20	Dandeettiin koo kan hiriyyoota koo caala					
21	Barnoota baayyee barachuun na gammachiisa					
22	Hojii-manaa ulfaataa hojjedhee yoon xumuru,waan gaariitu natti dhaga`ama					
23	Waantota na gammachiisan dubbisuurratti yeroo koo dabarsuu jaalladha					
24	Hojii-manaa hunda haala gaariitiin hojjechuuf hanga danda`utti nan caarraaqa					
25	Ani barachuuf karoora guddaa karoorfadheera					
26	Hojii-manaa jalqabe tokko hanga xumurutti hindhiisu					
27	Gumii tokko keessatti kan galmaa`u yoo inni kaayyoo guddaa kaayyeffadheeru galmaan gahuuf na gargaara ta`edha					
28	Barumsi guutummaa guutuutti ofitti na harkisa					
29	Ergan baradhee booda dorgomaa cimaa ta`a jedheen of yaada					
30	Qorumsa ulfaataa hojjechuun na gammachiisa					

Maqaa m/barumsaa----------kutaa----------lakk.galmee-----

Saala: Dhiira-----

Dhalaa----

Avareejii simisteera 1ffaa----------

APPENDIX V
Factor Analyses of the SDQ II- S Items

Self- Concept Item	Factor Loading						
	1	2	3	4	5	6	7
1. Physical Abilities							
1. I enjoy things like sports, gym and dance	**49**	-01	-02	19	05	04	-02
8. I'm good at sports, gym and dance	**75**	02	-24	00	-29	03	-02
15. I'm better than most of my friends at sports, gym and dance	**65**	-14	10	10	08	02	-17
22*. I'm awkward at things like sports, gym and dance	**79**	-15	-08	-08	03	06	-13
2. Physical appearance							
2. I have a nice looking face	05	**63**	-09	13	39	08	02
9. I'm good looking	-07	**58**	05	06	06	03	-22
16. Other people think I am good looking	08	**68**	-02	01	05	04	02
23. I have nice features (e.g. eye, nose, etc)	18	**69**	-13	11	13	2	-16
3. Same-sex Relations							
3*. It is difficult to make friends with members of my own sex	06	04	**63**	05	16	01	07
10. I make friends easily with members of my own sex	09	05	**68**	02	-01	05	-02
17. Other person of my own sex want me to be their friends	-23	12	**65**	18	15	13	08
24*. I do not get along very well with members of my own sex	-17	05	**62**	-11	02	08	02
29*. I'm not popular with members of my own sex	-08	04	**72**	13	11	06	02
4. Opposite-sex relations							
4. I'm not popular with members of my opposite sex	-24	-05	24	**61**	-06	02	11
11. Members of my opposite sex want me to be their friends	-02	-04	00	**64**	-09	04	-04
18. I make friends easily with my opposite sex	-20	-04	07	**76**	-17	06	13
25*. I do not get along very well with my opposite sex	-03	-16	06	**48**	04	03	-03
5. Honesty/ trust worthiness							
5. I'm an honest person	05	04	07	06	**72**	08	-05
12*. I often tell lies	08	03	-06	03	**68**	02	00
19*. I sometimes cheat	06	-02	04	-01	**67**	03	04
26*. I sometimes tell lies to stay out of trouble	11	03	01	02	**65**	02	01
30. I'm a person valued by my peers	07	-02	05	04	**64**	00	03
32. I'm a trustworthy person	04	04	03	-01	**70**	01	07
6. Parent Relationships							
6. I get along well with my parents	14	01	21	-10	06	**56**	06
13. My parents treat me fairly	-07	08	15	-34	02	**54**	19
20. My parents understand me	04	12	16	02	09	**58**	05
27*. I don't like my parents very much	-06	10	-03	-09	01	**50**	04
7. School subjects							
7*. I get poor marks in most schools subjects	08	-05	-18	-21	-07	04	**78**
14. I learn things quickly in most school subjects	16	-08	-15	-02	-17	02	**66**
21. I'm good at most school subjects	-17	-11	10	14	05	04	**61**
28. Other students come to me for help in most school subjects	-02	-14	08	00	01	02	**65**
31. Compared to other students, I am good at most school subjects	19	12	20	-07	-01	04	**69**
33. Work in most school subjects is easy for me	19	07	04	08	31	06	**68**

Note. All loadings are presented with out decimal points. Factor loadings in the bolded number are loadings for items adapted to measure each factor

** Negatively worded items*

APPENDIX VI

Reliabilities of Self-Concept Subscales and Academic Intrinsic Motivation

Variable	Cronbach Alpha Coefficient	n
Self-concept on physical abilities	.75	60
Self-concept on physical appearance	.82	60
Self-concept on same-sex relations	.71	60
Self-concept on opposite-sex relations	.60	60
Self-concept on parent relations	.95	60
Self-concept on honesty/trustworthiness	.68	60
Total non-academic self-concept	.78	60
Academic self-concept	.85	60
Total self-concept	.76	60
Academic intrinsic motivation	.80	60