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THE RELATIONSHIP OF CLASSROOM ACHIEVEMENT GOALS, PERSONAL ACHIEVEMENT GOALS, AND FRAMES OF REFERENCE WITH ACADEMIC SELF-CONCEPT

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THE RELATIONSHIP OF CLASSROOM ACHIEVEMENT GOALS, PERSONAL ACHIEVEMENT GOALS, AND FRAMES OF REFERENCE WITH ACADEMIC SELF-CONCEPT

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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ABSTRACT

Examines the relationship between undergraduates' perception of their classroom environment, their adoption of achievement goals, their use of frames of reference and academic self-efficacy and self-concept. The study also looked at proposed models by Skaalvik and Skaalvik (2002) and Elliot and Thrash (2001) in order to investigate whether frames of reference represent a unique influence on academic self-concept distinct from the influence of achievement goals. Results reveal that frames of reference do account for a sizable enough variance in self-efficacy to suggest that the standard a student uses to evaluate his academic performance contributes uniquely to his academic self-concept.

LITERATURE REVIEW

Introduction

The information a student receives in an academic setting such as college contributes to the formation of his academic self-concept (Novick, Cauce, and Grove, 1996). This information includes the interactions he has with instructors and other students, as well as the student's own prior notions and expectations about college and his ability or inability to succeed academically. This experience is reflected in the theories of early researchers who believed that self-concept was either a cognitive or social construction (James, 1890; Cooley, 1902). The present study proposes that students use different filters such as frames of reference (which is the standard a student uses to evaluate his performance) and achievement goals to process the information they receive. Frames of reference and achievement goals offer a more detailed explanation of academic self-concept formation.

While there is research that supports the relationship between frames of reference and academic self-concept (Marsh, 1988; Marsh and Hattie, 1996; Marsh and Hau, 2003; Marsh and Hau, 2004; Skaalvik and Skaalvik, 2002) as well as achievement goals and academic self-concept (Kaplan and Bos, 1995; Covington and Omelich, 1984), Skaalvik and Skaalvik believed that goal theory may be very useful in understanding the variations in students' frames of reference. They explained that the salience of a frame of reference may be explained by a student's achievement goal. To date, there is little, if any, evidence to support this proposal.

Elliot and Thrash (2001) offered a different explanation. They proposed a hierarchical model which shows achievement goals as differentiated on two dimensions (the definition and valence) of competence. They explained that competence may be defined as a function of the type of standard or referent that is used in evaluation. As a result, the three standards that Elliot and Thrash identified are explained as being an integral part of the particular achievement goal a student adopts.

This study seeks to understand the relationships among classroom achievement goals, personal achievement goals, frames of reference, and academic self-concept. It also tests the tenability of Skaalvik and Skaalvik's proposal that frames of reference represent a unique influence on academic self-concept distinct from the influence of achievement goals.

Academic Self-Concept

Academic self-concept is defined by Skaalvik and Skaalvik (2004) as "self-perceived abilities or the feeling of doing well or poorly in defined academic areas" (p. 619). Byrne (1996) wrote that although there is no specific definition of academic self-concept, the following are two important features used to characterize the construct. First, it contains both descriptive and evaluative aspects of self-perception. Secondly, these self-perceptions are related to academic competence. This supports and is reflective of Shavelson's (1976) self-concept model. Marsh and Craven (1997) pointed out that while some researchers use "self-esteem" for the evaluative component and "self-concept" for the descriptive component, the construct includes both.

Skaalvik and Skaalvik (2002) emphasized the importance of self-perception explaining that it is the perception of the self and not what the person actually is that influences behavior. People make assumptions about what kind of persons they are based on the information they receive from others. The same is true specifically in the world of academics. Students come to form their academic self-concept based on the information they receive from teachers, students, and parents.

In considering academic self-concept, it is important to establish its significance. According to the research, (Marsh and Hau, 2003; Guay, Marsh, and Boivin, 2003), academic self-concept is significant in educational settings because it is related to many academic outcomes such as academic achievement, persistence, coursework selection, and aspirations. It is considered a means to facilitate these other educational goals. The significance of academic self-concept enhancement can be seen as it is listed as a central goal in many educational policy statements around the world.

Valentine, DuBois, and Cooper (2004) wrote that there are opposing views concerning students' self-beliefs and their effects on academic achievement. While some (Beane, 1994) propose that a student's beliefs about himself are central to academic success, others (Seligman, 1993; Stevenson, 1992) think that self-beliefs are irrelevant or even possibly damaging to academic achievement. For example, if students create a false sense of security concerning their academic abilities this may cause more harm than good as they pursue difficult academic goals. However, studies do show a positive correlation

between self-beliefs and academic achievement (Wylie, 1979; Hattie, 1992). Of the different self-terms, several theorists have noted that academic self-beliefs, such as academic self-concept, are a stronger source of influence on achievement than general self-beliefs (Byrne, 1996; Wylie, 1979; Skaalvik and Skaalvik, 2002).

Structure of Self-Concept

For many years, the lack of theoretical models made defining and interpreting the self-concept construct difficult. Later, Shavelson (1976) developed a self-concept model which included three important factors: 1) self-concept is multidimensional; 2) self-concept facets become more distinct with age; and 3) the facets are arranged in a hierarchical structure.

In the past, researchers have focused on a general self-concept. However, in recent years, this notion presented difficulties in identifying the various factors that influence the construct. Self-concept is more complex than what the idea of a general self-concept can offer. Harter's (1996) model demonstrated how global characteristics generally develop into more domain specific attributes. For example, there are many areas (both academic and nonacademic) that contribute to self-concept such as physical abilities, appearance, relations with friend and family, ability, honesty, etc. These areas need definition to facilitate a complete and accurate description of self-concept.

As a result, researchers have turned away from one-dimensional models and have embraced multidimensional models which acknowledge domain-specific self-concepts such as physical appearance, physical abilities, relations

with parents, etc. Harter (1996) wrote that it was the Shavelson (1976) model that first identified academic and nonacademic self-concepts. Many studies (Hattie, 1992; Marsh, 1990, 1993; Marsh & Craven, 1997) support the multidimensional structure of self-concept.

One study in particular shows strong support for the multidimensional quality of the self-concept construct. In validating the Self-Description Questionnaire, the research was so convincing that Marsh and O'Neil (1984), wrote, "We contend that the relationship between self-concept and other constructs cannot be adequately understood if the multidimensionality of self-concept is ignored" (p. 168).

Self-concept is also thought to be structured in a hierarchical way with general self-concept at the top (Marsh and Hattie, 1996). As one moves down the hierarchy, global self-concept was shown to separate into the two divisions of academic and nonacademic self-concepts. Marsh (1996) worked with Shavelson(1976) in revising the model suggesting that the academic dimension may also be divided into sub-domains such as math, verbal, problem-solving, etc. However, Marsh and O'Neill (1984) suggested that more research is needed to confirm the hierarchical structure. In validating the Self-Description Questionnaire, which is based on the Shavelson model, the researchers found that the correlations among the factors were small for each set of responses suggesting there is no strong hierarchical structure. They were looking for a stronger relationship between the sets of responses showing that they had a common factor.

It is important to realize that global and dimensional views are not antithetical. They can coexist. Holding to a multidimensional theory does not eliminate the existence of a global self-concept (Marsh and Hattie, 1996). As Harter (1996) pointed out, people can make both global and domain specific self-evaluations. Academic self-concept is positioned under global self-concept to show that students use the things they know about themselves academically as one piece of information that contributes to their overall self-concept. The changes that happen in a student's academic self-concept impact her global self-concept as well as the other way around (Marsh and O'Neill, 1984).

The Cole et al. (2001) study suggests several important trends concerning self-concept development. One of these is that even though there seems be a more complex pattern for self-concept development than what was originally thought, there is support for the notion that self-concept becomes more defined and stabilizes over time. Children tend to have a general motivation for maintaining a positive self-concept. As a result, they learn and use a variety of strategies to accomplish their goal including overestimation of their abilities, selective social comparison, association with those who bring vicarious benefits, and investing in those activities in which they see themselves as competent.

Going to school gives students the opportunity to compare their performance with others which results in a more realistic view of themselves. Marsh and Ayotte (2003) believed that young children tend to have overly optimistic self-concepts and that through the process of receiving feedback from others their self-concepts become more correlated with the external indicators of

competence. Children's self-concepts become more realistic with age. Older children become able to see both their strengths and weaknesses.

Given the significance of academic self-concept, it is essential to gain a better understanding of how students process the information they receive in academic settings. This study examines two possible filters students use in processing this information, specifically, frames of reference and achievement goals.

Frames of Reference

Frames of reference, which are standards students use to measure their performance, provide one approach in explaining academic self-concept (Marsh and Hattie, 1996; Skaalvik and Skaalvik, 2002). The approach has a long history in social psychology and is based on social comparison theory (Festinger, 1957). Frames of reference influence academic self-concept when students compare their self-perceived academic performance with some frame of reference or standard. It is as though students use frames of reference as a filter to see or interpret their academic self-concept. As a result, it is possible for students who have the same accomplishments to have very different academic self-concepts if they are using different standards or frames of reference.

Marsh and Hau (2003) stated that “self-concept research cannot be adequately understood if the role of frames of reference is ignored” (p. 365) in order to emphasize the important role that frames of reference play in the development of self-concept. In addition, Skaalvik and Skaalvk (2002) make it

clear that the major determinants of academic self-concept are students' judgments of their achievements.

Big Fish Little Pond Effect

Using the frames of reference approach, Marsh (1996) developed a model to explain the big-fish-little-pond-effect (BFLPE). Marsh and Hau (2003) used the saying "its better to be a big fish in a little pond" to explain the phenomenon that equally able students tend to have lower academic self-concepts if they attend high-ability schools than if they attend lower ability schools. They wrote that both the academic achievement level of the individual student and the average of achievement levels of other students play a part in forming academic self-concept because students compare their own achievements with the achievements of their peers. The model proposes that academic self-concept and individual academic achievement are correlated positively, and academic self-concept and school-average achievement are correlated negatively. When the individual is comparing his or her performance with others, the outcome is dependent upon what frame of reference is being used. Even when students' academic achievement may be increasing, if they compare themselves with others in a high performing school then academic self-concept is decreased.

Although it is intended that academically selective schools would have a positive effect on academic self-concept, studies demonstrate that the effect is negative. In fact, Marsh and Hau (2003) conducted the largest cross-cultural study of BFLPE and found the effects of school-average achievement were negative in all 26 countries. Other studies show that in ability tracked classrooms,

higher-ability students have lower academic self-concepts and low-ability students have higher academic self-concepts than in regular classes that are not based on ability. Additionally, Macintyre and Ireson (2002) also wrote of the potential pitfalls of grouping students according to their ability by listing several studies that show the practice has negative effects on a student's self-concept.

These findings are an application of social comparison theory in educational settings. Marsh and Hau (2003) wrote that the BFLPE is specific to academic self-concept. Several of Marsh's studies show a large negative BFLPE for academic self-concept, but little or no BFLPE for self-concept in general or for self-esteem.

Internal/External Frames of Reference Model

Skaalvik and Skaalvik's (2002) research also supports the idea that "it is better to be a big fish in a little pond than a little fish in a big pond." While Marsh and Hau (2003) focus on external comparisons, Skaalvik and Skaalvik extended their explanation of the research to include both internal and external comparisons. The Internal/External model was developed because of the near zero correlation between math and verbal self-concept suggesting that students evaluated themselves as not measuring up in the lower scoring area because they are comparing it to the higher score area. They propose that students evaluate themselves academically by using many frames of reference. In an attempt to describe this very complex self-evaluation process, the authors discuss these different frames of reference by dividing them into external and internal comparisons. They look at several internal and external frames of

reference as well as the sources of information that inform them (Harter, Waters, and Whitesell, 1998).

This model is a combination of the antecedents of academic self-concept described by the researchers, including the social comparison process, reflected appraisals (teachers', classmates', and other students' responses to the student's academic performance are examples of reflected appraisals), mastery experiences, and psychological centrality (self-assessments of qualities that students value or consider important). By including these factors in the model, they demonstrate the complexity of the comparisons students use in reference to their academic self-concept (Skaalvik and Skaalvik, 2002).

External comparisons. Skaalvik and Skaalvik (2002) identified five possible sources of information for external comparisons. These include direct observation of other students' achievements, teachers' responses, classmates' responses, other students' responses, and grades. Each of these provides information that students use for social comparisons regarding their academic self-concept. Of these sources of information, reflected appraisals actually contribute to self-concept and may also serve as a frame of reference for students to use to make a social comparison. For example, the information in the reflected appraisal is used in evaluating self-concept, but the standard that is communicated in the information may be what the student uses to make a social comparison.

In using the information of a reflected appraisal to evaluate oneself, Harter et al. (1998) suggested that these evaluations may vary depending on the

relational context. They examined adolescents' evaluations of themselves in four different contexts: in regard to parents, teachers, male classmates, and female classmates. The items used measured to what extent adolescents liked and were happy or did not like or were unhappy with themselves as people when they were around each of the four classifications of people. The findings demonstrate that many (almost three-fourths of 279 participants) teenagers do evaluate themselves differently depending on the relational context.

Marsh and Hau (2004) emphasized that in order to make a self-appraisal, people must compare their self-perception (which is based on the information they have received) to some standard or frame of reference. Earlier Marsh (1988) explained external comparisons as a process in which students compare self-perceptions of their own achievements with the perceived performance of other students. The result of this comparison provides a basis for students' academic self-concept. There is some evidence that these external frames of reference can be predictive of academic self-concept.

Interestingly, the environment in the educational setting is most unique in that it is not as flexible as other environments where individuals have the freedom to choose a particular comparison target. Instead, the educational setting is somewhat situationally imposed upon students (Marsh and Hau, 2004). However, the person or group that a student uses for comparison can differ. Skaalvik and Skaalvik (2002) identified the comparison group as either other students in the same class or school or selected students either in or outside of the class.

Individual comparisons also happen, which brings up the issue of downward and upward social comparisons. These comparisons are different because the individual chooses to compare himself or herself with another individual instead of a comparison group. Some researchers (Collins, 1996) proposed that people usually compare themselves with others who they perceive to be either like them or just a little better because the association will increase the positive thoughts of their self-concept. While others (Brickman & Bullman, 1977; Taylor & Lobel, 1989) said people make downward comparisons assuming that people will feel better if they compare themselves with someone perceived to be a little lower in ability.

Internal comparisons. Students also make internal comparisons. Marsh and Hau (2004) wrote that internal comparisons represent an extension of the traditional view of social comparison. They explain the I/E model was initially developed to provide explanation for the very low correlations between math and verbal self-concepts. Initially, it was thought that math and verbal self-concepts would be highly correlated especially since math and verbal academic achievement typically have a large correlation. However, the research shows that math and verbal self-concepts are much more differentiated, suggesting that students think of themselves as good in either math or verbal areas, but not both. So, it is quite paradoxical because the perception of being more mathematically able has a negative influence on how students perceive themselves verbally and being more verbally able lowers the math self-concept perception.

Skaalvik and Skaalvik (2002) echoed this view by writing that internal comparisons are standards students use by comparing their perceived abilities or achievements in one area with those in another area regardless of how these abilities measure up to the abilities of other students. They wrote that Marsh (1985) believed that internal comparisons are another factor that contributes to academic self-concept. For example, students will compare their math and verbal abilities. The difference between them leads the student feeling more positive in one area than the other.

Several internal comparisons to schoolwork are proposed by the researchers (Skaalvik and Skaalvik, 2002). First, students can compare their performance in different subjects at a particular time. Secondly, students can compare their performance in the same subject over time. Another possible internal comparison is when students compare their performance in different school subjects with their goals in the same subjects. Lastly, students may compare their performance with their effort.

While the first comparison affects students' academic self-concept by comparing subjects, the second is connected to motivation. If the student is focused on how much he is learning instead of just performance, this comparison can facilitate self-improvement. The third comparison is different from the first two because instead of comparing achievement with achievement, it is comparing achievement with goals. The goals become the standard or frame of reference used to evaluate performance. This comparison can facilitate

motivation and achievement as they support a sense of mastery (Skaalvik and Skaalvik, 2002).

The last comparison also affects academic self-concept because as students compare their achievement with effort, they will be making judgments about how difficult the task is and how much effort was needed. If the task was difficult and they succeeded without much effort, they will probably conclude they have high ability. Covington (1984) showed that students would rather succeed because of high ability than the degree of effort given because high ability signifies worthiness.

Lastly, it should be noted that students tend to give more weight to external comparisons than internal (Skaalvik and Skaalvik, 2002). This may be due in part to difficulty of separating internal comparisons from external ones. For example when students compare achievement in two school subjects, another piece of information is their perception of their rank in the classroom. In this example, the comparison of ability in two subjects is based on an external comparison group. In addition, it should be noted that some of the mentioned sources of information do not apply with internal comparisons such as direct observation. While this may work in a sporting event, it wouldn't work with an essay assignment and so it is the grade assigned by the teacher that is the real source of information in this case.

Skaalvik and Skaalvik (2002) wrote that more understanding is needed concerning the psychological processes that are involved in internal/external comparisons. They have argued that students use multiple frames of references

and sources of information. So a student could use a variety of things as different frames of reference such as all the students in a class, a friend who scores higher in math, the students' own achievements, etc. The impact of the comparison also depends on several factors such as which frames of reference are most salient for the student or which sources of information do the students seek out to use to evaluate themselves academically. Several factors influence this selection process including a variety of contextual factors, grouping, instructional strategies, but also the students' own individual goal or motivational orientation. As a result, Skaalvik and Skaalvik believed that goal theory may be very useful in understanding a student's preference of frame of reference. They explain that the salience of a frame of reference may be explained by a student's primary achievement goal.

Achievement Goals

Within the field of achievement motivation, goal theory has become a major model that has proved useful in understanding student motivation. The theory has a social-cognitive framework and focuses on the purpose or reasons students pursue achievement (Midgley, et al. 1998). According to achievement goal theory, there are two major reasons why students choose to pursue academic achievement. First, some students are motivated by performance goals (also called ability or ego goals), or competing with other students. It is the performance or showing that they are better than other students that motivates them. Other students are focused on learning goals (also called task or mastery goals) or learning for learning's sake. If there is any competition of competence

for them, it is self-improvement. These two reasons or goals that students hold for achievement are said to "predict students' behaviors, thoughts, and affect" (Linnenbrink, 2004 p.160).

Because it is thought that students' achievement goals can influence how they approach, experience, and perform in their classes, researchers often examine a variety of factors that may lead students to adopt a particular achievement goal as well as the consequences of that goal. Both the need to achieve and the fear of failure are at work here.

Elliot and Church (1997) showed that students adopt mastery goals due to their need for achievement and their high competence expectations. Performance goals have been associated with less adaptive patterns of behavior (Linnenbrink, 2004). However, the conceptualization has been expanded and now suggests both performance-approach and performance-avoidance goals. Both kinds of performance goals are motivated by the judgments of others. However, with performance-avoidance the focus is on avoiding unfavorable evaluation by procrastinating or avoiding the situation all together. With performance -approach the focus is on trying to out perform other students in order to gain favorable judgments (Church, Elliot, and Gable, 2001).

Elliot and Church (1997) drew a distinction by reporting that students adopt approach or avoidance goals based on their perception of the achievement situation. If it is perceived as a threat, they adopt avoidance goals due to their fear of failure. If they see it as a challenge, they adopt approach goals due to their need to achieve. Students' perceptions are based on previous experience. If

they have experienced success academically, they will likely see an achievement situation as a challenge. However, if they have not been successful in academic settings, they will tend to see the situation as a threat.

Several possible reasons exist for students who avoid performance. Failure-avoidant students avoid performance because it is a threat to their self-worth. Learned helpless students do not believe they are capable of doing the work. Other students may feel capable, but see no reason to do it. Avoidance can also be the result of a passive-aggressive mechanism. Students don't do the work as a means of revenge because they are embarrassed or perceive to be treated unfairly by the teacher (Seifert, 2004).

While research clearly shows performance-avoidance goals are related to maladaptive patterns of behavior, this is not the case for performance-approach goals. In fact, there are findings (Harackiewicz, Barron, Carter, Lehto, and Elliot, 1997; Harackiewicz, Barron, and Elliot, 1998) that associate performance-approach goals with higher levels of achievement. This finding has led some to think that a multiple goals approach that includes both mastery and performance-approach goals as the most adaptive orientation.

In reference to the consequences of particular achievement goals, studies show (Harackiewicz, Barron, Tauer, Carter, & Elliot, 2000; Harackiewicz, Barron, Tauer, and Elliot, 2002) that mastery goals tend to predict long-term interest in a subject while performance goals predict grades. Elliot and Church (1997) found mastery goals to be associated with high intrinsic motivation, while performance-

avoidance goals were associated with both low motivation and low graded performance.

It is important to ask how goals enhance or inhibit academic self-concept. For just as an argument can be made that frames of reference influence a student's academic self-concept, a similar argument can be made for the influence of achievement goals on a student's self-concept. While there has been considerable research investigating different factors and consequences of achievement goals, several researchers (Deci, 1975; Maehr, 1976; Nicholls, 1979, 1984) have demonstrated that positive academic self-concept is an important educational outcome in relation to achievement goals.

Covington (1984) gave insight to how performance informs a student's self-concept. He wrote that within Western culture, self-worth is inherently connected to performance. In addition, a major part of achievement at school is the need for students to protect their sense of self-worth. Much of this depends on the students' perceptions of ability. Effort is often seen as a threat because if students give good effort and still fail, then there is a suspicion of low ability. In an effort to protect their self-worth, some students would rather not do the work even if they may experience some feelings of guilt than to try, fail, and experience humiliation.

Kaplan and Bos (1995) explained that when students have performance goals and success is defined in terms of winning a competition, success is limited. Students who encounter failure in these kinds of situations usually

attributed it to fixed ability. As a result, the situation tends to have a lasting effect on their self perception.

Kaplan and Bos (1995) wrote that the key difference in achievement goals is in how each one defines success in achievement situations. With a task-goal, success is defined in relation to the task. However, social comparison is central to performance goals because success is defined in relation to one's ability to out do others. When the two kinds of achievement goals are examined, students who are focused on learning instead of performance usually give more effort, persist even in the face of obstacles, and achieve at higher levels.

While ego goals tend to draw the students' attention to themselves, task goals tends to draw the attention away from the student and to the task at hand. While performance goals emphasize ability as a perceived cause of success and failure (Ames, Ames, & Felker, 1977) inhibitions are often removed when students focus on the task and not themselves (Maehr, 1998). The risk associated with performance often causes students to worry or feel incompetent. Studies (Arunkumar & Maehr, 1998 as cited in Maehr, 1998; Kaplan and Bos, 1995) show that task goals enhance the sense of competence and self-esteem.

Since performance is one source of information that students use in forming their academic self-concept, it is judicious to consider achievement goals as a filter that students use in evaluating and interpreting the information they receive in a classroom. The present study considers how classroom achievement goals in the college learning environment affect students' personal achievement goals and ultimately their academic self-concept.

Learning Environments

In the 1970's, a major complaint of teachers of inner city students was that the students were not motivated to learn. Many researchers assumed that there was something wrong with the students' upbringing that caused them to be disinterested. However, other researchers began to notice that these children were achievement oriented in other contexts so they wondered if there was a different cause of their disinterest in school. Perhaps there was something wrong in the learning environment and not the child (Maehr, 1998).

One assumption of goal theory is that goal structures of the learning environment influence students' personal achievement goals (Linnenbrink, 2004). Generally, there is evidence that supports a correlation between perceived goal structure and students' personal goals. However, the causality of the relation has not been established.

Several studies (Ames, 1992; Greene, Miller, Crowson, Duke, and Akey, 2004; Roeser, et al., 1996) show that a causal relationship between students' perceptions of the classroom climate and their achievement goal is a plausible one. Other studies (Ames, 1992a, 1992b; Maehr and Midgley, 1991) address the issue of identifying which classroom factors influence goal orientations. Practices that are utilized by teachers such as grouping, evaluations, and recognition are related to students' adoption of achievement goals (Meece, 1991).

Kaplan and Maehr (1999) proposed that while personal goals can influence students' evaluations of classroom orientations, a large part of goal theory literature supports the notion that goal adoption is a social constructive

process. A variety of studies (Ames and Archer, 1988; Meece, Blumenfeld and Hoyle, 1988; Meece, 1991; Nolen and Haladyna, 1990) show that students adopt different goals in different classrooms. The adoption of different achievement goals were related to the students' perceptions of goals emphasized as well as the instructional practices the teachers employed. In addition, similar findings were reported by Kaplan and Maehr (1999) for the larger school climate.

The study by Covington and Omelich (1984) substantiated many other studies (Ames & Ames, 1984, Covington, 1983, 1984; Nicholls, 1983, 1984) that suggested that different classroom goal structures elicit different motivational orientations. Specifically, student success is diminished in a competitive learning environment because the likelihood of success is reduced by other capable students. As a result of the competitive environment, the student may opt for avoiding failure rather than pursuing success. On the other hand, when the student's goal is learning and self-improvement, the likelihood of success no longer depends on other students' performance.

According to Maehr (1998), context will play an important role in deciding which achievement goal orientation will exist. Students will perceive the dominant goal and act accordingly (Anderman & Maehr, 1994; Urdan & Maehr, 1995; Urdan, 1997). Ego or performance goals tend to create an atmosphere of competition and comparison while task goals focus on self-improvement. Failure seen through the lens of performance goals may be cause for a student to give up while students in a task oriented classroom interpreted failure as information they need in order to know how to improve. If task goals characterize the school,

it is not due to chance so careful consideration of school policies and practices is essential (Maehr, 1998).

Other studies (Nolan and Haladyna, 1990; Roeser, Midgley, and Urdan, 1996; Kaplan and Maehr, 1999) suggested that while personal goals still influence the perceptions students have of the goal context, what they perceived still had some power to predict personal goals. Additional studies (Maehr and Midgley, 1996; Midgley and Maehr, 1999) showed mixed results. For example, Linnenbrink (2004) suggested that while a particular classroom may alter a student's achievement goal orientation temporarily, the student's prior personal goal orientation still has a strong effect.

The question of how personal goals interact with goal context causes many researchers to explore personal goals as either mediators or moderators of the classroom goals. If personal goals are a mediator then they would serve as a vehicle for bringing about a particular goal context. If a moderator, then personal goals would change the relationship between how personal goals would influence the goal context depending on what orientation was present in a particular learning environment. Several possibilities exist.

First, it is possible that goal structures within a particular learning context influence students' personal goals which then contribute to learning outcomes. However, there is some question about this since personal goals have been found to be stable over time (Midgley, et al.,1998). Even so, Roeser et al., (1996) reported findings that support the notion that personal mastery goals mediated the correlation of students' perception of a mastery school context and

students' self-reports of academic self-efficacy. Alternately, they also found that personal performance goals mediated the correlation of students' perception of a performance school context on students' report of self-consciousness. However, given the correlational nature here, causality cannot be established. It is just as likely that the effect of personal goals is mediated by the perceived goal orientation of the learning environment, but the research (based on self-reports) does suggest that motivational orientations within a learning context does have some effect in changing personal achievement goals (Linnenbrink, 2004).

It is also likely that the goal structure may interact with personal goals to influence learning outcomes. In this scenario, Linnenbrink (2004) explained that it is possible for there to be a mismatch between the students' personal motivational orientation and the goal orientation found in the classroom. More studies are needed to explain this phenomenon. However, two theories are proposed.

First, Linnenbrink (2004) wrote that the buffering theory explains that mastery achievement goals will buffer any harmful effects of performance related orientations. So whether the mastery goal is the student's personal goal or the one found in the classroom, it will act as a buffer to whatever performance goals the student may experience. Secondly, the matching theory suggests that students must be in a learning environment that matches their own personal motivational orientation to benefit. If not, the student will become frustrated and disengage from learning. This idea supports the person-environment fit research by Eccles et al., (1993).

The matching theory gives reason to believe that a multiple goal context is the most adaptive learning environment for all students. This is supported by research from Harackiewicz et al. (1997) who suggest that while it may be ideal to be in a learning environment that matches personal goals, it may be a better solution to offer multiple goals so all students may benefit.

Lastly, Linnenbrink (2004) also wrote that the possibility exists that personal goals are neither mediators nor moderators. Perhaps goal context has a direct effect on learning outcomes. In conclusion, much more information is needed to resolve the question of how learning environments influence students' personal goal orientations and learning outcomes.

How classroom achievement goals influence academic self-concept is another important factor. Kaplan and Bos (1995) supported the idea that a student's perception of the school environment is related to their self-concept and psychological well-being. Kaplan and Maehr (1999) suggested that students evaluate school tasks as either a risk to self (ego goals) or as not centered around the self (task goals). The Greene et al. (2004) study showed that students who perceived the classroom environment as having mastery-orienting rather than competitive evaluations showed higher self-efficacy.

Covington and Omelich (1984) did an interesting study in which they looked at specific instructional features of task-mastery learning environments and their effects on several different factors, but in particular academic self-concept. The researchers wanted to know if the impact of self-perceptions, which usually mediate performance, would be lessened under a task-oriented structure.

They looked to see if the dependency of performance on variations in self-concept decreased from one exam to another which would support the notion that adopting a task orientation at least temporarily suspends or holds academic self-concept constant.

Covington and Omelich (1984) found that individual differences in self-concept did indeed diminish significantly. They found that under a mastery format, positive perceptions of ability were maintained even when students failed if the students eventually reached their grade goals and made improvement. However, in the competitive learning environment students had no opportunity to do anything about their failures. Even though there were fewer failures, students felt greater discouragement. Other studies (Urdan, Pajares, and Lapin, 1997) provide additional support to the beneficial relationship that exists between task goals and students' academic self-concepts.

Competition is well known for raising the doubts of students by directing their attention to social comparison (Feldman & Ruble, 1977). Recent research suggests that task and performance goals are differentially associated with self-awareness. Crucial to a performance goal is the focus of one's ability. McInerney (1998) says, "Performance goals and achievement are... other referenced such that self-worth is determined by one's perception of ability to perform and compete successfully relative to external criteria" (pg. 4). So a student's self-worth is on the line with performance goals. If a student is not successful, both academic self-concept and the motivation to learn are decreased. While it is true that teachers and administrators cannot make

students equally competent, they can create an environment that influences how students feel about themselves as learners (Maehr, 1998).

Investigating the Relationship of Frames of Reference and Goal Orientation

Skaalvik and Skaalvik (2002) believed that goal theory may be very useful in understanding a student's choice of frame of reference. They explain that the salience of a frame of reference may be explained by a student's achievement goals. For example, there is a focus on oneself and social comparison that is central to the performance orientation. This may lead a student to use external comparisons, specifically, other students in the classroom as the frame of reference. In addition, when students hold to either a task-mastery or hold both a task-mastery and ego-performance goals at the same time, then Skaalvik and Skaalvik (2002) predict the student will use internal comparisons, specifically, personal goals and past performance. Here, the use of internal comparisons, personal goals, and past performance as the dominant frame of reference is being facilitated by the task-mastery orientation.

Elliot and Thrash (2001) offered a different explanation. They explain that competence is a function of either the type of standard or referent that is used in evaluation. As a result, they view achievement goals as being comprised of three categories that represent a different standard for evaluating competence. These standards are inherent or built into the achievement goal.

According to Elliot and Thrash (2001), competence may be defined in terms of fully mastering a particular task (absolute competency), improving one's knowledge or skills (intrapersonal competence), or performed better than others

(normative competence). These definitions reflect the traditional mastery-performance format of achievement goals. Elliot and Thrash implied that the standard (or frame of reference) students use to evaluate their competence is inherent in the reasons they have pursued achievement. The two closely work together and are interdependent.

Although there has been little research to support these predictions, the current study looks at the relationship between two filters that students use to evaluate the information they receive to form their academic self-concept: achievement goals and frames of reference.

Statement of Purpose

The purpose of the present study is to gain a better understanding of how students process the information they receive in academic settings that contribute to their academic self-concept. Once again, this will be done by (a) examining the relationships among classroom goal orientations, personal goal orientations, frames of reference, and academic self-concept, (b) specifically examining the relationships among achievement goals and different frames of reference as proposed by Skaalvik and Skaalvik (2000), and (c) by testing the tenability of Skaalvik and Skaalvik's proposal that frames of reference represent a unique influence on academic self-concept distinct from the influence of achievement goals.

Significance of the Study

Academic self-concept is significant in educational settings because studies show that it is related to many other academic outcomes such as

students' academic achievement, persistence, coursework selection, and aspirations. It is considered a means to facilitate these other educational outcomes (Marsh and Hau, 2003). In addition, for many years, researchers looked at ability and past experience to predict academic achievement. However, now some theorists are expanding their definition of success to include motivation as well as ability in predicting academic achievement. They are saying that besides ability, there is a significant role that motivational variables play as an indicator of academic success. Covington and Omelich's (1984) research showed that the enhancement of motivation is in itself an educational goal that mediates the performance process. Over the last couple of decades, the major model for understanding the achievement motivation of students has been achievement goal theory (Barron, Harackiewicz, and Trauer, 2001). In this study, the relationship of the student's frame of reference and goal orientation is being investigated for the effects it has on a student's academic self-concept.

Roeser and Eccles' (1998) study supported the notion that social comparison is detrimental to students' well-being. In fact, the results show that the more students perceived their school as competitive, the more students showed a decrease in the value of school, academic grades, and self-esteem. Researchers have proposed that academic environments that focus on high expectations for all students, self-improvement instead of social comparison and competition, and opportunities for student choice and participation foster a positive academic self-concept. When students experience a focus on self-

improvement at school instead of competition, it often leads to feelings of success and academic competence.

In conclusion, Roeser and Eccles (1998) argued that many of the practices in today's schools promote competition and social comparison which are detrimental to students. Harter et al. (1992) wrote that evaluating learning environments in order to determine how to improve the impact of educational practices on students' self-concept is critical. The current study examines students' perceptions of their classroom achievement goals, how these goals influence personal goals, and how personal goals influence the standards students use to form their academic self-concept.

Research Questions

1. What are the relationships among classroom achievement goals, personal achievement goals, frames of reference and academic self-concept?
    a. Do different classroom achievement goals influence a student's personal achievement goals?
    b. Do mastery achievement goals predict internal frames of reference?
    c. Do performance-approach goals predict external frames of reference?
    d. Do performance-avoid goals predict external frames of reference?
2. Which predictions (Skaalvik and Skaalvik (2002) who say that frames of reference are separate from achievement goals or Elliot and Thrash

(2001) who believed frames of reference are inherent in achievement goals) are the most consistent with the results of the study?

From the research (Ames, 1992; Ames and Archer, 1988; Greene et al., 2004; Linnenbrink, 2004; Maehr and Midgley,1991; Meece, Blumenfeld and Hoyle, 1988; Meece, 1991; Nolen and Haladyna, 1990 Roeser, et al., 1996), it was expected that classroom goals would predict personal goals because the adoption of different achievement goals has been shown to be related to the students' perceptions of goals emphasized as well as the instructional practices the teachers employed.

Secondly, when students hold to either a task-mastery or both a task-mastery and ego-performance goals at the same time, then Skaalvik and Skallvik (2002) predicted the student will use internal comparisons, so it was also expected that mastery goals would most likely predict internal frames of reference. In addition, when there is a focus on oneself and social comparison, this may lead a student to use external comparisons so it was expected that performance goals would predict external frames of reference.

Lastly, since researchers (Covington and Omelich, 1984; Deci, 1975; Linnenbrink, 2004; Maehr, 1976; Marsh and Hau, 2003; Nicholls, 1979, 1984; Roeser and Eccles, 1998; Skaalvik and Skaalvik, 2002; Urdan, Pajares, and Lapin, 1997) have proposed that academic environments that focus on high expectations for all students, self-improvement instead of social comparison and competition, and opportunities for student choice and participation foster a positive academic self-concept, it was expected that internal frames of reference

would predict academic self-concept while external frames of reference would either not predict academic self-concept or at least not as strongly as internal frames. This exception accounts for the difference between performance-approach and performance-avoidance proposed by Elliot and Church (1997).

METHODOLOGY

Sample

A convenience sample of 193 students (124 females and 69 males) enrolled in Introductory Psychology and upper-division psychology courses from one public and one private university was utilized. There were 151 upper classmen, 39 lower classmen, and 3 unclassified students. The average age was 21.1 years, and the average grade point was 3.3. Each participant was at least 18 years of age and proficient in reading and writing English. Participants received course credit for participating in this study.

Protection of Human Participants

Procedures were used to ensure that rights of the participants were protected. This study was submitted to the University of Oklahoma Institutional Review Board (IRB) for review and approval. In addition, the researcher followed the appropriate procedures for obtaining permission from the other school. Once permission was obtained, the faculty member responsible for recruitment of research participants from Introductory Psychology and upper-division psychology courses at each of the universities was contacted and classes were invited to participate in the study.

When permission was obtained from faculty, the researcher either scheduled a time to visit the class or arranged for the instructor to distribute the appropriate materials. The participants were given a brief description of the study along with any associated risks and benefits before the distribution of the research instruments (see Appendix A). The participants' responses were

anonymous and coded so the scores may be associated with the corresponding university for data analysis purposes. Each participant was required to read and sign an informed consent form (see Appendix B) and was given a copy of the form to keep. After informed consent was obtained, research packets were given to each participate in this study. Participants had the right to withdraw from the study at will.

Instruments

Basic demographic information was collected from a questionnaire the researcher developed (see Appendix D). Three additional instruments were used in this study: The Patterns of Adaptive Learning Scales (PALS; Midgley et al., 2000; see Appendix E), Self-Description Questionnaire II (Marsh, 1984; see Appendix F), and Frame specific Self-evaluations items (Skaalvik and Skaalvik, 2004; see Appendix G).

The Patterns of Adaptive Learning Scales

The Patterns of Adaptive Learning Scales (PALS) was used to investigate the relation between learning environment and students' motivation, affect, and behavior. Student scales assess five different areas. Of which, this study will utilize: 1) personal achievement goal orientations, 2) perceptions of the goal structures in the classroom, and 3) academic efficacy. The assessment uses a five point Likert-type scale. Items on the student scales are anchored at 1 = "Not at all true," 3= "Somewhat true," and 5 = "Very true."

The scales are based on research showing that differences in the emphasis of mastery or performance goals are associated with adaptive or maladaptive patterns of learning (Ames, 1992; Maehr, 1984; Nicholls, 1984). Also more recent research (Skaalvik, 1997; Elliot and Church, 1997) supports the idea of performance goals being divided into both approach and avoidance components. Confirmatory factor analysis was used to validate the 14 personal goal orientation items and the perceptions of the classroom goal structure (Midgley et al., 2000). Cronbach's alpha coefficients for these items ranged from .70 to .89.

Self-Description Questionnaire III

As mentioned earlier, empirical research strongly supports the multifaceted view of self-concept. Strein (1995) wrote that the measure most congruent with the multifaceted view is Marsh's (1992) set of scales ("Self-Description Questionnaire I, II, or III"). The Self-Description Questionnaire III (SDQIII) was especially designed for university students.

The SDQIII is based on Shavelson's (1976) model of self-concept. It contains 13 factors of self-concept. These dimensions were identified with conventional and confirmatory factor analyses. The reliabilities of the 13 factors were high (median alpha =0.89) and correlations among the factors were low (median r = 0.09). Marsh and O'Neill (1984) wrote that "the correlations among a wide variety of validity criteria and multiple dimensions of self-concept measured by the SDQIII formed a logical and theoretically consistent pattern of

relationships" (p.153). These findings give support for the construct validity of both self-concept and interpretations based upon the SDQIII.

From the 13 facets, the SDQIII measures three areas of academic self-concept including reading, math, and general school. For this study, the items for math and reading were changed to psychology to measure the psychology self-concept of the participants in order to consistently measure the constructs at the same level. The general school level was also included. The assessment uses a ten point Likert-type scale. Items on the student scales are anchored at 1 = "Definitely False," to 10 = Definitely True."

Frame-Specific Self-Evaluation

These eight items were designed according to the frame of reference most dominant in the item and referred to as: school, school class, selected classmate, friends and siblings, other school subjects, goals, effort, and improvement (Skaalvik and Skaalvik, 2004). Scales yielded two scores: a score for internal frames and a separate score for external frames. Skaalvik and Skaalvik designed this measure to investigate frames of reference in reference to the math ability of students. Although not an established measure, it did add significantly to the prediction of self-concept in their study. The assessment uses a ten point Likert-type scale. Items on the student scales are anchored at 1 = "Very Poorly," to 10 = Very Well."

Data Collection

Data were collected in the spring semester of 2006. After obtaining permission from the appropriate faculty member, the researcher scheduled times

to gather data. When participants were finished completing the research questionnaires, the packets were collected from the participants.

Participants are now finished with the questionnaires, and no further participation is necessary. Upon written request, the researcher will forward an executive summary of the completed study to any participant asking for the general results of this research.

Treatment of Data

Initially, relationships among relevant variables were established by using correlations. Afterwards, path analysis was used to find support for the proposed research questions. The level of statistical significance will be *p=.05* for all procedures used in this study. This is the accepted level used in social science research (Gall, Gall, and Borg, 2003).

RESULTS

Table 1 lists the means, standard deviations, Cronbach's alpha coefficients, and sample items from each scale included in the study. Reliability analyses indicated that all scales had adequate internal consistency.

Zero-order correlations were calculated to discover how achievement goals, frames of reference, self-efficacy, and academic self-concept are interrelated. This information can be found in Table 2.

There were strong correlations between class mastery and personal mastery and class performance -avoid and personal performance-avoid. In addition, mastery had moderately strong correlations with self-efficacy and academic self-concept.

Class-performance-approach had weak correlations to self-efficacy and academic self-concept. Additionally, personal performance-approach goals had weak and non-significant correlations with self-efficacy and academic self-concept. It is also remarkable that the class performance-approach only had a moderate correlation with personal performance-approach.

There were weak, but significant correlations between class and personal performance-approach and external frames. It is also interesting that there was a moderately strong correlation between mastery and external frames of reference. Performance-avoid had non-significant negative or weak correlation with self-efficacy and academic self-concept. Both external and internal frames had moderately strong correlations with self-efficacy and academic self-concept.

Table 1.

Means, standard deviations, Cronbach's alpha coefficients and sample items used in the study.

Scale	Mean/SD	Alpha	Sample item
Class Mastery	4.11/.64	.76	In our class, trying hard is very important.
Class Perf-App	3.46/.79	.70	In our class, getting good grades is the main goal.
Class Perf Avoid	2.27/.87	.83	In our class, it's very important not to look dumb.
Personal Mastery	4.07/.68	.85	One of my goals in class is to learn as much as I can.
Personal Perf-App	2.63/.93	.89	One of my goals is to show others that class work is easy for me.
Personal Perf-Avoid	2.59/.89	.74	It's important to me that I don't look stupid in class
External Frame	7.15/1.48	.86	How well do you do in psychology compared with with other students in your class?
Internal Frame	7.09/1.79	.87	How well do you do in psychology compared with the goals you set for yourself?
Self-efficacy	4.05/.69	.78	I can do almost all the work in class if I don't give up.
Academic Self-Concept	7.03/1.50	.89	I enjoy doing work for most academic subjects.

Table 2.

Intercorrelations among class achievement goals, personal achievement goals, frames of reference, self-efficacy and academic self-concept.

	1	2	3	4	5	6	7	8	9	10
1.Class Mastery	X									
2.Class Perf-App	.293**	X								
3.Class Perf-Avoid	.070	.421**	X							
4.Personal Mastery	.635**	.280**	.129	X						
5. Personal App	.142*	.332**	.732**	.196**	X					
6.Personal Avoid	.054	.249**	.720**	.155*	.769**	X				
7.External Frame	.352**	.152*	.057	.380**	.179*	.115	X			
8.Internal Frame	.381**	.098	.014	.299**	.111	.056	.758**	X		
9.Self-Efficacy	.356**	.161*	-.049	.566**	.113	-.019	.526**	.423**	X	
10.Academic Self-Concept	.458**	.242**	-.011	.414**	.085	.014	.498**	.499**	.594**	X

Note. *p<.05; **<.01

Model A (Figure 1) represents Skaalvik and Skaalvik's (2002) proposal and includes factors of achievement goals, frames of reference, self-efficacy, and academic self-concept. Model B (shown in Figure 2) and represents Elliot and Thrash's (2001) view so frames of reference are excluded from the model. In order to compare the two models, path analysis was used to determine how much variance is accounted for in academic self-concept by each model. This allows one to see if the inclusion of external and internal frames of reference made a difference in the outcome of self-efficacy.

Path coefficients were calculated by using regression analysis. Both the indirect and direct effects of each predictor in the path were calculated. Model A, (shown in Figure 1) accounted for .763 of the variance in self-efficacy. Standardized path coefficients for classroom to personal goals were moderate to strong with performance-approach being the weakest with a path coefficient of .332. Path coefficients for paths from personal goals to frames of reference were moderate for mastery to internal frames. There was a shared variance between performance achievement goals to external frames of reference with a moderate and significant path coefficient for performance-approach, but a negative and non-significant path coefficient for performance-avoid. The research results show the path coefficients for both external and internal frames of reference to self-efficacy as significant and moderate at .281 and .286 respectively. The path coefficient for self-efficacy to academic self-concept was strong and significant at .594.

Figure 1
Model A

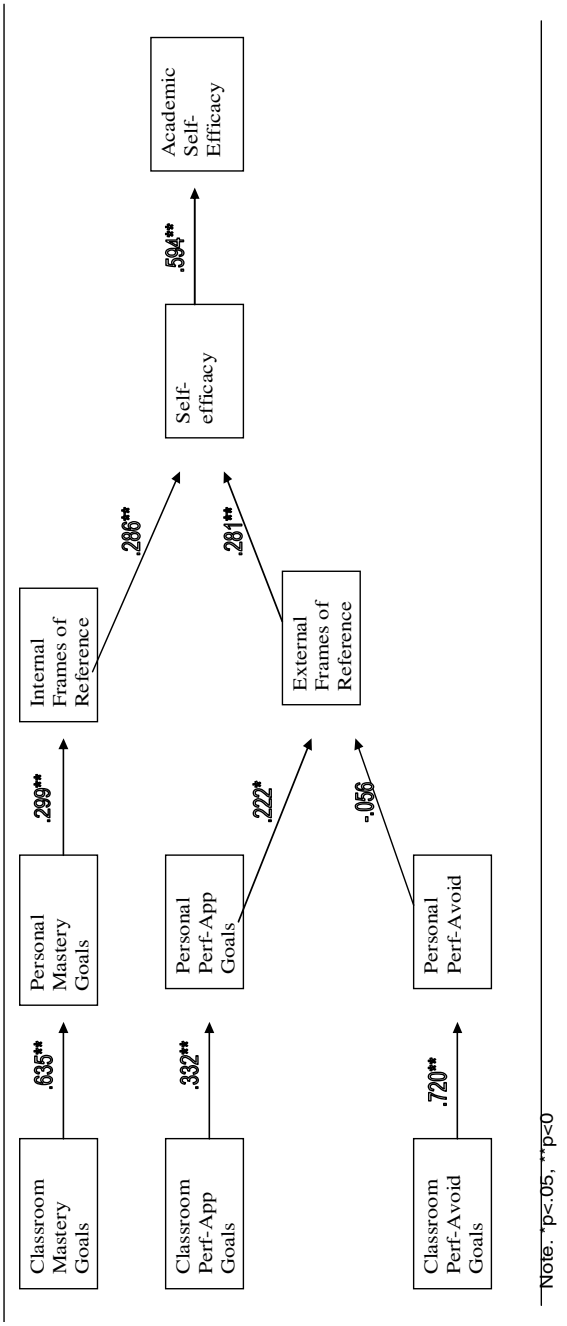
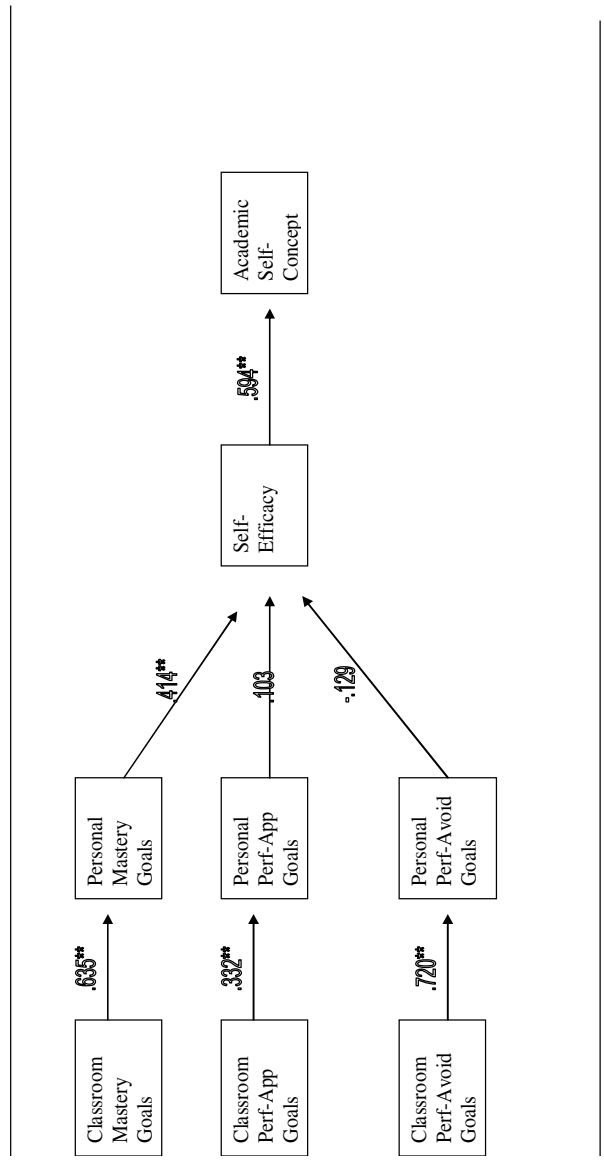


Figure 2
Model B



Note. *p<.05; **<.01

Model B (shown in Figure 2) represents Elliot and Thrash's (2001) view so frames of reference are excluded from the model. The total effects on self-efficacy yielded .592 for Model B. The individual paths of each model were calculated. Mastery to self-efficacy was the strongest path at .676. The class performance-approach and class performance-avoidance to self-efficacy paths were weak and not significant paths at .137 and -.221. Path coefficients for classroom goals to personal goals were moderate to strong with performance-approach being the weakest with a path coefficient of .332. Path coefficients for paths from personal goals to self-efficacy were moderately strong to weak and insignificant. The path coefficient for self-efficacy to academic self-concept was strong and significant at .594.

DISCUSSION

The results support many, but not all of the predictions represented in the two theories concerning the relationship between classroom achievement goals, personal goals, frames of reference, and self-efficacy and academic self-concept. First, all of the correlations between classroom achievement goals and personal achievement goals were positive and significant which supports previous research (Nolan and Haladyna, 1990; Roeser et al., 1996; Maehr & Midgley, 1996; Kaplan and Maehr, 1999; Midgley and Maehr, 1999). These results highlight the importance of the role and influence that educators have in the academic lives of their students.

For example, research (Ames & Ames, 1984; Covington, 1983, 1984; Nicholls, 1983, 1984; Ames and Archer, 1988; Meece et al., 1988; Meece, 1991; Nolen and Haladyna, 1990) shows that a student who begins a course of study for self-improvement may come along a class or an instructor who is competitive and so employs more external frames of reference than he would normally use. However, it is just as likely that a highly competitive student may come across a teacher who employs mastery goals and instructional strategies which reduces the student's need for competition and external evaluation. The experience causes the student's focus to be on learning so she employs more internal frames of reference.

Secondly, while Skaalvik and Skaalvik's (2002) predictions were not overwhelming, Model A did account for more variance in academic self-concept than Model B, implying that frames of reference account for unique variance in

self-efficacy beyond the effect of achievement goals. External frames are acting as a mediator for performance-approach achievement goals, and internal frames are acting as a mediator for mastery.

However, several questions are raised by the unexpected correlations and regression coefficients found in the study such as: Why is class and personal mastery related to external frames of reference? Skaalvik and Skaalvik (2002) predicted that students who hold either mastery or both mastery and performance goals at the same time will use internal comparisons. The correlations show a moderate relationship between mastery goals and both external and internal frames of reference. The study seems to bring up the question: Do students who hold to mastery goals use external comparisons?

In addition, Skaalvik and Skaalvik (2002) also predicted that students who hold to performance goals will use external frames of reference. Why is there only a weak relationship between class and personal performance-approach and external frames of reference? Why is there no relationship between class and personal performance-avoid goals and external frames of reference? And lastly, why do both external and internal frames predict self-efficacy? Since the statistics are not supporting all of the expectations of Skaalvik and Skaalvik's model, they lead to looking at the issue differently.

The results seem congruent with the literature (Harackiewicz et al., 1997; Harackiewicz et al., 1998) that supports the notion of a multiple goals approach that includes both mastery and performance-approach goals as the most adaptive orientation. It seems plausible that students would use both task and

performance-approach goals together. Pajares et al. (2000) wrote that students use mastery goals to develop their ability and performance goals to demonstrate their ability. The results of this study suggest that just as students use multiple goals in academic achievement, students also use multiple frames of reference in evaluating their academic performance. There was no evidence of a one-to one relationship where mastery goals were exclusively related to internal frames and performance goals related only to external frames. It is more complicated than Skaalvik and Skaalvik (2002) predicted.

Skaalvik and Skaalvik (2002) demonstrated, by describing a variety of frames of reference, that the process students use to evaluate their academic performance is complex. They wrote that internal and external comparisons have "complex psychological processes" (p. 241) because students are using multiple sources of information as well as multiple standards of comparisons. Being able to tease these frames of reference out of the process is difficult and complicated.

Secondly, in considering the results which show a weak relationship between class and personal performance-approach and external frames of reference, and no relationship between class and personal performance-avoid goals and external frames of reference, some factors come to mind. Perhaps there is a problem with how external comparisons have been defined and /or linked with performance goals. There seems to be evidence for a lack of clarity for both external and internal frames of reference and performance goals. These difficulties seem apparent in the study.

Skaalvik and Skaalvik (2002) said " a clear distinction between external and internal comparisons cannot always be made" (pg. 240). They even speculated that "the effect of achievement on internal comparison is mediated through external comparisons" (pg. 241). Earlier, Skaalvik (1997) talked about the need for clarity in relation to the criteria and comparisons of internal frames of reference. In addition, as a result of the lack of clarity, it is likely for students to encounter difficulty in distinguishing between internal and external comparisons when answering questions.

Dickhauser (2005) explained this difficulty is what happened in the Bong (1998) study. He explains that "participants did not differentiate between internal and external comparison processes when answering the items" (pg. 282). Bong suggested that students tend to assign more weight to external comparisons because they are salient and influence the comparison process. Dickhauser wrote that an important finding in his research is that internal self-concepts are determined by the social comparison process. This demonstrates that internal self-concepts are not independent from social or external comparisons.

While there are research findings (Midgley & Urdan, 1995; Harackiewicz, et al., 1997; Harackiewicz, et al., 1998) that associate performance-approach goals with higher levels of academic self-efficacy and achievement, the research seems to be limited in looking at the positive effects of external frames on self-efficacy and academic self-concept. Or research is limited in showing how external frames may be acting as a mediator for the positive operations of both mastery and performance-approach goals. While both internal and external

frames of reference have been thought to influence academic self-concept, external frames have been associated with the negative or maladaptive impact of performance goals. Just as researchers have begun to look at how performance goals may promote learning, perhaps more research should look at the possible positive effects of using external frames of reference.

In addition , while Skaalvik and Skaalvik (2002) hypothesized that external frames of reference would be used when students hold to performance goals, they also wrote about the two different dimensions of performance orientation and described performance-approach as self-enhancing and performance -avoid as self-defeating. They went on to say that even though these two dimensions share the same frame of reference, specifically other students, the consequence or interpretation of using the external frame may be quite different.

Most research has focused on performance goals in reference to the approach tendency and not in reference to the avoid tendency (Pajares et al., 2000). Both mastery and performance-approach goals are defined in terms of the tendency to approach a particular task. These goals share a common factor that is different and distinct from the performance-avoid goal. Mastery and performance-approach goals state the reason or purpose for achieving while performance-avoid express why achievement is avoided. Using these negative and positive constructs together can lead to difficulties in model construction and validation (Barker, Dowson, and McInerney, 2006).

Early on, researchers discussed the distinction between performance -approach and performance-avoid to some degree, but in presenting their

frameworks the researchers did not focus on the approach-avoidance distinction. Elliot (1999) made an initial argument for this distinction. The historical, theoretical, and empirical considerations of achievement goal theory caused Elliot to propose the trichotomous framework that uses not only a distinction between mastery and performance goals, but also a distinction between approach and avoidance goals. Since there is both an approach and avoidance tendency in achievement goal theory, perhaps more research is needed to draw a more defined distinction between the performance-approach and performance-avoid categories of behavior in relation to external comparisons.

It seems reasonable that the lack of a clear distinction in the characteristics that make up external and internal frames of reference contributes to students not being able to differentiate between internal and external comparisons when processing the items on the measure. Perhaps when the measures reflect a clearer distinction between external and internal frames of reference as well as a distinction between performance-approach and performance-avoid, we will have a better understanding of the relationship between achievement goals and frames of reference. Perhaps performance-avoid will most clearly represent the detrimental effects of social comparisons that are associated with external frames of reference.

Lastly, looking at the study's participants may add understanding of why external frames predicted academic self-concept. While the research (Urdan, 1997; Urdan & Maehr, 1995) generally shows that having a performance goal orientation is detrimental and maladaptive, and additional research suggests

through the BFLPE, that external comparisons cause students to have lower academic self-concepts, Elliot and Harackiewicz (1996) reported that performance-approach goals actually foster intrinsic motivation for college undergrads. So, while some studies (Middleton & Midgley, 1997) conclude that performance- approach goals are not helpful to younger children, there may be a developmental factor at play here.

To summarize, Model A did account for more variance in academic self-concept than Model B. Additionally, mastery, performance-approach and performance-avoidance classroom goals have moderate to strong correlations with corresponding personal goals. Lastly, mastery and performance-approach personal goals and frames of reference correlate positively. All of these findings seem to fit the Skaalvik and Skaalvik (2002) model. However, it was not expected that both internal and external frames would predict self-efficacy. In addition, although performance-avoid had a negative value as expected, the finding was non-significant.

In terms of Elliot and Thrash's (2001) predictions, the overall variance accounted for in academic self-concept is smaller in Model B than Model A. Like Model A, mastery, performance-approach and performance-avoidance classroom goals have moderate to strong correlations with corresponding personal goals. In Model B, only mastery predicts self-efficacy. While one could argue that this is congruent with Elliot's notion showing that mastery goals are linked with internal comparisons which lead to higher self-efficacy, however; it doesn't explain his research that supports performance-approach as being

facilitative or predicting academic achievement since both findings for performance goals were insignificant.

While achievement goals may be an influence in how students process the information they receive, they do not seem to be the whole story. Achievement goals act as a form of motivation. Whether the student is motivated by self-improvement or by proving himself, achievement goals really address the issue of motivation. But how a student evaluates performance after the initial motivation seems to be a separate and independent contributing factor in the formation of academic self-concept. Once the motivated student steps out to accomplish a particular academic goal, how he decides what standard to use with the information he receives is another important piece of information.

Conclusion

While the results are conflicting, there seems to be more evidence to support Model A. However a student combines the different frames of reference, the results suggest that frames of reference do account for a sizable enough proportion of variance in self-efficacy to suggest that the standard a student uses to evaluate his academic performance contributes uniquely to his academic self-concept. So the acknowledgement of frames of reference as a separate, contributing factor facilitates our understanding of how achievement goals may be used in the formation of academic self-concept as Skaalvik and Skaalvik (2002) suggested. However, just as students use multiple achievement goals, the results suggest they also use multiple frames of reference.

Questions the study does not address and that are worthy of further research include: Do mastery achievement goals predict external frames of reference? How is the information from one frame used with the other? Are frames interdependent with one another?

In addition, the number and nature of questions on the frame of reference measure is limited. I agree with Skaalvik and Skaalvik (2002) that in order to really gain a better understanding of all the psychological processes that are in effect with internal and external frames of reference, researchers need to conduct qualitative research. This would allow for a more comprehensive look at which frames of reference students hold salient, and how students use external and internal frames together. Understanding more about the self-evaluation process informs educators on the best practices to use to help students form positive academic self-concepts.

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Appendix A

Oral Description of Study

UNIVERSITY OF OKLAHOMA

ORAL DESCRIPTION OF STUDY

Title of Project: The Relationship of Classroom Achievement Goals, Personal Achievement Goals, and Frames of Reference on Academic Self-Concept

Oral Description of Study:

My name is Deborah White. I am currently working on my doctorate in educational psychology at the University of Oklahoma. As part of the requirements to obtain this degree, I am conducting a study about the relationship between achievement goals of the classroom and academic self-concept. I would greatly appreciate your participation in my study by completing a series of research measures which will take approximately 20 minutes of your time.

No personally identifying information will be placed on anything you complete. You can be assured of total anonymity. DO NOT write either your name or student ID on anything you fill out connected with this study. Data will be stored in my possession for three years and then will be destroyed by shredding.

Your participation in this project is strictly voluntary. Refusal to participate will involve no penalty. You may withdraw at any time without penalty as well. If you are participating in this study to obtain course credit or extra credit points, then you may not receive credit if you decide not to continue. However, you will not be penalized any credit for withdrawing from the study. Should you complete the materials, you will receive course credit for your participation in this endeavor.

Please read, sign, and hand in the informed consent before you begin completing the research measures. You will also be given a consent form (minus your signature) that you may keep. Please read and carefully answer all questions in this series. If you come across any questions that you do not understand, please raise your hand and I will come to you. If you come across any questions you feel are offensive, you may skip them. Please read the directions carefully.

APPENDIX B

Informed Consent Form

to be Returned to the Researcher

INFORMED CONSENT
TO PARTICIPATE IN A RESEARCH STUDY

PROJECT TITLE: **The Relationship of Classroom Achievement Goals, Personal Achievement Goals and Frames of Reference on Academic Self-Concept**

PRINCIPAL INVESTIGATOR: **Deborah White**

CONTACT INFORMATION: **University of Oklahoma**
Educational Psychology Department
(620) 947-3121 ext. 1065

You are being asked to volunteer for a research study. This study is being conducted at University of Oklahoma –Norman Campus and Southern Nazarene University. You were selected as a possible participant because you are an undergraduate student in psychology and at least 18 years of age. Please read this form and ask any questions that you may have before agreeing to take part in this study.

The sponsor of the study is: Dr. Teresa DeBacker.

Purpose of the Research Study

The purpose of this study is: to gain a better understanding of how students process the information they receive in academic settings that contribute to their academic self-concept. This will be done by examining the relationship of classroom achievement goals, personal achievement goals, frames of reference, and academic self-concept.

Procedures

If you agree to be in this study, you will be asked to do the following things: Complete a series of questionnaires designed to measure achievement goals, frames of reference and academic self-concept. It will take approximately 20 minutes to complete these instruments.

Risks and Benefits of Being in the Study

There are no foreseeable risks of participation in this project for you.
The benefits to participation are: Your participation may help both researchers and school personnel in reforming school practices. In addition, you may gain insight into your own kind of motivational goals or frames of reference through your participation in this study.

Compensation

If you are participating in this study to obtain course credit or extra credit points, then you may not receive credit if you decide not to continue. However, you will not be penalized any credit for withdrawing from the study. Should you complete the materials, you will receive course credit for your participation in this endeavor.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to participate will not result in penalty or loss of benefits to which you are otherwise entitled. If you decide to participate, you are free to not answer any question or withdraw at any time.

Confidentiality

The records of this study will be kept private. In published reports, there will be no information included that will make it possible to identify the research participant. Research records will be stored securely No personally identifying information will be placed on anything you complete. You can be assured of total anonymity. DO NOT write either your name or student ID on anything you fill out connected with this study. Data will be stored in my possession for three years and then will be destroyed by shredding. Only approved researchers will have access to the records...

Contacts and Questions:

The researcher(s) conducting this study can be contacted at If you have any questions about this project, please contact Deborah White at: (405) 632-8480, dlw@ou.edu or my University supervisor, Dr. Teresa DeBacker at (405) 325-1068, debacker@ou.edu. You are encouraged to contact the researcher(s) if you have any questions.

If you have any questions about your rights as a research participant, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405.325.8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

STATEMENT OF CONSENT

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

Signature _____ Date _____

APPENDIX C

Informed Consent Form

to be Kept by the Participant

INFORMED CONSENT
TO PARTICIPATE IN A RESEARCH STUDY

PROJECT TITLE:	**The Relationship of Classroom Achievement Goals, Personal Achievement Goals and Frames of Reference on Academic Self-Concept**
PRINCIPAL INVESTIGATOR:	**Deborah White**
CONTACT INFORMATION:	**University of Oklahoma** **Educational Psychology Department** **(620) 947-3121 ext. 1065**

You are being asked to volunteer for a research study. This study is being conducted at University of Oklahoma –Norman Campus and Southern Nazarene University. You were selected as a possible participant because you are an undergraduate student in psychology and at least 18 years of age. Please read this form and ask any questions that you may have before agreeing to take part in this study.

The sponsor of the study is: Dr. Teresa DeBacker.

Purpose of the Research Study

The purpose of this study is: to gain a better understanding of how students process the information they receive in academic settings that contribute to their academic self-concept. This will be done by examining the relationship of classroom achievement goals, personal achievement goals, frames of reference, and academic self-concept.

Procedures

If you agree to be in this study, you will be asked to do the following things: Complete a series of questionnaires designed to measure achievement goals, frames of reference and academic self-concept. It will take approximately 20 minutes to complete these instruments.

Risks and Benefits of Being in the Study

There are no foreseeable risks of participation in this project for you.
The benefits to participation are: Your participation may help both researchers and school personnel in reforming school practices. In addition, you may gain insight into your own kind of motivational goals or frames of reference through your participation in this study.

Compensation

If you are participating in this study to obtain course credit or extra credit points, then you may not receive credit if you decide not to continue. However, you will not be penalized any credit for withdrawing from the study. Should you complete the materials, you will receive course credit for your participation in this endeavor.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to participate will not result in penalty or loss of benefits to which you are otherwise entitled. If you decide to participate, you are free to not answer any question or withdraw at any time.

Confidentiality

The records of this study will be kept private. In published reports, there will be no information included that will make it possible to identify the research participant. Research records will be stored securely No personally identifying information will be placed on anything you complete. You can be assured of total anonymity. DO NOT write either your name or student ID on anything you fill out connected with this study. Data will be stored in my possession for three years and then will be destroyed by shredding. Only approved researchers will have access to the records.

Contacts and Questions:

The researcher(s) conducting this study can be contacted at If you have any questions about this project, please contact Deborah White at: (405) 632-8480, dlw@ou.edu or my University supervisor, Dr. Teresa DeBacker at (405) 325-1068, debacker@ou.edu. You are encouraged to contact the researcher(s) if you have any questions.

If you have any questions about your rights as a research participant, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at 405.325.8110 or irb@ou.edu.

You will be given a copy of this information to keep for your records. If you are not given a copy of this consent form, please request one.

STATEMENT OF CONSENT

I have read the above information. I have asked questions and have received satisfactory answers. I consent to participate in the study.

Signature _____ Date _____

APPENDIX D

Demographic Questionnaire

Demographic Questionnaire

Please read the directions and answer the following items. If you come to any items that you feel are offensive, or an unwarranted invasion of your privacy, you may skip them. Please do not write on any of the test materials. Place all of your responses on the scantron answer sheet provided to you for this purpose. Remember that all of your answers will be kept confidential.

Please answer the following questions:

1. Your Gender: (0) Female (1) Male

2. Your Age:

3 Your Ethnicity: (0) African/African-American (3) Latino
(1) Asian/Asian-American (4) Native American
(2) Caucasian (5) Other

4. Your Classification: (0) Freshman
(1) Sophomore
(2) Junior
(3) Senior
(4) Unclassified Student

5. Your Cumulative College Grade Point Average (GPA):

6. Your Cumulative High School Grade Point Average (GPA):

APPENDIX E

Patterns of Adaptive Learning Scale

Patterns of Adaptive Learning Scales (PALS)

Student Survey

Here are some questions about you as a student in this class. Please circle the number that best describes what you think.

	Not at all true		**Somewhat true**		**Very true**
1. It's important to me that I learn a lot of new concepts this year.	1	2	3	4	5
2. It's important to me that other students in my class think I am good at my class work.	1	2	3	4	5
3. I'm certain I can master the skills taught in class this year.	1	2	3	4	5
4. One of my goals is to keep others from thinking I'm not smart in class.	1	2	3	4	5
5. One of my goals is to show others that I'm good at my class work.	1	2	3	4	5
6. One of my goals in class is to learn as much as I can.	1	2	3	4	5
7. One of my goals is to master a lot of new skills this year.	1	2	3	4	5
8. One of my goals is to show others that class work is easy for me.	1	2	3	4	5
9. It's important to me that my teacher doesn't think that I know less than others in class.	1	2	3	4	5
10. One of my goals in class is to avoid looking like I have trouble doing the work.	1	2	3	4	5

	Not at all true		Somewhat true		Very true
11. One of my goals is to look smart in comparison to the other students in my class.	1	2	3	4	5
12. It's important to me that I thoroughly understand my class work.	1	2	3	4	5
13. I'm certain I can figure out how to do the most difficult class work.	1	2	3	4	5
14. It's important to me that I look smart compared to others in my class.	1	2	3	4	5
15. I can do almost all the work in class if I don't give up	1	2	3	4	5
16. In our class, getting good grades is the main goal.	1	2	3	4	5
17. In our class, showing others that you are not bad at class work is really important.	1	2	3	4	5
18. In our class, it's important that you don't make mistakes in front of everyone.	1	2	3	4	5
19. In our class, getting right answers is very important.	1	2	3	4	5
20. In our class, how much you improve is really important.	1	2	3	4	5
21. In our class, really understanding the material is the main goal.	1	2	3	4	5
22. In our class, it's important to get high scores on tests.	1	2	3	4	5
23. In our class, it's important not to do worse than other students.	1	2	3	4	5

	Not at all true		Somewhat true		Very true
24. Even if the work is hard, I can learn it.	1	2	3	4	5
25. In our class, it's important to understand the work, not just memorize it.	1	2	3	4	5
26. In our class, learning new ideas and concepts is very important.	1	2	3	4	5
27. In our class, one of the main goals is to avoid looking like you can't do the work.	1	2	3	4	5
28. In our class, it's OK to make mistakes as long as you are learning.	1	2	3	4	5
29. It's important to me that I don't look stupid in class.	1	2	3	4	5
30. It's important to me that I improve my skills this year.	1	2	3	4	5
31. In our class, trying hard is very important.	1	2	3	4	5
32. In our class, it's important not to look dumb.	1	2	3	4	5
33. I can do even the hardest work in this class if I try.	1	2	3	4	5

APPENDIX F
Self-Description Questionnaire III

Self-Description Questionnaire III

Please circle the number that best describes what you think.

		Definitely False									Definitely True
1.	I find many psychological problems interesting and challenging.	1	2	3	4	5	6	7	8	9	10
2.	Overall, I have a lot of respect for myself.	1	2	3	4	5	6	7	8	9	10
3.	I enjoy doing work for most academic subjects.	1	2	3	4	5	6	7	8	9	10
4.	I have hesitated to take courses that involve psychology.	1	2	3	4	5	6	7	8	9	10
5.	Overall, I lack self-confidence.	1	2	3	4	5	6	7	8	9	10
6.	I hate studying for many academic subjects.	1	2	3	4	5	6	7	8	9	10
7.	I have generally done better in psychology courses than other courses.	1	2	3	4	5	6	7	8	9	10
8.	Overall, I am pretty accepting of myself.	1	2	3	4	5	6	7	8	9	10
9.	I like most academic subjects.	1	2	3	4	5	6	7	8	9	10
10.	Psychology class makes me feel inadequate.	1	2	3	4	5	6	7	8	9	10
11.	Overall, I don't have much respect for myself.	1	2	3	4	5	6	7	8	9	10
12.	I have trouble with most academic subjects.	1	2	3	4	5	6	7	8	9	10
13.	I am quite good at psychology.	1	2	3	4	5	6	7	8	9	10

		Definitely False									Definitely True
14.	Overall, I have a lot of self-confidence.	1	2	3	4	5	6	7	8	9	10
15.	I'm good at most academic subjects.	1	2	3	4	5	6	7	8	9	10
16.	I have trouble understanding anything that is based upon psychology.	1	2	3	4	5	6	7	8	9	10
17.	Overall, I have a very good self-concept.	1	2	3	4	5	6	7	8	9	10
18.	I'm not particularly interested in most academic subjects.	1	2	3	4	5	6	7	8	9	10
19.	I have always done well in psychology classes.	1	2	3	4	5	6	7	8	9	10
20.	Overall, nothing that I do is very important.	1	2	3	4	5	6	7	8	9	10
21.	I often have to read things several times in psychology before I understand them.	1	2	3	4	5	6	7	8	9	10
22.	I learn quickly in most academic subjects.	1	2	3	4	5	6	7	8	9	10
23.	Overall, I have pretty positive feelings about myself.	1	2	3	4	5	6	7	8	9	10

APPENDIX G

Frame -Specific Self-Evaluation

Frame-Specific Self-Evaluation

Please circle the number that best describes what you think.

	Very Poorly									**Very Well**
1. How well do you do in psychology compared with other students at your college, not only students in your class?	1	2	3	4	5	6	7	8	9	10
2. How well do you do in psychology compared with other students in your class?	1	2	3	4	5	6	7	8	9	10
3. How well do you do in psychology compared with the one classmate with whom you usually compare yourself?	1	2	3	4	5	6	7	8	9	10
4. How well do you do in psychology compared with friends or siblings who do not attend your class?	1	2	3	4	5	6	7	8	9	10
5. How well do you do in psychology compared with other subjects in school?	1	2	3	4	5	6	7	8	9	10
6. How well do you do in psychology compared with the goals you set for yourself?	1	2	3	4	5	6	7	8	9	10
7. How well do you do in psychology relative to your own effort?	1	2	3	4	5	6	7	8	9	10