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# Factors influencing student motivation within two university-offered physical activity classes

Chad A. Grabau

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

FACTORS INFLUENCING STUDENT MOTIVATION WITHIN TWO  
UNIVERSITY-OFFERED PHYSICAL ACTIVITY CLASSES

A Dissertation Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy

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School of Sport and Exercise Science  
Sport Pedagogy

April 2013

This Dissertation by: Chad A. Grabau

Entitled: *Factors Influencing Student Motivation Within Two University-Offered Physical Activity Classes*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy  
in College of Natural and Health Sciences in School of Sport and Exercise Science,  
Program of Sport Pedagogy

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## ABSTRACT

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The purpose of this study was to examine factors influencing student motivation in a college physical activity course. Fifteen participants (13 students and two instructors) were recruited from two college physical activity classes of 25 students each. The two classes examined in the study were separate sections of a course entitled Lifetime Fitness and Wellness offered within the Basic Instruction Program (BIP) by two different members of the teaching faculty. Each class was held twice a week throughout the duration of a 16-week spring semester. The course was designed to enhance participation in physical activities throughout a person's lifetime. Data collection involved conducting semi-structured interviews, and course syllabi were examined. Data analysis revealed four main themes: (a) transition from high school to college, (b) structured learning environment, (c) assessment and evaluation, and (d) instructor influence. These four themes were expressed by the student participants as having the most influence on their motivation within the college physical activity course. Each of these themes represented students' perceptions about their experiences in the course and the ways in which they interacted with the instructors and classmates throughout the semester. Results of the study support finding ways to initiate more self-directed motivation as critical to sustained levels of interest and engagement of college students in physical activity

classes. Students of all ages entering colleges (especially incoming freshmen and transfer students) should be met with resources to acclimate themselves to their new surroundings. These resources should include opportunities to learn more about creating their own structure for physical activity (e.g., skills, self-designed fitness/wellness plans) and to be involved in campus and surrounding community offerings for physical activity and recreational sports participation.

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## **CHAPTER I**

### **INTRODUCTION**

#### **Statement of the Problem**

Regular participation in moderate to vigorous bouts of physical activity can reduce health care costs, prevent disabling conditions and chronic diseases, and is an essential component of a holistic wellness approach to improving one's quality of life (U.S. Department of Health and Human Services [DHHS], 2008). Hettler (1984) defined wellness as "an active process through which people become aware of, and make choices toward a more successful existence" (p. 14). Daily participation in physical activity has shown results such as: (a) alleviation of symptoms of depression, (b) reduction in anxiety and stress, and (c) enhancement of one's ability to perform daily tasks throughout a lifetime (DHHS, 2008). Yet, despite these known benefits, Americans continue to avoid regular participation in physical activity in favor of a sedentary lifestyle (U.S. Department of Health and Human Services [DHHS], 2010). Few would disagree that Americans are amidst an obesity epidemic resulting from the emergence of societal norms characterized by chronic sedentary behavior. The existing health crisis in the United States has placed additional pressures on professionals within the fields of health promotion, disease prevention, and sport and exercise science to implement effective strategies for promoting wellness and preventing disease.

In an attempt to address the ongoing health concerns in the United States, a number of populations have been examined to gain a better understanding of the physical activity trends that exist within various age groups. Among these populations are an estimated 13 million men and women who attend colleges and universities within the United States each year. Findings have indicated that, of those attending colleges and universities, many students experienced decreased levels of physical activity while attending college (Bray, 2007; Bray & Born, 2004; Kwan, Bray, & Martin Ginis, 2009). In response to ongoing trends of high-risk behaviors that college and university students have reported, the U.S. Department of Health and Human Services (2000) targeted inadequate physical activity as one of six priority health-risk behaviors to be addressed by institutions of higher education in an effort to reduce the increasing incidence of high-risk behaviors and promote healthier behavior practices.

Despite the recommendations of various professionals to adopt a healthier lifestyle, a majority of college students seem to choose to engage in behaviors that increase their risk of acquiring undesirable conditions or otherwise preventable diseases later in life. Sparling and Snow (2002) found that 81.3% of sedentary college seniors who failed to adhere to regular physical activity participation remained sedentary 5 to 10 years following college graduation. In contrast, Sparling and Snow (2002) indicated significant (84.7%) carryover patterns beyond graduation in adult men and women who reported being regularly physically active during their senior years of college. These particular findings revealed the presence of habitual patterns of physical activity participation nearly 10 years following college graduation.

With such findings, college seems to be an opportune time to intervene in ways to promote healthy lifestyle choices. Numerous advantages within higher education settings could be considered the ideal environment for exercise and health promotion. Such advantages include knowledgeable students, ample facilities, and leaders within a multitude of disciplines (e.g., exercise science, psychology, residence life, campus recreation, etc.) striving for the common goal of personal growth and development of each student (Savage, 1998). Even with these advantages, many college students remain sedentary despite acknowledging the importance of regular physical activity (Savage, 1998). The question is raised as to why many college students do not initiate or maintain regular participation in physical activity.

Motivation is commonly used in describing an individual's intention, or the intensity with which an individual desires to act upon those intentions (Sage, 1977). Specifically, intrinsic motivation is defined as the degree to which an individual chooses to participate in an activity for the pleasure derived rather than for any extrinsic reward (Deci & Ryan, 1985). Researchers suggested that promoting intrinsic motives might be effective in encouraging regular participation in physical activity (Buckworth, Lee, Regan, Schneider, & DiClemente, 2007; Treasure & Roberts, 1998;). To best promote lifelong physical activity, an examination of factors that may influence motivation within courses of basic instruction programs, also referred to as general, basic activity, or service programs (Hensley, 2000; Savage & Sharpe, 1998) at colleges and universities seems important. In the field of sport and exercise psychology and, more recently, the field of sport pedagogy, motivation has been examined with achievement goal theory as the theoretical framework (Ferrer-Caja & Weiss, 2000; Goudas & Biddle, 1994; Kavussanu

& Roberts, 1996). Achievement goal theory is focused on the goal-directed nature of achievement behavior and states that demonstration of competence is a major goal in achievement contexts (Roberts, 2001). Achievement behavior is a reference to the intensity and persistence one demonstrates while engaged within a particular task (Roberts, 2001).

As defined within achievement goal theory, achievement motivation refers to a person's efforts to accomplish mastery of a task, achieve a standard of predetermined excellence, overcome existing barriers, outperform others at a given task, and take pride in exhibiting ability pertaining to a particular task (Gill, 2000). The examination of such tasks, at a given point of time within a particular setting, is considered goal-involvement, whereas goal orientation describes a tendency an individual is likely to exhibit within achievement settings (Gill, 2000). This is important because a student's goal orientation and goal involvement will often determine his or her ability to initiate or remain motivated and maintain desirable behavior change (e.g., sedentary → physically active). Nicholls (1989) stated that individuals behave according to two types of goals: (a) task-involved and (b) ego-involved. For the purposes of the current study, these will be referred to as a person's goal-orientation.

Task-involved individuals tend to focus on personal improvement and respond to failure as a temporary setback. These individuals view unsuccessful attempts at a task as challenges, not threats, and accept errors as an integral part of the learning process (Nicholls, 1989). In contrast, an ego-involved individual is most concerned with the outcome of a performance. Unlike task-involved individuals, those who are ego-involved have difficulty conceptualizing failure in a proactive sense and are more than likely to

quit or avoid participation altogether than to view hardship as a temporary set-back and persevere despite an unexpected challenge (Nicholls, 1989).

Achievement goal theory was used as a framework for the current study to gain a better understanding of the factors influencing student motivation within physical activity classes offered at colleges and universities. Previous researchers within traditional classrooms, physical education, and sport contexts have used achievement goal theory to examine student motivation and found support for the notion that factors in the environment can influence student motivation (Ames, 1992; Ames & Archer, 1988; Treasure & Roberts, 1998). These settings, and particularly the environmental conditions that exist within the setting, determine the motivational climate in which the activity or task is performed. Motivational climate is a term used to describe the psychological climate of an educational setting (e.g., classroom, gym, field, etc.) specifically structured in ways to influence achievement behavior (Ames, 1992; Ames & Archer, 1988). Ames (1992) discovered the concept of a motivational climate while examining the structure of a learning environment, and particularly the impact that the environment might have on the adoption of achievement goals.

Theorists continued to examine how the structure of the motivational climate might increase or decrease the likelihood of adopting a particular type of achievement goal, whether task-oriented or ego-oriented (Ames, 1992; Ames & Archer, 1988). A teacher creates the motivational climate through choices he or she makes related to task design, grouping of students for learning, and evaluation (Ames, 1992; Epstein, 1989). Teachers often prefer to create task-oriented motivational climates in which students are encouraged to focus on individual improvement and respond to failure as a temporary

setback. Within a task-oriented climate, unsuccessful attempts at a task are viewed as challenges, not threats, and errors are viewed as an integral part of the learning process (Weiss & Ferrer-Caja, 2002). An ego-oriented motivational climate is one in which norm-referenced sources are often used to define one's success within a task (Weiss & Ferrer-Caja, 2002). Most research has been used to examine the influences of a motivational climate in regard to a participant's adaptation of an achievement goal within classroom (Ames, 1992), sport, and physical activity settings (Treasure & Roberts, 1998). Much of the literature obtained from previous studies involving motivational climate showed that the motivational climate structured by the teacher often influences the achievement behavior of the student regardless of the context or setting in which the achievement behavior takes place (Ames, 1992; Ames & Archer, 1988; Treasure & Roberts, 1998).

To date, researchers have continued to examine physical activity trends of college students as a means of gaining a better understanding of the population as a whole (Gano-Overway & Ewing, 2004). The current study was a means by which colleges and universities' leaders might gain a better understanding of the factors influencing student motivation within a college physical activity course. Better understanding of the factors influencing student motivation was expected to generate insight that instructors might use as they strive to create environments that foster the intrinsic motives necessary for a person to participate regularly in lifelong physical activity.

### **Purpose of the Study**

The purpose of this study was to gain an understanding of the factors influencing student motivation within a college physical activity course.

## **Research Question**

What factors influence student motivation within two physical activity classes offered at a state university located in the Midwest region of the United States?

Research pertaining to student motivation within traditional classroom, sport, and K-12 physical education settings has been well documented (Ames, 1992; Duda, 1989; Dweck, 1986; Nicholls, 1984; Treasure & Roberts, 1998). In fewer studies, however, factors have been examined on influence for student motivation within courses offered in physical activity service programs in higher education (Hensley, 2000; Hildebrand, Johnson, & Dewayne, 2001; Leenders, Sherman, & Ward, 2003; Savage & Sharpe, 1998).

## **Definition of Terms**

The terms used in this study were defined as follows:

**Achievement behavior.** Achievement behavior is a term typically defined as, “behavioral intensity (trying hard), persistence (continuing to try hard), choice of action possibilities, and performance (outcomes)” (Roberts, 2001, p. 6).

**Achievement goal theory.** Achievement goal theory is one theory of motivation, in which “three factors interact to determine a person’s motivation: achievement goals, perceived ability, and achievement behavior” (Weinberg & Gould, 2003, p. 65).

According to Weinberg and Gould (2003), to understand an individual’s motive, we must understand how that person defines success and failure. Treasure (1997) summarized achievement goal theory as a motivation theory that “focuses on the goal-directed nature of achievement behavior and contends that the demonstration of competence is the major goal in achievement contexts” (p. 278).

**Ego-involved.** Ego-involved is a term used to describe an individual's dispositional goal orientation (Treasure, 1997). Treasure (1997) concluded, "For an individual who is ego-oriented, the demonstration of competence is based on outperforming others or succeeding at a high normative task" (p. 279). Ego-involved has been described by Nicholls (1989) as one's conceptualization of ability relative to his or her ability to outperform others.

**Ego-oriented.** Ego-oriented is a term used to describe student and instructor perceptions of a motivational climate existent within an educational setting (e.g., classroom, gym, field, etc.). An ego-oriented climate is one in which norm-referenced sources are used to define success (Weiss & Ferrer-Caja, 2002).

**Exercise.** Exercise is a component of physical activity. The distinguishing characteristic of exercise in relation to physical activity is that it refers to structured activity specifically planned to develop and maintain physical fitness ("Exercise," 2006 p. 1).

**Goal involvement.** Goal involvement is a situational state experienced due to an individual's disposition in which he or she is either task or ego-involved (see Ego-Involvement and Task-Involvement) within an achievement setting (Treasure, 1997).

**Goal orientation.** According to achievement goal theory, an individual's goal orientation influences his or her investment and involvement in activities within various achievement settings (Nicholls, 1989). According to Roberts (2001), the individual is assumed to be predisposed to be task and/or ego goal involved and to exhibit the behaviors associated of the held orientation. Roberts (2001) further explained that the orientations should not be confused as being "traits," but rather cognitive schemas that

are subject to change as the individual acquires and processes information pertaining to his or her performance of a task.

**Intrinsic motivation.** Intrinsic motivation is a source of motivation in which the individual strives inwardly to be competent and self-determined in his or her effort in mastering a task.

**Motivational climate.** Motivational climate is a term used to describe the psychological climate of an educational setting (e.g., classroom, gym, field, etc.). Ames (1992) introduced the concept of a motivational climate while examining the structure of a learning environment, and particularly the impact that the environment may have on the adoption of achievement goals.

**Physical activity.** Physical activity is an inclusive term that refers to “any expenditure of energy brought about by bodily movement via the skeletal muscles; as such, it includes the complete spectrum of activity from very low resting levels to maximal exertion” (DHHS, 2008, p. 2).

**TARGET.** An acronym for task, authority, recognition, grouping, evaluation, and time as TARGET strategies developed by Epstein (1989) to align with Ames’s (1992) conceptualization of a task-oriented motivational climate. The intent of one’s implementation of Epstein’s (1989) TARGET strategies is to provide a framework for establishing a learning environment that fosters an enjoyable and rewarding learning experience for all participants.

**Task-involved.** Task-involved is used to describe an individual’s achievement behavior in a given situation, derived from one’s dispositional goal orientation (Treasure,

1997). Task-involved has been described by Nicholls (1989) as one's utilization of an undifferentiated conception of ability.

**Task-oriented.** Task-oriented is used to describe student and instructor perceptions of an ideal motivational climate existent within an educational setting (e.g., classroom, gym, field, etc.). In task-oriented climates, individuals might focus on improvement and respond to failure as a temporary setback. Within a task-oriented climate, unsuccessful attempts were viewed as challenges, not threats, and errors are viewed as an integral part of the learning process (Weiss & Ferrer-Caja, 2002). Treasure (1997) added, "For an individual who is task-oriented, the demonstration of competence is based on maximum effort and is self-referenced, with a focus on developing skills, and demonstrating mastery of the task" (p. 278).

### **Significance of the Study**

Based upon previous studies (Ames, 1992; Treasure & Roberts, 1998) in which the importance of implementing quality educational experiences within numerous environments (e.g., classroom, sport, and physical education) were examined, physical activity classes provided an ideal medium from which to study student motivation. Invaluable data were expected, pertaining to the quality of physical activity programming being offered within higher education, and understanding efforts to ensure quality physical activity experiences, which were factors in promoting lifelong physical activity. Basic instruction programs (BIPs), also known as general, basic activity, or service programs, have existed on college and university campuses for years. Examination of BIPs and course offerings within such programs is necessary to provide additional insight

pertaining to the role these programs play in addressing the particular fitness needs of young-adults attending colleges and universities within the United States.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

The intent of this review is to provide the reader with an understanding of existing literature relevant to the examination of factors influencing student motivation within a physical activity class offered at a state university located in the Midwest region of the United States. The chapter is presented in the following parts: (a) physical activity considerations, (b) basic instruction programs in higher education, (c) motivation theory, (d) achievement goal theory, and (e) summary.

#### **Physical Activity Considerations**

According to the U.S. Department of Health and Human Services (2008) researchers, “physical activity” is an inclusive term that refers to “any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a basal level” (p. 2). Examples of physical activity were planned activities such as walking, martial arts, and swimming; however, many forms of physical activity also included daily activities such as household chores, yard work, and walking the dog (DHHS, 2008). Members of the general public too often use physical activity synonymously with exercise, which is suggestive that many people believe exercise is a component of physical activity. Exercise is a subcategory of physical activity that is planned, structured, repetitive, and purposive in the sense that the improvement or maintenance of one or more components of physical fitness is the objective (“Exercise,” 2006 p. 1).

Another common misconception is that high-intensity exercise programs are the only means by which individuals might gain health benefits while preventing disease. Although high-intensity or vigorous activities remain highly recommended, recent findings have led professionals within the field of health promotion and disease prevention to suggest that adequate health benefits might be gained from engaging in moderate-intensity physical activity on a daily basis (DHHS, 2008). Based on these findings, adults were recommended to accumulate at least 150 minutes or more of moderate-intensity physical activity each week (DHHS, 2008).

### **Benefits of Physical Activity**

Numerous researchers have confirmed that regular participation in moderate to vigorous physical activity was a factor in reduced risk of premature death in adults and decreased likelihood of acquiring several diseases and undesirable conditions such as: (a) coronary heart disease; (b) type-2 diabetes; (c) high blood pressure; (d) high cholesterol; (e) stroke; (f) sleep apnea; (g) respiratory problems; and (h) endometrial, breast, prostate, and colon cancers (DHHS, 2010). Moderate-intensity physical activities, such as aerobic dance, gardening, hunting, cycling, stair climbing rather than taking the elevator, swimming, running, and brisk walking might all contribute to increased levels of fitness and wellness. Regular participation in physical activity might also improve one's mental health by reducing stress and improving mood (Adams, Moore, & Dye, 2007; Dishman, 1995; Schafer, 1996; Smith et al., 2007; Wipfi, Rethorst, & Landers, 2008). Such benefits were shown within cross-sectional studies in which sedentary individuals were compared to active persons. Those studies showed that active persons were more likely to be better adjusted to life's daily occurrences, performed better on tests of cognitive functioning, exhibited reduced cardiovascular responses to stress, and reported fewer symptoms of

anxiety and depression (Adams et al., 2007; Dishman, 1995; Smith et al., 2007; Wipfi et al., 2008).

Despite these benefits, less than half of the adult population participated in regular physical activity (Bray, 2007; Bray & Born, 2004; Kwan et al., 2009; DHHS, 2010). The U.S. Surgeon General Dr. Regina M. Benjamin commented regarding obesity and the current state of our nation:

Our nation stands at a crossroads. Today's epidemic of overweight and obesity threatens the historic progress we have made in increasing American's quality and years of healthy life. Two-thirds of adults and nearly one in three children are overweight or obese. Every one of us has an important role to play in the prevention and control of obesity. Mothers, fathers, teachers, business executives, childcare professionals, clinicians, politicians, and government and community leaders—we must all commit to changes that promote the health and wellness of our families and communities (DHHS, 2010, p. 1).

Overcoming such challenges and addressing existent barriers that prevent individuals from becoming more physically active is one of many obstacles that Americans needed to face in battling the epidemic of obesity and sedentary living.

### **Barriers to Physical Activity Participation**

With overweight and obese populations at an all-time peak, sedentary living has become the obviously accepted norm within the American society rather than the exception. Perceived barriers were defined as obstacles that prevent one's initiation or ability to maintain a desired behavior change. Such barriers were associated with unavailability, inconvenience, expense, difficulty, time, or personal cost (Brown, 2005; Canadian Fitness & Lifestyle Research Institute [CFLRI], 1996; Gomez-Lopez, Gallegos, & Extremera, 2010; Grubbs & Carter, 2002; Sallis & Owen, 1999; Salmon, Crawford, Owen, Bauman, & Sallis, 2003; Reichert, Barros, Domingues, & Hallal, 2007; Smits, Tart, Presnell, Rosenfield, & Otto, 2010). Many researchers have examined the existence

of barriers and determinants associated with one's physical activity participation (Brown, 2005; CFLRI, 1996; Gomez-Lopez, Gallegos, & Extremera, 2010; Grubbs & Carter, 2002; Sallis & Owen, 1999; Salmon, Crawford, Owen, Bauman, & Sallis; 2003; Reichert, Barros, Domingues, & Hallal, 2007; Smits, Tart, Presnell, Rosenfield, & Otto, 2010). For this review, barriers have been categorized into interpersonal barriers, intrapersonal barriers, and environmental barriers.

Intrapersonal barriers are perceived barriers that individuals have internalized as reasons by which they were prevented from engaging or committing to regular participation in physical activity (CFLRI, 1996). Often, individuals failed to prioritize time devoted to participation in physical activity within their daily schedule. In addition to prioritizing time, individuals identify feeling tired as a significant barrier to daily participation in physical activity (CFLRI, 1996). Lastly, disability and injury often prevent individuals from participation in regular physical activity (CFLRI, 1996). Disability and injury in this case were listed as intrapersonal barriers because, despite the fact that in most instances the individual would still be able to participate in a modified activity, he or she chose to use the injury or disability as an excuse to remain inactive (Sallis & Owen, 1999; Salmon, Crawford, Owen, Bauman, & Sallis; 2003). Intrapersonal barriers were social influences that existed based on a person's interaction with others. Examples of intrapersonal barriers include: (a) relationships with instructors or coaches, (b) problems with childcare, (c) lack of a partner, and (d) lack of support from family and friends (CFLRI, 1996).

The most commonly reported environmental barriers were the lack of facilities, safety concerns, and limited transportation options. An additional example of an

environmental barrier includes seasonal influences. This barrier is often reported in terms of one's reluctance to participate in exercise or physical activity due to the influence of weather (Sallis & Owen, 1999; Salmon, Crawford, Owen, Bauman & Sallis, 2003). Although barriers might be the cause of preventing an individual from successfully engaging in an intended behavior, determinants refer to factors that have influence on behavior.

### **Determinants of Physical Activity Participation**

Determinants may be influenced biologically, or they may exist within the environment. In terms of influencing behavior, determinants were considered facilitators for promoting physical activity participation that were used to reduce the negative influence of barriers that often resulted in sedentary behavior (Dishman, Sallis, & Orenstein, 1985; Kim, Kim, Park, & Kim, 2009; Nahas, Goldfine, & Collins, 2003; Sallis & Owen, 1999). Sallis and Owen (1999) identified six salient determinants of physical activity participation. These include: (a) demographic and biological factors; (b) psychological, cognitive, and emotional factors; (c) behavioral attributes and skills; (d) social and cultural factors; (e) physical environment factors; and (f) physical activity characteristics. As many factors could be modified, researchers suggested that intervention programs be focused on psychological and environmental factors that were most applicable to the specific needs of the population (Dishman, Sallis, & Orenstein, 1985; Kim, Kim, Park, & Kim, 2009; Nahas, Goldfine, & Collins, 2003; Sallis & Owen, 1999). Figure 1 illustrates the determinant factors of physical activity.

Behavioral Attributes And Skills	Social And Cultural Factors	Physical Environment Factors	Physical Activity Characteristics
Activity history	Class size	Access to facilities	Intensity
Alcohol	Exercise models	Climate and season	Perceived effort
Dietary habits	Group cohesion	Cost of programs	
Process of change	Family influences	Routine disruption	
Smoking	Physician influence	Home equipment	

*Figure 1. Determinant factors of physical activity. Adapted from *Physical Activity and Behavioral Medicine* (p. 116), by J.F., Sallis and N. Owen, 1999, Thousand Oaks, CA: Sage Publications. Copyright 1999 by Sage Publications, Inc.*

### **Physical Activity Trends of College and University Students**

College students' physical activity behaviors seemed no different than those of the general population in that most collegians remain sedentary (Buckworth & Nigg, 2004; Raynor & Jankowiak, 2010; Staten, Miller, Noland, & Rayens, 2005; U.S. Department of Health and Human Services [DHHS], 2000). Of those attending colleges and universities, 40% of young adults (ages 18-24) remained physically inactive, and a mere 17% engaged in regular bouts of moderate physical activity. Perhaps equally alarming was that 30-40% of college students, despite being engaged in physical activity, failed to meet the physical activity recommendations necessary to accrue health benefits (Bray, 2007; Bray & Born, 2004; Kwan et al., 2009; DHHS, 2000). Raynor and Jankowiak (2010) examined college students' physical activity behaviors by calculating the number of daily steps taken to determine if college students were adhering to the U.S. Department of Health and Human Service's (2008) physical activity recommendations. Their findings showed that a majority of college students (78%) failed to receive the maximum health benefits gained by participating in sustained (10 minutes) bouts of moderate to vigorous physical activity most days of the week.

### **Transitioning from High School to College**

Making the transition from high school to college can be difficult, as Bray and Born (2004) indicated: "Transitions such as this often represent a process characterized by change, ambiguity and adjustment across a number of previously salient life domains" (p. 181). Despite the individualized nature of each student's transition, previously

established behavior patterns commonly showed change as an individual becomes familiar with his or her new surroundings (Bray & Born, 2004). Bray and Born studied incoming college freshmen and found that 66% reported sufficient amounts of vigorous physical activity participation as seniors in high school. Of that same population, only 44% reported these same measures of physical activity just two months into their first year of college. Bray and Born (2004) made an important point about the critical nature and timing in a college student's life:

Given the positive physical and mental health benefits of regular physical activity coupled with the competitive, achievement goal-oriented environment of college and university study, the accumulating evidence suggests that first-year students may have a great deal to gain in terms of health and well-being by staying active. (p. 186)

Gyurcsik, Bray, and Brittain (2004) examined freshman college students' physical activity patterns while making the transition from high school to college and found that students reported barriers to being physically active as academic demands such as course load and studying, as well as not feeling motivated to exercise. Bray (2007) also studied student's self-efficacy in regard to their ability to cope with barriers they were most likely to experience while making the transition to college life. Results of the study showed that students who were more confident in their abilities to overcome barriers were, in turn, more physically active than students who reported being less confident.

Wengreen and Moncur (2009) conducted a longitudinal observational study to examine changes in weight and physical activity behaviors among first-year college students attending a public university in the United States. Participants ( $N = 159$ ) completed surveys about dietary intake, physical activity and other health-related behaviors during the last six months of high school and during their first semester of

college. Twenty-three percent of students participating in the study gained greater than 5% of their baseline body weight. The average amount of weight gained by these students was approximately 10 pounds. A characteristic specific to this particular group included reports of being less physically active during the first three months of college as compared to the amount of physical activity they participated in during high school.

In response to the ongoing trends related to declining levels of physical activity among first-year college students, researchers (Bray et al., 2008) designed an intervention program using print media intended to reinforce one's self-efficacy and stimulate students to be physically active in their new surroundings. This particular study was successful in that providing first-year university students with theory-based print media designed to promote physical activity was shown as an effective means of intervention. Further, the authors of the study (Bray et al., 2008) concluded that future research should be conducted to explore modifiable factors related to college students' physical activity behavior and effective methods that will assist students in maintaining healthy levels of physical activity as they transition through college and into later adulthood. In addition, researchers (Bray et al., 2008; Hildebrand et al., 2001) suggested that significant predictors of regular physical activity participation include frequent experiences of participant success, knowledge, and enjoyment. For example, students who engaged in positive physical activity experiences were more likely to continue their participation in physical activity while attending college than those who had experienced negativity or failure within similar contexts (Hildebrand et al., 2001).

Paffenbarger, Hyde, Wing, and Hsieh (1986) examined physical activity trends among students as they graduate and transition from college into the real world. College

alumni reported decreased mortality rates in nearly 50% of participants who maintained regular physical activity from their college years to the ages of 70 to 84 years. This research showed that students who have remained committed to regular physical activity beyond their college years have a much greater chance of living a long, healthy life. As a result, a necessary focus would be to increase the likelihood that participants have positive physical activity experiences while participating in physical education classes offered within basic activity programs at colleges and universities. In fact, college and university physical activity programs may represent a chance (sometimes the last chance) to introduce and help students engage in physical activity in hopes of living a healthy life (Pennington, Manross, & Poole, 2001).

### **Basic Instruction Programs in Higher Education**

#### **Student Enrollment**

Basic instruction programs (BIPs), also known as general, basic activity, or service programs, have existed on college and university campuses for years. Basic instruction programs provide students a structured learning environment to develop sport-related skills and healthy lifestyle habits intended to promote lifelong physical activity and increased overall health and wellness (Hensley, 2000; Savage & Sharpe, 1998). Physical activity courses offered within basic instruction programs in higher education appear to remain popular electives on college and university campuses (Hensley, 2000; Savage & Sharpe, 1998). Physical activity courses have remained popular due to the student's ability to recognize a number of perceived physiological and psychological benefits resulting from his or her participation in such classes (Hensley, 2000; Savage & Sharpe, 1998).

Although recommendations and theories pertaining to physical activity and exercise have changed, little has changed over the years in reasons for physical-activity course enrollment within higher education. Broer and Holland (1954) reported that student objectives pertaining to course involvement included a desire to develop skills in various sports. Similarly, Weick (1975) reported that having fun and getting regular exercise were determinants of physical activity course enrollment. More recently, Savage (1998) reported that regular exercise participation, keeping in shape, skill acquisition, and having fun were leading determinants of physical activity course enrollment.

Hildebrand et al. (2001) examined students' reasons for enrollment, and specifically hypothesized that college students who had positive experiences in high-school physical education would enroll in college physical activity classes either (a) in search of positive experiences within physical activity and sport similar to that of their high-school physical education experiences, or (b) because they already believed they were competent or proficient. Using a survey assessment inventory, Hildebrand et al. (2001) asked each participant to categorize their reasons for taking physical activity classes on a four-degree scale ranging from "most important reason," to "not at all important." Participants selected from options of (a) health/fitness, (b) interest/enjoyment, (c) academic, (d) social, and (e) financial reasons. The top two reasons for enrolling in college physical activity classes for both men and women participants were: (a) enjoyment of the activity (81%), and (b) interest in the activity (77%). Following enjoyment and interest, men listed reasons for enrollment as (a) perception of the class as exciting, (b) a need for academic credit, and (c) an easy grade. Women listed (a) improved fitness, (b) opportunity for a scheduled workout, and (c)

being good for their health as additional reasons for having enrolled in the class. In this contribution to the literature, researchers emphasized the importance of experiencing a quality physical education program before graduation (Hildebrand et al., 2001; Leenders et al., 2003).

Research has shown that students enroll in physical activity courses for specific reasons related to individual needs and interests (Hildebrand et al., 2001; Leenders et al., 2003); therefore, knowing whether physical activity service programs are meeting the needs of the students who enroll in the courses is important. Savage (1998) examined college students' motivation for participating in physical activity classes offered in physical activity programs. In addition to examining motives, Savage examined student satisfaction with the course as well as student perceptions of the physical activity program overall. Results indicated that students were satisfied with the overall program, and 43% of the students who participated in the study indicated that they had elected to take a second (non-required) physical activity class the following semester. Savage summarized, "the strength and resilience of basic instruction (physical activity) programs in universities and colleges depends on universities providing quality instruction while meeting the needs and interests of the students" (p. 62).

### **Quality of Instruction in Basic Instruction Programs**

According to Savage and Sharpe (1998), BIPs have often been criticized for their reliance on graduate teaching assistants and coaches rather than faculty members as the primary instructors. In addition, the increased number of overweight and obese students attending colleges and universities has raised further speculation about the effectiveness of such programs. Russell (2008) used a case-study research design to examine student

perceptions in an effort to obtain a more comprehensive understanding of student perspectives, recommendations and issues related to their experience in BIP courses. According to Russell, the purpose of the study was two-fold: (a) to examine characteristics of student motives for enrolling in BIP courses, perceived value of these courses, and aspects of the course structure that were viewed to be most beneficial; and (b) to gather student perceptions of the evaluative process as it pertained to teaching effectiveness. Results of the study indicated that students found value in their educational experiences gained in BIP courses. Additionally, the students appreciated the opportunity to socialize with their peers while taking the class. Consistent with previous studies, (Leenders et al., 2003; Savage, 1998) students reported a desire to improve their current fitness level and learn new skills as their primary reasons for enrollment. In addition, the energy, enthusiasm, and approachability of the instructor were expressed as being a positive influence on the overall experience of the student (Leenders et al., 2003; Savage, 1998).

An important component of quality instruction is the creation of an environment for learning (Ames, 1992). This refers to the ability of the teacher to develop and maintain a positive learning climate. A positive learning climate can be used to motivate students to learn. Successful teachers create a climate within their classrooms that is described as task-oriented, business-like, and slightly warm in their affective tone. In other words, teachers play an important role in motivating students (Ames, 1992; Rink, 2003).

## **Motivation Theory**

Evidence about physical activity patterns showed the importance of providing college and university students with positive physical activity experiences (Youth Risk Behavior Surveillance [YRBS], 1997). As a result, interventions have been designed and implemented to provide positive physical activity experiences intended to replace unhealthy high-risk behaviors of nearly 13 million people commonly found on college and university campuses throughout the country (YRBS, 1997). Before college basic instruction programs can be used to promote lifelong participation in regular physical activity, the factors in the environment that influence student motivation must be understood.

Researchers have continued to examine the reasons why individuals choose to remain engaged in, or withdraw from, their participation in a particular task. Roberts (2001) offered the following perspective on motivation research within a social cognitive approach:

Motivation is considered a social cognitive process in which the individual becomes motivated, or demotivated, through assessments of his or her competencies within the achievement context and of the meaning of the context to the person. Thereby, from a social cognitive point of view, motivation may be defined as the organized patterning of at least one of three psychological constructs that energize, direct, and regulate achievement behavior in physical activity: personal goals, emotional arousal, and personal agency beliefs. (p. 6)

Roberts (2001) suggested the following about using achievement goal theory as a framework:

Achievement goal theory applies only to people who are trying to achieve a desired personal or socially constructed goal in an achievement context. Achievement goal theory concerns why you are in the context and argues that the major reason you strive to achieve is to demonstrate a valued competence. (p. 17)

Roberts's (2001) idea was a reminder that numerous theories existed related to motivation, and that each theory had a unique perspective and framework from which further to examine motivation within a variety of contexts. Additional examples of motivation theory include, but are not limited to, self-efficacy theory (Bandura, 1997) as previously mentioned, competence motivation theory (Harter, 1981), expectancy value theory (Eccles et al., 1983), and self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2000). Achievement goal theory was chosen for the purpose of the current study due to its presumed "goodness of fit" in attempts to examine the factors of influence on student motivation within two college physical activity classes.

### **Achievement Goal Theory**

#### **Background and Overview**

In motivation research, achievement goal theory has evolved within a social-cognitive framework in which emphasis was placed on how children perceived situations, interpreted events in situations, and processed information about situations (Ames & Archer, 1988; Dweck, 1986; Dweck & Leggett, 1988; Nicholls, 1989). Three major tenets set the foundation for achievement goal theory. The first of these is that the goal in an achievement setting was to demonstrate competence. Second, achievement goals had a major role in whether one was motivated to demonstrate competence. The third major tenet that achievement goal theorists (Ames, 1992; Ames & Archer, 1988; Dweck, 1986; Dweck & Leggett, 1988; Elliott & Dweck, 1988; Nicholls, 1984, 1989) agreed on was that motivation in achievement contexts was a function of personal characteristics such as goal orientation, as well as situational characteristics within the classroom.

For years, achievement goal theorists recognized only two types of achievement goals (also called a dichotomous framework of achievement goals): (a) the goal to

develop ability and (b) the goal to demonstrate ability, or avoid demonstrating the lack of ability (Elliot, 1999). While achievement goal theorists agreed these two types of achievement goals existed, they each created their own term for these goals. These include being identified as learning and performance goals (Dweck, 1986), task-involvement and ego-involvement goals (Nicholls, 1984), and mastery and performance goals (Ames & Archer, 1988) all of which were references to the same concepts.

Achievement goals have been considered unique to each individual (Maehr & Nicholls, 1980) and one's adoption of a particular achievement-goal orientation may elicit a variety of positive or negative responses (Ames, 1992). Students who adopted mastery goals were expected to persist when faced with difficult challenges, seek challenging activities, and have high intrinsic motivation (Ames, 1992; Dweck, 1986; Nicholls, 1984). In contrast, students who adopted performance goals were expected to avoid challenging activities and have low intrinsic motivation (Ames, 1992; Dweck, 1986; Nicholls, 1984). While mastery goals consistently have been linked to a positive set of processes and outcomes, the effects of pursuing performance goals have been less clear. Until recently, and still highly debatable, theorists had agreed that the adoption of performance goals had negative effects on intrinsic motivation when accompanied with low perceived competence (Elliot & Church, 1997; Elliott & Dweck, 1988). Other studies have not been supportive of these findings depending upon the role of perceived self-competence (Elliot & Harackiewicz, 1996; Harackiewicz & Elliot, 1993). In a recent article detailing a review of achievement goal theory, Senko, Hulleman, and Harackiewicz (2011) called for a shift in perspectives concerning performance goals. In particular, they "urged the field to consider the potential unique benefits of performance-

approach goals and mastery goals, and to identify how the two goals can combine to optimize motivation” (p. 30).

Researchers such as Elliot (1999) and Pintrich (2000) have argued that mastery goals needed to be separated into approach and avoidance orientations as they relate to one’s competence. As a result, achievement goal theory has undergone a number of theoretical changes that have resulted in a newly recognized, (although not necessarily accepted among all theorists) 2 x 2 achievement goal framework (see Figure 2). The framework is comprised of four achievement goals: (a) mastery-approach, (b) mastery-avoidance, (c) performance-approach and (d) performance-avoidance (Elliot, 1999; Elliot & McGregor, 2001; Pekrun, Elliot, & Maier, 2009; Pintrich, 2000).

		<b>Definition</b>	
		Absolute/ intrapersonal (mastery)	Normative (performance)
<b>Valence</b>	Positive (approaching success)	Mastery- approach goal	Performance- approach goal
	Negative (avoiding failure)	Mastery- avoidance goal	Performance- avoidance goal

Figure 2. The 2 X 2 achievement goal framework. Adapted from “A 2 X 2 Achievement Goal Framework” by A. J. Elliot, & H. A. McGregor, 2001, *Journal of Personality and Social Psychology*, 80, p. 502. Copyright 2001 by the American Psychological Association, Inc.

Elliot (1999) defined mastery-approach goals as those that entailed (a) striving to develop one's skills and abilities, (b) advance one's learning, (c) understand material, or (d) complete or master a task. Elliot (1999) defined mastery-avoidance goals as (a) striving to avoid losing one's skills and abilities, (b) forgetting what one has learned, (c) misunderstanding material, or (d) leaving a task incomplete or unmastered. In addition, Elliot (1999) suggested that mastery-avoidance goals were likely to be pursued when a person realized that his or her ability to perform a skill had diminished.

Contrary to the less desired performance goals categorized within the original dichotomous framework (mastery and performance); Elliot (1999) suggested that performance-approach goals elicited numerous positive and a few negative processes and outcomes. In fact, performance-approach goals have been associated with higher levels of task engagement, high performance outcomes, and intrinsic motivation (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001; Pekrun et al., 2009). Performance-approach goals have also been associated with negative outcomes, including test anxiety and an unwillingness to seek help with schoolwork (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001). Unlike performance-approach goals, performance-avoidance goals have been associated with numerous negative processes and outcomes, including: (a) low absorption during task engagement, (b) low self-determination while studying, (c) threat-related affect while studying, (d) distraction while studying, (e) disorganized studying, (f) less self-regulated learning, (g) procrastination, (h) an unwillingness to seek help with schoolwork, (i) wanting to escape evaluation, (j) anxiety prior to evaluation, (k) anxiety during evaluation, (l) poor retention

of information, (m) poor performance, and (n) reduced intrinsic motivation (Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001).

### **Development of Achievement Goal Theory in Traditional Classrooms**

Educators have long recognized that the tasks used in the traditional classroom were used to communicate important messages to students about emphases there, which, in turn, might have influence on their adoption of achievement goals (Ames, 1992; Ames & Archer, 1988). For instance, classroom contexts that were structured toward challenge were likely to activate the need for achievement, which resulted in adoption of mastery and/or performance-approach goals. In contrast, classroom contexts that were structured toward threat were likely to activate fear of failure, which resulted in adoption of performance-avoidance and/or performance-approach goals (Elliot, 1999). Ames's (1984, 1992) association with achievement goal theory has primarily involved the examination of the environment, specifically a traditional classroom setting in which an activity or learning takes place. Ames (1984) explored the intricacies and influences of task-structure, perceived causes of success, and teacher behaviors relative to students' goals, self-perceptions, and achievement behaviors. In doing so, Ames (1984) developed a reward structure associated to students' achievement goals and behavior. Figure 3 illustrates the relationship between achievement goals, achievement emotions and academic performance.

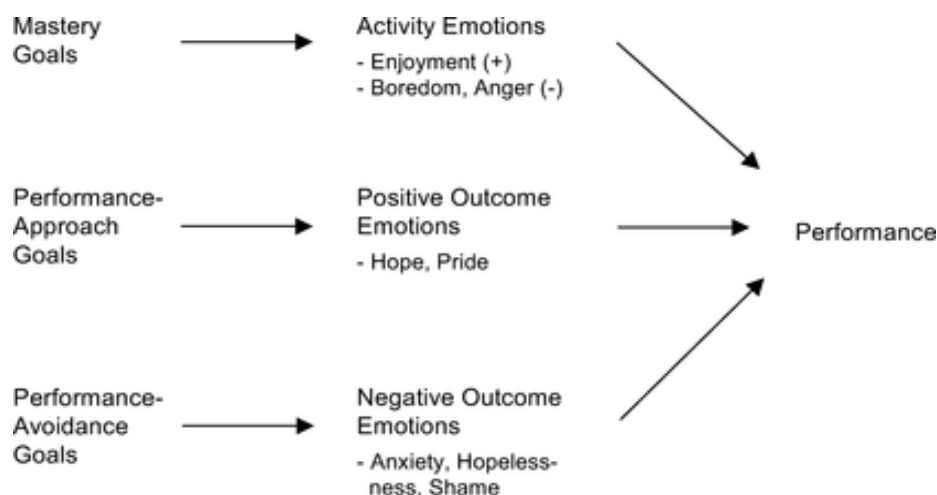


Figure 3. Goals, emotions, and performance. Adapted from “Achievement Goals and Achievement Emotions: Testing a Model of Their Joint Relations with Academic Performance” by F.I. Pekrun et al., 2009, *Journal of Educational Psychology*, 101, p. 119. Copyright 2009 by the American Psychological Association.

Specific to her research on motivational climate, Ames (1984) defined a reward structure as an environment in which certain goals were fostered based on an established criterion for evaluating and recognizing performance. These particular reward structures were framed into three distinct categories, which included competitive, individualistic, and cooperative rewards. Ames’s (1984) contention was that within each reward structure potential existed for different motivational processes because of each reward structure’s different definitions of success at a particular task. Ames and Archer (1988) later determined that competitive and individualistic reward structures resulted in the conceptualization and adoption of performance goals, whereas a cooperative reward structure was used for the conceptualization and adoption of mastery goals amongst the participants exposed to the influences of each motivational climate.

Ames (1992, p. 267) noted that several classroom practices were likely to encourage adoption of mastery goals:

- designing classroom tasks that include challenge, variety, novelty, and active involvement;
- giving students opportunities to make choices and decisions regarding their learning;
- providing private recognition and rewards that focus on individual student effort and improvement;
- creating small groups of heterogeneous abilities that encourage working effectively with others on learning tasks and developing a feeling of belongingness;
- conducting evaluation practices that are private, assess progress, improvement, and mastery, and avoid social comparisons; and
- allowing for time on task to vary with the nature of the task and student needs.

Conversely, performance-oriented classrooms are created when (a) students are not given varied tasks, (b) the teacher maintains authority; (c) students are recognized for their ability relative to others, (d) homogeneous ability groups are used, (e) evaluation is based on normative practices, and (f) time for task's completion is inflexible (Ames, 1992, p. 267).

In an earlier study of 176 students in grades 8-11 attending junior high school, Ames and Archer (1988) investigated how students' perceptions of the classroom goal orientation were related to their use of effective learning strategies, task choice, attitudes toward their class, and causal attributions of success and failure. Results indicated that students who perceived mastery goals as salient in the classroom reported using more effective learning strategies, preferred challenging tasks, had a more positive attitude toward the class, and had a stronger belief in effort as an attribution for success. Students who perceived performance goals as salient in the classroom tended to have a negative attitude toward the class, a negative perception of ability, and attributed failure to lack of

ability. Consequently, researchers focused their efforts on the relationship between the environmental emphasis of the classroom on achievement goals and student outcomes.

For example, Church, Elliot, and Gable (2001) conducted two consecutive studies to examine the relationships among perceptions of the classroom environment, adoption of achievement goals, course grade performance, and intrinsic motivation. The first study included 119 male and 89 female undergraduate students, and the second study included 103 male and 194 female undergraduate students. Three dimensions represented perceptions of classroom environment: (a) lecture engagement, (b) evaluation focus, and (c) harsh evaluation. Achievement goals were conceptualized in terms of mastery, performance-approach, and performance-avoidance goals. Results from the two studies conducted by Church et al. (2001) indicated that mastery goals were related positively to lecture engagement and negatively were related to evaluation focus and harsh evaluation. When perceived classroom environment and achievement goal variables were tested together as predictors of graded performance and intrinsic motivation, results showed that the perceived classroom environment had influence on adoption of achievement goals. These findings showed that educators needed to understand that learning environments featuring stringent evaluative standards represented a risk factor in the achievement domain.

The effect of classroom goal structure on students' behavior had been documented by studies conducted at the middle school level. For example, Ryan, Gheen, and Midgley (1998) investigated how classroom goal structure was related to avoidance of help seeking for 516 students across 63 seventh-grade math classrooms. Results indicated that students' perceptions of a mastery classroom goal structure were associated

with higher level of help avoidance. These results showed that students were less likely to avoid seeking help with their work when they need it in classrooms where students perceived the focus is on understanding, mastery, and intrinsic value of learning compared to classrooms where the focus was on competition and proving one's ability. Phan (2008) examined effects of a classroom-learning environment on students' achievement goals and reflective thinking practices for a sample of 298 secondary-school students in Sydney. Results of the study indicated that certain factors of the classroom environment, such as student involvement, student cohesiveness, task orientation, and feelings of student satisfaction had positive influences on student motivation towards accomplishment of achievement goals.

Urdu and Midgley (2003) examined whether changes in students' perceptions of the mastery and performance classroom goal structures were associated with changes in their motivation and academic performance. The first result indicated that students' perceptions of changes in the mastery goal structure of their classroom were related more strongly to changes in motivation, affect, and academic performance than were their perceptions of changes in the performance goal structure. The second result was that (a) individual mastery goals, (b) self-efficacy, (c) positive affect, and (d) GPA were all significantly lower, and negative affect was higher, in the sixth grade than in the fifth grade for students who perceived a decline in the classroom mastery goal structure from the fifth to the sixth grade. The third result was that the effects involving changes in the perceived mastery goal structure were stronger than those involving changes in the performance goal structure. These longitudinal studies of classroom goal structure indicated that, although efforts to smooth the transition to the middle school were needed

and worthwhile, a need existed also to increase students' perceptions of mastery goal structure in their classrooms in grade levels beyond the transition year.

### **Motivational Climate in Traditional Classrooms**

In the late 1980s, Ames and Archer (1988) first began examining motivational climate existent in classrooms within a “traditional classroom” environment. Ames (1992) identified a number of characteristics that were essential in fostering an optimal motivational climate. These characteristics included: (a) variety, (b) optimal challenge, (c) meaningfulness to the individual, (d) choices and shared-decision making; as well as (e) evaluative criteria that focus on effort, learning, and self-improvement. According to Ames (1992), individual goal orientations were determined by the motivational climate from the influence of affiliates tied to the participant. These affiliates might include parents, coaches, teachers, and others who played significant roles in the individual's participation in a given task. Ames (1992) suggested that climates focused on “skill-learning,” or the improvement of self, were influential in mastery-goal orientation, whereas climates focused on “social comparison” of performance among peers were used to foster a performance-goal orientation.

A mastery-goal-oriented climate is one in which success is based on personal improvement, creating an internal frame of reference. Mastery goal-oriented individuals valued learning goals or the process of learning, oftentimes responding to failure as a momentary setback. Rather than attributing failure to a lack of ability, mastery goal-oriented individuals focused on controllable factors such as lack of practice, inappropriate strategy selection, and inadequate effort as evaluative criteria in reflecting upon undesirable performance (Weiss & Ferrer-Caja, 2002). Mastery goal-oriented individuals

were most likely to experience satisfaction and enjoyment from acknowledgment of high effort pertaining to a particular task.

A performance goal-oriented climate promoting social comparison was one in which success was based on outperforming others within a particular task. Individuals with performance goal orientation frequently exhibited achievement behavior due to their need for social comparison. These individuals often accepted optimal challenges and demonstrated maximal effort as long as their perceptions of ability were high (Weiss & Ferrer-Caja, 2002). If an individual driven by performance goals experienced self-doubt, he or she likely would seek minimal challenges to avoid being judged among others. Performance outcomes, if attributed to high-ability, would be perceived as success, and future expectations for similar success were fostered; whereas performance outcomes attributed to low ability were perceived as failure with future expectations fostered for similar outcomes. Unfortunately, this reluctance to choose optimal challenges due to a fear of unfavorable comparison inhibited the individual from participating in the necessary experiences needed to improve performance over time (Weiss & Ferrer-Caja, 2002).

Although perceptions were shaped within the individual, existent comparisons of one's ability in relation to others' abilities and to the established standard were significant in determining success or failure attributed to one's ability or lack thereof. Due to this particular goal-orientation, an individual might choose tasks to outperform others in a similar task while exhibiting less effort in achieving the same outcome. Although favorable results may ensue with either orientation-involvement, most literature would indicate a task-orientation was most conducive to desirable behavior (e.g., enjoyment)

within an achievement setting (Ames, 1992; Dweck, 1986; Nicholls, 1984; Treasure, 1997). Ames's (1992) research findings indicated that students placed within a mastery goal-oriented climate that was focused on the process of skill development achieved greater academic progress than those of a performance goal-oriented climate in which success and achievement were determined by end result rather than the process to achieve the end.

Ames (1992), Dweck (1986), and Nicholls (1984) had linked a mastery goal-oriented climate to higher levels of intrinsic motivation, whereas those within a performance goal-oriented climate relied almost entirely on extrinsic reward systems. The significance of this research for physical activity settings was that individuals who experienced a mastery goal-oriented climate and were intrinsically motivated might be more likely to adhere to the adoption of regular participation in physical activity experiences, while understanding that challenges and successes were part of the "journey." Students within a performance goal-oriented climate tended to focus solely on the end result; when faced with challenges, these students often would remove themselves entirely from the activity, resulting in exercise attrition. An additional concern of physical educators is that individuals who were extrinsically motivated and adopted a performance goal-orientation had no control over the end result. Another team, individual, or environment might be too great a challenge for them to be successful in alignment with outcome-based goal orientation. Within mastery goal-oriented climates, participants were less likely to be concerned with others' abilities, resulting in less social comparison and increased self-efficacy, perhaps leading to optimal levels of participant motivation.

Ames's (1981, 1984, 1992) intervention-based research within the classroom was addressed to the need to put achievement goal theory into practice within an educational setting. Her shaping of the environment using a mastery goal-oriented, goal-reward structure has, in many ways, changed the means by which teachers approach instructional theory and practice within education. Ames validated with extensive research the motivational advantages that existed when the educational environment and specifically, the tasks students engaged in, had variety, optimal challenge, meaningfulness, choice, and shared decision-making. In addition, Ames stressed the importance of establishing evaluation criteria to promote learning, effort, and improvement while diminishing the importance of comparing one's ability to others. Treasure and Roberts (1995) concluded,

although establishing linkages between the achievement contexts, goals, and student motivational outcomes has been important, strategies to determine how physical educators may most effectively use this information to enhance motivation and foster adaptive achievement behaviors need to be developed. (p. 480)

### **Epstein's TARGET Strategies**

Epstein (1989) designed strategies that align well with Ames's (1981, 1984) task-oriented motivational climate. These strategies have been identified by the acronym TARGET, in which each letter is representative of the one of the six strategies designed to foster an ideal learning environment for students. The six TARGET strategies (Epstein, 1989, p. 177) include:

- T—task: provide a variety of tasks and opportunities for students to be successful;
- A—authority: build numerous pieces within a curriculum and instructional strategies to ensure student ownership;
- R—recognition: as a teacher, provide rewards for achieving “process” goals, by means of teacher feedback, peer encouragement, and recognition of effort;
- G—grouping: specifically group students to minimize “spotlighting” and social comparison to ensure that each student feels “emotionally safe” and successful;

- E—evaluation: assessments and evaluations should be aligned with “process” goals and objectives to ensure that the student is aware that progress is more important than product; and
- T—time: allow for numerous opportunities for successful experiences and skill development through well-designed skill progressions and activities that are challengeable yet attainable.

Epstein’s TARGET strategies were focused on the structure of the environment and its ensuing climate as well as the influences that existed for shaping an individual’s mastery or performance-goal orientation development. A task might be an experience in which students were asked to respond to a particular demand that was placed on them (e.g., motor skills, tests, etc.). The tasks students participate in should be varied to accommodate the abilities of all students. Figure 4 illustrates examples of TARGET principles.

	<b>Description</b>	<b>Example</b>
Task	Challenging and diverse	A lesson provides students with six stations for learning to throw and catch
Authority	Provide student choice and leadership	Students are asked to outline rules for the class
Recognition	Based on individual progress	Students are rewarded for personal achievement
Grouping	Promote cooperation and peer instruction	Students teaching each other how to catch
Evaluation	Mastery of tasks and individual development	Grade students on individual progress
Time	Adjusted to personal capabilities	allow enough time for student mastery of skills
Adapted from (Biddle, 2001)		

*Figure 4.* An Explanation of TARGET Principles and Related Examples. Adapted from “Using Target Approach to Enhance Teacher Effectiveness” by D. J. Perlman & G. G. Karp, 2007, *The Physical Educator*, 64, p. 103. Copyright 2007 by The Physical Educator.

The implementation of task variety, that is, providing student choice, was shown to increase the likelihood of active participant involvement (Epstein, 1989). Task variety may be used to foster a relationship between an instructor and a student: because a variety of tasks are implemented, the student could recognize his or her abilities as unique and valued by the teacher. In addition, task variety has the potential to lower social comparison within the physical activity setting. A student is less likely to be concerned with the abilities of others if he or she is performing tasks dissimilar to others in the classroom.

Authority is a reference to the nature and frequency of the decision-making process or leadership style as the teacher exemplifies. Effective authority implementation strategies include: (a) the involvement of students in decision-making and the establishment of classroom rules, (b) creating numerous opportunities for students to

assume leadership roles, and (c) promoting student responsibility rather than student obedience (Epstein, 1989). In addition, allowing students to have input in the decision-making process fosters student ownership. The presence of student ownership and student choice was shown to increase the student's perceived ability to perform a given task through self-placement within the activity (Epstein, 1989).

Using a variety of instructional deliveries provides opportunities for students to gain insight from others and allows students to learn through assisting others while sharing experiences and acquired knowledge with their peers. Mosston and Ashworth (2002) identified a number of instructional strategies that foster student learning and development within activity settings. Examples of instructional deliveries included, but were not limited to, inclusion, divergent, and guided discovery.

Recognition refers to procedures and practices used to identify progress and achievement (e.g., awards). Effective implementation strategies include (a) private consultations to discuss individual progress (focusing on the process rather than the product); (b) recognition of individual progress, effort, and achievement; and (c) ensuring that all students have an equal opportunity for positive recognition (Epstein, 1989). This reward structure fosters a task-oriented climate in which emphasis is placed on the individual and his or her attempts to achieve a particular task, rather than emphasizing competition through external rewards (Treasure & Roberts, 1995). Ames (1981) conducted research examining the effect of cooperative reward structures within the classroom. Her findings showed that, although cooperative structures may provide a means of integrating students of varied abilities, the success or failure of the group seems to play a critical role in affecting the motivational state of the student (Ames, 1981).

Grouping refers to the manner in which students are organized at various times within a class. Effective grouping strategies were (a) combining individuals in ways that limit social comparison (e.g., avoiding traditional relay formats), (b) providing cooperative experiences, and (c) keeping group sizes small to maximize participation (Epstein, 1989). In grouping students, instructors should be mindful that essential to the development of motor skills is giving students ample time to practice each skill (Treasure & Roberts, 1995). Grouping in pairs or small groups often lends well to various instructional styles as well. An example of this particular style is that of reciprocal teaching, in which students have the opportunity to teach one another a particular skill, provide feedback, and personal insight based on specific criteria provided by the instructor (Mosston & Ashworth, 2002). This particular style of instruction might be used to foster positive social interaction and opportunities for students to learn within a cooperative framework.

Evaluation is the process of determining progress and achievement within a classroom based on a variety of specific measures obtained throughout a unit while using various assessment techniques. Effective implementation strategies for evaluation included (a) developing performance measures based on effort, improvement, persistence, and progress gained as specific to individually designed “task-oriented” goals; (b) use of a variety of assessment techniques involving both the student (self-assessment) and his or her peers (peer assessment); and (c) making evaluation meaningful and applicable to individual needs (Epstein, 1989). The evaluation standards would be derived from student progress and would be focused on improvement and mastery as shown through a variety of assessments, rather than through an emphasis solely on

performance outcomes. Students should be involved in the evaluation and reevaluation of progress, accomplishment, and task goals to promote lifelong implementation of independent evaluation as it pertains to physical activity (Epstein, 1989).

Timing is a reference to the appropriateness of the pace at which learning occurs. Effective implementation strategies for timing include: (a) recognition of individual needs in reference to time; (b) sufficient time allowed to develop motor skills, as well as skills within the affective and cognitive domain; and (c) approaching students in an effort to make connections with all, rather than a few. These elements, when implemented with desirable outcomes in mind, create a climate that may have influence on an individual's orientation within a given experience (Epstein, 1989).

### **Application of Achievement Goal Theory in Sport and Physical Education**

Shortly after the major tenets of achievement goal theory were supported by research conducted in academic settings, investigation began on whether the theory could be applied also to sport and physical education settings. Duda (1989) was one of the first researchers to suggest the examination of achievement goal theory within a physical achievement domain. Her contention at the time was that an individual's display of ability and effort, as well as variances in task-difficulty, would be more evident (i.e., providing greater opportunity for research gains) within sport and physical activity settings than in previously examined settings within academics. Duda (1989) examined high school athletes' conceptualizations of sport and, specifically, his or her beliefs as to the purpose of sport participation. Her findings showed that task-oriented athletes suggested that sport should: (a) enhance self-esteem, (b) teach people to try their best, (c) teach people to cooperate, and (d) make people better citizens (Duda, 1989, p. 318).

Mastery goal-oriented athletes strongly disagreed with the idea that sport should serve the

purpose of improving his or her social status, whereas performance goal-oriented athletes suggested that sport should enhance self-esteem and improve an individual's social status. Performance goal-oriented athletes indicated the usefulness of sport participation, suggesting that sport would play a significant role in preparing them for a career. They specifically spoke of sport participation providing an advantage in the areas of college admittance, career positioning, and earning a top salary once they became members of the self-described "dog eat dog" world that awaited them (Duda, 1989).

In response to these contentions, Watkins and Montgomery (1989) interviewed children and adolescents to examine their perceived attributions towards athletic ability. The participants in the study identified natural ability, effort-experience, social support, and emotions-attitudes as contributors to his or her athletic ability. These findings were in support of Nicholls' (1984) contentions that young children (under 12) were less capable of differentiating ability from effort; effort was identified most frequently within the younger population, while natural ability was identified most frequently among the older participants. Chaumeton and Duda (1988) later reported findings of performance goal-orientations becoming more pronounced as an athlete moved from one level of competition (e.g., middle school sport participation) to the next (e.g., high school sport participation). Their findings also indicated that dysfunctional aspects of sport, such as aggression, and unsportsmanlike behavior became more prevalent in settings of higher competition.

Duda (1989) suggested the following, as it applied to the potential that may exist regarding one's achievement behavior in sport and its applicability within various contexts, specifically speaking of continued participation in physical activity:

As a task-orientation entails an emphasis on skill mastery and an interest in an activity for its own sake, it would also be expected that a task-oriented athlete might stress the inherent capacity of competitive sport to enhance lifetime physical fitness. (p. 330-331)

While sport contexts provide numerous opportunities for participant enjoyment, learning of skills, and association with peers, such opportunities often were neither available nor affordable to all populations (Coakley, 2001). In addition, the increasingly organized and competitive nature of sport at all levels had become more exclusive to many within our society (Coakley, 2001). Gano-Overway and Ewing (2004) offered the following comments on previous studies that have focused on the examination of goal orientation and motivational climate as they apply to the instructional practices involved within sport and physical education:

Initial research does seem to indicate that a shift in goal orientation will occur as a result of the perceptions of the motivational climate within the sport setting. Work, however, is needed in the physical education classroom to determine what longitudinal effects occur within this setting. Although similar to the sport arena in that they both provide an achievement context in which there is a public display of effort and ability toward achievement outcomes, the physical education classroom is associated with unique characteristics. (p. 317)

Gano-Overway and Ewing (2004) suggested a variety of differences including: (a) various levels of student competencies, (b) limited in-class time, (c) differences in dynamics between student and teacher, and (d) differences in dynamics that exist solely among peers. One important perspective shown was the acknowledgement of sport and physical education as two completely separate entities.

Contrary to the misunderstood perceptions of many within the general population, physical education programs should not be viewed as synonymous with sport or recess. A quality physical education program would be designed to provide an optimal learning environment intended for motor skill development and acquisition, recreational and

competitive sport involvement, regular bouts of exercise, and physical activity participation intended for a lifetime (Rink, 2003). Unlike the often-imposed “win at all costs” nature of organized competitive sport and the numerous barriers and misconceptions that often exist within the context of a regimented exercise program, physical education programs were focused on providing the most optimal environment possible to provide enjoyable experiences that may foster intrinsic motivation leading to life-long participation in physical activity (Rink, 2003).

Although debate has existed about what characterized a quality physical (Rink, 2003) education program, the remaining focus of this review as it pertains to such programs includes a desire to establish a task-oriented climate conducive to fostering intrinsic motives for participation. Intrinsically motivated individuals within physical activity see themselves as the cause of their behavior and often report the following: (a) a preferred desire to focus on improving skills, (b) frequent experiences of enjoyment, and (c) a willingness to persist when faced by challenging tasks (Ferrer-Caja & Weiss, 2000; Goudas & Biddle, 1994; Kavussanu & Roberts, 1996). Such characteristics may be used to provide the mindset necessary to remain motivated while attempting to adhere to a desired behavior, whereas extrinsically motivated individuals perceive the cause of their behavior to be external. In many cases an individual succeeded in accomplishing a given task; however, due to an acquired dependency on external sources of positive and negative reinforcement, the individual was less likely to remain motivated for long periods of time (Ferrer-Caja & Weiss, 2000; Goudas & Biddle, 1994; Kavussanu & Roberts, 1996).

In an effort to understand better the intrinsic and extrinsic motives in the behaviors of a particular population, many researchers have chosen to examine goal-orientation, involvement, and behavior existent within an achievement setting (Ferrer-Caja & Weiss, 2000; Goudas & Biddle, 1994; Kavussanu & Roberts, 1996). Students who experienced participation within a mastery goal-oriented climate (a) reported higher incidences of enjoyment; (b) preferred to focus on skill development; and (c) chose to persist, rather than quit, when faced with a challenging task. Students subjected to a performance goal-oriented climate most often attributed success to their ability, hence minimizing their desire to improve skill (Ferrer-Caja & Weiss, 2000; Goudas & Biddle, 1994; Kavussanu & Roberts, 1996). This is not to suggest that extrinsic rewards are of little value within sport and exercise settings, rather that a climate of fostering intrinsic motivation was more aligned with the goals set forth by professionals within physical education. Emphasis in quality physical education programs has been given to lifelong participation in physical activity (Rink, 2003). Therefore, numerous opportunities exist to continue efforts in determining the most effective manners in which to enhance the long-term motivation necessary to adhere to daily participation within sport, exercise, and physical activity settings.

In response to administering sport participation within a variety of contexts (e.g., athletics and physical education) Duda (1989) offered the following suggestions:

Extrapolating from the present findings to the practical realm, if coaches, physical educators, and sport administrators want young athletes to associate sport participation with “what’s in it for me?” then promoting an ego-orientation seems best. However, if those who are leaders in shaping the school sport experience want young people to feel that athletics should teach people to try their best, cooperate, obey the rules, and become model citizens, then a task orientation appears warranted. (p. 332)

To understand motivational tendencies related to lifelong participation in physical activity better, researchers (Treasure & Roberts, 1998; Weiss & Ferrer-Caja, 2002) continued to examine achievement goal orientation and achievement behavior within a variety of contexts. For the purposes of this review, the remainder of the focus pertaining to achievement goal theory is centered around an extensive review of the literature pertaining to motivational climate and the influences of particular reward structures on achievement behavior.

### **Motivational Climate in Sport and Physical Education**

Seifriz, Duda, and Chi (1992) examined the relationship of a perceived motivational climate to intrinsic motivation and attributional beliefs that existed within sport. Specifically, they examined adolescent participation within varsity sports. Results of the study were supportive of previous claims from achievement goal theorists (Ames, 1984; Ames & Archer, 1988; Dweck, 1986; Nicholls, 1984) who had examined similar variables within educational settings. Athletes who adopted a mastery goal-orientation (a) were focused on improving skills, (b) attributed success and recognition to their degrees of effort, and (c) enjoyed time spent in season more so than athletes with performance goal-orientation. In addition, athletes who adopted a performance goal-orientation attributed success to their levels of ability to perform the skill, and when compared with mastery goal-oriented teammates, found the season to be more stressful.

Some theorists argued that athletic performance might be better served with fostering a performance goal-orientation within the most competitive contexts, with claims that mastery goal-orientation was nonexistent within the most extreme of competitive environments (Harwood, Hardy, & Swain, 2000). Nicholls (1984) previously established that children (under the age of 12) have difficulty in distinguishing between

effort and ability; therefore, participants within youth sport settings often associated effort with success regardless of ability. One might assume, due to the increasingly competitive nature of varsity sport, that participants would adopt a performance goal-orientation. Treasure et al. (2001) responded to Harwood et al. (2000) that although adolescents and adults clearly understood the distinctions between ability and effort, several adolescent and adult participants (in this particular case, varsity athletes) might be prone to emphasize the roles of effort, hard work, and skill mastery in their perceptions of successfully accomplishing a task.

Within a youth sport setting, Halliburton and Weiss (2002) examined the phenomenon of an existent or nonexistent skill-level variance within a perceived motivational climate. The authors also hypothesized about whether competence information and perceived motivational climate were interrelated. The results indicated that gymnasts competing at varying skill levels processed information differently in regard to their perceived motivational climate. Gymnasts performing at a low-level of skill reported mastery goal-oriented measures as a significant influence within their experiences. In contrast, gymnasts performing at a high-level of skill reported performance goal-oriented measures as a significant influence within their experiences (Halliburton & Weiss, 2002). In addition to these findings, a significant relationship was shown between use of sources of competence information and perceived motivational climate (Halliburton & Weiss, 2002). Although many studies have been focused on the influence of goal orientation within sport (Ames, 1992; Duda, 1989; Dweck, 1986; Nicholls, 1984), further research is needed to address the impact that task-oriented goals

within an ideal motivational climate might have on students within other physical activity settings.

In examining an individual's adoption of goal orientation as it related to experiences within physical education settings, Walling and Duda (1995) found that students displaying high ego-orientation attributed their success in physical education to possessing high-ability, whereas task-oriented students were more likely to attribute success to their interest in the activity, cooperation, and high-effort. These findings were similar to previous conclusions in research on achievement behavior within academic and competitive sport settings (Ames, 1992; Duda, 1989; Dweck, 1986; Nicholls, 1984). These findings, suggested that, although differences might exist within the environment from which participation takes place, the behavioral characteristics associated with both mastery and performance goal-orientations appeared to be consistent with those of previous studies.

In the differences that might exist within various contexts (e.g., reward structure, teaching philosophy, etc.), researchers such as Papaioannou (1995) and Solmon (1996) examined various factors to determine the potential influence they might have on participation motivation. Papaioannou (1995) examined the relationship between students' perceptions of the motivational climate related to: (a) perceptions of teachers' differential treatment toward high and low achievers, and (b) student motivation and anxiety as it pertains to various interactions among children of various abilities. Increased levels of anxiety and frequent displays of social comparison amongst peers were common perceptions reported by students that were involved in a performance-oriented environment. Conversely, student perceptions of competence had no effect on his or her

intrinsic motivation while involved in a mastery goal-oriented environment. Papaioannou (1995) suggested that the presence of a high-mastery and low-performance goal structure might increase an individual's level of perceived competence, regardless of his or her ability.

Solmon (1996) examined motivational patterns in contrasting learning environments within a middle school (seventh and eighth graders) co-ed physical education class. Two primary research hypotheses were developed within the study on the impact a specific motivational climate might have on student learning. The first hypothesis was whether the students' persistence (measured in practice attempts) within a variety of assigned tasks would differ in response to the implementation of a motivational climate (mastery or performance goal-oriented). The second hypothesis was whether students' attributions about success would differ in response to the implementation of a motivational climate (mastery or performance goal-oriented). Results indicated that students who had experienced a mastery goal-oriented climate were more persistent throughout various practice sessions within class than were the students who had been exposed to a performance goal-oriented climate. Additionally, students within the performance goal-oriented climate often chose not to participate in difficult activities in an effort to avoid embarrassment, whereas students within a mastery goal-oriented climate were inclined to participate regardless of perceived difficulty. In gender differences, boys were more likely than girls to adhere to perceptions of an ego-oriented climate.

Treasure's (1997) assessment of the relationships that exist between children's perceptions of mastery and performance-oriented climates, as well as their perceived

indicators of success, satisfaction, interest (boredom), perceived ability (skill), and attitude toward physical education were further explanation of Solomon's (1996) findings. Treasure (1997) hypothesized that perceptions of high mastery goal-orientation would be associated directly with attitude (positive), high-satisfaction, and high perceived-ability within a physical education setting. Treasure hypothesized that student perceptions of high performance goal-orientation, however, would associate directly with attitude (negative), low-satisfaction (boredom), and low perceived-ability within a physical education setting. Similar to previous studies involving sport and classroom settings, the hypothesized relationships were accurate. Treasure's (1997) examination of motivational climate within elementary school physical education settings reaffirmed the relationship between children's perceptions of mastery and performance goal-oriented climates and the ways in which they attributed success, feelings of satisfaction, boredom, perceived ability, and attitude towards physical education.

Spray (2000) examined goal perspectives of students within physical education settings to understand better the influence motivational climate and one's goal orientation had in regard to student motivation. The results of the study indicated that the perceived motivational climate (mastery or performance) was more influential than one's goal orientation. Additionally, Spray (2000) concluded that student perceptions of a mastery climate within physical education classes would increase feelings of enjoyment and were more likely to promote long-term participation within the class. The intervention was successful in creating a stronger mastery goal-oriented climate while successfully decreasing student perceptions of a teacher-desired, performance goal-oriented climate. Following the study, the teachers who succeeded in implementing the mastery goal-

oriented climate moved to another school and were replaced by two teachers unfamiliar with achievement goal theory and motivational climate research. Within ten months of being removed from the mastery goal-oriented climate, gains in attitudes, perceptions, and cognitions were lost and returned to a highly competitive ego-oriented climate, resulting in high numbers of non-participation (Spray, 2000). This study was an example of the importance of creating and maintaining a task-oriented climate within physical activity settings, and was used to identify a need for parent and community education for fostering a mastery-oriented climate outside of the school setting as well.

Similar to the research conducted earlier by Treasure (1997), Papaioannou, Marsh, and Theodorakis (2004) examined the effects of classroom motivational climate and individual goal orientations related to individual behavior within a physical education setting. They discovered that mastery-involving perceptions related to the existent motivational climate resulted in the promotion of intrinsic motivation (enjoyment and effort) within the population, whereas performance-involving perceptions related to the existent motivational climate positively influenced self-concept but had no significant influence on one's intrinsic motivation (enjoyment and effort).

Within the same year, Xiang, Bruene, and McBride (2004) investigated the motivational climate that existed within an elementary physical education running program called "Roadrunners." The variables of interest included achievement goals, perceived motivational climate, and student achievement behavior. Results of the study showed that the establishment of task-oriented goals and the structure of a mastery goal-oriented climate positively related to performance, motivation, and learning. Studies within the domains of the traditional classroom, various sport settings, and physical

education showed that efforts to enhance the motivation of the participant were focused on promoting a mastery-oriented climate and deemphasizing performance goal-oriented cues within achievement settings (Digelidis, Papaioannou, Laparidis, & Christodoulidis, 2003; Papaioannou et al., 2004; Solmon, 1996; Treasure, 1997; Xiang et al., 2004).

### **TARGET Strategies in Sport and Physical Education**

Theeboom, De Knop, and Weiss (1995) conducted a three-week intervention study within an organized youth sports program. The authors used an adapted version of Epstein's (1989) TARGET strategies as a framework in the study. Results of the study indicated that the presence of a mastery motivational climate resulted in an increased number of positive experiences for children while engaged in the process of learning new skills. Specifically, children reported greater enjoyment, heightened perceptions of competence, and increased intrinsic motivation (Theeboom, De Knop, & Weiss, 1995).

Digelidis et al. (2003) studied the effects of a yearlong intervention on motivational climate, goal orientations, and attitudes toward exercise and diet within a Greek middle school physical education class. The intervention consisted of 70 lesson plans designed for teaching skills and games, and 17 lesson plans for health and exercise concepts, most of which consisted of both lecture and practice. Teachers were assisted in delivering these principles through participation in seminars, meetings, and regular communication with the researchers. The teachers were afforded the freedom to teach any skills or activities desired, but were asked to maintain a mastery goal-oriented climate throughout the intervention. The intervention was framed using Epstein's (1989) TARGET strategies.

Using Epstein's (1989) TARGET strategies as a framework, Parish, Rudisill, and St. Onge (2007) discovered that the environment created by the establishment of a

mastery motivational climate could have a significant effect on a person's physical activity level. Specifically, their findings showed that a mastery climate within a toddler day care class resulted in increases of heart rate during bouts of free play. They concluded that the TARGET-structured framework of the study was used to enable children to engage in a range of challenging, yet developmentally appropriate tasks and activities. For example, an established self-reward system was implemented with the encouragement and ongoing facilitation of the day care staff. In a recent study, Bowler (2009) examined Epstein's (1989) TARGET strategies to gain a better understanding of how they were influential in student perceptions of the motivational climate and in levels of physical activity within a physical education setting. Results of the study indicated that task, grouping, and time had the greatest positive influences on student motivation and levels of physical activity within the class (Bowler, 2009).

Perlman and Karp (2007) conducted a study in which they used Epstein's (1989) TARGET strategies to help pre-service teachers develop a motivational climate within their physical education classes. Perlman and Karp (2007) were most interested in examining whether or not pre-service teachers were able to develop a motivational climate within their class. They conducted an intervention using TARGET (Epstein, 1989) and a 12-week practicum. Five themes were identified within the qualitative study (Perlman & Karp, 2007, p. 106):

- an overall desire was expressed to simply get through the lesson each day;
- early development and implementation of a motivational climate was evident;
- implementing strategies related to recognition took considerable time to be developed;
- the use of authority and time constructively became more evident throughout the practicum; and

- many pre-service teachers lacked a true understanding of how to assess and evaluate their students effectively.

Boyce (2009) intended to describe the importance of establishing a mastery-oriented motivational climate and how structuring this environment might have influence on student motivation within physical education settings. In attempt to educate others about the importance of establishing a mastery-oriented climate, Boyce (2009) provided a brief summary of the literature pertaining to motivational climate and physical education settings (Carpenter & Morgan, 1999; Papaioannou, 1995; Parish & Treasure, 2003; Solmon, 1996; Treasure, 1997). Boyce shared strategies of how to establish a mastery-oriented motivational climate using Epstein's (1989) TARGET framework; and designed a checklist intended to help teachers assess their classroom environment. Boyce (2009) concluded that a mastery climate delivered using the TARGET framework (Epstein, 1989) could have positive influence on student motivation within physical activity settings.

### **Achievement Goal Theory in College Physical Activity Courses**

On most campuses, basic instruction programs are designed to provide a wide variety of activities for students to experience and enjoy while attending college. Personal enjoyment has been accepted as instrumental in determining an individual's continued participation within physical activity. Enjoyment often is the result of perceived experiences of success, leading to increased levels of self-efficacy within a mastery-oriented setting (Bandura, 1997). In an effort to examine participant enjoyment within a college student population, Briggs (1994) investigated the relationship of six variables as predictors of enjoyment within an introductory volleyball course. The variables investigated within the study included: (a) motor trials (skill attempts), (b) successful motor trials (skill attempts), (c) perceived success, (d) perceived challenge, (e) pre-class

mood, and (f) the perception of teacher behaviors. Results of the study indicated that a participant's perception of success was the strongest predictor in enjoyment of the experience, accounting for over 36% of the variance in enjoyment. This study showed that the frequency with which a student perceived to have experienced success within the class needed to be considered.

Kavussanu and Roberts (1996) examined perceptions of motivational climate as it relates to self-efficacy and intrinsic motivation within a college physical activity class. Similar to findings discovered within the contexts of a traditional classroom, sport, and physical education, the study showed a positive association between a mastery goal-oriented climate and the variables of enjoyment, effort, perceived competence, and self-efficacy. Gano-Overway and Ewing (2004) conducted a longitudinal study examining the existence of three issues specific to the existing motivational climate within a variety of college physical activity courses. These issues included: (a) an examination of the perceived motivational climate and goal orientations over time, (b) an investigation of how a participant's goal orientation may fluctuate while in the presence of an opposing climate orientation, and (c) determining how the motivational climate may impact practice strategies. In addition, the researchers suggested a need for further investigation of the potential influences that may exist pertaining to motivational climate and achievement behavior within physical activity settings (Gano-Overway & Ewing, 2004).

### **Summary**

Achievement goal theory states that one's goal orientation and perceived motivational climate interact to influence achievement behavior (Dweck & Leggett, 1988; Nicholls, 1989). Researchers had examined the influences of a structured

environment (motivational climate) regarding a participant's adaptation of an achievement goal within classroom (Ames, 1992), sports, and physical activity settings (Treasure & Roberts, 1998). To date, few studies have been used to examine factors that influence student motivation within a college physical activity course. Such a study is needed to gain a better understanding of the motivational factors that exist within college physical activity classes.

## **CHAPTER III**

### **METHODOLOGY**

#### **The Research Process**

In this chapter, the qualitative research process is explained in detail. Information pertaining to participants, setting, procedures, data collection, and data analysis is explained within the context of a qualitative research design. In addition, the appropriateness of selecting a qualitative research design to address the research question is discussed.

The aim of the current research was to gain understanding of factors influencing student motivation within physical activity settings. Before establishing a research framework, the various methodological approaches believed to best address the research question were explored. Both qualitative and quantitative research designs were examined. Numerous studies have used quantitative designs to examine student motivation within basic instruction programs on college and university campuses (Avery & Lumpkin, 1987; Lumpkin, Leath, & Almekinders, 1990; Quarterman, Harris, & Chew, 1996; Savage, 1998; Soudan & Everett, 1981; Yoh, 2001); while considerably fewer studies have examined student motivation within college physical activity courses using a qualitative design (Higgins, Lauzon, Yew, Bratseth, & Morley, 2009). Qualitative research design was chosen for the current study instead of a quantitative design as a means to increase “understanding the complex interrelationships among all that exists”

(Stake, 1995, p. 37). A qualitative research design was used to gain a detailed understanding of the complexities surrounding factors with influence on student motivation, as shared by the instructors and students who participated within the course. While recently conducting a similar study, Russell (2008) shared similar reasons for using a qualitative research design to investigate student perceptions of a Basic Instruction Program (BIP):

Having a non-traditional dialogue with students can provide the deeper insights into their ideas, recommendations, and perceptions of BIP courses and GTA [Graduate Teaching Assistants] instructional effectiveness. Currently such depth is lacking due to the use of current standardized course evaluation instruments. More specifically, qualitative-oriented student evaluative feedback can be utilized more effectively to make concerted efforts to inform the administrative, pedagogical, and support processes impacting GTAs who traditionally serve as lead instructors of BIP courses. (p. 69)

The research process can be broken down into four elements (Crotty, 1998). These elements include: (a) *epistemology*, the theory of knowledge embedded within the theoretical perspective and thereby in the methodology; (b) *theoretical perspective*, the philosophical stance one develops as he or she searches for a means by which to ground the methodological approach intended for the study; (c) *methodology*, the strategy or design that provides the necessary means in which to select appropriate methods in research; and (d) *methods*, the techniques or procedures used to gather and analyze data (see Figure 5).

*Figure 5. The four elements of research. Adapted from The Foundations of Social Research (p. 4) by M. Crotty, 1998, Thousand Oaks, CA: Sage. Copyright 1998 by Michael Crotty.*

According to Crotty (1998), these four elements are determined once the researcher has addressed the following four questions: (a) What *methods* do we propose to use? (b) What *methodology* governs our choice and use of methods? (c) What *theoretical perspective* lies behind the methodology in question? (d) What *epistemology* informs this theoretical perspective (p. 2)? Trochim (2000) contended that epistemology and methodology were intimately related, suggesting that epistemology was representative of one's philosophy or understanding of the world, and methodology involved one's application within the world itself.

### **Epistemology**

#### **Constructionism**

Epistemology is defined as “the theory of knowledge embedded in the theoretical perspective and thereby in the methodology” (Crotty, 1998, p. 3). Constructionism was determined as the best fit for the current study because an individual's interpretation of meaning within an experience is “constructed” in relation to the phenomena that exist between the participant and the factors of an established college physical activity class. Constructionism is an epistemology that, according to Crotty (1998), may be used to support the idea that:

There is no objective truth waiting for us to discover it. Rather, truth, or meaning, comes into existence in and out of our engagement with the realities of the world. There is no meaning without mind. Meaning is not discovered, but constructed. (p. 8-9)

Constructionists believe that meaning does not simply exist on its own, but rather is constructed due to an encounter or presence of another being and the interactions that exist between them. Greenwood (1994) offered a unique comparison of meaning as it applies to both physical and social phenomena:

Physical and social phenomena...differ in one essential respect. Chairs may exist independently of our knowing what they do; our knowledge of the existence of chairs is not constitutive of their existence. In contrast, social phenomena do not exist independently of our knowledge of them...Social realities, therefore, are constructed and sustained by the observation of the social rules which obtain in any social situation by all the social interactors involved...Social reality is, therefore, a function of shared meanings; it is constructed, sustained and reproduced through social life. (p. 85)

This theory is well-applied to the notion that each individual creates a unique interpretation of meaning as he or she engages thought, brought upon by the existence of a given object (factors that influence student motivation) within an existent environment (college physical activity course). Crotty (1998) further explained that the construction of meaning might have occurred while within or outside of the particular environment. Hence, the experience of an “aha” moment may not occur only within the classroom setting (e.g., gym, field, or swimming pool), but outside of class as well. Each student’s experience is considered unique; therefore, each individual may interpret his or her experiences, as well as attribute their acquired knowledge, skills, and ability to a variety of factors. The presence of such interpretations within the study drives the theoretical framework of interpretivism.

### **Theoretical Perspective**

Whereas an epistemology provides understanding to explain what is known, a theoretical perspective is defined as, “the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria” (Crotty, 1998, p. 3). Due to the existent nature of education as a learning process, interpretivism (often used interchangeably with constructivism), or a person’s interpretation of his or her involvement as it applies to the educational experience, seemed to fit best for the current study. The purpose of the study was to examine student motivation within physical activity settings and factors influencing student motivation in two college physical activity classes.

#### **Interpretivism**

In interpretive research, the journey of understanding and applying knowledge is considered a learning process; the involvement pertaining to both the student and the instructor in a college physical activity class is considered a lived experience (Merriam, 1998). According to Schwandt (1998), interpretivists believe that to understand and take meaning from this world, a person must interpret it. Interpretivists argue that although the goal of the natural sciences is scientific explanation, the goal of the social sciences should be grasping or understanding of meaning as it exists within a social construct. A methodological framework that included the use of a preexisting criterion, that is, Epstein’s (1989) TARGET strategies, was established in the current study as a guide while analyzing factors that influenced student motivation within each class.

#### **Achievement Goal Theory, Constructionism, and Interpretivism**

Interpretivism was specifically chosen in alignment with achievement goal theory (Ames, 1992; Dweck, 1986; Nicholls, 1984) because cognitions and behaviors result

from an individual's perceptions of interactions (environmental and others) that occur within a college physical activity class. The examination of student motivation was used to provide insight on how a student interpreted these experiences or conditions as being conducive or non-existent in pursuit of skill acquisition, fitness, and enjoyment within college physical activity settings. The theoretical framework of interpretivism was configured within a constructionist epistemology to allow for the freedom of individual interpretation and constructed meaning while a student assumed ownership of his or her experiences within a college physical activity setting.

### **Methodology**

#### **Basic or Generic Qualitative Study (Interview Study)**

Methodology is defined as “the strategy, plan of action, process or design lying behind the choice and use of particular methods to the desired outcomes” (Crotty, 1998, p. 3). This study was a qualitative interview design using interview tenets from Merriam (2009) and Crotty (1998) where questions were preplanned, but flexible in nature in order to allow naturally emergent lines of information to be pursued. For the purposes of this study, factors that influence student motivation were examined within two college physical activity classes. The use of interview study methodology was used to examine student motives within the two physical activity classes in detail.

According to Merriam (1998) the use of a basic or generic qualitative study (interview study) is common in education-related research due to the researcher's desire to “discover and understand a phenomenon, a process, or the perspectives and worldviews of the people involved” (Merriam, 1998, p. 11). Merriam (1998) indicated that qualitative research had limitations as well, citing the researcher's ability or inability to document accurately the experience as it happened. Researcher bias is inevitable;

therefore, prior awareness of potential bias and counter measures should be implemented to ensure the most accurate depiction of the experience. To address my own research biases, the process of triangulation and member checks was used to limit the inevitable influences that are associated with bias and to ensure trustworthiness. In addition, I have acknowledged my own biases about the investigation and in doing so have done what I can to avoid an inaccurate depiction of the study.

### **Researcher Stance**

Merriam (1998) noted that one strategy for enhancing the internal validity of a study is for the researcher to clarify his or her biases at the outset of the study. In this process, the researcher clarifies his or her assumptions, worldview, and theoretical orientation at the outset of the study to assist the reader's understanding of the researcher's bias (Merriam, 1998). Janesick (1994) offered the following perspective regarding the researcher's perspective:

As we try to make sense of our social world and give meaning to what we do as researchers, we continually raise awareness of our own biases. There is no attempt to pretend that research is value free. Likewise, qualitative researchers, because they deal with individual persons face-to-face on a daily basis, are attuned to making decisions regarding ethical concerns, because this is part of life in the field. From the beginning moments of informed consent decisions, to other ethical decisions in the field, to the completion of the study, qualitative researchers need to allow for the possibilities of recurring ethical dilemmas and problems. (p. 212)

In the current study, researcher perspective was acknowledged in several ways. In addition to pursuing this research because of personal interests in the area of exercise motivation, I coordinated the BIP offered at the university that participated in the study in an appointed role as the Basic Instruction Program Coordinator. This was not a supervisory role, but rather I served as a liaison and provided resources and direction as needed to the instructional faculty and staff of the basic instruction program. My

responsibility was to assist each faculty member in a variety of ways to ensure that the physical activity courses offered were of the highest standard. Success for such programs is not measured in terms of high student enrollment or generated revenue, but rather is measured in availability of opportunities for student body members in personal growth within physical activity settings. To best serve students, faculty and staff must improve their understanding of students' experiences within physical activity courses. As a result, I chose the role of case researcher as advocate.

Steps were used from the beginning to the end of the study to account for the inevitable researcher bias. Such steps included:

- providing a detailed consent form explaining participant rights as well as potential risks involved in participating in the study;
- clearly identifying my role as researcher, as well as my role as an assistant professor and coordinator of the basic instruction program to all participants;
- taking measures to ensure trustworthiness (triangulation and member-checks); and
- taking measures to ensure dependability (reader generalization).

Because of my involvement at the time as coordinator of the BIP, I chose not to use observation as a means of data collection. My role as coordinator might have compromised the nature of the classroom environment had I chosen to observe within the field.

### **Researcher Perspective**

As a teacher I have often wondered how my instruction and more specifically my structuring of the classroom have influenced students' present choices in regard to their participation in physical activity. I first became interested in the idea of examining the influences of student motivation within college physical activity courses while teaching aquatics as a graduate student. I was assigned to teach an advanced swimming and

conditioning course. Although I had an extensive aquatics background, I was not experienced with competitive swimming. With my experience in mind, I determined what I thought was important for each student to learn in the course. I also made decisions related to how I might best contribute to each student's experience in the class.

To aid my decisions I sought the opinions of various associates who were professionals in competitive swimming at the time. These associates offered different perspectives as to how I might go about teaching an advanced swim course, including information on various methods of delivery, content, and training as might resemble a competitive swim practice. This would seem appropriate considering that most of the students enrolled in the course were former high school varsity swimmers; however, I soon realized (through observing and interacting with the students) that most of them were in search of other objectives. The students collectively shared four goals at a meeting held on the first day of class:

- experience new training methods;
- practice routines he or she had experienced prior to enrolling in the class;
- to place themselves in a structured course in hopes of having an instructor coach them as they had been coached previously, and
- to workout while earning college credit.

To most of the students' initial dismay, I structured the course (with little knowledge at the time about student motivation literature) in a way that students had the responsibility of setting personal goals, designing workouts, and giving evaluative feedback rather than administering the course using a command style approach (Mosston & Ashworth, 2002) often found in competitive settings. As the instructor, I purposely reminded myself to

resist my desire to become a primary source of feedback and praise for those students seeking approval.

At the conclusion of the course, students were asked to reflect upon their class experience and share their intentions related to future involvement in aquatics. Many students shared initial frustrations at being asked to design their own workouts and displeasure with me for not being more involved as the instructor. A majority of the students, however, shared that by the end of the course they felt a sense of achievement for having taken ownership of their workouts and appreciation for their class peers who had assisted them by providing evaluative feedback throughout the semester. That experience had a lasting impression on my desire to continue searching for ways in which instructors may provide experiences within physical activity settings to motivate students to be physically active for a lifetime.

## **Methods**

### **Context**

At the time of the study, all students were required to take a minimum of two course credits offered by the Department of Physical Education in order to satisfy the Physical Development and Wellness requirement within the university's General Education Program. All courses offered within the BIP used a letter-grade student evaluation system, and carried one or two hours of academic credit depending on the particular course. Each academic term, the BIP offered the university student body approximately 20 courses, including individual sports (e.g., tennis, racquetball, and golf), team sports (e.g., basketball, flag football, and soccer), and a variety of fitness-oriented courses.

The two classes examined in the study were separate sections of a course entitled Lifetime Fitness and Wellness offered within the BIP by two different members of the teaching faculty. Each class was held twice a week throughout the duration of a 16-week spring semester. The course was designed to enhance participation in physical activities throughout a person's lifetime (See Figure 6).

**Course Description:** Participation and increase skill knowledge through participation in various fitness conditioning practices (e.g. strength training, cardiovascular training, core training, etc.) intended to enhance participation in physical activities throughout a person's lifetime.

*Figure 6. Course Description. Adapted from HP 175 – Lifetime Fitness & Wellness, Course Syllabus (Department of Human Performance, Minnesota State University, Mankato, 2007)*

The focus of the course was to introduce new skills or refine skills pertaining to the components of health-related fitness (e.g., cardiovascular endurance, muscular endurance, muscular strength, flexibility, body composition). Although both sections of the course shared the same course title and description, each instructor was allowed the freedom to structure and deliver the course to his or her own liking as long as the pre-existing course objectives were accomplished.

The two classes examined in the study were conducted on campus within the fitness and recreation center. The facility had received a complete renovation and was opened to all students, faculty, and staff in the fall of 2005. The fitness and recreation center is a two-story, state-of-the-art facility with three full-size courts on its lower level, primarily used for participation in basketball and volleyball. In addition, the lower level has an extensive array of strength training equipment arranged in an L-shaped configuration in effort to avoid congestion.

The second floor consists of an open-air balcony with a rubberized four-lane running/walking track and matted areas placed alongside the track to provide ample space for core-training exercises (crunches, medicine ball exercises, etc.). This second floor also contains more than 40 cardiovascular machines including a variety of elliptical trainers, treadmills, bikes, and stair-climbers. Each machine is fully equipped with a keyboard and monitor system with which student can select choices from watching television to checking e-mail while exercising.

**Participants**

A purposeful sample (Patton, 2002) of fifteen participants (13 students and two instructors) was recruited from two college physical activity classes of 25 students each. Purposeful sampling was used to gain a better understanding of the factors that influence student motivation within a college physical activity course. Once both instructors agreed to participate, every student enrolled in the two classes was sent an informative e-mail inviting them to participate in the study. Informational consent forms were discussed and distributed to both instructors and all students that were interested in participating in the study. The students were informed in writing of their right to refuse to participate in the study, and were informed of their individual rights in person at an informational meeting held without the presence of the instructors to help ensure that instructors were unaware of which students participated in the study. The informational meeting was audio taped to ensure the policies and procedures provided by the institutional review board were followed. If a student was not interested in participating in the study, he or she was assured that his or her rights would be respected and that involvement in the class itself would not differ from than that of a study participant. The 13 students who participated were chosen because they were enrolled in the Lifetime Fitness and Wellness course. The

first 13 students who responded to the recruitment letter were selected as participants for the study. The researcher believed that a sample of 13 students would provide an adequate representation of student perspectives needed for data collection and analysis. If, in the event, it was determined that data saturation had not taken place, additional students would have been interviewed.

The participants' involvement in the study included their willingness to be interviewed once near the later part of the semester regarding individual perceptions they formed while participating in the course. The informational consent forms (See Appendix A) required signatures from the participants acknowledging their willingness to participate in the study as well as an agreement to be audio recorded during the interview. The researcher's signature indicated recognition of the consent form as a contractual agreement to ensure that protocols to protect the rights of the participant were followed. In addition, all participants were informed that all results pertaining to the study would be made available to them, if interested, at the completion of the study.

**Instructors**

Both instructors were recruited because of the particular course that they taught, not for any other reason. Each instructor taught a section of a course entitled Lifetime Fitness and Wellness. The instructors were informed in writing of their right to refuse to participate in the study, and were informed of their individual rights in person at an informational meeting held separate from the student-participant meeting. The informational meeting was audio taped to ensure the policies and procedures provided by the institutional review board were followed. The two instructors selected for the current study shared a number of common characteristics: (a) ethnicity (Caucasian), (b) dual-appointment faculty (instructor and employed outside of the department), (c) former

collegiate athletes, and (d) education level (master's degrees in sport and exercise-related fields).

**Kay.** At the time of the study, Kay was entering her third year of teaching fitness courses within the basic instruction program. In addition to her responsibilities as an instructor, Kay was employed within Campus Recreation as a Program Coordinator for Fitness, Wellness, and Special Programs. Kay had recently earned a Master's Degree in Sport Psychology and shared that she decided to get into teaching because she felt she could positively influence college students' lives and make a difference as an instructor within the basic instruction program. Furthermore, Kay indicated that her own personal transition from high school to college served as one of the most influential times in her life, and attributed many of the lessons learned during that time to the teacher she has become. When asked about the importance of the basic instruction program, she shared:

I think that offering all of the physical activity offerings that we do is a good idea because it allows students the opportunity to experience a variety of activities and allows people to find their niche. Also, the 2-credit requirement may serve as an excuse for students to go and experience something new that they wouldn't have maybe tried but with the security blanket of others knowing that it is required they are able to go and participate without feeling the embarrassment of their choices for participation in new activities.

**Brad.** At the time of the study, Brad was entering his second year as a graduate assistant coach for Men's Track and Field. In addition to his coaching and teaching responsibilities, Brad was completing a Master's degree in Sport Management. As an undergraduate student, Brad participated in athletics as a Division-1 athlete in Track and Field. He served as a two-time captain and NCAA Division-1 national participant in the high jump.

According to Brad, his interest in teaching was instilled in him at a young age. He shared that his mom was a teacher for 24 years and, at the time of the study, was completing her tenth year as a principal. He indicated that all of his aunts (mother's side) are also teachers and "so, it's just kinda in the blood!" He explained that this was his first semester and, when asked why he got involved with teaching in the basic instruction program, he indicated: "I just felt it was a step in the right direction as far as building myself, my character, and growing as a person."

Each instructor was scheduled for an interview held within the last 2 weeks of the semester. Instructors also provided their course syllabi. The instructors were not made aware of the student participants' identities and therefore could not distinguish participants from non-participants unless otherwise shared by the participant himself or herself. At the completion of the study, both instructors were asked if they had become aware of the identities of the student-participants; both shared that they had not.

### **Students**

Students at the university at which the study was conducted had a minimum two-credit requirement from within the general education curriculum offered within the Department of Physical Education. The courses have remained popular (based on enrollment) as electives selected by undergraduate students of all disciplines.

**Todd.** Todd (age 23) was a fifth-year senior majoring in Law Enforcement. Todd enrolled in the course as a way to prepare for a required tactics class within his major. He shared that the tactics class included a physical agility component of various assessments: a timed 1.25 mile run, 440 yard sprint, 50 yard sprint, sit-ups, crunches, push-ups, squat-thrusts, pull-ups and dips. He shared that he knew about the requirements for a number of years but still found it difficult to get motivated and go to the gym to exercise. He

admitted that prior to taking the class he was not very knowledgeable about fitness-related principles. He had never participated in a high school sport, and did not have positive experiences in physical education while growing up, so he had hoped to learn new ways to incorporate physical activity into his life as an adult. More specifically, he wanted to ensure that he would be well prepared to pass all of the physical fitness tests that were required of him

**Ben.** Ben (age 20) was a sophomore Economics major. He shared that during his freshman year there were many times that he intended to work out but often did not. He believed that enrolling in the class would provide additional incentive to get a workout in a couple times a week while attending college. He added that he used to work out in high school as a member of the hockey team, but since arriving at college, he had strayed away from exercise. At the beginning of the semester, he shared that he found it difficult to get motivated for class, and attended class only to ensure that he earned a high grade. However, as time passed, he started to recognize progress (muscle gain) and became eager to attend each class.

**Melissa.** Melissa (age 20) was a sophomore pursuing degrees in Mass Communications: Public Relations, Studio Art, and Political Science. Her self-described interests included current events, politics, skiing, sculpting, and media study. Despite not being required to take a physical activity course (for college credit), she enrolled in the class after hearing positive reviews the previous year from her freshman roommate. Melissa described herself as always being physically active but admitted that, since arriving at college, she has become involved in sport-related activities. She shared that she found the class to be beneficial in the following ways: (a) provided a convenient way

to ensure that she was getting her workouts in, (b) appreciated the opportunity to learn new things, and (c) enabled her to unwind and to focus better on solving other problems.

**Ross.** Ross (age 19) was a sophomore Physical Education Teaching major. The course was required within his major, but Ross shared that it was a course that he would have been interested in taking regardless of the requirement. In addition to his interests in pursuing a teaching career, Ross was specifically interested in the area of strength and conditioning. Ross was recovering from shoulder surgery and was a little concerned about how he would be able to participate fully throughout the semester. However, he shared that his instructor (Kay) was extremely accommodating and helped him research various ways that he could modify his exercises while rehabilitating his shoulder. He added that one of the greatest draws of the course was that he was sure to get a workout in at least twice a week and that he planned on taking similar classes in the future.

**Cristen.** Cristen (age 19) was a freshman with hopes of being accepted into the nationally recognized Athletic Training Program. When asked why she enrolled in the class, she shared that doing so would meet the university's general education requirement, but that she was also interested in coaching and thought the class might, additionally, give her more ideas related to the field. She believed that her instructor's enthusiasm and the way that she organized the class inspired her to give her best effort as a student; and that she would look for other classes with the same instructor to take in the future, regardless of university requirements.

**Megan.** Megan (age 20) was a sophomore Nursing major. As a result she was interested in improving her own health-related fitness. She admitted that before taking the class she was not really all that into weight lifting, but now she is much more comfortable

with lifting and enjoys it. She had not heard anything about the class prior to taking it but knew that it satisfied the university's general education requirement. Another reason she shared for taking the class was that it served as a good excuse to go to the gym twice a week, and hoped that taking the class would help her remain motivated to continue working out long after the course had ended.

**Stacy.** Stacy (age 22) was a junior Public Relations and Communications major. She signed up for the same course a year earlier but it did not work well with her schedule and she had to drop it. Although only in the class for limited time, she realized early on that she wanted to take the class prior to graduation. Stacy had been physically active in the past; however, taking the class helped her establish the routine and structure that she needed to maintain a physically active lifestyle.

**Amber.** Amber (age 19) was a sophomore Accounting major. Amber enrolled in the course after hearing about it from a friend who had taken it freshman year. Amber admitted that, during her freshman year, she was not physically active and, therefore, wanted to take a class that would ensure that she was active at least twice a week throughout the semester. She indicated that, before taking the class, weight lifting was not something she would have considered trying, but now she feels comfortable in the weight room and lifts weights on a regular basis. She feared that, without the structure of the class, she would not motivate herself to get to the gym on a regular basis. Therefore, regardless of university general education requirements, she planned to take additional fitness courses in the future.

**Cathy.** Cathy (age 19) was a freshman Exercise Science major. For Cathy, the course was required within her program of study. She was a recent transfer student (from

another university) and knew little of the class prior to the first day; other than it involved things she enjoyed, such as weight lifting and various exercises. She considered herself to be physically active prior to taking the class but shared that, because of her experiences in class, she has even more confidence now while working out at the gym.

**Morgan.** Morgan (age 20) was a sophomore Liberal Studies major. Morgan first came across the course while looking for an additional credit to take to ensure that she was enrolled as a full-time student (12 credits). Morgan was looking for a class that would provide a break from other courses within her program that required numerous readings and written papers. Due to the demands of being a college student, she found little time to exercise as a freshman and believed that taking a fitness class would provide the opportunity to work out at least twice a week throughout the semester. She was hopeful that her experiences in class would teach her new ways to ensure that she remained physically active in the future, despite the demands of a busy schedule while attending college.

**Rachel.** Rachel (age 20) was a sophomore who had yet to declare a major. She was aware of the university's general education requirement but shared that she specifically enrolled in this course intending to reestablish an exercise routine after adopting a sedentary lifestyle over the summer while living with her parents back home. She was confident that she could apply the skills learned throughout the semester long after the class had finished, regardless of her environment.

**Mike.** Mike (age 18) was a freshman Aviation major. Mike enrolled in the class to get back into shape and because it would satisfy the university's general education

requirement. Mike mentioned that he found the structure of the class to be beneficial, and planned to incorporate a similar structure on his own once the course was completed.

**Kara.** Kara (age 19) was a sophomore Psychology major. Although she admitted that the university's general education requirement had influenced her decision to take a physical development and wellness course, she added: "this is a class that I would not mind taking anyways." After returning home to live with her parents over summer break she struggled to establish a workout routine without the resources she had become accustomed to having while attending college (fitness center). She intended to apply the knowledge and skills learned from class for years to come, to ensure that she remained physically active regardless of her surroundings.

### **Data Collection**

Data collection methods have been defined as "the techniques or procedures used to gather and analyze data related to some research question or hypothesis" (Crotty, 1998, p. 3). As Crotty (1998) indicated, methods of data collection ought to be determined by the research question or questions and factors unique to the study (i.e., number of participants, environment, and length of the study). To gain an understanding of the factors that influence student motivation within two college physical activity courses, data were collected through conducting semi-structured interviews and artifacts. To ensure the protection of the participants' rights, all the procedures and documents that were used as data were approved according to the institutional review board before the recruitment of participants. The approval process was completed both at the university where I was employed at the time, which was the same university at which the study was conducted, as well as at the university where I was enrolled as a doctoral student.

**Semi-Structured Interview**

The researcher interviewed the instructors of the two physical activity courses examined in the study. A single (individually administered) semi-structured interview was held with each of the instructors during week 14 of the 16-week semester. Each of the instructor interviews lasted approximately 45 minutes. Thirteen students also were interviewed. A single (individually administered) semi-structured interview was held with each of the 13 students who participated in the study. Each of the student interviews lasted between 30 and 45 minutes. Merriam (1998) defined a semi-structured interview as “an interview in which all of the questions are more flexibly worded, or a mix of more and less structured questions” (p. 74). Consequently, both the student and instructor interviews followed that of an open-ended format, yet contained specific predetermined questions designed to redirect the respondent to focus on items deemed important to the interview. Merriam (1998) noted that asking good questions was essential for stimulating desired responses that will provide information useful to the study’s focus. An interview guide was used (See Appendices B & C) to avoid certain aspects of questioning in an effort to get as thorough and valid a response as possible. The first effort was to avoid leading questions that might reveal a bias or assumption regarding the interviewee’s participation in the physical activity course. These types of questions were avoided to ensure that the participants were not unintentionally set up to accept the researcher’s point of view. The second effort was made to avoid the use of yes-or-no questions, which would result in a limited response and an unnecessary predetermined need to probe further as an interviewer (Merriam, 1998). The interview guide consisted of several main questions that were asked of each participant. However, probing or follow-up questions were also used at times to clarify points or ask for a deeper perspective.

Each participant interview was held in the researcher's office. Before starting each interview, the interviewee was provided a copy of the original consent form that acknowledged his or her agreement to participate in the study as well as his or her approval of being audio recorded. Digital recording allowed the researcher to concentrate on the interview and questions as opposed to writing down the information while the interview was conducted. Once all interviews were completed, each was transcribed verbatim using ScanSoft Dragon Naturally Speaking Software (a PC transcription program). Upon transcription, each respective interviewee was provided a copy of his or her transcribed interview to review (member checking) so he or she could confirm the essential facts and evidence presented (Yin, 2003).

**Documents / Artifacts**

Documents or artifacts were collected to add another rich data source. These included course syllabi collected from each of the two instructors who participated in the study. Merriam (1998) indicated that documents were "a ready-made source of data easily accessible to the imaginative and resourceful investigator" (p. 112). Merriam (1998) also used the term document as the umbrella term to refer to a wide range of written, visual, and physical material relevant to the study at hand. Because the study consisted of two class sections of the same course, taught by two separate instructors; the two course syllabi that were collected shared identical components (e.g., course title, course description, and course objectives), as well as similarities (e.g., course content), and differences (e.g., course assessment and evaluation).

## **Data Analysis**

### **Process**

According to Merriam (1998), “choosing a qualitative research design presupposes a certain view of the world that in turn defines how a researcher selects a sample, collects data, analyzes data, and approaches issues of validity, reliability, and ethics” (p. 151). In addition, Merriam (1998) alluded to the notion that data analysis is not a linear process within a qualitative design, but rather a process that occurs simultaneously to data collection. Stake (1995) offered a reminder for both the reader and the researcher pertaining to the process of data analysis within qualitative research:

Ultimately, the interpretations of the researcher are likely to be emphasized more than the interpretations of the people studied, but the qualitative researcher tries to preserve the multiple realities, from the different and even contradictory views of what is happening. (p. 12)

Therefore, data collection and analysis were performed concurrently. That is, as the data were collected, they were interpreted and used to address the research question. Inductive analysis design allowed for the important concepts to develop from patterns found within the data without presupposing what they would be in advance. During the early stages of data analysis, it was difficult to keep an open mind and avoid searching for principles specifically related to TARGET (Epstein, 1989). However, I soon recognized my predisposed tendency to look for TARGET principles and ensured that all developing concepts were thoroughly analyzed. To organize and analyze the data effectively, a data management system was established. Electronic folders were used to organize all documents derived from course syllabi and interview transcripts, which were housed on a separate external hard drive. All hard-copied materials were locked in a file cabinet within the researcher’s office.

## **Transcription**

Data transcription is a process by which the researcher (or someone hired by the researcher) produces verbatim transcription of previously conducted and audio-recorded semi-structured interviews. Although transcribing interviews is time consuming, Merriam (1998) suggested several benefits for the researcher personally transcribing the interviews. These benefits included: (a) cost savings, (b) gaining an intimate familiarity with the data, and (c) familiarity with terms often mistakenly interpreted by an outsider hired to transcribe the data. I chose to transcribe the interviews myself using a Sony ICD-S10 digital recorder and ScanSoft Dragon Naturally Speaking software (a PC transcription program). The Dragon software is speaker dependent and was not designed to transcribe multiple voices. However, I successfully used the software to transcribe interviews using a basic technique called voice writing or parroting. The process of voice writing or parroting each interview consisted of:

- recording the interview using a Sony ICD-S10 digital recorder;
- downloading the electronic recording of the interview to my PC;
- listening to the recording through a Dragon headset, and
- repeating the recorded interview as I heard it into a Dragon microphone.

Speaking the text aloud in my own voice enabled the Dragon software to accurately transcribe the audio, and converted my voice to text simultaneously. Therefore, unlike the process of many transcription programs, there was not a need constantly to rewind the audio while trying to type out the corresponding text.

At the top of each transcribed interview the name of the interviewer, the date, and the time of the interview were stated. Once completed, the interview was played back to correct any errors that had been made to ensure the validity of the transcription. The

transcribed interview consisted of a single-spaced format; however, a double-spaced format was used between statements made by the interviewer and the interviewee to make it easier to read. Two-inch side margins were used to provide ample space for typed comments that would later be made while the data were analyzed during the process of coding (See Figure 7).

I think I did a lot of learning on my own. Just the transition from high school to college and all of a sudden you don't have parents there anymore and now you have to make all of the decisions and live with the consequences of them and self-sufficient person and not believe that oh, I have to call my mom and dad, or gain roommates approval or this or that but rather be confident in your decisions and know that you have become educated enough to make them.

What approach do you take in regard to the tasks and activities that you assign within the class?

WSU 11/5/08 5:30 PM

**Comment [1]:** interesting...as an instructor...she points out that much of her own motivation and desire to teach this course...and for it to be successful is due to the fact that she too...had a difficult transition from high school to college.

*Figure 7. Open Coding. (Grabau, 2013).*

### **Basic Description and Coding System**

Basic description is a means of organizing one's thoughts before the process of category construction and the identification of themes (Merriam, 2009). Merriam explained the benefits of providing a descriptive account of the findings within a study as an early means of data analysis. This narrative account depicts the researcher's interpreted meaning of documents (i.e., transcribed interviews and course syllabi) analyzed within the current study. Basic description is the first step of transforming data into a prepared format. Once the data were transcribed, a two-step coding process was used to analyze the data. The first coding process (open coding) involved making notations next to bits of data that struck me as interesting or potentially relevant. It is called open coding because of the researcher's openness to many things being relevant

during the early stages of data analysis (Merriam, 2009). The second coding process (axial coding) consisted of grouping notations created within each transcript that seemed to go together, due to commonalities. Axial coding is merely a more directed approach at looking at the data, to ensure that all aspects have been identified (Merriam, 2009). I used the process of highlighting, using different colors to distinguish between, and represent, various concepts during the early stages of data analysis. The highlighting process provided a much-preferred visual context, which assisted me throughout the process of data analysis.

### **Category Construction**

Once a basic description of the data has been prepared (open and axial coding), Merriam (1998) suggests the construction of categories designed to link similar occurrences existent within the study. The category construction process should be exercised in conjunction with data collection (Merriam, 1998). Categories are generated according to the researcher's intuitive sense of shaping the data in ways that are true to their occurrence. Participants' responses to the semi-structured interview questions were grouped and analyzed to obtain insight into various aspects of the participants' experiences in the class. Data that appeared to have certain commonalities were sorted into groupings. In reading each document, a variety of different colored highlighters were used to establish a system of categorization. As mentioned earlier, a process of highlighting similar occurrences in their representative colors assisted the process of categorization. The color-coordinated highlighting seemed beneficial for separating the data into categories.

After I finished an entire transcript or document, I attempted to keep a running list on a separate sheet of paper of the groupings within the transcript or document; however,

this extra list was not helpful. Admittedly, I struggled at my attempts to organize data into categories using a traditional running list of common occurrences, so instead I utilized the process of highlighting, and later concept mapping, throughout the data analysis process. The process of highlighting is a widely accepted method of coding (Merriam, 1998) and was repeated for each transcript used in the study (See Figure 8).

to participate each class period. we also have three write-ups on lectures. There are 6 to 8 available lectures and we are required to attend and write-up a minimum of three...but we have the option of choosing which three or more we wish to attend.

Well even if I didn't take this class...I would be in the gym at least two times a week anyway. But this class was just really convenient for me that I could go workout and learn a bit more about my own personal fitness plan and my own personal fitness goals. I personally like to go and workout because it really helps me to unwind and to focus better on solving other problems that arise and helps me feel better and to clear my mind. For me exercise really

wsu 11/5/08 1:49 PM

**Comment [5]:** It will be interesting to find out if the majority of students are motivated to participate due to the attendance requirement or because of the impact that physical activity within the class is having on their lives.

*Figure 8. Highlighting and Category Construction (Grabau, 2013).*

Categories were adjusted as more data were analyzed. The final stage in the process involved the construction of themes and ideas by means of a concept map. Based on provisional interpretations of various statements made by the participants (students and instructors), tentative themes were generated. Themes were based on commonalities between participants' experiences specific to student motivation within the class (Merriam, 1998). The concept map provided a visual document and assisted me in collecting items of similarity, identifying items of dissimilarity, and establishing themes.

One benefit of using qualitative analysis was that I soon became aware of my preference as a visual learner. Once I learned to utilize concept maps, I more efficiently organized data into categories and subsequent themes.

### **Trustworthiness**

Trustworthiness is a qualitative research term comparative to the quantitative research concept of internal validity (Merriam, 1998). Trustworthiness is used to answer the question of whether or not investigators are observing or measuring what they intended to measure. All researchers strive to develop a research design that will yield trustworthy (valid) and dependable (reliable) results. In an effort to enhance internal validity, triangulation, member-checks, and peer debriefers were utilized to review aspects of the study including tentative themes, methods, and conclusions to enhance the internal validity and dependability of the study (Merriam, 1998).

### **Triangulation**

Triangulation is a procedure used to check the integrity of the inferences one draws and can involve the use of multiple data sources, multiple investigators, multiple theoretical perspectives, multiple methods, or any combination of the four (Denzin, 1978). Triangulation was achieved in the current study with use of two data sources. These data sources included student and instructor interviews and course syllabi, which allowed for the development of converging lines of inquiry (Yin, 2003). Using more than a single data source provided what Yin (2003) referred to as multiple accounts of the same phenomenon as a means to help to confirm the trustworthiness of the data.

### **Member-Checks**

Merriam (1998) defined member-checks as a process of taking data and tentative interpretations back to the source from whom they were derived and asking him or her if

the results are plausible. To ensure trustworthiness with interview data, member-checks were completed with each of the respondents (instructors and students) interviewed within the study. Transcripts of the interviews were made available to each interviewee in an effort to ensure the trustworthiness of the data. If the participant or I felt it necessary to seek further detail or clarity about a point in the interview transcription, an arrangement was made to listen to the original recording of the interview and hold a follow-up interview if necessary to address any concerns previously shared by either party.

### **Dependability**

Merriam (1998) defined dependability as, “the extent to which research findings can be replicated” (p. 205). The question is not whether the results of a particular study can be found again within an identical framework, but rather, whether assurance is provided that the results are consistent with the data collected. Triangulation of data collection was used to strengthen the dependability of the study as earlier described in the chapter. To ensure dependability, two sources of data were used (participant interviews and course syllabi), two outside members were invited as peer debriefers (my research chair and a colleague) to examine the construction of categories and themes within the process of data analysis; and an audit trail was maintained. The following procedures were documented before and during data collection: (a) recruitment of participants, (b) informational meeting, (c) interviews schedule, and (d) collection of documents. The following procedures were documented during the process of analyzing data: (a) transcription of interviews, (b) review and coding of documents, (c) construction of categories, and (d) the development of themes using a concept map.

### Reader Generalization

Reader generalization indicates how the results of a particular study might be applicable to other situations within society (Merriam, 1998). This notion is similar to the traditional or empirical use of external validity as it applies to scientific research. To enhance the generalizability of a particular qualitative study, Merriam (1998) suggested the implementation of two strategies that were used in the current study. The first strategy used was *typicality or modal category*. In this strategy, a description is generated of how typical the program, event, or individual is as compared with others in the same class, so that users can make comparisons with their own situations. The interview questionnaire was designed using TARGET (Epstein, 1989) to specifically gain a detailed perspective of the participant's involvement in the class. As mentioned earlier, there were unforeseen challenges that had to be addressed during the process of data analysis as a result of using TARGET to guide the design of the interview questionnaire.

The reader compares experiences shared by the participants of the study with experiences that he or she has had in the past, as well as those he or she might have never given thought to after having read the experiences of the participant. The second strategy used in the study was *Multi-site designs*—using several sites and situations, especially those that maximize diversity in the phenomenon of interest (Merriam, 1998). A thorough examination of both instructors, student-participants, and their perceptions of factors that had influence on student motivation were used to express diverse viewpoints within the class.

Efforts were taken to specifically account for a diverse group of participants. These efforts included the recruitment of instructors and students and designing a





activity participation, they seemed to appreciate the extra motivation and structure of a class environment. Figure 9 illustrates factors that influence student motivation within a college physical activity course.













































































and Xiang, McBride, and Solmon (2003) using Epstein's (1989) TARGET strategies as a framework. As mentioned earlier, BIPs have been criticized for many years regarding contributions to the college experience (Savage, 1998; Savage & Sharpe, 1998). Many of these criticisms have centered on teacher effectiveness, which might be addressed using Epstein's (1989) TARGET strategies to guide curricular design and instructional delivery.





































**APPENDIX C****INTERVIEW PROTOCOL OF INSTRUCTOR-PARTICIPANT**



