The only lifelong, reliable motivations are those that come from within, and one of the strongest of those is the joy and pride that grow from knowing that you’ve just done something as well as you can do it. – Lloyd Dobens and Clare Crawford-Mason
THE EFFECTS OF A COACHING EDUCATION WORKSHOP ON THE SELF-REGULATED MOTIVATION OF 6TH GRADE MALE AND FEMALE BASKETBALL PLAYERS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

Gregory S. Sullivan, M.B.A.

* * * * *

The Ohio State University
2005

Dissertation Committee:

Dr. Janet Fink, Adviser

Dr. Donna Pastore, Adviser

Dr. Brian Turner

Approved by

Advisers
Graduate Program in Education
ABSRACT

Millions of children, and their parents, have developed a reliance on organized youth sport as the primary source of physical activity. Many of these children are participating on teams that are being directed by coaches that, unlike practitioners in many other fields, do not have access to any formal training. These coaches have a tremendous impact on the motivations of participating children but they are unfamiliar with strategies that may have a positive impact on the motivational climate they are creating. The United States is the largest producer of sport science research but little of it finds its way to these practitioners. The purpose of this study was to design and implement an education workshop for youth sport coaches. The workshop employed the principles of andragogy (adult learning theory) as well as transformative learning theory in an attempt to create a revised meaning of one’s coaching experience and as a guide to action. Coaches were introduced to the tenets of, and strategies that employ, Self-Determination Theory (SDT). SDT posits that if the basic psychological needs of autonomy, relatedness, and competency are met then the opportunity for intrinsically motivated behavior exists. Motivation is viewed upon a continuum with decreasingly positive consequences from intrinsic motivation to amotivation. Fourteen sixth grade travel basketball teams (7 male
and 7 female) teams from the central region of a Midwestern State were randomly selected to participate in the study. Athletes (n = 107) were pre- and post-tested for levels of motivation. Seven of the coaches were randomly selected to participate in the coaches’ education workshop. A pre- and post-test was administered to the coaches and t-tests showed significant increases in their understanding of motivation in a youth sport setting and their understanding of SDT. A post-workshop coach’s evaluation revealed high inclination to implement coaching strategies that employ the principles of SDT. A multivariate analysis of variance (MANOVA) found no support for the hypotheses that athletes of workshop attending coaches will demonstrate significant increases in their self-determined motivation scores, a higher propensity to participate in basketball next season, or higher levels of satisfaction than athletes of coaches that did not attend the workshop. A multivariate analysis of variance (MANOVA) did find support for the hypothesis that no significant differences will be found on the basis of gender. Implications of these results are discussed and suggestions for future research are forwarded.
You can't live a perfect day without doing something for someone who will never be able to repay you. – John Wooden

This dissertation is dedicated to my spouse, Sharon, and my three sons, Chris, Kevin, and Brian, who sacrificed so much so that I could fulfill this dream. Enjoy your many, many perfect days!
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I would like to acknowledge my parents for instilling me with a strong work ethic and stressing the importance of independence. I would like to thank my mother for teaching me that approaching life with a sense of humor is the best approach and my father for showing, by example, that it is never too late to change direction in life. “The people who get on in this world are the people who get up and look for the circumstances they want, and, if they can't find them, make them.” - George Bernard Shaw.
VITA

November, 29, 1959 Born........................................ Brooklyn, New York

1982............................................................... B.A. Economics, Brooklyn College

2002............................................................... M.B.A., Seton Hall University

2004 – present................................................. Instructor, Otterbein College

2002 – 2004..................................................... Graduate Teaching Associate,
                                       The Ohio State University

FIELDS OF STUDY

Major Field: Education
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CHAPTER 1
INTRODUCTION

Benefits of Youth Sport Participation

Ewing, Seefeldt, and Brown (1996) define organized youth sports as “any of the various athletic programs that provide a systematic sequence of practices and contests for children and youth.” The benefits of participating in organized sport are thought to be important to the physical and social development of children in society. Children are motivated to participate in youth sports to develop and demonstrate physical competence, gain social acceptance from peers and adults (including their own parents), and to have fun (Butcher, Lindner, & Johns, 2002). The benefits of organized sport are many and varied and would include fitness, responsibility and autonomy, morality and social skills (Barnett, Smoll, & Smith, 1992; FEPSAC, 1996). Specifically, Smith and Smoll (1997b) point out that organized sport has the potential to provide a setting where children can develop important behaviors such as “adaptive ways of competing and cooperating with other people; they can learn risk taking, personal commitment, and self control; and they can learn to deal with success and failure” (p. 17). Hellstedt, Rooks, and Watson (1988) asserted that in youth sport a child can have fun, learn skills, set and meet goals, develop a positive self-concept, learn coping skills, become introduced to competition, and develop social and interpersonal skills. Donnelly and Kidd (2003)
opined that sport was a venue where children could learn the values of citizenship that would lead to the sustenance of safe and supportive communities.

The American Academy of Pediatrics outlined many health benefits of participating in organized youth sport including “the establishment of developmentally sound criteria for determining readiness to play, a fair process in choosing teams, and enforcing rules targeted at reducing injuries.” The International Federation of Sports Medicine (FIMS) and the World Health Organization (WHO) formed an Ad Hoc Committee on Sports and Children (“Sports and Children: Consensus Statement on Organized Sports for Children,” 1998) and stated that sport and physical activity were essential to “promote optimal growth and maturation and to develop sufficient physical fitness and mental vigour” (p. 445). A well run organized youth program can minimize injuries and offer a safe enjoyable atmosphere for youth sport participation. The potential benefits of a well run organization would include physical health improvement, socialization skills, positive self-esteem and self-perception, and psychological well-being. The committee also states that participation in organized sport can “establish the basis for a healthy lifestyle and a lifelong commitment to physical activity” (p. 446). Sport involvement has been positively related to self-concept, body image, self-esteem, achievement attitudes, and mental health (Ryska, 2003).

Other researchers have also found significant correlations between participation in physical activity as a youth and participation as adults (Yang et al, 1999). The Centers for Disease Control and Prevention (CDC) also extolled the physical benefits of youth participation that would include the improvement of strength and endurance, the building
of healthy bones and muscles, controlling weight, stress and anxiety reduction, increased self-esteem, the possible improvement of blood pressure and cholesterol levels (Ewing, Seefeldt & Brown, 1996). A 1996 Carnegie Corporation report, entitled “Great Transitions: Preparing Adolescents for a New Century” found that sports and sports organizations, along with families, schools, health care providers, and the media, play a crucial role in youth development. The report found that the road to a healthy adulthood must include:

- Finding a valued place in a constructive group.
- Learning how to form close, durable human relationships.
- Feeling a sense of worth as a person.
- Achieving a reliable basis for making informed, deliberate decisions especially on matters that have large consequences such as educational futures.
- Knowing how to use available support systems.
- Finding ways of being useful to others beyond the self.
- Belief in a promising future with real opportunities.
- A cultivation of inquiry and problem-solving habits of mind for lifelong learning and adaptability.
- Learning a respect for democratic values and understand responsible citizenship.
- Building a healthy lifestyle.

Many youth sport coaches will agree that sports can be a venue where many of these valuable lessons can and should be learned. They will even agree that it is their responsibility to impart these crucial life skills to their athletes, yet when queried, many of those same coaches will be unable to describe how these lessons are taught.

*The Role of the Youth Sport Coach*

Organized youth sports, under the right conditions, can aid in the learning process of many of these important life lessons. One of the most important of these conditions would be a qualified youth coach who is not only aware of the importance of his/her role
but is proficient in the skills of the sport and the important role he/she may be playing in the psychological development of the participants. Youth sports are heavily reliant on volunteers and the turnover is great. Many coaches only stay involved as long as their children are involved and will withdraw as their children lose interest or eligibility to participate. Ewing, Seefeldt and Brown (1996) agree that the quality of the youth sports experience is largely contingent upon the quality of the adult leadership and specifically, the coach. They suggest that it would make intuitive sense that wide scale training programs would be in place for youth coaches but that is not the case. A few programs exist for coaches at the national level, yet it is estimated that 90 percent of youth coaches have no formal education in coaching techniques, first aid, injury prevention, or emergency care (Ewing, Seefeldt & Brown, 1996). With so many coaches uneducated in the rudimentary necessities of being a coach one could hypothesize that many of these individuals are unprepared to meet the psychological needs of their charges as well.

The FIMS/WHO Ad Hoc Committee on Sports and Children (“Sports and Children: Consensus Statement on Organized Sports for Children,” 1998) also discussed potential health risks for children’s involvement in organized sport. Injuries due to overuse are more prevalent in organized sport than they are in children who participate in free play activities. There have also been instances of physical abuse found within organized sport due to forced nutritional habits and excessive training. Mental abuse has been cited as well. “Similarly, examples of pathological socialization or psychopathology, such as excessive anxiety or stress, have been noted among children
and adolescents who participate in organized sports” (p. 446). Hellstedt, Rooks, and Watson (1988) declared that evaluative competition in youth sport can lead to the development of low self-esteem, the learning of over-aggressive behavior, and the development of excessive anxiety.

Motivational climates that focus on the winning of a game, match or meet, as the measure of success are considered to be outcome oriented. Motivational climates that emphasize effort and persistence are said to be process oriented. Hochstetler (2003) further defines process as “the journey of sport experience, not only those end points in sport (e.g., completing a period, crossing the finish line, besting an arch rival) but also those elements of sport that happen in between – the stages or phases of the competitive project” (p. 232, parentheses original). Hochstetler states that these endpoints are a component of the process as well but that “..if we have enjoyed or found meaning in the process, we are more likely to feel at peace with the outcome, regardless of the result” (p. 233). Further, Hochstetler discusses the implication of when the process is not enjoyable or no meaning is to be found there, “When there is little joy in the doing, when the practice may even become unbearable, the practitioner may discontinue rather than persist…” (p. 237). Coakley (2004), in discussing children and sport socialization, stated that the youth sport coach can have an important impact on the way children define their sport experiences and that coaching behaviors can have a important long-term consequences for life-long sport involvement.
Growth of Organized Sport in the United States

Organized sport in the United States has grown dramatically in the past few decades. Prior to World War II there was not tremendous involvement by adults in youth sports. The New York City school system founded the Public School Athletic League (PSAL) in 1903 but it wasn’t until the founding of “Pop” Warner Football and Little League Baseball that youth sport started to become highly organized (Koester, 2002; Wiggins, 1987). “Pop” Warner Football was founded in Philadelphia, Pennsylvania in 1929 by a factory owner as a way to occupy youths to prevent them from breaking the windows in his factory. Little League Baseball was founded in Williamsport, Pennsylvania in 1939 and was only played in that state until 1945. Today, Little League Baseball is played in every state in the union and has grown to the point where even regional games are televised nationally on ESPN and ABC. Abrams (2002) states that the “adultification” of youth sport started after World War II and prior to that, youth sport was organized but it was organized by the participants. Children organized themselves by scheduling the game, creating teams, ensuring the teams were balanced and fair or created ways of handicapping them if they weren’t (e.g., the best right-handed players were forced to bat left-handed in sandlot baseball), and officiating their own games and devising their own ways of arbitrating disputes. Gone are the days of sandlot baseball or pickup games at the park as free play or unstructured games has given way to organized sport.
American children are being signed up for organized sport at earlier and earlier ages. The 1972 passage of Title IX legislation led to an increase of youth sport programs for girls and by 1986 it was estimated that 20 million children were participating in organized sport in the United States (Wood & Abernathy, 1989). A 2001 journal article in *Pediatrics* stated that organized sport has grown to the point in the United States where infant and pre-school training programs are now available for many sports. Anecdotal evidence abounds regarding the manic sporting schedules that some children maintain. Youth baseball has gone beyond T-ball to wee-ball (T-ball for 3-year olds) and an official of the American Junior Golf Association reported that parents of an 18-month old boy inquired about golf lessons for their child (Brown, 2000). A recent *Sports Illustrated* article on youth sport highlighted a 10-year-old boy that had played 127 baseball games in the summer of 2001 (Wolff, 2003).

Today, the Stanford University based Positive Coaching Alliance (www.pca.org) estimates that there are forty million youths participating in organized sports in the United States. Further, they estimate that 4 million youth coaches are supervising these children. These 4 million coaches, along with league officials and parents, are being asked to provide the many benefits of being involved in organized sport yet are not being properly trained, or trained at all, in the important psychological aspects of their roles.

Smith, Smoll, and Curtis (1979) noted how organized sport was growing in the late 1970’s and opined on the importance of providing quality supervision in youth sport. In that article they quoted the following passage from the *Official Rules* (1977) of Little League Baseball:
We have stimulated the imagination of a million boys to come into this program. Yet for their leadership we have largely trusted to the luck of the draw – to mere accident. The least we can do for all these youngsters is to try and find them a good manager and once selected provide him with some indoctrination and in-service training. The quality of leadership represents our biggest problem and until we solve it we can never realize the full potential we have. (p.18)

This is an issue still waiting to be addressed; the experience a child has in youth sport is still very much “luck of the draw.” Many volunteer coaches model themselves after the only prototype they may have, coaches they may have had during their playing days or professional or collegiate coaches that represent the win at all cost model. Fred Engh, President and CEO of the Alliance for Youth Sport, estimates that 70 percent of children leave organized sports prematurely (Cary, Dotinga, & Comarow, 2004). Engh cites the primary reason as being the inadequate training and relevant education of volunteers.

The Center for Disease Control (CDC) issued a report to the President of the United States entitled Promoting Better Health for Young People Through Physical Activity and Sports (2003). The report from the Secretary of Health and Human Services and the Secretary of Education, and released by the White House, outlines ten strategies to promote health and reduce obesity through lifelong participation in enjoyable and safe physical activity and sports. One key strategy involves the training of youth sport coaches where coaches would learn age specific techniques and developmentally appropriate safe, and enjoyable physical activity experiences for young people. The report states that better trained coaches will enhance the enjoyment of the team sports experience for young people, increase retention rates among participants, and help to reduce sports-related injuries. However, it is estimated that 90% of youth sport coaches are untrained (Ewing Seefeldt & Brown, 1996).
Withdrawal and Attrition from Organized Youth Sport

There has been a great deal of research done regarding youth withdrawal from organized sport. Ewing, Seefeldt and Brown (1996) stated that the attrition from youth sport starts at the age of 10 and reaches its peak at the age of 14-15. There are a myriad of reasons as to why children decide to leave sport. Gould and Weiss (1987) detailed many of these studies and found that while many older children will dropout of sport for a number of reasons, including a lack of time and the development of other interests, younger children will tend to dropout due to the emphasis on competition, a dislike for the coach, and feelings of incompetence. Developmental theory states that many children leave sport as they mature and develop other interests. Adolescents are able to apply social exchange theory and come to the conclusion that the benefits derived from sport do not equal the time and effort needed to put into the activity (Keintzler, 1999; Lindner, Johns, & Butcher, 1991; McEwin & Dickinson, 1996; VanYperen, 1997). Stress is also seen as a large contributory factor to youth withdrawal from sport. Some researchers will state that this stress leads to “burnout” (Smith, 1986) and the Gatorade Sport Science Institute (“Kids and Sports: Maximizing Benefits, Minimizing Risks Summary of Facts and Consensus,” 2004) found that burnout in young athletes is more common than ever and can be attributed to social, psychological, and physical pressures. The report states that stress is a symptom, not a cause, of burnout. Raedeke, Lunney, and Venables (2002) stated that more work needed to be done to define the relationship between stress and burnout.
McEwin and Dickinson (1996) define burnout as the feeling when demands placed on them exceed their capacities to meet them. The inability of athletic programs to meet the needs of the athletes is also seen as a reason for youth withdrawal from sport (Brown, 2000; Raedeke & Lunney & Venables, 2002). Many athletes participate initially to have fun, improve skills and fitness, and to challenge one’s ability but find that the sporting environment, as presented, does not meet these needs for many athletes (Ryska, Cooley, Hohensee, & Jones, 2002; Wiese-Bjornstal, 1997). Burton (1992) found that the overemphasis of youth sport on outcome, rather than learning and performance output was causing young wrestlers to dropout of that sport. College students, asked to reflect upon reasons why they decided to leave sport cited, as the predominant reason (47%), that other activities prevented participation. Activities such as band, cheerleading, academics, and jobs were mentioned however, the authors included in this category students who said they moved on to other activities because they no longer enjoyed the sport they were involved with. Fifteen percent of those surveyed cited aversive events as contributing to their termination of participation. Aversive events included not getting along with the coach, and the emphasis placed upon winning by the coach and league officials. Other reasons cited were illness and injury, and low perceived ability (Martin, 1997).

A 1996 survey conducted by USA Swimming (Recruiting and Retaining Swimmers, 1996) found that number one reason why swimmers quit the sport was time constraints followed by having to deal with a negative coach, other interests, and boredom with the sport. Also seen as a determining factor to withdraw from sport was
the level of support from the family (Bussman, 1999; Green & Chalip, 1997; Hoyle & Leff, 1997; Wood & Abernathy, 1989). Green (1997), in her article about a modified soccer program (founded by an individual who felt that traditional sport organizations are not children-centered), discusses the age-old argument that competitive pressures have removed key elements of fun and peer socialization from sport. Other researchers have found that many youths cite poor coaching or lack of playing time as the primary reasons for leaving organized sport (Mistr, 2002; Stratton, 1996). A 2003 article in *Sports Illustrated* posited that forcing children to specialize in one particular sport at young ages has made the organized sport experience less enjoyable and leading to withdrawal from sport (Wolff, 2003). Abrams (2002) opined that adults have taken over organized sport to the point that they have forgotten the primary objective, enjoyment for the participants. Hellstedt, Rooks, and Watson (1988) also cited a number of reasons for youth dropout, however, for youngsters between the ages of nine and fourteen the primary reasons mentioned are a lack of playing time and the perception that they are not competent in their particular sport.

*Current Health Related Issues*

While organized sport participation has grown over the past few decades so has childhood obesity. Research has found that obesity is influenced, in part, by environmental factors and that the adoption of sedentary lifestyle and sustained physical inactivity are possible risk factors for childhood obesity (Faith, et al, 2001; Marshall, et al, 2002). Organized youth sport has become the basis for physical activity for many children. “At the time of its origin, organized youth activity was intended to be an
adjunct to free play. Unfortunately, organized sports have become the basis of physical activity for most children” (Koester, 2002, p. 7). In many communities youth sport has become exclusive; it excludes many from participating. The adoption of the “professional sports model” within youth sport, the win at all cost standard, has cast many participants, deemed to be substandard athletically, aside. Many youth organizations and their coaches have chosen to focus on the elite athletes and designing their programs around them. Rolf Carlson from Stockholm University college of Physical Education and Sport, in a speech made before the FIS Conference on Children and Youth (“Sports and Children: Consensus Statement on Organized Sports for Children,” 1998) said that big sports federations are losing members because they have not listened to children’s needs. He cited the problem of children starting sport at younger ages and the lack of competency for coaches to deal with these young participants. Carlson stated that adults in control of organized sports have created environments that satiate the needs of the adult, not the participating youth. In many cases the prestige of the coach is contingent upon the performance of the children. Further, Carlson stated that we must be mindful of the late bloomers and not favor only those children at mature at an early age, all children should be afforded an equal opportunity to participate. There is also a great need to increase spontaneity and fun for the participating athletes.

As described earlier, youth sports in this country has grown dramatically in recent decades. Many youth sports organizations are extremely well run and funded by their constituents. These programs, despite their reliance on volunteers, are well staffed at the organizational level as well as the coaching level. Many communities have excellent,
well-maintained, athletic facilities. Coaching technical knowledge, thanks to many forms of electronic mediums such as coaching videos and the Internet, has never been higher. It seems the one important variable we have left out of the equation is that this is supposed to be an enjoyable activity, the intrinsic aspect. We have a tremendous incongruency of goals between the organizers and the participants. The participants are primarily joining to have fun while the organizations, coaches, and, many times, parents have adopted the performance ethic. Kevin Daugherty, a youth sport specialist for the American Sport Education Program (ASEP), stated in an interview with iVillage.com (“Kids and Sports: Winning Isn’t Everything,” n.d.) that the problem is a cultural one where we are “bombarded with messages that winning is everything. Pro sports are about winning and making money, youth sport should be about having fun, improving skills, developing character and learning to make a lifetime commitment to physical activity.” Coaches that stress outcome over process neglect these important points and cater to the higher caliber athlete. The focus is on strategy and performance and this is best done in a highly controlling atmosphere by controlling coaches.

A 1987 Youth Sports Institute survey of 10,000 children aged 10-18 cited fun as the number one reason they played sport (“Insight into Why Kids Quit Sports,” n.d.). The number ten reason was to win. The top two reasons cited for withdrawing from sport were losing interest followed by not having fun. Sports Illustrated for Kids conducted a comparable survey of almost 10,000 children in 1995 and found similar results. Of the children surveyed, 91% of the boys and 83% of the girls participated in organized sport. Winning was very important to 32% of those surveyed but not very or sort of to 67%.
Having fun was very important to 91.3% of children but not very or sort of to 8.7% and getting a chance to play was very important to 81% of those surveyed (“Kids pick their favorites!”, 1996).

The FIMS/WHO Ad Hoc Committee on Sports and Children (Sports and Children: Consensus Statement on Organized Sports for Children,” 1998) make a number of suggestions to ensure that potential benefits of organized youth sport are met and that a physically and mentally safe environment is created. These recommendations would include coaching certification, coaching credentials that would include not only the technical expertise for coaching sport but also a proficiency in the psychology and sociology of children and adolescents. It is also recommended that coaches participate in coaching education programs.

STATEMENT OF PURPOSE

Toner (2004) states that the United States supports more research in the sport sciences than any other nation in the world, perhaps more than all other nations combined. However, the results, due to a lack of a competent delivery system for coaches, of this research are rarely made available to coaches. A youth coach would have to be either forced by his/her youth sport organization, or highly motivated to access much of this research. Horn (2002), in discussing coaching effectiveness and the amount of research conducted with older, elite athletes, stated that, “Considerably less research has been conducted with younger athletes or those who play at less competitive levels. Thus continued research is warranted in this area” (p.335). The Carnegie Corporation, in their study of the role of sports in youth development, asked a number of research
questions including ascertaining the skills of qualified coaches the training models that work well in developing these qualified coaches or mentors.

This study seeks to extend research in the realm of coaching education by introducing youth sport coaches to vital sport science research. Specifically, it is the purpose of the study to test whether a coaching education workshop intervention, designed specifically for coaches and based upon the principles of andragogy (adult learning) and transformative learning theory, can provide coaches with the knowledge, skills and motivation to initiate the fostering of a motivational climate, employing the principles of self-determination theory (Ryan & Deci, 2002), that will have a significant positive impact on the self-regulated motivation of youth athletes. The coaches will be introduced to the tenets, as well as strategies, of self-determination theory that can be employed during practice sessions. Self-determination theory will also be discussed in detail later in this dissertation. Further, it is the aim of this study to investigate the benefits of a contextually based education program for coaches and players; the workshop will be sport specific (basketball). This research will attempt to ascertain not only the skills and tactics necessary to create a motivational climate that fosters self-regulated motivation but also to develop a training model that employs strategies and theories that engage the adult learner and perhaps transform his/her approach to coaching youth sport.
Andragogy

The adult education literature is generally supportive of the notion that adults learn differently than children and adolescents and that those teaching adults should employ a different style of teaching from the methods used with pre-adults (Imel, 1989). Malcolm Knowles developed the theory of andragogy (from the Greek word andros – adult man and ago – meaning I guide (Zmeyov, 1998)) in an attempt to develop a theory of adult learning and he defined it as the art and science of helping adults learn. Andragogy is a set of assumptions about how adults learn; (a) With maturity, an adult's self-concept moves from dependent to self-directed learner; (b) An adult's experience is a resource for learning; (c) An adult's readiness to learn is closely related to his or her social role; (d) Adults relate need to learn to need to apply knowledge, thus an adult is more problem-centered than subject-centered in his or her approach to learning; and (e) Internal rather than external factors tend to motivate adult learners (Knowles, 1984).

The andrological model has had a significant impact on adult education and, in particular, in regard to the assumption that teaching adults should differ from teaching children and adolescents (Imel, 1989). Andragogy has been the preeminent instructional method in adult education due to the work of Knowles (Rachal, 2002). Imel (1989) states that Knowles’ theory emphasizes that adults are self-directed and expected to take responsibility for decisions and that adult learning must accommodate these vital aspects. Daloisio and Firestone (1983) defined self-directed learning in Knowles’ own words as “a process in which individuals take initiative. They diagnose their learning needs, formulate learning goals, identify human and material resources for learning, choose and
implement approximate learning strategies and evaluate learning outcomes. Self-directed learning usually occurs in association with various helpers, such as teachers, tutors, masters and peers” (p.73).

Research has found that teachers perceive differences in learning styles between adults and pre-adults. Adults were perceived to be more intellectually curious, motivated to learn, willing to take responsibility for their learning, willing to work hard, precise about what they wanted to learn, and concerned with the practical implications of learning (Imel, 1989). A crucial aspect of being an effective instructor involves understanding how adults learn best and being mindful that adults have special needs and requirements as learners (Lieb, 1991).

Understanding how adults learn best will be crucial to altering the mindset of youth sport coaches. Many coaches have adopted the professional “win-at-all-costs” model and applied it to youth sport. Many coaches feel the *raison d’etre* for youth sport is to win. “An effective coach at the youth level may be one who provides optimal encouragement and learning opportunities for participants. Coaching effectiveness at the professional level is generally measured by winning percentage and championships” (Gilbert & Trudel, 2004, p. 24). Barnett, Smoll, and Smith (1992) state that there is little doubt that the coach-player interaction will primarily determine the quality of the athletic experience and the outcomes of athletic participation. Much of the literature on youth dropout and attrition point to the overemphasis on winning and its related outcomes (stress, lack of playing time, lack of competence and lack of enjoyment) as the primary reasons for the dropout and withdrawal problems.
Gilbert and Trudel (2004) found that most coaches learn how to coach from their own experience or through observation while they posit that effective coaches “transform experience into knowledge through a process of reflection” (p. 24). Further, they state that the process of reflection will be enhanced through access to coaching peers, which could be done through issue discussion groups and coaching pods, local coaching resource centers and partnerships with educational institutions, and peer or coaching consultant programs.

These prior coaching experiences that adults bring to a peer coaching consultant program can influence and, potentially distort, their expectations about how what they learn should be as opposed to how it really is. Coaches may think that they are coaching effectively and instilling important values in their athletes but this may not be the case. For example, coaches who equate winning with fun or assume that valuable life lessons are learned by the mere playing of the game rather than realizing that these must be taught. When learners are able to reflect critically on their prior assumptions, they begin to engage in transformative learning.

Transformative Learning

Transformative learning theory was developed largely through the ideas of Friere and Mezirow as they attempted to develop an educational framework to create social change for oppressed people through education (Baumgartner, 2001, Christopher, et al., 2001). These researchers were attempting to move away from the traditional educational model, referred to as the banking model, where the teacher was seen as the expert and the learner was viewed as passive objects that become filled with knowledge. In this
traditional model there is very little discussion and fails to recognize the individual
differences of the learner. Friere viewed this system as oppressive due to the paternalistic
nature of the teacher/student relationship, and the failure to recognize the individuality of
the student. Friere and Mezirow believed that a system of education, which promoted
self-awareness and freedom, would “help create social equity for the oppressed and for
real learning to occur” (Christopher, et al., 2001, p 135).

“The transformation process has been closely linked with psychology and
developmental theory, but it has only recently been introduced as a theory of practice in
adult education – Jack Mezirow is credited as the founder of this movement” (Grabove,
1997, p. 90). Transformative learning “is the process of effecting change in a frame of
reference” (Mezirow, 1997, p. 5, italics original). Frames of reference are defined as the
structures of assumptions through which we understand our experiences (Mezirow,
1997). Adults have acquired a logical body of experiences that define their world. These
experiences would consist of associations, concepts, values, feelings, and conditioned
responses. Through these frames of reference we develop preconceptions and we have a
strong tendency to reject ideas that fail to fit our preconceptions. Under the right
circumstances, transformative learners can move toward frames of reference that are
“more inclusive, discriminating, self-reflective, and integrative of experience” (Merizow,
1997, p. 5).

Although the transformational learning process was initially seen as a linear one,
current research indicates that it is dependent upon the experience of the individual.
Further, the triggering event, which was originally thought to be single, dramatic
happening, is now viewed as more of a cumulative process (Baumgartner, 2001). Baumgartner (2001) cites the example of one student’s journey toward feminism beginning by taking a graduate course on the subject.

Cranton (2002) describes transformative learning as a simple yet elegant concept. “Through some event, which could be as traumatic as losing a job or as ordinary as an unexpected question, an individual becomes aware of holding a limiting or distorted view. If the individual critically examines this view, opens herself to alternatives, and consequently changes the way she sees things, she has transformed some part of how she makes meaning out of the world” (p. 64). It is safer and easier, Cranton maintains, to hold on to habits of mind rather than let them go but the key is for the adult learner to partake in critical reflection. Through critical reflection, adult learners question their ideas, their validity, their sources, and underlying principles. “It helps to talk to others, exchanging opinions and ideas, receiving support and encouragement, and engaging in discourse where alternatives are seriously weighed and evidence brought forth” (p. 65).

Cranton (2002) states that there are no particular teaching methods to guarantee transformative learning, however, there are certain facets that must be present if transformative learning is to occur. First is the need to create an activating event. Learners must be exposed to viewpoints that may be in disagreement with their current views. Secondly, adult learners need to be able to articulate assumptions. Cranton suggests that is difficult for learners to express their feelings and ideas about a particular topic. She suggests metaphor analysis as a way of assisting learners articulate. The learner will be asked other ways to explain the topic at hand and then be asked why they
chose to describe it that way. Third is the need for critical self-reflection. Students must be given the opportunity to question their assumptions, “to examine what they think and how they feel and consider the consequences of holding certain assumptions” (p. 67-68). This critical self-reflection may take place in the classroom but will invariably take place outside the classroom as well. Cranton also suggests the use of self-reflective journals to help the student organize his/her thoughts on the subject.

Baumgartner (2001) states that two approaches have been taken towards group transformational learning. Action learning involves the placing of individuals on teams and asked to solve a problem or issue. Collectively they work on a solution by employing reflection and discourse. Collaborative inquiry (CI) invites volunteers to examine a question of interest and through meetings and discussions practices and methods are transformed.

Adult-learners must possess openness to alternatives and must be willing to engage in discourse rather than discussion. Cranton describes the optimal conditions for discourse as having accurate and complete information, being free from coercion and distorting self-deception, weighing evidence and assessing arguments, critically reflecting on assumptions, having equal opportunity to participate, and accepting informed consensus as valid knowledge. Cranton also suggests the use of observers to assist in discerning when learners resort to persuasion rather than evidence.

Christopher et al. (2001) described the three-step process to transformative learning. Step one is assisting the learners to become critically aware of how and why their assumptions have come to constrain the way they perceive the world. Step two
consists of a revision of belief systems occurs as learners “change structures of habitual expectation to make possible a more inclusive, discriminating, and integrative perspective” (p.135). In step three, learners adopt behaviors that are more consistent with this new perspective. This three step process is enhanced by ensuring that teachers are empathetic, caring, and sincere; by creating a learning climate that is open, safe, and trusting; and by employing learner-centered instructional methods that promotes participation, reflection, and autonomy. Robertson (1996) defines learner-centered as when the exemplars focus “on the learners, their key personal characteristics and how those features affect their lived experience in learning situations” (p. 47).

Since 1978, the theory of transformative learning, as developed by Mezirow, has inspired much discussion in the field of adult education (Taylor, 1997). Robertson (1996) in his discussion regarding the facilitation of transformative learning stated that there are two types of learning, simple (an elaboration of one’s existing paradigm) or transformative (creating a new paradigm) and that transformative learning should be the goal of adult educators. However, adult educators are not being adequately prepared or supported to reach that goal. To affect a paradigm shift is a complicated process that involves rendering the existing paradigm dysfunctional. There is an important transition phase between the letting go of the existing paradigm and the acceptance of a new one that must be nurtured by a skilled instructor. Robertson (1996) suggests a six-prong approach to strengthen transformative education which includes better preparation and support for its practitioners, the employment of a systems approach to transformative education with a focus on both teacher and learner’s experiences, the building of a
scholarly body of literature with a focus on the teacher as facilitator relationship, education on this topic at the graduate level, a code of ethics regarding the educational helping relationship, and ongoing professional consultation opportunities for adult educators. Further, Robertson (1996) stresses the need for those involved in adult education to remember the importance of both the learner and the facilitator.

Adults do not want to be lectured to but, rather, prefer to be a part of the process. The goal of this coaching education program is to meet the educational needs of the adult coach. The principles of andragogy and transformative learning will be applied to meet one of the adult educational needs, as defined by Zmeyov (1998), learning for the purpose of leisure time and personal development. The life experience, as well as coaching experience, of the coach will be factored in to the program and the material to be discussed will be linked directly to contextual coaching situations.

In this workshop the adult coaches will be invited to take initiative in discussions and direct his/her own learning. The coach’s self concept will be strongly considered and, consistent with andragogical principles, their experience will be recognized and valued. The physical learning environment will be one where an adult feels comfortable; a lounge will be used rather than a classroom, and beverages and snacks will be readily available. These adult learners will not be told what they will learn but that they should be involved in the process of self-diagnosis for learning. The instructor will explain to the coaches that he/she is in a learning position as well and looking forward to learning from their experiences. The instructor will assume the role of a guide rather than a teacher. The instructor will serve as a procedural guide or a content resource. The
instructor will avoid staying in lock step with a set program and look for teaching moments when they arise.

Crucial to the success of the workshop will be the opportunity for the coaches to learn ways to apply what they have learned in the workshop. The curriculum will be organized towards solving a problem and that will be the focus. We have established many assumptions about youth sport and youth sport coaching and during this workshop we will discuss many of these assumptions. Coaches will be assisted to become critically aware of how and why these assumptions might have come to constrain their approach to youth coaching. Through discussion and reflection, coaches will be given the opportunity to revise some of these assumptions and will be provided with coaching methods that are more consistent with these new assumptions. The learning climate will be open, safe, and trusting with an emphasis on participation, reflection, and autonomy. The learner will be assisted in participating effectively in discourse while being supplied with new information. Learners will be encouraged to challenge, defend, explain, and judge arguments. As they are introduced to a new paradigm, they will be given strategies to employ this new paradigm if they choose to accept it.

Coaching education programs have been criticized for a lack of a contextual approach and educators must realize that coaches do not operate in a vacuum. An emphasis of this educational program will be on the micro-level with an emphasis on the why and how of coaching rather than the what of coaching (Potrac et al, 2001). Coaches will be asked to consider more than physical skill acquisition as part of their role as a youth coach and will be asked to view coaching as a social process. Abraham and
Collins (1998) claim that coaching is a cognitive skill rather than an art and must look to the realm of cognitive psychology for coaching education ideas. In a cognitive approach, coaches’ procedures are challenged and explained as to why they may be incorrect. This forces the coach to be truly reflective of his/her methods. The coaches “who make top billing are those who are truly reflective, and this trait is an essential prerequisite for the experiential approach to be effective” (p. 73).

Learners will be asked to solve problems as a group and those problems will be directly related to their coaching contexts. As Pilling-Cormick (1997) stated, not all learning environments can become transformative but the opportunity should exist. Instructors must go beyond offering technical skills and aim for transformative learning. Grabove (1997) states that there is no single model of transformative learning. Transformative learning can be rational, analytical, cognitive process or it can be an intuitive, creative, emotional process. The instructor is responsible for fostering critical reflection that may lead to transformation.

Volunteer coaches are assuming increasingly important roles in youth sport. Training programs should be designed to educate and develop coaches to have a positive impact. The goal of this education program is for coaches to learn context specific content that they can and will use once they return to their coaching activities. Currently, coaching education does not define the role and function of the coach. Coaches should be given, through the application of self-determination theory principles, a goal of specific positive outcomes for their players. Although there is much to be accomplished in one workshop, research has shown that even short workshops have produced positive
results and programs that enhance confidence in coaching should produce more positive coaches (Malete & Feltz, 2000).

Coaches and Motivation

Coaches need to be introduced to the important concept of motivation and the crucial role they play in creating a motivational climate. Two predominant motivational theories have been applied to youth sport, achievement goal theory and self-determination theory, “have extensive applications in sport and exercise and have facilitated our understanding of motivated behaviour and related cognitive, affective and behavioural outcomes” (Ntoumanis, 2001b, p 397). While achievement goal theory primarily focuses on the concept of ability and competence, self-determination theory “provides a more comprehensive framework by considering issues of autonomy and relatedness, as well as those of competence, in predicting sport and exercise participation” (Frederick-Recasino, 2002, p. 279.) As coaches begin to understand the importance of their role within the youth sport domain and the impact they have on the motivation of the youth participant they must be given the tools to create a motivational climate that is psychologically positive for the athlete.

Coaches attempt to motivate their athletes in many different ways as their ideas of how to motivate vary significantly. Many studies have shown that the manner in which motivation is structured can predict motivational orientation and performance of athletes (Frederick & Ryan, 1995). Frederick and Ryan (1995) cited studies that showed that controlling coaches lowered expectations on self perception of female athletes and that lower parental pressure on young basketball players was associated with intrinsic
motivation. Pelletier et al (2001) state that coaches resort to controlling methods due to “lay theories regarding ways of optimizing motivation or because they have beliefs about a subordinates’ motivation that could induce them to support autonomy (or to be controlling)…” (p. 299). Further, atmospheres where the coach will be rewarded for the performance of the athlete can also lead to controlling behaviors. These controlling motivational climates can have deleterious effects on the motivation and future participation of athletes and students.

The primary tenet of self-determination theory is the recognition that there is a body of evidence “in favor of human tendencies towards active engagement and development and that there is, as well, manifold indication of fragmentation and conditioned responses” (Ryan & Deci, 2002, p. 5). Ryan and Deci (2002) posit that all individuals have natural tendencies to grow internally and externally and that healthy development involves the “complementary functioning of these two aspects of the integrative tendency” (p. 5). These tendencies should not be taken for granted and actually it is imperatives that social contexts are created that nurture these tendencies. Self-determination theory states that there are specific characteristics of these contexts that will promote this growth while others will inhibit or thwart this growth.

Social environments that facilitate and enable growth of the individuals will be those environments that meet three basic or fundamental needs of the individual. Ryan and Deci (2002) define these three basic needs are the needs for competency (“feeling effective in one’s own ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capacities” p. 7), relatedness (“refers to
feeling connected to others, to caring for, and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community” (p. 7), and autonomy (‘being the perceived origin or source of one’s own behavior” p. 7). Social environments that allow satisfaction of these needs are predicted to support healthy functioning; conversely when these needs are thwarted the opposite is predicted (Ryan & Deci, 2002). These basic psychological needs are essential for the growth and well being of individual’s personalities and cognitive structures. Further, these needs are universal and “represent innate requirements rather than acquired motives” and will be seen in all cultures and developmental periods (p. 7).

Ryan and Deci (2002) also contend that individuals will gravitate towards situations that are able to meet these basic psychological needs. Further, Ryan and Deci (2002) point out that their concept of needs is markedly different from personal motives, desires, or strivings. In fact some motives may distract people from activities that could provide need fulfillment and well-being. Even when individuals are effective at satisfying motives, the motives may still have a deleterious impact on well-being if they interfere with attainment of autonomy or relatedness. “This is an extremely important point, because it makes clear that attaining one’s goals efficaciously is not enough to ensure psychological well-being” (p. 8).

SIGNIFICANCE OF THE STUDY

This study intends to extend the research on coaching education and motivation. In particular this study will extend the research on coaching behaviors that are conducive to self-determination; little research has been done in this area (Frederick & Ryan, 1995).
This study will also seek to extend gender differences in reaction to competition, another area where a “systematic picture has not emerged” (Frederick & Ryan, 1995, p. 18). This research also seeks to extend the research aimed at understanding how a coach can learn an autonomy supportive style of coaching for the benefits of his/her athletes. Gagne, Ryan and Bargmann (2003) in their study of autonomy support and need satisfaction of gymnasts stated that “it would be also be useful to manipulate coaching styles in future studies…thus, an intervention study could be designed to train coaches to be autonomy supportive toward their athletes and then look at effects on motivation…” (p. 386). This research intends to do just that through the coaching education workshop.

Coaching as a social process receives slight attention (Cushion, 2001; Cushion, Armour, & Jones, 2003). Further, Cushion, Armour, and Jones (2003) state that current coaching education is inadequate as it is fragmented and divided into subcomponents and perpetuates the idea that it is an “autonomous body of facts passed through generations” (Mckay, Gore, & Kirk, 1990, p. 62 as cited in Cushion, Armour, & Jones, 2003). Cushion (2001) in discussing this fragmented state of current coaching education claimed that the “sum of the parts does not equal the whole” (p. 3). Current coaching education makes learning mechanical and fails to consider the “dynamic human context” and creates a philosophical orientation that is “vocational and technocratic” where the emphasis is on “procedural knowledge, the skills, technique, and tactics of the game” (Cushion, Armour, & Jones, 2003, p. 220). Coaches are trained as technicians and much of this training is not aimed at the particular level or context at which they will be active.
Further, this study intends to extend the coaching education research as it applies to the training of adults. Researchers have called for the importance of including discourse and reflective thinking within the coaching education realm. This research intends to extend the current research regarding a cognitive approach to coaching. Abraham and Collins (1998) criticized current modes of coaching education and asked the best way to modify existing approaches to address the specific needs of coaches. They suggest looking to the field of cognitive psychology for answers. These researchers claim that coaching is a cognitive skill rather than the much proclaimed “art” or common sense and much of coaching research has followed a behaviorist approach rather than a cognitive one.

RESEARCH HYPOTHESES

The majority of youth sport coaches are not trained in the ways of teaching children about the youth sport experience. Further, the programs that are available to coaches tend to focus on the technical aspects (skills, rules, safety) of coaching. Engh (1999) described the typical youth sport volunteer as “…individuals who typically don’t understand how to organize a practice, know what role winning should play, appreciate how to deal with parents, comprehend what motivates kids, or grasp the important lifetime influence they’ll have on children” (p.81). The coaching education workshop designed by this researcher will focus on providing information regarding motivation in a youth sport setting. Accordingly, I hypothesized:
Hypothesis 1: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of motivation in a youth sport setting.

As mentioned above, coaches will be introduced to the principles of self-determination theory (Ryan & Deci, 2002). In its simplest form (as it will be discussed in great detail later in this treatise), self-determination theorists posit that if the basic psychological needs of competence, autonomy, and relatedness are satisfied it will lead to healthy functioning. “To the extent that an aspect of the social context allows need fulfillment, it yields engagement, mastery, and synthesis; whereas, to the extent that it thwarts need fulfillment, it diminishes the individual’s motivation, growth, integrity, and well-being” (p. 9). Accordingly, I hypothesized:

Hypothesis 2: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of self-determination theory.

Along with the principles of self-determination theory, coaches will be introduced to methods to actually employ the theory in a youth basketball context. Specifically, coaches will be introduced to strategies that positively enhance the competence, autonomy, and relatedness of their athletes. These strategies are discussed in detail in Appendix A. Accordingly, I hypothesized:
Hypothesis 3: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of coaching strategies that employ the principles of self-determination theory.

Self-determination theory has been explored in an educational setting and, in particular with teachers employing the principles of self-determination theory. Research has shown that students thrive in these educational settings (Mageau & Vallerand, 2003, Reeve, 2002, Wong, Wiest, & Cusick, 2002). Further, Reeve (2002) states that a teacher’s style of motivation is malleable and that any teacher interested in learning would be able to modify their current practices. Accordingly, I hypothesized:

Hypothesis 4: Athletes whose coaches experience the coaches education workshop will demonstrate significant increases in their self-regulated motivation scores.

Strong support has been found for higher dropout levels for high school students that perceived themselves as being less competent and autonomous than their peers, and perceived parents, teachers, and administrators as being more controlling (Vallerand, Fortier, & Guay, 1997). Among competitive athletes, Pelletier et al. (2001) found that swimmers who were self-regulated or intrinsically motivated showed greater persistence to continue swimming than athletes who were amotivated and withdrew from the sport. Accordingly, I hypothesized:
Hypothesis 5: Athletes whose coaches experience the coaches education workshop will demonstrate a significantly higher propensity to continue participation in basketball than athletes whose coaches do not participate in the education program.

Ryan and Deci (2002) State that self-determination theory “begins by embracing the assumption that all individuals have natural, innate. And constructive tendencies to develop an ever more elaborated and unified sense of self” (p.5). While some research had detected some gender differences for participation motivation in exercise, for example, in measuring exercise motivation gender differences were found for body-appearance and fitness motivation however, no gender differences were found for interest/enjoyment, competence, or social motives (Frederick-Recasino, 2002). Frederick-Recasino (2002) states that much of the gender difference in motivation research stemmed from societal pressures where female athletes were “viewed as less desirable role models than competent male athletes, later research shows no such effects. Female sport and exercise participants may now feel that it is more acceptable to express their desires to achieve and become competent as motivating factors in their participation, without experiencing social stigma” (p.285).

Ryska (2003) found no significant gender differences in levels of perceived success, dimensions of intrinsic motivation, and activity enjoyment. In studying goals, interests, and learning in physical education, Ang Chen and Ennis (2004) concluded that “the discrepancy between high and low responses to high situational interest in physical activity was likely caused by lack of skill rather than gender. The results suggests that
offering gender-appropriate physical activities for the sake of motivating boys and girls separately may be unfounded” (p. 334). Robinson and Lieberman (2004) found no gender differences in self-determined motivation among the vision impaired. Accordingly, I hypothesized:

**Hypothesis 6:** There will be no significant difference in self-regulated motivation due to the gender of the player.

The coaches education workshop is both sport and age specific. Appropriate behavior and expectations for dealing with sixth grade basketball players will be discussed in great detail. Most importantly, coaches will be introduced to the psychological needs of the sixth grade basketball player. Chelladurai (1993) posited that if the coach displays appropriate leadership behaviors, and meets the needs and desires of the players, then there will be player satisfaction. Allen and Howe (1998) investigated the relationship between coaching behaviors and satisfaction (with the coach and team involvement) and found that the perceptions of coaching behaviors such as praise, information, encouragement, and corrective information (skills to be detailed in the coaches education workshop) were related to higher levels of satisfaction. Accordingly, I hypothesized:

**Hypothesis 7:** Athletes whose coaches experience the education workshop will demonstrate a significantly higher level of satisfaction with their coach and team than athletes whose coaches do not participate in the education program.
DEFINITIONS

The following section contains definitions of major terms that are used throughout this document. These definitions are intended to give the reader a better understanding of the terminology found throughout the document.

Organized Youth Sport - Ewing and Seefeldt (1996) define organized youth sports as “any of the various athletic programs that provide a systematic sequence of practices and contests for children and youth” (p. 2).

Motivation – Refers to “those personality factors, social variables, and/or cognitions that come into play when a person undertakes a task at which he/she is evaluated, enters into a competition with others, or attempts to attain some standard of excellence” (Roberts, 1992, p. 5).

Intrinsic Motivation – Refers to behaviors performed out of interest and enjoyment (Vallerand & Ratelle, 2002).

Extrinsic Motivation – Refers to behaviors “carried out to attain contingent outcomes” (Vallerand & Ratelle, 2002, p. 37).

Amotivation – the state of lacking intention to act (Ryan & Deci, 2002)

Competency –Ryan and Deci (2002) define competency as “feeling effective in one’s own ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capacities” (p. 7).

Relatedness - Refers to “feeling connected to others, to caring for, and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community” (Ryan & Deci, 2002, p.7).
**Autonomy** – Defined as “being the perceived origin or source of one’s own behavior” (Ryan & Deci, 2002, p.7).

**Andragogy** - Malcolm Knowles developed the theory of andragogy (from the Greek words andros – adult man and ago – meaning I guide (Zmeyov, 1998)) in an attempt to develop a theory of adult learning and he defined it as the art and science of helping adults learn.

**OVERVIEW OF THE CHAPTERS**

The following chapters document this experimental design. Chapter 1 includes background information and theoretical grounding, statement of the problem, statement of the purpose, research hypotheses, significance of the study, and definition of terms.

Chapter 2 provides an overview of the literature. It discusses the concept of andragogy, transformative learning theory, self-determination theory, and the current coaching education literature.

Chapter 3, methodology, addresses the quantitative methodological techniques that are employed in this study. The chapter refers to experimental designs, survey instruments, data collection, statistical analysis techniques and issues related to validity, reliability, and generalizability. One of the key independent variables, the coaching education workshop is outlined in great detail.

Chapter 4 presents the results of the experiment. It discusses the validity and reliability of the instrument and reviews each of the research hypotheses posed in this initial chapter.
Chapter 5 presents a discussion of the research findings. It includes a discussion of the results of each of the research hypotheses as well as a summary and recommendations for future research.
CHAPTER 2

REVIEW OF THE LITERATURE

Sports are an important component of the life of many young children in the United States. Due to the increase of our reliance on organized sport for many of these children, the quality of the sporting experience can be largely dependent upon the principles and practices of the coach. Toner (2004) stated that “The coach has a strong effect on the athlete's role in sports and, since the time he spends with the athlete may be considerable, he can have an enormous impact on the child's personality. The coach may provide a model for the child to follow, and his/her personality and behavior may influence the player's actions; a child can gain much from associating with a coach who has admirable characteristics that he/she admires” (Toner, 2004, p. 49). Cushion, Armour, and Jones (2003) state that not a great deal is known about the coaching process and, in particular, how to tap into a coach's experience to learn more about coaching. In the following pages the literature regarding coaching education will be reviewed.

COACHING EDUCATION

Due to the increasing numbers of children involved in organized sport, (the Stanford-based Positive Coaching Alliance (www.pca.org) estimates that there are 40 million children participating in organized sports in the United States), there has been tremendous amount of effort dedicated to understanding of a child’s sporting experience. Much of the initial research on coaching effectiveness was derived from leadership
research from non-sport settings. Trait and behavioral approaches were taken to attempt to understand coaching effectiveness and, just as in non-sport settings, these approaches were found to be simplistic and new paradigms were sought. Leadership studies then focused on both personal and situational variables and many of these studies were applied to sport settings with “minimal success” (Horn, 2002, p.310).

Horn (2002) states that the sport setting possesses unique characteristics that may limit the transferability of general leadership studies and led to research that proposed theories of leadership that were unique to the sport setting. For example, Chelladurai’s (1993) Multidimensional Model of Leadership posits that the athletes will experience positive outcomes if the coach behaves appropriately for the situation and in a preferred manner. Further, the coach will respond in his/her behavior by the perception of the level of satisfaction and performance of his/her athletes. Young athletes prefer coaches that are supportive, encouraging, knowledgeable, fair and consistent. Chelladurai posits that leader effectiveness is a function of the congruency between actual and preferred leader behavior (Martin, et al, 1999). Barnett, Smoll, & Smith (1992) also stressed that it is the athlete’s perception of the coaches’ behavior (influenced by situational and personal characteristics) that is crucial to studying coaching effectiveness. “…a child’s cognitive processing of adult leadership behaviors will determine their ultimate effects on the child’s evaluation of his or her sport experience” (p. 123.).

Horn (2002) suggests that three important points have arisen from this leadership research. First, it highlights the importance of the behavior of the coach, the antecedents of behavior, and the effects of the behaviors. Secondly, the perception of the athlete is
paramount and can be different from athlete to athlete in the same situation. These individualized perceptions will have a profound impact on the athletes’ self-perceptions, beliefs, and attitudes. These self-perceptions will affect motivation, performance, and behavior. Finally, the mediating effect of contextual variables (type of sport, competitive level), and athlete variables (age, skill level) as well as athlete’s perceptions and cognitions, and the socio-cultural context highlights the fact that there will not be one set of coaching behaviors that will be effective for all athletes and in all sport situations; “rather, effective coaching behaviors will vary as a function of the athlete and the sport context” (Horn, 2002, p.314).

The role of a youth sport coach is complex and, as stated above, will vary according to a number of contextual factors as well as the personalities of the athletes. However, youth coaches do not have formal training or the benefit of a highly structured work environment to assist them (Gilbert & Trudel, 2001; Gilbert & Trudel, 2004; Tinning, 2001; Quinn & Carr, 1998). Youth sport coaches are expected to acquire and use knowledge from a wide range of disciplines including, anatomy, pedagogy, physiology, nutrition, sport psychology and finance (Potrac et al, 2000). However, there are no agreed upon coaching education programs and large-scale education programs have been criticized for lack of a contextual approach (Abraham & Collins, 1998, Gilbert & Trudel, 2001). Smith and Smoll (1996a) summarized the dilemma and the great irony in youth sport coaching as follows:
Most athletes have their first sport experiences in programs staffed by volunteer coaches. Although many of these coaches are fairly well versed in the technical aspects of the sport, they rarely have had any formal training in creating a healthy psychological environment for youngsters. Moreover, through the mass media, these coaches are frequently exposed to college or professional coaches who model aggressive behaviors and a “winning is everything” philosophy that is highly inappropriate in a recreational skill development context. Because the vast majority of youth coaches have desirable motives for coaching, one can assume that their limitations result primarily from a lack of information on how to create a supportive interpersonal climate” (p. 27, quotes original).

Potrac, et al. (2000) posits that coaches do not operate in a vacuum and the sociological implications of their undertakings must be considered. However, they cite a scarcity of sociologically grounded research within coaching education. Future research needs to be done at the micro level of human interaction with more emphasis on the why and how of coaching rather than the what of coaching. These researchers favor an observation/interview approach to investigating coaching behavior and education. “It is thus argued that in order to discover, examine, and understand the nuances, actions, and behaviors of coaching practitioners, research should focus on the social world of individual coaches and how they operate within given guidelines” (Potrac, et al., 2000, p. 189).

Tinning (2001) reviewed the coaching education research produced between the years of 1998 and 2000 and found a dearth of research on coaching education. He posited that coaching education lacks a scholarly tradition and this may explain the “relatively small scale on the literature on coach education” (p. 4). His search found 18 articles under the descriptor coach education and, of those, he considered 5 to be relevant.

Most youth sport coaches are volunteers and are not required to obtain any certification; virtually anyone can become a youth sport coach. “The gap between expected competencies and the typical youth sport coach profile (i.e., volunteers with
sparse formal training) has long been considered a major challenge for youth sports” (Gilbert & Trudel, 2001, p. 16, parentheses original). Coaches, left to their own designs, have created a variety of environments for athletes. Some coaches emphasize winning and skill development while others will accentuate fun and social development.

“Although not always practiced, it has long been acknowledged that youth sport coaches must consider more than physical skill acquisition as a part of their role” (Orlick & Botterill, 1975, as cited in Gilbert & Trudel, 2004, p. 21). Further, Gilbert and Trudel (2004) stated that youth sport coaches should have the goal of creating autonomous learners and should understand the role they play in the cognitive and affective consequences for the athletes. There is an abundance of coaches that have no idea of what their athlete’s desire of them and many coaches are unaware of the mental skills of their athletes (Leslie-Toogood & Martin, 2003). Many coaches have these as goals but lack the knowledge or the skill to implement them. Most youth sport coaches work in isolation and receive little support or supervision, this gives them tremendous freedom to run their programs the way they see fit and to include the content and methods of their choosing (Gilbert & Trudel, 2001). Cushion, Armour, and Jones (2003) suggested that mentoring and critical reflection would enhance the current state of coaching education. They are concerned that current content knowledge is not sufficient and that the nature of coaching must be investigated prior to devising ways to improve it.

Currently the primary source of education for coaches is experience and observation of other coaches. “Inherent in the process of learning how to coach, therefore, would appear to be an element of socialization within a subculture, with a
personal set of coaching views emerging from observations of, and interaction with, 
existing coaches of “how things should be done”’’ (Cushion, Armour, & Jones, 2003, p.
217, italics original). Sport sociologist Jay Coakley (1978) points out that these are the 
methods that become integrated into the behavior of young coaches (as cited in Cushion,
Armour, & Jones, 2003). However, as pointed out by Gilbert and Trudel (2001), not all 
experienced coaches are competent and, to become a competent coach, significant 
experience would be required. Further, there has been an infusion of professional 
coaches within youth sport. Many elite or youth travel teams, particularly in soccer, are 
hiring coaches. Many of these coaches adopt an approach that may not be suitable for a 
youth sport setting and are imitated by other coaches (“Will the increase of paid coaches 
for youth sport travel teams or elite teams increase the pressure to win at all costs for the 
coach and the players?” 1997). Increased media attention to sport in general, and to 
coaching behaviors in particular, has led to wide-scale emulation of professional coaches 
at the youth sport level. Clearly, the objectives of the professional coach (dealing with 
adults) should not be the same as the youth coach (dealing with children). This creates an 
incongruity of goals between the athletes, seeking fun, competence, and a positive social 
experience, and a coach whose only goal is to win (McCallister, Blinde, & Weiss, 2000).

Current coaching programs are primarily focused on the promotion of athletic 
achievement (Abraham & Collins, 1998). Coaching as a social process receives slight 
attention (Cushion, 2001, Cushion, Armour, & Jones, 2003). Further, Cushion, Armour, 
and Jones (2003) state that current coaching education is inadequate as it is fragmented 
and divided into subcomponents and perpetuates the idea that it is an “autonomous body
of facts passed through generations” (Mckay, Gore, & Kirk, 1990, p. 62 as cited in Cushion, Armour, & Jones, 2003). Cushion (2001), in discussing this fragmented state of current coaching education, claimed that the “sum of the parts does not equal the whole” (p. 3).

Less than 20 percent of youth league coaches have received even minimal training in the technical aspects and the safety features of youth sport. It is not required in most of the youth sport leagues or by any state (Diegmueller, 1995). Many coaches rely on their own personal experience from former coaches, emulate coaches they see through the media, or learn by watching their peers. Gilbert and Trudel (2001) examined how youth sport coaches learn to coach through experience. Employing a multiple-case study approach, the researchers interviewed and observed six youth sport coaches and found that all these coaches refined coaching strategies through a process of reflection. These coaches reflected upon coaching issues, role frame, issue setting, strategy generation, experimentation, and evaluation. These coaches discussed many of these issues with peers, relied on their own prior experience or relied on coaching materials such as books and videotapes. Based on their findings, Gilbert and Trudel (2001) recommend that coaching educators should consider using an issue based approach and also give youth sport coaches the opportunity to frame their role. As discussed in the review of andragogy it is important for the adult to have the opportunity to participate in role frame analysis as “role frame analysis an individual to critically examine the underlying components that influence behaviors” (Gilbert & Trudel, 2001, p. 31). Coaches should
be asked, in small groups, to address a series of typical coaching issues and be given the opportunity to think reflectively about the decisions they may make.

Current coaching education makes learning mechanical and fails to consider the “dynamic human context” and creates a philosophical orientation that is “vocational and technocratic” where the emphasis is on “procedural knowledge, the skills, technique, and tactics of the game” (Cushion, Armour, & Jones, 2003, p. 220). Coaches are trained as technicians and much of this training is not aimed at the particular level or context at which they will be active. These various contexts can include youth, developmental, competitive, and professional, team or individual sport. Each of these contexts has their own specific demands and objectives and creates a lack of fit between coach education and practical needs that weakens coaching development (Cushion, Armour, & Jones, 2003).

Cushion (2001) opines that the most critical aspect of coaching depends upon which expert you are listening to. Some educators stress the importance of communication; others stress feedback, while other experts will emphasize instruction. Coaching educators must consider the level of experience of the coach prior to instituting an education program. It would be a mistake to assume that there is only one approach to coaching education and an approach that includes mentoring from other trained, experienced, and influential coaches would be recommended (Cushion, Armour, & Jones 2003; Quinn & Carr, 1998). This approach would enable coaches to learn from others in the field and to give novice coaches the opportunity to reflect upon the importance of their undertaking and the important influence they have upon their charges (Jenkins,
“Making coaches more reflective can not only help in this recognition process but also be a catalyst for change” (Cushion, Armour, & Jones, 2003, p. 224). Further, it would enable the neophyte coaches the opportunity to develop a coaching philosophy that they can adhere to (Drury, 2002; McCallister et al, 2000; Parker & Sharpe, 1995).

Many coaches would like to instill values and create intrinsic motivation for the athletes but are unaware of how to do it. Female athletes (N = 221) cited their primary reason for participating in athletics was to have fun and coaches must certainly consider this when dealing with female athletes (Stewart & Taylor, 2000). DeVoe and McMillen (1996) called for the infusion of a multicultural component into coaching so that coaches may better understand athletes from different cultural backgrounds.

Sports are an important aspect of millions of youths’ lives and represent a critical venue to learn important life lessons. McCallister et al. (2000) surveyed coaches to ascertain which values and life skills they deem important and their methods in generating these outcomes. However, numerous inconsistencies were found between desired outcomes and coaches detailing of how they taught these desired outcomes within the sporting environment. For example, a number of coaches stated that having fun was a main priority but there was a tendency among these coaches to assume that having fun was a result of winning. Anecdotally, these researchers also pointed out the twenty-two youth coaches in this study were volunteers, got the position by default (no other volunteers), and had a child involved in the program. This, the authors pointed out, suggests that the prerequisites for becoming a youth sport coach are minimal. Sport
psychologist Harvey Dulberg, a member of National Youth Sports Safety Foundation, said, “Anybody who wants to coach – certainly at the recreational league level – can coach” (Diegmueller, 1995, p. 2).

Due to these inconsistencies and a lack of formal training Gilbert and Trudel (2004) suggest that these coaches should have model coaches to refer to frame their roles. They define role frames as a way to interpret situations. If coaches had a model to reference it would help define their roles and “provide insight into the often reported discrepancy between coaches’ attitudes/beliefs and their actual behaviors” (p. 24). Currently most youth sport coaches often model their approach to coaching on elite or professional coaching where winning is the primary goal. In their research they chose six “model” youth sport coaches. A model coach was defined as a coach who was interested in the theory and practice of coaching, was respected in the community for his/her dedication to youth sport, was considered a good leader, teacher, and organizer, and kept winning in perspective and encouraged children to respect the game, opponents and officials. They found that there was not one all-encompassing model role frame but that there are common attributes (discipline, fun, personal growth, winning) of a role frame for youth sport coaching (Gilbert & Trudel, 2004).

Abraham and Collins (1998) also criticized current modes of coaching education and discussed the best way to modify existing approaches to address the specific needs of coaches. They suggest looking to the field of cognitive psychology for answers. These researchers claim that coaching is a cognitive skill rather than the much proclaimed “art” or common sense and much of coaching research has followed a behaviorist approach
rather than a cognitive one. Further, they posit that much can be learned from outside the
developmental domain of the physical education teaching and coaching literature.

Abraham and Collins (1998) discuss the behavioral approach and the use of the
Coach Behavioral Assessment System (CBAS) developed by Smith, Smoll, and Hunt
(1977). Trained observers watch coaches and then check boxes next to categories of
behavior (normally verbal) that they interpret the coach to be employing. This analysis is
then presented to the coach, and if necessary, should lead to behavior modification if
required. However, as these researchers state, there are major differences in how
information gained from these assessments is interpreted. For example, there is
tremendous premium placed upon positive feedback from coach to player, and this is
certainly an important tool, however at certain levels of development, research has
indicated that the recipient can actually construe positive feedback as negative.

Positive feedback has been found to increase self-esteem among athletes but it is
only one factor among many that coaches should consider (Boyd & Trudel, 1996, as cited
in Abraham & Collins, 1998, Parker & Sharpe, 1995). Coaching instruction is also seen
as paramount yet studies have revealed that many athletes prefer a democratic style of
coaching. Finally, the CBAS is seen as simplistic and only looking to measure one type
of coaching style and, as stated, there is no one stereotypic coaching personality or set of
behaviors (Abraham & Collins, 1998). Being an expert coach is not a function of
increasing or decreasing certain behaviors but rather considering the context (team versus
individual, gender, age, type of sport, high- or low-expectancy athlete, skill level, starting
or non-starting player stage of the season, aims of the coaching session, practice versus
game, and coaching philosophy) of his/her coaching and making correct decisions.

“Thus coaching is not a behavior to be copied but a cognitive skill to be taught” (Abraham & Collins, 1998, p. 68).

One major difficulty in coaching education, particularly when dealing with seasoned coaches, is dealing with deeply ingrained beliefs, as they are very difficult to modify. This is problematic when coaches have adopted beliefs that may be deleterious to the health and continued participation of athletes. Current coaching education challenges these beliefs through methods where coaches are put into situations where their methods will be guided by their beliefs; the coach will learn from his/her mistakes. These beliefs can be then challenged and the hope is that new beliefs will come about. This enables the coach to rely on his/her intuition about coaching decisions that may, or may not, be correct. Conversely, with a cognitive approach, coaches’ procedures are challenged and explained as to why they may be incorrect. This forces the coach to be critically reflective of his/her methods. The coaches “who make top billing are those who are truly reflective, and this trait is an essential prerequisite for the experiential approach to be effective” (Abraham & Collins, 1998, p. 73).

Gilbert and Trudel (1999) discuss coaching education programs on a large-scale and state that the needs and wants of amateur coaches are rarely considered and most of these large-scale coach education programs have not been evaluated and their effectiveness has been questioned. Thus, “the evaluation of coach education programs has become one of the most pressing issues in sport science research” (p. 235). These researchers also suggest that experiential knowledge is essential for coach education as
well as the need to consider the coaching context. It is imperative to analyze how the course is delivered, the coach’s knowledge and context prior to instruction and coaching behaviors and the related cognitive processes. Amateur coaches are assuming increasingly important roles in youth development. Training programs should be designed to educate and develop coaches to have a positive impact. The question to be answered is whether coaches are learning context specific content that they can and will use once they return to their coaching activities (Gilbert & Trudel, 1999).

Dils and Ziatz (2000) opined that if athletics are to serve an educational purpose, “then coaches must not pursue vague clichés as objectives (or, worse yet, work under the false assumption that positive outcomes of athletics are inevitable) rather, coaches must teach, model, and reinforce” positive outcomes (p, 89, parentheses original). Coaching education programs should model teacher education programs and be very specific about the objectives of the position (Sullivan, 1996). The goal should be appropriate positive outcomes. Currently coaching education does not define the role and function of the coach. In a modified Delphi approach, (Dils & Ziatz, 2000) the panel of experts on youth sports found that the following learning outcomes should be taught to coaches to be pursued through interscholastic athletics:

- Self-confidence
- Self-respect
- Self-discipline
- Circulo-respiratory efficiency
- Courage to act
○ Joy of movement

○ Teamwork

○ Honesty

○ Leadership

Gallimore and Tharp (2004) took the opposite in approach when, in 1976, they looked to an outstanding coach, John Wooden men’s basketball coach at UCLA, to see what teachers can learn from successful coaches. They found that much of Wooden’s success could be attributed to his use of feedback and instruction with players. In particular his “sandwich approach” of correct demonstration, imitation of the incorrect procedure, followed by another correct demonstration was found to be effective by these researchers. It was also highlighted in this study how this great coach enjoyed the process; he loved the practice more than the game (outcome). Further, Wooden’s use of praise that was specific and informative was highlighted. Wooden reserved much of his use of praise for the second tier players as he felt they needed it the most.

To further stress the importance of sport specificity in coach education, Fung (2003) assessed the self-efficacy (belief of competence) of coaches to gain insight for planning future coach preparation programs. In this study, the Coaching Efficacy Scale (CES) was employed to assess levels of self-efficacy in four areas, motivating athletes, strategy use, coaching technique, and character building. Coaches in this study felt most efficacious in character building followed by coaching technique, motivation of athletes, and strategy use. Certainly with coaches feeling the least competent in strategy use it would make intuitive sense to make the intervention specific to the sport of the coach.
Malete and Feltz (2000) investigated the effect of a coaching education program of high school basketball coaches on coaching efficacy. These researchers posited that an effective, well-designed, coaching education program should enhance the level of coaching efficacy and cited research that showed that coaches were more likely to use information on a topic they had received training than coaches that did not receive training.

In a quasi-experimental design, some coaches received the Program for Athletic Coaches Education (PACE). PACE was developed by academics at Michigan State University in conjunction with high school athletic officials from the state of Michigan and encompasses training in the following areas: injury prevention, care and management, risk management, growth, development and learning, training, conditioning and nutrition, social and psychological aspects of coaching, skills, tactics and strategies, teaching and administration and professional preparation and development, e.g., public relations. The results of their study showed a significant relationship between exposure to the PACE program and in increase in perceived self-efficacy. “Even with such a short-term program, coaches still showed significant improvements in their coaching efficacy” (Malete & Feltz, 2000, p. 416). Programs that use approaches enhance confidence in coaching should produce more confident coaches (Malete & Feltz, 2000).

In another coaching intervention, Smith, Smoll, and Curtis (1979) used their Coaching Effectiveness Training (CET) to raise levels of self-esteem among youth athletes. The CET is a 2-hour training program that provides coaches with “specific behavioral guidelines for fostering positive coach-athlete relationships, reducing
evaluation apprehension, and enhancing team cohesion” (Smith, Smoll, & Barnett, 1995). Coaches are observed after the training sessions by trained observers employing the Coaching Behavior Assessment System (CBAS) and their specific behaviors are pointed out to the coach. Other researchers have also advocated the use of video and audiotape to solicit feedback to coaches with the primary focus on the behavior of the coach. Smith, Smoll, and Curtis (1979) called for an “expanded implementation and assessment of intervention programs designed to enhance the psychological welfare of participants” (p. 75).

Educational programs that enable coaches to create positive climates for athletes and foster reflective thinking by coaches need to be endorsed by the directors of youth sport organizations. It is important for youth coaches to have access to peers to enhance the educational process. Gilbert and Trudel (2001) advocate the creation of coaching pods where coaches can get together, led by a senior coach, and discuss issues related to coaching. This would lead to more reality based discussions within the context that the coaches are currently involved. Coaches need to understand the importance of critical thinking and creating their own approach and not “follow blindly generic guidelines or mimic the practice of observed others” (Cushion, Armour, & Jones, 2003, p. 226). The best coaches are those that are reflective and this is a key attribute to be an effective coach. Coaching education should be concerned with asking coaches why they do certain things rather than how. This will benefit other coaches by motivating them to think reflectively as well. The knowledge gleaned should be easily disseminated to other coaches and by combining the “cognitive and experiential worlds” (Abraham & Collins,
1998, p. 75). Coaches should be educated as early in their coaching careers as possible to avoid the “marriage” to poor coaching concepts.

ADULT LEARNING

As will be discussed, research has strongly indicated that adults learn differently than pre-adults and children (Kerka, 2002). It is the goal of this study to conduct an educational intervention for adult coaches of youth sport in the form of a workshop. With that goal in mind it is imperative for this researcher to have an understanding of both the predominant theories in adult learning and the key differences between the teaching of children (pedagogy) and the teaching of adults (andragogy). In the following pages adult education and its respective theories will be reviewed and a theory will be forwarded that this researcher feels is the most appropriate for the proposed adult education workshop. Further, a review of youth sport coaching education will be provided as well as an outline of the proposed coaching education workshop.

The independent, or treatment variable, in this experimental design will be an intervention to introduce youth sport coaches to the principles of self-determination theory as well as coaching strategies that will employ the tenets of self-determination theory. These adult coaches will be divided into two groups, with one group receiving the treatment variable and the second group, the control group, not receiving the treatment variable. (The dependent variable in this experimental design is a self-report instrument for the athletes to measure self-regulated motivation and is discussed later in this dissertation.) The intent of the independent variable is to educate adult coaches to the premises and principles of a coaching strategy, employing the tenets of self-
determination theory, and it will be important for the researcher to be well versed in, and prepared to design and implement, an effective educational presentation for these coaches. A crucial aspect of the intervention is the instructional design, defined as creating an instructional design that employs “instructional methods that are likely to lead to desired learning goals in a given situation” (Chyung & Stepich, 2003, p. 317). With this in mind it is important to review the literature in two key areas. The first area to be reviewed will be educational theories as it relates to adult education and its related literature. The second key area to be reviewed is coaching education and its current status within the realm of youth sport and sport management.

**Adult Education**

Lifelong learning is not only a good idea but also a real necessity for many people. Individuals are constantly being asked to attend training sessions at their workplace to maintain a level of competency in many rapidly changing fields. Others, such as the adult attempting to learn the game of golf by taking golf lessons, choose to continue their educations in varied spheres for a myriad of reasons. Zmeyov, (1998) stated that, for many reasons, but in particular, due to “the level of socio-economic and personal development” a higher level of individual competence in the “occupational, social, family and internal domains” of a person’s world is required (p. 103). Adult learning has grown in society (from less than 10 percent in the 1960’s to 40 percent of North Americans today) as men and women “struggle to create new realities at every stage of life” (Nesbit, 1999, p. 265). Delegates to a 1997 United Nations Educational, Scientific, and Cultural Organization (UNESCO) conference called upon all members to
develop educational programs for adults, as adult education is the key to a successful transition to the twenty-first century (Nesbit, 1999). Zmeyov (1998, p. 103) groups individual adult educational needs into three primary categories:

- needs of general secondary education;
- needs associated with social roles (acquisition and updating of occupational knowledge and skills, participation in social life, and improvement of the quality of family life); and
- needs of general culture and personal development (learning for the purposes of health maintenance, leisure time and personal development).

A review of educational theories revealed at least 50 major theories of learning and instruction. Some of the more popular theories would include cognitive dissonance, criterion referenced instruction, situated learning, social learning theory, and experiential learning. However, most of these theories are focused on the instructor (teacher directed) rather than the student (learner centered) and are more applicable to teaching children than adults; many researchers assert that adults learn differently than children and, ergo, should be taught differently than children (Kerka, 2002). Verduin, Miller, and Green (as cited in Okezie, 2003) discussed some of the key differences between pre- and adult learners:

- Life experience – the most crucial influence on the ability and willingness of the adult learner to understand and internalize information. Adults bring a strong conviction about the way things ought to work and this strong conviction directly or indirectly influences the degree to which adults are willing to engage in the learning process.
- Self-concept and self-esteem – the adult learner comes to the educational setting with various perceptions of him/herself. Adult learners will be more prone to internalizing lessons if they are positively tied to their life experiences.

- Linkage between life experience and topics – adult learners appear to focus more attention on concepts directly tied to life situations. The more the learning process is tied to the problems and concerns of the adult learner, the more the dedication by the adult learner to the learning process.

Adult learners are also motivated by different factors than children. Adults are motivated for social reasons, to upgrade skills for professional development, to learn to serve others with a new skill (such as CPR), for escape or stimulation, or pure interest (Lieb, 1991). Adult education was founded as a professional field of practice in the 1920’s. In the past eighty years there has been “no single answer, no one theory or model of adult learning that explains all that we know about adult learners, the various contexts where learning takes place and the process of learning itself” (Merriam, 2001, p. 3).

Much of what is known about learning has come from the studies of children and animals. “From these theories and assumptions there has emerged the technology of ‘pedagogy’ – a term derived from the Greek stem paid – (meaning ‘child’) and agagos (meaning ‘leading’) so ‘pedagogy’ means, specifically, the art and science of teaching children” (Gehring, 2000, p. 156). Gehring (2000) states that over time the term child in the definition became lost and pedagogy came to mean the art and science of teaching. Within adult education, the approach was to teach adults as if they were children. Okezie (2003) states that this is an incorrect approach and that teachers of adults must have a
sound understanding of adult psychology and must stay informed about new techniques in adult education. The practice of adult education and research conducted around the world make obvious that adult learning requires its own specific technologies and principles (Zmeyov, 1998). In the mid-twentieth century a drive to professionalize adult education, which included the need to develop a knowledge base unique to adult education, led to the emergence of the field of andragogy, or adult learning. In the following pages I will summarize some of the recent literature regarding this field.

*Andragogy*

Malcolm Knowles developed the theory of andragogy (from the Greek word andros – adult man and ago – meaning I guide (Zmeyov, 1998)) in an attempt to develop a theory of adult learning and he defined it as the art and science of helping adults learn. The andrological model has had a significant impact on adult education and, in particular, in regard to the assumption that teaching adults should differ from teaching children and adolescents (Imel, 1989). Andragogy has been the preeminent instructional method in adult education due to the work of Knowles (Rachal, 2002). Imel (1989) states that Knowles’ theory emphasizes that adults are self-directed and expected to take responsibility for decisions and that adult learning must accommodate these vital aspects. Daloisio and Firestone (1983) defined self-directed learning in Knowles’ own words as “a process in which individuals take initiative. They diagnose their learning needs, formulate learning goals, identify human and material resources for learning, choose and implement approximate learning strategies and evaluate learning outcomes. Self-directed
learning usually occurs in association with various helpers, such as teachers, tutors, masters and peers” (p.73).

Research has found that teachers perceive differences in learning styles between adults and pre-adults. Adults were perceived to be more intellectually curious, motivated to learn, willing to take responsibility for their learning, willing to work hard, precise about what they wanted to learn, and concerned with the practical implications of learning (Imel, 1989). A crucial aspect of being an effective instructor involves understanding how adults learn best and being mindful that adults have special needs and requirements as learners (Lieb, 1991).

Merriam (2001) described the five assumptions underlying andragogy that depict the adult learner:

1) the adult learner has an independent self-concept and can direct his/her own learning;
2) the adult learner has accumulated a reservoir of life experiences that is a rich resource for learning;
3) the adult learner has learning needs loosely related to changing social roles;
4) the adult learner is problem-centered and interested in immediate application;
5) the adult learner is motivated to learn by internal rather than external factors;

Based upon these assumptions, Knowles proposed a model for designing, implementing, and evaluating educational experiences for adults. Gehring (2000) discussed the assumptions of andragogy and their technological implications.
Self-Concept – as an individual sees him/herself as an adult they no longer see themselves as a full-time learner but rather as a doer or producer. The adult acquires a new status within society and his/her self-concept becomes that of a self-directing personality. A person becomes an adult when he/she perceives him/herself to be able to make his or her own decisions and become totally self-directing. For this reason adults need to be treated with respect, as able to make their own decisions, and to be seen as unique human beings. Environments not conducive to adult learning would include such elements as treating adults like children, being told what to do, being talked down to, being embarrassed, punished, and judged. “Adults tend to resist learning under conditions that are incongruent with their self-concept as autonomous individuals” (p.157). Based upon the self-concept assumption it is important to create a learning climate that makes the adult learner feel physically at ease (adult sized furniture, informal meeting room, decorated to adult tastes). All symbols of childish learning should be removed. Adult learners should not be told what they are going to learn but, rather, they should be involved in the process of self-diagnosis for learning. Adult learners should be involved in the decision making process and the teacher should more of a facilitator serving as a procedural guide or a content resource. The instructor should assume the role of a guide rather than a teacher. He/she should create a climate of support and judgment should be avoided.

Experience – due to differences in experiences, adults normally have more to offer and can be, themselves, rich resources for learning. This richer foundation of experiences will enhance the learning of new experiences as new ideas can be related to
past experiences. The adult educator should also be mindful of adults that have acquired a large number of fixed habits and patterns of thought and of those that tend to be less open minded. The instructor should emphasize experiential techniques as well as the practical application of the material. At the beginning of the instruction, facilitators should spend some time helping the adult learner look at themselves and the material more objectively and attempt to free their mind from preconceptions.

**Readiness to learn** – just like childhood and adolescence, adulthood is a developmental stage and has its transition points and crises. Educators of adult should avoid staying in lock step with a curriculum and take advantage of teaching moments when he/she sees them. The educator must also try to group learners as he/she sees fit. Some material is more conducive to a homogeneous group while other material is best learned within a heterogeneous atmosphere.

**Orientation to learning** – adults tends to want to apply immediately what they have gleaned. They want to learn in response to pressures they feel from their lives. They want to better deal with problems they are currently dealing with or improve upon a way of doing something. They will tend to enter a learning activity with the need to find a solution. The focus of the educator should be to assist the adult to learn rather than to teach subject matter. Curriculum should be organized towards solving the problem and that should be the focus. An adult that wants to learn how to play golf is probably not interested in listening to the educator discuss the history of golf or the evolution of golf equipment. Educators should attempt to discern at the onset of the program what the adult learner hopes to learn from the experience.
Educators should focus on skill development rather than theory; the goal should be to facilitate learning rather than to propagate information (Fidishun, 2000, Robertson, 1996, Zmeyov, 1998). Success should be measured in the acquisition of the competencies and whether these competencies are employed when necessary (Daloisio & Firestone, 1983). Zmeyov (1998) states that andralogical principles should be applied when learners have practical experience in the sphere, are conscious of the domains in which the knowledge, and skills acquired can be used, have a sufficient background in the field, and are trying to achieve learning objectives in a short time. The goal is to change the way learners think rather than increase their knowledge base. Learners will use what they already know to “filter and interpret” new information (Pratt, 2002, p. 8). This means that learners will construct their own understanding rather than accept the teacher’s understanding of the subject matter. Therefore, it is imperative that instructors strongly consider the learner’s prior experience and understanding regarding the subject matter. Further, Pratt (2002) cautions that it is not easy to teach this way. The instructor will be expected to ask quality questions and wait for the response rather than giving them to the students. The focus must be on reflection, analysis, and reasoning rather than recall, recognition, and correct answers. “Indeed, from this perspective, sometimes less (telling) means more (learning)” (p. 9, parentheses original).

Adult education instructors should be mindful of diversity when working with adult-learners. Gadbow (2002) points out what it takes to be successful when dealing with a diverse group of adult learners; “Their needs are as different as they are. Primarily they need to be respected and treated as unique individuals who can learn and develop
skills and abilities as competent self-directed learners” (p. 54). It is important for trainers and teachers of adults to focus more on the individual needs of the learners and less on content and presentation of material.

Andragogy is not without its critics. Hartree (1984) questioned whether there was a theory involved at all or just principles of good practice (as cited in Merriam, 2001). Zepke and Leach (2002) stated that Knowles assumed that all adults are self-directed learners and advocated means to give adults that control through such devices as learning contracts. However many adult learners are “syllabus bound, look to others to control their learning, have little ability to learn for themselves” and, in general, prefer to be directed (p. 208). Further, andragogy is too focused on individualism and tends to discount human interdependence. The concept of self within andragogy also tends to be static rather than evolving and constantly changing. Zepke and Leach (2002) are also concerned about the generalization of andragogy as a white male with a Western cultural bias developed it. They also claim that andragogy is nothing more than a set of techniques that “ignore the contextual nature of learning” (p. 208).

Zepke and Leach (2002) summarized the critiques regarding the importance of experience within andragogy. They would include the individuality and the inability to generalize experiences, memories of experience vary and some learners may not choose the most appropriate experience. Levels of experience will differ among adult learners; two 40-year old adults may have dramatically different sets of experiences. Some children may have richer and more varied experiences than some adults (Merriam, 2001). Rachal (2002) note that very little empirical work has been done on andragogy and what
has been done has been done in the 1980’s and 1990’s in the form of unpublished dissertations. Much of this research was conducted with college age students or, if adults were used, they were not isolated from the rest of the sample. Other studies fail to give the learner control, a crucial premise of andragogy, and learner freedom. Further, voluntarism was not included in many of these studies, also an important aspect of andragogy. However, Knowles continues to be the most widely cited source in adult education.

Knowles (1980) answered his critics by stating that andragogy was not, unlike pedagogy, an ideology and should not replace the pedagogical model but should provide an alternative set of assumptions about the learner. Therefore “the andragogical model is a system of assumptions which includes pedagogical assumptions” (p. 49). Trainers must assess each situation and determine which pedagogical strategies are appropriate with the ultimate goal to be to move towards the andragogical model. Knowles also states that there are degrees of “andragogy-ness” and that it is situational. Situation variables might include “degree of voluntariness, learner’s experience of and prior knowledge of the content, the need for quality control in assessing learner outcomes, the presence or absence of institutional and professional constraints, and general course goals” (Rachal, 2002, p.224). “Andragogy is not a panacea but it is a system of ideas that can improve the quality of learning” (Knowles, 1980, p. 49).

It is the goal of this researcher to design and implement the coaching education workshop employing the principles of andragogy as described above. As described in other sections of this dissertation, coaching education in the youth sport realm is woefully
inadequate and has had a deleterious impact on many participants. The purpose of the education program is to modify the mindset of coaches as to what the goals of youth sport should be, and the coaches’ role in the youth sport domain and achieving those goals. We have allowed the “win at all cost” model of sport pervade to the very lowest levels of youth sport. Many coaches are creating stressful, controlling motivational climates with an overemphasis on outcome rather than process. After an extensive review of the adult education literature, coupled with the aim and goal of the workshop (to change the perspective of adult coaches of youth sport) this researcher is of the opinion that the most appropriate and relevant theory to employ in this workshop is transformative learning. It is described below.

Transformative Learning

Transformative learning theory was developed largely through the ideas of Friere and Merizow as they attempted to develop an educational framework to create social change for oppressed people through education (Baumgartner, 2001; Christopher et al, 2001). These researchers were attempting to move away from the traditional educational model, referred to as the banking model, where the teacher was seen as the expert and the learner was viewed as passive objects that become filled with knowledge. In this traditional model there is very little discussion and fails to recognize the individual differences of the learner. Friere viewed this system as oppressive due to the paternalistic nature of the teacher/student relationship, and the failure to recognize the individuality of the student. Friere and Mezirow believed that a system of education, which promoted
self-awareness and freedom, would “help create social equity for the oppressed and for real learning to occur” (Christopher et al, 2001, p 135).

“The transformation process has been closely linked with psychology and developmental theory, but it has only recently been introduced as a theory of practice in adult education – Jack Mezirow is credited as the founder of this movement” (Grabove, 1997, p. 90). Transformative learning “is the process of effecting change in a frame of reference” (Mezirow, 1997, p. 5, italics original). Frames of reference are defined as the structures of assumptions through which we understand our experiences (Mezirow, 1997). Adults have acquired a logical body of experiences that define their world. These experiences would consist of associations, concepts, values, feelings, and conditioned responses. Through these frames of reference we develop preconceptions and we have a strong tendency to reject ideas that fail to fit our preconceptions. Under the right circumstances, transformative learners can move toward frames of reference that are “more inclusive, discriminating, self-reflective, and integrative of experience” (Mezirow, 1997, p. 5).

Although the transformational learning process was initially seen as a linear one, current research indicates that it is dependent upon the experience of the individual. Further, the triggering event, which was originally thought to be single, dramatic happening, is now viewed as more of a cumulative process (Baumgartner, 2001). Baumgartner (2001) cites the example of one student’s journey toward feminism beginning by taking a graduate course on the subject.
Cranton (2002) describes transformative learning as a simple yet elegant concept. “Through some event, which could be as traumatic as losing a job or as ordinary as an unexpected question, an individual becomes aware of holding a limiting or distorted view. If the individual critically examines this view, opens herself to alternatives, and consequently changes the way she sees things, she has transformed some part of how she makes meaning out of the world” (p. 64). It is safer and easier, Cranton (2002) maintains, to hold on to habits of mind rather than let them go but the key is for the adult learner to partake in critical reflection. Through critical reflection, adult learners question their ideas, their validity, their sources, and underlying principles. “It helps to talk to others, exchanging opinions and ideas, receiving support and encouragement, and engaging in discourse where alternatives are seriously weighed and evidence brought forth” (p. 65).

Cranton (2002) states that there are no particular teaching methods to guarantee transformative learning, however, there are certain facets that must be present if transformative learning is to occur. First is the need to create an activating event. Learners must be exposed to viewpoints that may be in disagreement with their current views. Secondly, adult learners need to be able to articulate assumptions. Cranton suggests that is difficult for learners to express their feelings and ideas about a particular topic. She suggests metaphor analysis as a way of assisting learners articulate. The learner will be asked other ways to explain the topic at hand and then be asked why they chose to describe it that way. Third is the need for critical self-reflection. Students must be given the opportunity to question their assumptions, “to examine what they think and
how they feel and consider the consequences of holding certain assumptions” (p. 67-68). This critical self-reflection may take place in the classroom but will invariably take place outside the classroom as well. Cranton also suggests the use of self-reflective journals to help the student organize his/her thoughts on the subject.

Baumgartner (2001) states that two approaches have been taken towards group transformational learning. Action learning involves the placing of individuals on teams and asked to solve a problem or issue. Collectively they work on a solution by employing reflection and discourse. Collaborative inquiry (CI) invites volunteers to examine a question of interest and through meetings and discussions practices and methods are transformed.

Students must possess openness to alternatives and must be willing to engage in discourse rather than discussion. Cranton (2002) describes the optimal conditions for discourse as having accurate and complete information, being free from coercion and distorting self-deception, weighing evidence and assessing arguments, critically reflecting on assumptions, having equal opportunity to participate, and accepting informed consensus as valid knowledge. Cranton also suggests the use of observers to assist in discerning when learners resort to persuasion rather than evidence.

Christopher, et al (2001) described the three-step process to transformative learning. Step one is assisting the learners to become critically aware of how and why their assumptions have come to constrain the way they perceive the world. Step two consists of a revision of belief systems occurs as learners “change structures of habitual expectation to make possible a more inclusive, discriminating, and integrative
perspective” (p.135). In step three, learners adopt behaviors that are more consistent with this new perspective. This three step process is enhanced by ensuring that teachers are empathetic, caring, and sincere; by creating a learning climate that is open, safe, and trusting; and by employing learner-centered instructional methods that promotes participation, reflection, and autonomy. Robertson (1996) defines learner-centered as when the exemplars focus “on the learners, their key personal characteristics and how those features affect their lived experience in learning situations” (p. 47).

Since 1978 the theory of transformative learning, as developed by Mezirow, has inspired much discussion in the field of adult education (Taylor, 1997). Robertson (1996) in his discussion regarding the facilitation of transformative learning stated that there are two types of learning, simple (an elaboration of one’s existing paradigm) or transformative (creating a new paradigm) and that transformative learning should be the goal of adult educators. However, adult educators are not being adequately prepared or supported to reach that goal. To affect a paradigm shift is a complicated process that involves rendering the existing paradigm dysfunctional. There is an important transition phase between the letting go of the existing paradigm and the acceptance of a new one that must be nurtured by a skilled instructor. Robertson (1996) suggests a six-prong approach to strengthen transformative education which includes better preparation and support for its practitioners, the employment of a systems approach to transformative education with a focus on both teacher and learner’s experiences, the building of a scholarly body of literature with a focus on the teacher as facilitator relationship, education on this topic at the graduate level, a code of ethics regarding the educational
helping relationship, and ongoing professional consultation opportunities for adult educators. Further, Robertson (1996) stresses the need for those involved in adult education to remember the importance of both the learner and the facilitator.

Paralleling Robertson’s (1996) discussion of paradigms, Mezirow (1997) differentiates habits of mind and point of view. A habit of mind is a habitual way of thinking while a point of view is a way of articulating that habit of mind. A coach may feel that his/her way, win at all cost for example, of doing things may be superior to anyone else’s, which would be his habit of mind. A resulting point of view would be the “complex of feelings, beliefs, judgments, and attitudes” he/she may have regarding specific individuals or groups such as other coaches or groups with differing attitudes (Robertson, 1996, p.6). Habits of mind are more durable than points of view. Points of view are malleable, particularly when things don’t occur as we expect them to. “Points of view are more accessible to awareness and to feedback from others” (Robertson, 1996, p.6).

Mezirow (1997) states that learning can be either instrumental (subject to empirical testing) or communicative (the understanding of purposes, values, beliefs, and feelings). With communicative learning we rely on the judgment of those we believe to be informed. Mezirow (1997) refers to this as discourse which he defines as “a dialogue devoted to assessing reasons presented in support of competing interpretations, by critically examining evidence, arguments and alternative points of view” (p.6). Discourse is a way of learning together by sharing related experiences to arrive at an understanding. Through critical reflection on the assumptions upon which our interpretations, beliefs,
and habits of mind or points of view are based transformation then occurs when our frames of reference are transformed. Mezirow (1997) outlines the four processes through which learning occurs:

1) Seeking further evidence to support initial bias and expand the range and or intensity of point of view;
2) Establish new points of view;
3) Transform our point of view – individuals can have an experience that results in critically reflecting on a point of view;
4) Transform a habit of mind – by becoming aware and critically reflective of a generalized bias. This highly significant transformation is less common and more difficult.

Adult learners must also learn to think autonomously and responsibly. It is important for the educator to not only set goals and objectives for the learner but also help the learner attain the goal of becoming an autonomous thinker. Mezirow (1997) defines autonomy as “the understanding, skills, and dispositions necessary to become critically reflective of one’s own assumptions and to engage effective in discourse to validate one’s beliefs through the experiences of others who share universal values” (p. 9).

Mezirow (1997) outlines a number of ways to facilitate transformative learning:

- Educators must help learners become aware and critical of their own and others’ assumptions. Learners need practice in recognizing frames of
reference and in using their imagination to redefine problems from a
different perspective.

- Learners must be assisted in participating effectively in discourse.

  Effective discourse depends upon how well the facilitator can create an
  environment where learners have full information, are free from coercion,
  are able to challenge, defend, explain, assess, and judge arguments,
  become critically reflective of assumptions, are open to other perspectives,
  are willing to listen and search for a common ground, and can make a
  tentative best judgment to guide action.

- New information must be incorporated into an already existing frame of
  reference. The learner may have to be helped to transform his/her frame
  of reference to fully understand the experience.

- Educators must assume responsibility for setting objectives that explicitly
  include autonomous thinking and recognize that this requires experiences
  designed to foster critical reflectivity and experience in discourse.

- A learning environment that fosters critically reflective thought,
  imaginative problem solving, and discourse is learner-centered,
  participatory and interactive, and it involves group deliberation and group
  problem solving. Instructional material reflects real life situations and is
  designed to foster participation in small groups. Learning occurs through
  discovery and imaginative use of metaphors to solve and redefine
  problems.
The educator will reframe questions in terms of the learner’s current level of understanding. Learners are frequently challenged to identify and examine assumptions, including their own.

Use of methods such as metaphor analysis, concept mapping, consciousness raising have been found useful as they encourage critical reflection and experience in discourse.

To foster self-direction the educator should function as a facilitator rather than an authority on subject matter. The facilitator should assume the role of co-learner and attempt to encourage learners to create norms that accept order, justice and civility in the learning environment. An environment where diversity is welcome, where there is peer collaboration, and equal opportunity for participation.

Wilcox (1997) discussed her use of transformative learning in her role as a faculty developer and concluded that the “quality of learners’ relationship with educators has a significant impact on the process of educator development” (p. 30). Dirkx (1997) stated that learning is not a product of the individual or other socio-cultural sources. In discussing a holistic concept of transformative learning Dirkx (1997) said, that “from the perspective of soul, transformative learning results in a transcendence of the individualistic and constraining vision provided by the ego. Learning through soul is thus “transegoic”; it connects us to the immediacy of our present expectations and, through this process, leads us into an experience that transcends more limited, ego-based views of
the world” (p. 83, quotes original). Pilling-Cormick (1997) created a model for self-directed and transformative learning as well as the Self-Directed Learning Perception Scale (SDLPS). The model highlights the three components of self-directed learning (“the foundation of transformative learning” p. 69) control, interaction between educator and student and influences on the interaction between educator and student. Control is defined as the extent to which students can direct their learning. Factors influencing the student-educator interaction and affecting the amount of control students have would include social constraints, environmental characteristics, student characteristics, and educator characteristics.

Pilling-Cormick (1997) states that not all learning environments can become transformative but the opportunity should exist and discusses ways of fostering transformative learning. She suggests that some students may require assistance determining what they need to learn. It will differ from student to student but the instructor should focus on initiating reflective thinking amongst all the students. Appropriate resources should be available. For example, a computer literacy course should provide access to computers for adult learners. The educator must also be sure that the resources are what the adult learners need and expect. Educators must consider outside influences that impacts learning. Educators must be aware of factors in the lives of adult learners that may influence their learning. Educators must be cognizant of a students need for feedback, whether the student needs assistance with time management skills, and if the student-learner feels comfortable with group work. The adult educator must also be concerned with the physical elements of the learning environment; ensuring
that the classroom or space is conducive to learning (as described earlier in the discussion of andragogy). Finally, the educator must ensure the environment is a trusting one where individuals feel comfortable opening up to each other.

Taylor (1997), in his neurobiological perspective of transformative learning theory, stated that critical reflection was a crucial component of transformative learning. Critical reflection is defined as “the type of thinking that serves to challenge notions of prior learning…Critical reflection occurs when patterns of a person’s beliefs, goals, or expectations are put to the test by means of thoughtful questioning” (van Halen-Faber, 1997, pp51-52). However, Taylor (1997) opined that much more attention needs to be given to the roles of emotion and implicit memory in the transformative process and calls for teachers to be given more guidance in how to manage the emotional nature of learning in the classroom. Cohen (1997) also discussed the importance of critical reflection in his autoethnographic reflection of experiencing transformative learning as a teacher. Cohen (1997) posits that in order to create an environment where students engage in critical thinking it is important to assure the students that they possess the ability to think. Van Halen-Faber (1997) suggests that teachers should also think of themselves as life-long learners and this would enhance their understanding of their adult students. The objective of the adult teacher should be to increase the involvement of the student in his/her own learning. One way of doing this, and encouraging critical reflection, is by requesting the adult learners to maintain narratives of their learning experiences (van Halen-Faber, 1997).
Foster (1997) in her discussion of the use of transformative learning with adult second language learning discusses the importance of considering the adults prior positive or negative experiences in the classroom. “In order to take learners beyond subject-oriented learning or allow learners to go beyond it on their own, the instructor must at least be knowledgeable about the different kinds of learning. She needs to create an unconstrained learning environment – for herself and for her learners – that supports, promotes, and embraces learner endeavors and successes” (p. 38). Instructors must go beyond offering technical skills and aim for transformative learning. Strategies that utilize the enthusiasm of the instructor become infectious for the learner.

Grabove (1997) states that there is no single model of transformative learning; transformative learning can be a rational, analytical, and cognitive process, as espoused by Mezirow or it can be an intuitive, creative, emotional process. The educator is responsible for fostering critical reflection that may lead to transformation. Learners should be expected to learn new skills but “the ultimate goal of learning: to become autonomous, socially responsible thinkers. As part of the process of learning content or attaining new skills, adult learners should also develop an awareness of assumptions – both their own and those of others, which they have hitherto taken for granted – and become critical of those assumptions” (Grabove, 1997, p. 91).

Cranton (2002) suggests that teaching for transformation is “setting the stage and providing the opportunity” (p. 69). The process can be difficult, or even painful, for some and joyous for others. Further, it may be helpful for the learners to stay in contact with each other to discuss the subject matter further as well as the implementation of
suggested strategies. Students should be provided with action plans to ease the process and to assist them in implementing this new paradigm.

In the following section the literature regarding coaching education is discussed. In this section current principles of coaching education are described as well as calls for modifications to current methodology.

_Coaches as Adult Learners_

Research has strongly indicated that adults do not learn the same way as pre-adults (Gehring, 2000, Imel, 1989, Knowles, 1980, Lieb, 1991, Merriam, 2001, Okezie, 2003, Zmeyov, 1998). Adults do not want to be lectured to but, rather, prefer to be a part of the process. The goal of this coaching education program is to meet the educational needs of the adult coach. The principles of andragogy and transformative learning will be applied to meet one of the adult educational needs, as defined by Zmeyov (1998), learning for the purpose of leisure time and personal development. The life experience, as well as coaching experience, of the coach will be factored in to the program and the material to be discussed will be linked directly to contextual coaching situations.

In this workshop the adult coaches will be invited to take initiative in discussions and direct his/her own learning. The coach’s self concept will be strongly considered and, consistent with andragogical principles, these adult coaches will not be treated like children. The physical learning environment will be one where an adult feels comfortable; a lounge will be used rather than a classroom, and beverages and snacks will be readily available. These adult learners will not be told what they will learn but that they should be involved in the process of self-diagnosis for learning. The instructor
will explain to the coaches that he/she is in a learning position as well and looking forward to learning from their experiences. The instructor will assume the role of a guide rather than a teacher. The instructor will serve as a procedural guide or a content resource. The instructor will avoid staying in lock step with a set program and look for teaching moments when they arise.

Crucial to the success of the workshop will be the opportunity for the coaches to learn ways to apply what they have learned in the workshop. The curriculum will be organized towards the application of a theory and that will be the focus. We have established many assumptions about youth sport and youth sport coaching and during this workshop we will discuss many of these assumptions. Coaches will be assisted to become critically aware of how and why these assumptions have come to constrain their approach to youth coaching. Through discourse and reflection, coaches will be given the opportunity to revise some of these assumptions and will be provided with coaching methods and strategies that are more consistent with these new assumptions. The learning climate will be open, safe, and trusting with an emphasis on participation, reflection, and autonomy. The learner will be assisted in participating effectively in discourse while being supplied with new information. Learners will be encouraged to challenge, defend, explain, and judge arguments.

Coaching education programs have been criticized for a lack of a contextual approach and educators must realize that coaches do not operate in a vacuum. An emphasis of this educational program will be on the micro-level with an emphasis on the why and how of coaching rather than the what of coaching (Potrac, 2001). Coaches will
be asked to consider more than physical skill acquisition as part of their role as a youth coach and will be asked to view coaching as a social process. Abraham and Collins (1998) claim that coaching is a cognitive skill rather than an art and must look to the realm of cognitive psychology for coaching education ideas. In a cognitive approach, coaches’ perceptions and, ergo, procedures are challenged and explained as to why they may not be suitable in a youth sporting environment. This forces the coach to be truly reflective of his/her methods. The coaches “who make top billing are those who are truly reflective, and this trait is an essential prerequisite for the experiential approach to be effective” (Abraham & Collins, 1998, p. 73).

Learners will be asked to solve problems as a group and those problems will be directly related to their coaching contexts. As Pilling-Cormick (1997) stated, not all learning environments can become transformative but the opportunity should exist. Instructors must go beyond offering technical skills and aim for transformative learning. Grabove (1997) states that there is no single model of transformative learning. Transformative learning can be rational, analytical, cognitive process or it can be an intuitive, creative, emotional process. The instructor is responsible for fostering critical reflection that may lead to transformation.

Volunteer coaches are assuming increasingly important roles in youth sport. Training programs should be designed to educate and develop coaches to have a positive impact. The goal of this education program is for coaches to learn context specific content that they can use once they return to their coaching activities. Currently, coaching education does not define the role and function of the coach. Coaches should
be given, through the application of self-determination principles, a goal of specific positive outcomes for their players. Although there is much to be accomplished in one workshop, research has shown that even short workshops have produced positive results and programs that enhance confidence in coaching should produce more positive coaches (Malete & Feltz, 2000). Further, information in the form of a booklet will be provided to the coaches as a reference.

COACHING EDUCATION WORKSHOP

Townsend, et al (2003) developed a theory-driven approach to design a developmental workshop. These researchers posit that educators can apply their methods to “systematically use theory in the development, implementation, and evaluation of their workshops, staff trainings, and curricular materials for professionals and consumers” (p. 312). They described their theory-driven approach to nutrition education: “Given that theory describes events and explains relationships by organizing principles and concepts, theory-driven approach has the potential to greatly improve the effectiveness of nutrition education” (p. 312). The primary focus of this coaching intervention is to change the behavior of the coach and Townsend, et al, state that educators cannot ignore behavior change research in designing an intervention. As described above adults do not want to be lectured to and educators must be mindful of the differences between pre- and adult learners. In their workshop, Townsend, et al employed the theory of planned behavior as they felt it best applied to their target audience. For many of the reasons described above, this study will be employing the principles of transformative learning for this coaching
workshop. Taylor (1997) stated that there has been a great deal of research regarding transformative learning as a viable model for adult education.

A key component of transformative learning is the fostering of reflective thought. Moon (2004) says that, for a variety of reasons, short course and workshops often have no impact on practice and are a waste of money. She states that if learners believe that, at a workshop, they need only to passively absorb what the teacher gives them, the learning outcomes will not be achieved. Moon differentiates between learners that take a ‘deep’ approach rather than a ‘surface’ approach. A learner that takes a deep approach set out with the intention of learning and applying the material and ideas. Learners with a surface approach just feel they have to garner the ideas that are presented and will be more concerned with facts than reasoning. Their approach is most likely to be influenced by the instructor or facilitator of the course.

Moon (2004) states that a quality facilitator of a workshop will encourage a deep approach to learning, be aware of the state of learning of the learners by checking in advance of the course the level of knowledge on the subject, and have good technical skills such as the ability to convey credibility and enthusiasm, good communication and good use of voice, and good organization of material. The workshop must be designed so that the notion of impact is constantly in mind. “This is based on the idea that to change practice, it is important that the course participants are aware of the nature of their current practice with respect to the area of potential change. Moon’s (2004) framework to improve impact of learning in short courses is provided below:
- Develop awareness of the nature of the current practice.
- Clarify the new learning and how it relates to current understanding.
- Integrate new learning and current practice.
- Anticipate or imagine the nature of improved practice.

As discussed in the sections on andragogy and transformative learning, it is imperative to relate theory to practice. Adult learners want to learn material that they will be able to employ to solve real problems and issues. The problem with many workshops is that they are “divorced from their context” (Moon, 2004, p. 8). They are not normally conducted in their correct context and other participants may not be colleagues. It is here that reflective learning as part of the transformative process can be seen to bring the current practice into the course, relating it to the new learning, and therefore enabling a consideration of how the two relate to the future changed practice. Moon defines reflection/reflective learning as a “form of mental processing – like a form of thinking – that we may use to fulfill a purpose or to achieve some anticipated outcome or we may simply ‘be reflective’ and then an outcome can be unexpected. Reflective learning…in the academic or educational context is also likely to involve a conscious and stated purpose for the reflection, with an outcome specified in terms of learning, action or clarification” (p. 9).

This reflective process of mulling over learned ideas, reorganizing them, and considering of how what has been learned will fit into patterns of the environment to improve practice can be incorporated in a number of ways. Moon (2004) suggests periodic “stop and think” breaks where learners will have 5 to 10 minutes to jot down
reflections, ideas, and thoughts and these thoughts can be incorporated in a log or course journal. Learners must be asked to envision how to incorporate what was discussed and how it would change their current environment. Learners must take this reflective time very seriously; this should be a very quiet time and should not be used to take a break. It is also useful to have the learners follow up with the facilitator after the course to reflect on how the implementation of the ideas went.

Due to the short duration of the workshop it is strongly suggested that every aspect of the workshop should work towards the transformative process and the achievement of impact of the course. Moon (2004) suggests 10 components, or activities, that have a common purpose. They are:

- Course planning or administrative duties.
- Activities that involve actual instruction or the delivery of information.
- Activities that facilitate group functioning to improve the learning resource of the group and the learning environment.
- Activities to support the learner in implementing change in practice.
- Provision of overviews of the course: introductory or summarizing activities.
- Activities to deepen or enable integration of learning (other than reflective activities).
- Reflective activities.
- Activities to support individual learning or coping behaviors.
- Assessment activities to evaluate personal learning.
- Course evaluation activities.

In the workshop for this study, coaches will be asked to maintain a journal for the day that will facilitate notes and for the reflection periods. The researcher will send follow-up information, based upon group discussions regarding suggested coaching practices.
The coaching education program outline is detailed in Chapter Three of this dissertation. The reader must keep in mind that it is just an outline with suggested topics. It will be the role of the facilitator to keep the discussion moving and on schedule to cover most of the suggested material. Of course, some of the material must be covered, such as the components of self-determination theory and its related coaching strategies, and that will also be the responsibility of the facilitator. It is expected that these experienced coaches will add many suggestions to the ones that appear on the outline. As described above, adult learners do not want to be lectured to and want to be a part of the learning process through discourse and reflective thinking. The outline, as presented, gives the adult coach the opportunity to do just that.

The current goal for the workshop is to be a four-and-a-half-hour program. Section one, pre-test and introductions, is scheduled for 30 minutes. Section two, three, and four are scheduled for 50 minutes with a 5-minute reflection period and a 5 minute break. There will be a 30-minute lunch break and then section five will be scheduled for 30 minutes. It is the intention of this researcher to conduct a pilot study of the intervention program with graduate students to ascertain that the schedule can be maintained and that all the significant information is disseminated to the participants.

In this workshop the coaches will be introduced to the principles of Self-Determination Theory (Ryan & Deci, 2002) as well as strategies that coaches can employ to implement the theory. In the following pages a review of the self-determination theory literature will be presented.
SELF-DETERMINATION THEORY

The primary tenet of self-determination theory is the recognition that there is a body of evidence “in favor of human tendencies towards active engagement and development and that there is, as well, manifold indication of fragmentation and conditioned responses” (Ryan & Deci, 2002, p. 5). Ryan and Deci (2002) posit that all individuals have natural tendencies to grow internally and externally and that healthy development involves the “complementary functioning of these two aspects of the integrative tendency” (p. 5). These tendencies should not be taken for granted and actually it is imperatives that social contexts are created that nurture these tendencies. Self-determination theory states that there are specific characteristics of these contexts that will promote this growth while others will inhibit or thwart this growth. Ryan and Deci (2002) refer to this as the organismic dialectic:

Another way of stating this is that the foundations of SDT reside in a dialectical view which concerns the interaction between an active integrating human nature and social contexts that either nurture or impede the organism’s active nature. Social environments can, according to this perspective, either facilitate and enable the growth and integration propensities with which human psyche is endowed, or they can disrupt, forestall, and fragment these processes resulting in human behaviors and inner experiences that represent the darker side of humanity. As such, psychological growth and integration in personality should neither be taken as a given, as something that will happen automatically, nor should it be assumed not to exist. Instead, it must be viewed as a dynamic potential that requires proximal and distal conditions of nurturance. In this, we fully agree with Allport who suggested that unity in personality is a matter of degree and should not be exaggerated. We add, however, that whatever the attained unity of the psyche, the importance of the issue of integration within personality cannot be over emphasized when one is attempting to understand the processes of healthy psychological and social development. As well, the issue is important for examining applied questions to effective parenting, education, work, health care, exercise regimens, environmentalism, religiosity, psychotherapy, and other significant human endeavors (p. 6).
Social environments that facilitate and enable growth of the individuals will be those environments that meet three basic or fundamental needs of the individual. All living things have needs that must be met. The three basic needs are the needs for competency (“feeling effective in one’s own ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capacities” p. 7), relatedness (“refers to feeling connected to others, to caring for, and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community” p.7), and autonomy (“being the perceived origin or source of one’s own behavior” p. 7). Social environments that allow satisfaction of these needs are predicted to support healthy functioning; conversely when these needs are thwarted the opposite is predicted (Ryan & Deci, 2002). These basic psychological needs are essential for the growth and well being of individual’s personalities and cognitive structures. Further, these needs are universal and “represent innate requirements rather than acquired motives” and will be seen in all cultures and developmental periods (p. 7).

Deci and Ryan (2002) also contend that individuals will gravitate towards situations that are able to meet these basic psychological needs. Ryan and Deci (2002) point out that their concept of needs is markedly different from personal motives, desires, or strivings. In fact some motives may distract people from activities that could provide need fulfillment and well-being. Even when individuals are effective at satisfying motives, the motives may still have a deleterious impact on well-being if they interfere with attainment of autonomy or relatedness. “This is an extremely important point,
because it makes clear that attaining one’s goals efficaciously is not enough to ensure psychological well-being” (p. 8).

**Components of Self-Determination Theory**

Self-determination theory is actually an amalgamation of four mini-theories that have evolved over the past 30-years. These four mini-theories will be described in the following pages:

**Cognitive evaluation theory** – was formulated to describe the effects of social contexts on people’s intrinsic motivation. Ryan and Deci (2002) define intrinsic motivated behaviors as those whose motivation is based in the inherent satisfaction of the behaviors per se, rather than in contingencies or reinforcements that are operationally separable from those activities. Conversely, extrinsic motivations are defined as being focused toward a dependent on contingent outcomes that are separable from the outcome per se. The concept of perceived locus of causalities has been used to describe these motivations with extrinsic motivation perceived to have an external locus of causality and intrinsic motivation to have an internal locus of causality. Much of the research regarding this theory dealt with tangible rewards and its effect on intrinsic motivation. Studies found that rewards had an undermining effect on intrinsic motivation and that positive feedback (verbal rewards or praise) enhanced intrinsic motivation when individuals feel a sense of autonomy with the activity. External rewards were seen as shifting the locus of causality from internal to external and perceived competence, when increased, will increase intrinsic motivation when people feel a sense of autonomy.
The nature of the motivational climate also played a significant role within cognitive evaluation theory. Climates that were characterized as controlling (pressure towards specified outcomes – a shift towards a external locus of causality) undermines intrinsic motivation while informational climates (feedback is provided that supports competence - a shift towards internal locus of causality) are expected to enhance intrinsic motivation. Of major significance to this current study, Ryan and Deci (2002) state that relatively little attention has been given to events that enhance intrinsic motivation through a shift toward a more internal perceived locus of causality. Motivational climates that foster relatedness will also enhance intrinsic motivation but relatedness “plays a more distal role” relative to competence and autonomy “although there are some interpersonal activities for which satisfaction of the need for relatedness is crucial for maintaining intrinsic motivation” (p. 14).

**Organismic Integration theory** – is based upon the assumption that individuals are naturally inclined to integrate their ongoing experiences if they have the necessary ‘nutriments’ to do so. This makes it possible for an individual to be autonomously intrinsically motivated. Organismic integration theory views internalization in terms of a continuum rather than a dichotomy. This theory proposes a categorization of types of regulation for extrinsic motivation, which differ in the degree to which they represent autonomy. This is presented in Figure 2.1.
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<th>Behavior</th>
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**Figure 2.1:** The self-determination continuum, showing the motivational, self-regulatory, and perceived locus of causality bases of behaviors that vary in the degree to which they are self-determined. Deci and Ryan (2000).

Furthest on the left end of the continuum is amotivation, the state of lacking the intention to act. This state results from feeling unable to achieve desired outcomes due to a lack of contingency, a lack of perceived competence, or a lack of value for the outcomes associated with the activity. Furthest on the right hand of the continuum is the previously described intrinsic motivation. The four types of regulation in the center of Figure 1 characterize extrinsically motivated behaviors.

*External regulation* is the least autonomous form of extrinsic motivation and can be best described as being motivated by rewards or to avoid punishment. External regulation has an external locus of causality. An example of this would be the basketball player that plays on the team solely to avoid the ire of her parents.
Introjected regulation involves an external regulation having been mildly internalized and not truly accepted as one’s own. An individual that participates in activity to avoid guilt or anxiety or attain ego enhancement such as pride would be an example of introjected regulation.

Regulation through identification is a more self-determined form of extrinsic motivation as it involves a conscious valuing of a behavioral goal or regulation, an acceptance of the behavior as personally important. The identification represents an important aspect of the process of transforming external regulation into self-regulation. An individual that exercises because he knows it is good for him would be an example of regulation through identification.

Integrated regulation represents the most autonomous form of extrinsically motivated behavior and results when identifications have been evaluated and brought into correspondence with personally endorsed values, goals, and needs that are already a part of the self. An individual may choose to participate in a sport, have a good diet, and a balanced social life to achieve the ultimate goal of a healthy way of life (Ntoumanis, 2001b). Integrated regulation shares many characteristics with intrinsic motivation but these activities are done to attain personally important outcomes rather than done for their inherent interest or enjoyment.

Ryan and Deci (2002) point out that there is consistent research pointing to advantages of being autonomously regulated such as choosing to be persistent, better relationships within social groups, more effective performance, greater health and well-being. By definition, extrinsically motivated behaviors are not inherently interesting.
Normally individuals will get involved in these activities by the prompt of a significant other (a mother asks her child to take piano lessons), the offer of a reward, or by seeing others enjoy an activity. Getting involved in an activity for social reasons points out the importance of relatedness and organismic integration theory points out the importance of relatedness in promoting internalization. However, relatedness alone is not enough to reach full internalization of extrinsic motivation. People need to feel competent and autonomous. Satiation of these needs, it is posited, will lead to a full internalization.

**Causality Orientations Theory** – deals with the inner resources of an individual that have developed over time as a function of prior interactions with social contexts. People are assumed to have three causality orientation approaches, autonomous, controlled, and impersonal all to differing degrees. This is measured through the General Causality Orientations Scale (GCOS) developed by Deci and Ryan (1985). Individuals get a score on each of the three orientations that indicates the predominance of each tendency for themselves. “…the autonomy orientation was found to relate positively to self-actualization, self-esteem, ego development, and other indicators of well-being. As expected, the controlled orientation was not positively associated with well-being but instead was related to public self-consciousness and the Type-A coronary prone behavior pattern, indicating the focus tends to be outward and pressured. The impersonal orientation was related to self-derogation, low self-esteem, and depression” (Ryan & Deci, 2002, p. 21).
Basic Needs Theory – this mini-theory was formalized to clarify the meaning of the concept of a need and to detail its relationship with well-being. “To qualify as a need, a motivating force must have a direct relation to well-being. Needs, when satisfied, promote well-being, but when thwarted, lead to negative consequences” (Ryan & Deci, 2002, p. 22). Further, these needs are posited to be universal and the relation between need satisfaction and well-being must “apply across all ages, genders, and cultures” (p. 22). Ryan and Deci (2002) have adopted a eudaimonic (highest ethical goal is happiness) approach to well-being and have operationalized this construct by measuring positive affect and mental health. Studies have confirmed that the satisfaction of each basic need contributed to general well-being. Schmuck and Kasser (2000) described intrinsic aspirations (affiliation, personal growth, and community) versus extrinsic motivations (wealth, fame, image) and found intrinsic goals were significantly positively related to well-being indicators such as self-actualization and vitality. Extrinsic goals were positively related to conduct disorders and negatively related to global social functioning and social productivity. Extrinsic motivations can be highly motivating and can develop as substitutes for basic needs when need satisfaction is unavailable. “…they can provide collateral satisfaction, but they do not provide the direct satisfaction of basic needs that are necessary for promotion of well-being” (Ryan & Deci, 2002, p. 25). Basic needs theory has been examined cross-culturally with similar results and will be described in more detail later in this paper.
Just as Deci and Ryan (2002) have expanded upon the ideas of a multidimensional approach to extrinsic motivation, other researchers have done the same with intrinsic motivation. Pelletier, et al (1995) described three dimensions of intrinsic motivation. The first is the motivation to know, where individuals find satisfaction in learning new ideas or skills. The second is the motivation to accomplish where individuals attain pleasure in mastering skills they might already know; there is intrinsic pleasure in the accomplishment and not necessarily in the outcomes of mastering a skill. Third is the motivation is to experience pleasant feelings associated with physical activity, described by some as a “runners high” and the primary tenet of flow theory (as cited in Ntoumanis, 2001b).

Vallerand and Ratelle (2002) described motivation at three levels of generality. The global level is seen as an individual’s general motivational orientation and is considered to be the most stable. The contextual level refers to motivation in regard to a particular domain such as education or sport. Motivations at this level can be influenced to an extent by social factors that are unique to each domain. Lastly, there is the situational level, which is considered to be an unstable due to its “responsiveness to the environment” (p. 45). At the situational level, researchers are interested in understanding why individuals engage in a specific activity at a particular time. In the following pages some of the research done regarding self-determination research will be reviewed.
**Self-Determination Research**

Much of the research with self-determination theory has looked at the importance of each of the basic needs in regard to achieving the benefits posited to come from self-regulated motivation. Grolnick and Apostoleris (2002) investigated the autonomy supportiveness versus the controlling atmosphere created by parents. Autonomy supportive parents encourage children to solve their own problems, take children’s perspectives and minimize the use of controlling actions. A controlling parent values obedience and conformity, and parents from their own perspectives rather than their children’s. They suggest that parents who have difficulty separating their needs from their children’s will foster a controlling atmosphere. In the domain of sport, it is well documented the number of parents that live their sporting lives vicariously through their children and dominate the actions of their children. These researchers suggest that parents, teachers, and other adults responsible for the socialization of children should be made aware of the internal pressures to control. “...they can then begin to ask themselves what stake they have in their children’s performance. Do they see the children’s behavior as reflecting upon themselves? Has the outcome become more important than the process?” (Grolnick and Apostoleris, 2002 p. 178).

Reeve (2002) explored self-determination theory as applied to educational settings and, in particular, to autonomy supportive teaching. He states that two decades of research has supported two important conclusions; autonomously supported students thrive in educational settings, and students benefit when teachers support their autonomy. Some of these benefits would include staying in school, higher academic achievement,
higher perceived competence, higher self-worth, preference for optimal challenge, and pleasure from optimal challenge. Further, Reeve differentiates between controlling and autonomy-supportive behaviors. Autonomy-supportive teachers listened more, gave students more time for independent work, and gave students fewer answers to the problems students faced. Autonomy-supportive teachers avoid directives, praise mastery, avoid criticism, and communicate in an empathetic manner considering the perspective of the student. Conversely, controlling teachers take charge, shape students toward a right answer, evaluate (criticize), and motivate through pressure.

Wong, Wiest, and Cusick (2002) discovered a link between perceived autonomy support and academically based outcomes. Specifically, the results of their study were consistent with self-determination principles that autonomy support and perceived competence contributed significantly to an individual’s motivational orientation and performance. Vallerand, Fortier, and Guay (1997) found strong support for their motivational model of high school dropout. Dropout students had lower levels of intrinsic motivation, identification, and introjection. Dropout students saw themselves as less competent and autonomous and they perceived parents, teachers, and administration as being more controlling. Further, students that were taught by teachers in an autonomy supportive manner performed better than students who were taught by controlling teachers (Mageau & Vallerand, 2003).

Reeve (2002) states that a teacher’s style of motivating is changeable. Any teacher interested in learning how to be autonomy-supportive can do so. Further, the theoretical concept of autonomy support informs classroom practice. The question then
arises if the benefits of autonomy support are so great then why are teachers so frequently controlling with their students? Reeve (2002, p. 191) outlines eleven reasons why teachers are sometimes controlling with their students:

1. Prevalence and popularity of behavior modification principles in teacher training programs.
2. Relative absence in these same teacher-training programs of how to design instruction to promote autonomy.
3. Recognizing interest in others is difficult. So teachers, like everyone else, have a difficult time coordinating their instructional decisions with how interested/disinterested students are.
4. Teachers are themselves subjected to controlling, pressuring, conditions within their jobs.
5. The more disengaged students are, the more they pull controlling behaviors out of the teachers.
6. Both parents and students adhere to the “maximal operant” principle of motivation, which is basically the belief that “the larger the incentive, the greater the motivation.”
7. Teachers sometimes underestimate the students’ ability to motivate themselves.
8. Some teachers view motivation as a fixed trait in students. Accordingly, when motivation is low, controlling motivational strategies are used to overcome the perceived deficit.
9. The American culture identifies teaches as powerful actors and students as relatively weak actors.
10. Both parents and students rate controlling teachers as significantly more competent than autonomy-supportive teachers.
11. Some teachers deeply and sincerely believe that researchers just don’t really understand, as in, “If you tried that (i.e., autonomy support) in my classroom, chaos would break loose.”

Coaches attempt to motivate their athletes in many different ways as their ideas of how to motivate vary significantly. Many studies have shown that the manner in which motivation is structured can predict motivational orientation and performance of athletes (Frederick & Ryan, 1995). Frederick and Ryan (1995) cited studies that showed that controlling coaches lowered expectations on self perception of female athletes and that lower parental pressure on young basketball players was associated with intrinsic
Pelletier, et al (2001) states that coaches resort to controlling methods due to “lay theories regarding ways of optimizing motivation or because they have beliefs about a subordinates’ motivation that could induce them to support autonomy (or to be controlling)…” (p. 299). Further, atmospheres where the coach will be rewarded for the performance of the athlete can also lead to controlling behaviors. These controlling motivational climates can have deleterious effects on the motivation and future participation of athletes and students.

In an experimental design, Prusak et al. (2004) investigated the opportunity for choice within a physical education setting and its effect on the motivation of adolescent girls. They found that providing choice to adolescent girls significantly increased the situational motivation and lessened the amotivation for physical education in general. Further, these researchers found that even small amounts of input increased the motivation of these female students and stated that the opportunity for choice was particularly salient at the adolescent age. Hagger, Chatzisarantis, Biddle and Culverhouse (2003) investigated whether perceived autonomy support in physical education classes led to the intention to be physically active during leisure time. These researchers posited that if the “environment is such that an internal perceived locus of causality can be fostered in a school context, then students are more likely to pursue those activities out of choice in their free time and in the absence of external persuasion from teachers” (p. 785). They found that perceived autonomy support in physical education classes directly influenced intrinsic and identified motives in a physical education context and that an internal perceived locus of causality in a physical education context positively
affects an internal perceived locus of causality in a similar atmosphere, in particular, leisure time physical activity.

Gagne, Ryan, and Bargmann (2003) employed self-determination theory to formulate hypotheses about how parents’ and coaches’ interaction styles influenced the motivation as well as the well-being of athletes. In particular, they investigated the principle of self-determination theory that posits that a pressure and controlling atmosphere will have negative effects on an individual's adopted motivational style as the basic psychological needs for competence, autonomy, and relatedness will be thwarted in such an atmosphere. Autonomous self-regulation leads to well-being which is defined as “psychological functioning characterized by positive experiences and an integrated sense of self within the domain of action” (p. 374). In this study the researchers recorded daily motivation of female gymnasts to attend practice, need satisfaction, and well-being to ascertain how variations in experiences of autonomy, competence, and relatedness affected well-being from before to after practices. Their research discovered that coaches may possibly have greater influence on players practice motivation and well-being than parents. Further, positive well-being outcomes were more positively correlated with autonomous motivational styles and more negatively correlated with controlling styles. It was also found that being motivated in a controlling manner was associated with more unstable self-esteem. Support was found for self-determination theory’s proposal that autonomy support satisfies psychological needs that are important for sustained autonomous motivation. These researchers also stated that it would be useful, for future research, to manipulate coaching styles and study its impact on the motivational climate.
Pelletier, et al., (2001) also investigated the effects of a perceived autonomy supportive context and its relationship to dropout from sport. Their longitudinal study investigated competitive 174 male and 195 female swimmers over a 22-month time period. In line with the tenets of self-determination theory, these authors posited that an autonomy supportive style from coaches can positively influence the internalization of the activity and this context, created by the coach, “will influence both the amount and the quality of the internalization” (p. 283). Athletes who perceive their coaches as autonomy supportive will show more self-determined forms of regulation. Conversely, athletes who perceive their coaches to be controlling will show less self-determined regulation. These researchers posited that more self-determined athletes would also show greater persistence to stay involved with swimming over the course of the study.

Consistent with dropout and attrition from competitive sport literature, Pelletier, et al (2001) found that 47.4% of the swimmers dropped out during the course of the study. These dropouts were equally distributed from all competitive levels of swimming (nationally, regionally, and locally ranked) and gender. A comparison of persistent versus dropout athletes found that athletes who were intrinsically motivated and self-determined (identified regulation) showed greater persistence. Athletes who indicated they were amotivated showed the highest rate of attrition from swimming. Support for the proposition that regulation of behavior can vary greatly in its relative autonomy as significant predictions can be made about the persistence of behavior over time. These researchers also contend “autonomy support may become especially relevant for teenage athletes” (p. 299). “This sense of choice, the provision of a meaningful rationale for
training and freedom from external pressure which should allow athletes progressively to transform the activity into something they will value” (p. 299). They also call for further research into the role of the coach and his/her interpersonal behaviors on the motivation of athletes of different ages and how these behaviors facilitate the development of self-determined motivation.

The role of competence has also been studied as it pertains to staying involved in sport. In their longitudinal study regarding changing competence perceptions, Rodriguez, Wigfield, and Eccles (2003) discovered that as perception of competence waned so did the value of athletics among elementary school children. The researchers point out the importance of valuing athletics early in life. “If the valuing of athletics drops early in life, perhaps children will not stay involved in sport, precluding the benefits of an active lifestyle” (p. 69). To combat this, these authors recommend that a focus on process, rather than outcome, where children feel competent, personal control for effort and performance should be encouraged. Coaches should teach athletes how to evaluate performance adaptively and coaches should have the cognitive capacity to do so, and to be able to teach adaptive self-processes to children. Adult coaches must be able to distinguish the athlete’s success from their own and should not apply unnecessary pressure on athletes when the goal should be on having fun. “It is proposed that youth sport coaches, physical education teachers, and parents of young athletes attend training seminars that teach adults developmental processes associated with youth sport and learning of sport skills” (p. 78).
Biddle (1999) discussed motivation and perceptions of control and stated that it was important to convey feedback about an individual’s competence within a context of autonomy. “Events during which positive feedback occurs under pressure may be less powerful in influencing intrinsic motivation. Choice and positive feedback are perceived as informational, while rewards, deadlines, and surveillance tend to be controlling. Negative feedback is seen to undermine motivation and is therefore referred to as amotivating” (p. 14). In his discussion, Biddle cited his research that lent support to self-determination theory. In two separate studies involving adolescent students, intentions predict physical activity when they are autonomous rather than controlling. Biddle also states that competence, along with autonomy, is also a necessary ingredient to reach a goal of intrinsic or self-regulated motivation. Both are necessary and not sufficient on their own in leading to self-determination.

Mageau and Vallerand (2003) developed a motivational model for the coach-athlete relationship where “coaches’ personal orientation towards coaching, the context within which they operate, and their perceptions of their athletes’ behaviour and motivation influence their coaching behaviours” (p. 885). When coaches behave in an autonomous, supportive manner they will have a beneficial impact in satiating the athletes need for competence, relatedness, and autonomy. The satisfaction of these needs will determine the athletes’ intrinsic and self-determined extrinsic motivation. These researchers point out that there are aspects to athletics that are not always enjoyable and athletes cannot only rely on intrinsic motivation but, at times, must turn to forms of self-regulated extrinsic motivations. Self-determined athletes have shown higher levels of
concentration, exhibit higher levels of effort and persistence, and perform better than athletes who rely in non-self-determined forms of motivation.

Mageau and Vallerand (2003) define what they mean by autonomy-supportive behavior. Autonomy-supportive individuals:

- provide as much choice as possible within limits – research has shown that choice is related to greater intrinsic motivation.
- provide a rationale for tasks, limits, and rules – a rationale “facilitates the internalization of the underlying reasons for activity engagement” (p. 888).
- inquire about and acknowledge others’ feelings – this shows the athletes are perceived by their coach as individuals with specific needs and feelings. Coaches should explain their general strategy and acknowledge the athletes possible resentment towards certain rules or demands to foster self-determined and intrinsic motivation.
- allow for independent work – athletes should be allowed opportunities for self-initiated behavior. Research has shown that coaches that coerce their players into following their instructions it undermines intrinsic and self-determined motivation.
- provide non-controlling competence feedback – providing positive feedback may not be as simple as it appears. The way feedback is presented has an impact on the motivation of an athlete. Positive, informational feedback, provided in a non-controlling manner has been shown to be the most effective in providing competence for athletes.
• avoid controlling behavior such as guilt inducing criticism, controlling statements, and tangible rewards – relying on psychological control forces the athlete to ignore his/her own values and relinquish autonomy on behalf of maintaining the coach-athlete relationship. Studies have also shown that athletes, who perceive their coaches as controlling also exhibit less self-determined forms of motivation. Rewards have been shown to undermine intrinsic motivation as the reward creates informational feedback for the athlete that states that the activity is not worth doing for the sake of the activity itself.

• prevent ego-involvement from taking place – in an ego-oriented the focus is on the outcome rather than the process as athletes are constantly comparing their performance to peers.

In discussing the coaching context, Mageau and Vallerand (2003) point out the difference between a climate of permissiveness and of autonomy-supportiveness. These researchers claim that an autonomy supportive environment is analogous to an authoritative style of parenting where parents set limits and provide structure but do it in a non-controlling manner. The coaching context is also influenced by the amount of pressure put upon the coach to perform, or as mentioned above, when the performance of the athletes are seen to be a reflection of the coach.

Coaches also perceive levels of motivation for individual players and treat them accordingly. Coaches are more likely to take a controlling approach with players they sense are not motivated. Athletes that are seen as being difficult to get along with are
also more likely to be dealt with in a controlling manner. Levels of trust are also crucial as a coach that feels he cannot trust his player is more apt to act in a controlling manner as well. Mageau and Vallerand (2003) point out that coaches’ tendency to be more controlling is “self-defeating and counterproductive at best” (p. 897). The controlling methods employed by coaches tend to lower the very motivation they were attempting to enhance in the first place.

Reeve et al (2002) focused on the aspect of providing a rationale in an autonomy supportive way as a strategy to motivate others during an uninteresting activity. Coaches, when attempting to motivate players to participate with effort in an uninteresting behavior such as a repetitive drill often resort to controlling behaviors or the offer of tangible rewards in an attempt to “redefine the activity away from something “not worth doing” toward something “worth doing”” (p. 184). A rationale, defined as a verbal explanation of why exerting effort during the drill might be a useful thing to do, and its relationship to motivation was investigated by Reeve, et al and they proposed that the presence of a rationale (administered in an autonomy supportive manner) leads to identification which leads to effort. Identification is defined as the acceptance, endorsement, and valuing of the effort that an individual puts forth. When given a reason to exert effort with an uninteresting activity, students displayed higher levels of effort with the activity. The researchers explained this due to the rationale being delivered in an autonomously supportive way and due to some degree of internalization of that rationale occurred. The rationale for the activity, as presented, was communicated in such a way that effort on the task would be a valuable investment for the person. These researchers
claim that this strategy promotes effort during uninteresting activities “not because it
substitutes for an absence of self-determined motivational strivings but, instead, because
it enriches these strivings “(p. 205).

Ntoumanis (2001b) used self-determination theory in an attempt to understand
motivation in a physical education setting. In this study Vallerand’s 1997 motivational
sequence was tested. In this model (social factors → psychological mediators → types of
motivation → consequences) different motivational types are influenced by a number of
social factors. The influence of these social factors is exerted through the satisfaction of
certain psychological needs. These different types of motivation will lead to important
“cognitive, affective, and behavioural consequences” (p. 227). Crucial social factors
would include cooperation among participants, a self-referenced environment, and the
opportunity for choice in tasks. This model posits that the influence of social factors on
the different types of motivation is exerted through the satisfaction of competence,
relatedness, and autonomy. Self-determination theory states that the social factors which
increase perceptions competence, autonomy, and relatedness leads to satisfaction of these
needs and fosters self-determination. Conversely, social factors that undermine the
satisfaction of these needs will lead to amotivated forms of behavior. The consequences,
as described by Ntoumanis (2001b), are cognitive (levels of concentration), affective
(e.g., enjoyment, boredom), and behavioral (e.g., effort and persistence).

Ntoumanis’ (2001b) hypotheses that cooperative learning would predict perceptions
of relatedness, an emphasis on improvement would predict perceived competence, and
perceived choice would predict levels of autonomy were supported. Classes where
students had the opportunity to work together and help each other learn were positively related to perceptions of relatedness. A choice of activities along with the increased student involvement was positively related to perceptions of autonomy. An emphasis on self-referenced improvement led to higher perceptions of competence among students. Regarding the consequences of this model, Ntoumanis (2001b) found that levels of effort were strongly predicted by intrinsic motivation; however, identified regulation did not predict effort in a physical education setting. The intention to be physically active outside of physical education classes was positively predicted by intrinsic motivation.

For many, competition has become the focus of youth sport. Youth sport has been criticized for its adoption of the professional sport model. This “win at all cost” process may not be appropriate for younger participants. Evidence suggests that “intrinsic motives such as fun, enjoyment, skill development, and challenge, supersede other motives in explaining sport participation” (Frederick-Recasino, 2002, p. 285). Reeve and Deci (1996) investigated the elements of the competitive situation that affect intrinsic motivation. In an experimental design with college undergraduates, these researchers looked at three distinct elements of a competitive situation; competition versus no competition, win versus lose, and a controlling context versus a non-controlling context. These researchers predicted higher levels of intrinsic motivation for competitors that won because of the impact of competitive outcome on perceived competence. Winning in a controlling environment (the importance of beating the opponent is stressed) was predicted to undermine intrinsic motivation and that winning in a non-controlled environment (no pressure to win) would facilitate intrinsic motivation. Support was
found for these hypotheses as winning, in a non-controlling context, facilitated intrinsic
motivation. Intrinsic motivation was undermined when participants were pressured to
win. Competitors that win certainly receive positive information regarding their
performance, however competitors that received positive information about their
performance in a pressured situation “showed a mark reduction in perceived self-
determination, which, in turn, undermined their intrinsic motivation” (p. 32).

Focusing on just competence and its relationship to intrinsic motivation can lead to an
incomplete view of the individual in the sport context. Athletes are also trying to have a
choice in their actions and want to be connected with others in a meaningful way
(Vallerand & Losier, 1999). Athletes’ motivation can lead to a number of outcomes such
as affective experiences, an orientation towards being a better sportsman, and persistence.
Educating coaches can lead to important positive consequences for athletes. Coaches
after being trained to become more autonomy supportive and to foster competence with
competitive swimmers were perceived by the athletes as being less controlling and more
autonomy supportive. This led to increased levels of perceived competence and intrinsic
motivation for the swimmers. Further, attendance rates for practice rose dramatically
(from 58 to 90 %), annual dropout rates dropped significantly as well (35 to 4.5 %), and
performance increased as many of the swimmers earned national and international
recognition. These results strongly suggest that an intervention aimed at modifying the
social factors, and in particular, the actions of the coach, can facilitate the athletes’
perception of competence and autonomy and their intrinsic motivation (Pelleteir, Briere,
The construct of relatedness is also crucial to the self-determination model. Allen (2003) points out the importance of interpersonal interactions and viewing youth sport as a social setting. “The social context of sport is salient to participants’ motivation” (p. 551). Allen states that evidence from participation motivation demonstrates that children have motives other than physical competence for athletic involvement. Children stay involved in athletics for a myriad of social reasons including the opportunity to develop social connections and friendships; athletics are both an achievement and a social domain. Children are likely to feel good about their sport participation if they are allowed to affiliate with others and from friendships, and if they feel they are part of a popular group or that they have gained the approval of others. Wiersma (2001) further states that those researching the motivation of youth sport participation have largely ignored the social aspect of participation. He found affiliation with peers, just behind self-referenced competency and competitive excitement, as a primary source of enjoyment for youth sport participants. Further, Wiersma equates his definition of enjoyment (a positive affective response to the sporting experience that reflects generalized feelings such as pleasure, liking and fun) as being synonymous with intrinsic motivation but mention that enjoyment might be derived from extrinsic sources as well.

Frederick and Ryan (1995) also state that the most salient motive for sports participation concerns the “spontaneous experience of interest, enjoyment, and challenge that are inherent in sport activity per se, rather than contingencies and consequences of a separable, extrinsic nature” (p. 5).
CHAPTER 3

METHODOLOGY

The purpose of this chapter is to describe the methodological procedures for the study and testing of the hypotheses presented in Chapter 1. The methods are described in relation to the (a) type of research, (b) selection of sample, (c) variables, (d), instrumentation, (e) data collection procedures and (f) data analysis procedures.

Organized youth sports, under the right conditions, can aid in the learning process of many important life lessons as well as enhance the chances of the athlete participating in physical activity well into adulthood. One of the most important of these conditions would be a qualified youth coach who is not only aware of the importance of his/her role but is proficient in the skills of the sport as well as the important role he/she may be playing in the psychological development of the participant. In particular, this dissertation is concerned with the psychological aspect as it regards to the motivation of the athlete.

Youth sports are heavily reliant on volunteers and the turnover is great. Many coaches only stay involved as long as their children are involved and will withdraw as their children lose interest or eligibility to participate. Ewing Seefeldt & Brown (1996) posit that that the quality of the youth sports experience is largely contingent upon the quality of the adult leadership, and specifically, the coach. They suggest that it would
make intuitive sense that wide scale training programs would be in place for youth coaches but that is not the case. A few programs exist for coaches at the national level, yet it is estimated that 90 percent of youth coaches have no formal education in coaching techniques, first aid, injury prevention, or emergency care (Ewing, Seefeldt & Brown, 1996). With so many coaches uneducated in the rudimentary necessities of being a coach one could posit that many of these individuals are unprepared to meet the psychological needs of their charges. This research will introduce an education workshop to coaches that will prepare them to effectively understand the psychological needs of the young athlete and to implement strategies to help the satisfaction of those needs.

As outlined in Chapter One, there are a number of research hypotheses to be tested in this experimental design. The primary purpose of this study is to test whether a coaches education workshop, the independent variable, has an impact on the coaching philosophy and strategies employed by the coach and thus, the motivation of their athletes. The workshop will introduce coaches to the primary principles of self-determination theory as well as strategies that coaches can employ to implement the theory. In its simplest form, self-determination theory posits that when the athlete’s human needs for competency, autonomy, and relatedness are met, it will lead to more self-regulated forms of motivation, and perhaps, intrinsic motivation. The motivation of the 6th grade male and female basketball players is to be determined at the beginning of the season (time 1) and at the end of the season (time 2) by employing the Sport Motivation Scale (SMS-28, see Appendix B) (Pelletier et al, 1995).
Time 1 will occur shortly after the season has started to ensure that the players have had a chance to get to know the coach, and his/her methods, in both practice and game situations. The Sport Motivation Scale will serve as the primary dependent variable for this study. Each athlete will receive a score for the SMS-28 at time 1.

Within a week or two after the athletes have received their score for the SMS-28, half of the coaches (half of the boys and half of the girls coaches) will be randomly selected to participate in a coaches education workshop (see Appendix C). Prior to the coaches’ education workshop, coaches will be pre-tested on their knowledge of self-determination theory, and specifically, the components, principles, and strategies associated with the theory (see Appendix D). The coaches will then participate in the workshop and, in order to ascertain that they have garnered all of the information to which they have been exposed, the coaches will be post-tested using the same pre-test. Pre and post-test scores will be compared. The coaches will then be asked to employ some of the strategies they have learned and to adapt a coaching philosophy that is congruent with self-determination theory.

Towards the end of the season the all of the athletes will then be asked to fill out the SMS-28 once again. Scores of those athletes, whose coaches participated in the education workshop, will be compared to scores of those athletes whose coaches did not participate in the education workshop. Further, these scores will also be compared by gender to ascertain any differences as well. It is also theorized that coaches who meet the needs of their athletes will lead to greater levels of satisfaction of athletes. Therefore, athlete satisfaction will be measured with three additional questions (see Appendix E).
Finally, if the self-regulated motivation of the athlete has increased then that athlete should display a greater interest in staying active in that sport than an athlete whose self-regulated motivation has not increased. One question will be added to the post-test to measure the intention of the athlete to participate in basketball next season (see Appendix E).

The following specific hypotheses will be tested:

**Hypothesis 1**: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of motivation in a youth sport setting.

**Hypothesis 2**: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of self-determination theory.

**Hypothesis 3**: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of coaching strategies that employ the principles of self-determination theory.

**Hypothesis 4**: Athletes whose coaches experience the coaches education workshop will demonstrate significant increases in their self-regulated motivation scores.

**Hypothesis 5**: Athletes whose coaches experience the coaches education workshop will demonstrate a significantly higher propensity to continue participation in basketball than athletes whose coaches do not participate in the education program.
Hypothesis 6: There will be no significant difference in self-regulated motivation due to the gender of the player.

Hypothesis 7: Athletes whose coaches experience the education workshop will demonstrate a significantly higher level of satisfaction with their coach and team than athletes whose coaches do not participate in the education program.

In the following pages the measurements of these hypotheses will be discussed in greater detail.

RESEARCH DESIGN

Educational research is usually divided into two broad categories: quantitative and qualitative analysis. Quantitative analysis, originated in positivism (the belief that laws govern the social world as they do the physical world), uses objective measurements and statistical analysis of data, normally collected from a well-controlled setting. Conversely, qualitative research, rooted in phenomenology (the belief that the individual and his/her world is so interconnected that one has no existence without the other), data is collected in natural settings and “focuses on understanding social phenomena from the perspective of the human participants in the study” (Ary, Jacobs, & Razavieh, 2002, p.22). Ary, Jacobs, & Razavieh (2002) state that qualitative research aims at generating theory while quantitative research focuses on testing theory. Fraenkel and Wallen (2003) state that in scientific research the “emphasis is on obtaining evidence to support or refute proposed facts or principles” (p.11). Further they posit that there are many methodologies that are available to a researcher to accomplish this goal. In the quantitative genre survey research is used to determine specific characteristics of groups, correlational research is
done to determine relationships among two or more variables, and causal-comparative research investigates the “cause for or the consequences of differences between groups of people” (p.12). Examples of qualitative research would include ethnographies (documenting the everyday experiences of people through observation and interviews), historical research (collection and evaluation of data to understand events of the past), and action research (conducted by one or more individuals or groups for the purpose of solving a problem or obtaining information in order to inform local practice) (Fraenkel & Wallen, 2003).

The focus of this study is another type of quantitative research, experimental design. Fraenkel and Wallen (2003) state that experimental design is the “most conclusive of scientific methods” (p. 11) leading to the most clear-cut interpretations because of the ability of the researcher to establish different treatments and study their effects. With an experimental design, the researcher seeks to control all other variables that might influence the observed and measured variable (the dependent variable) so that alternative explanations of the findings can be eliminated (Ary, Jacobs, & Razavieh, 2002). The research design chosen for this study will be experimental due to it being, as stated by Campbell and Stanley (1963), “the only means for settling disputes regarding educational practice, as the only way of verifying educational improvements, and as the only way of establishing a cumulative tradition in which improvements can be introduced without the danger of faddish discard of old wisdom in favor of inferior novelties” (p.2).
Internal and External Validity

In their seminal work, *Experimental and Quasi-Experimental Designs for Research*, Campbell and Stanley (1963) describe 12 factors risking the validity of experimental designs. Internal validity is defined as the “basic minimum without which any experiment is un-interpretable: Did in fact the experimental treatments make a difference in this specific experimental instance?” (Campbell and Stanley, 1963, p.5).

External validity deals with the issue of generalizability. “To what populations, settings, treatment variables, and measurement variables can this effect be generalized?” (p.5).

The authors state that it is important for the researcher to choose a design that is strong in both internal and external validity.

Campbell and Stanley (1963) describe eight classes of variables that are relevant to internal validity. These variables “if not controlled in the experimental design, might produce effects confounded with the effect of the experimental stimulus” (Campbell and Stanley, 1963, p.5). Campbell and Stanley (1963, p. 5, italics original) describe these effects:

1. *History*, the specific events occurring between the first and second measurement in addition to the experimental variable.

2. *Maturation*, processes within the respondents operating as a function of the passage of time per se (not specific to the particular events), including growing older, growing hungrier, growing more tired and the like.
3. *Testing*, the effects of taking a test upon the scores of a second testing.

4. *Instrumentation*, in which changes in the calibration of a measuring instrument or changes in the observers or scorers used may produce changes in the obtained measurements.

5. *Statistical regression*, operating where the groups have been selected on the basis of their extreme scores.

6. Biases, resulting in differential *selection* of respondents for the comparison groups.

7. *Experimental mortality*, or differential loss of respondents from the comparison groups.

8. *Selection – maturation interaction*, etc., which in certain of the multiple-group quasi-experimental designs, such as Design 10, is confounded with, i.e., might be mistaken for, the effect of the experimental variable.

Campbell and Stanley also described four threats to external validity (1963, p. 5, italics original):

9. The *reactive* or *interactive effect of testing*, in which a pretest might increase or decrease the respondent’s sensitivity or responsiveness to the experimental variable and thus make the results obtained for a pre-tested population unrepresentative of the effects of the experimental variable for the un-pre-tested universe from which the experimental respondents were selected.

10. The *interaction* effects of *selection* biases and the *experimental variable*. 

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11. Reactive effects of experimental arrangements, which would preclude generalization about the effects of the experimental variable upon persons being exposed to it in non-experimental settings.

12. Multiple-treatment interference, likely to occur whenever multiple treatments are not usually erasable.

Experimental Designs

In experimental research the researcher is able to influence a particular variable, and is the best type of research for testing hypothesis relating to cause and effect relationships (Fraenkel and Wallen, 2003). In an experimental study, the researcher is able to investigate the effects of at least one independent variable on one or more dependent variable. The independent variable also referred to as the experimental or treatment variable is manipulated (the researcher deliberately and directly determines what forms the independent variable will take) by the researcher and would include such things as methods of instruction, types of assignment, learning materials, rewards, and types of questions. For this particular study there is one independent variable, coaching education via a live presentation. The independent variable will be described in greater detail later in this treatise. The dependent variable, also known as the outcome or criterion variable refers to the results or the outcomes of the study. Dependent variables would include such constructs as achievement, interest in a subject, and attitudes (Fraenkel and Wallen, 2003). For this study the dependent variable will be levels of self-regulated motivation and will be described in detail later as well.
Campbell and Stanley (1963) identify three types of experimental designs, pre-experimental, true experimental, and quasi-experimental. Fraenkel and Wallen (2003) refer to pre-experimental designs as “weak” designs because there are no controls for threats to internal validity (p. 271). A researcher who employs these designs will have difficulty assessing the effectiveness of the independent variable. Researchers that lack full control over the scheduling of experimental stimuli might want to utilize quasi-experimental designs. These designs do not include the use of random assignments and rely on other techniques to attempt to reduce threats to internal validity. Random assignment means that every individual participating in the experiment has an equal chance of being assigned to either the experimental or the control group (Fraenkel and Wallen, 2003).

When individuals have been randomly assigned to groups, the groups can be considered statistically equivalent. This does not mean that the groups are absolutely equal but that any difference between the groups is a function of chance alone and not a function of any other factors (Ary, Jacobs, and Razavieh, 2002). Random assignment should occur prior to the start of the experiment, it is a process of distributing groups, and equivalency of groups should serve to eliminate the threat of extraneous variables, not only those the researcher might be aware of but also of those they are not aware that could affect the outcome of the study (Fraenkel and Wallen, 2003).

For this study a true experimental design will be employed as “they are the recommended designs in the methodological literature” (Campbell and Stanley, 1963). True experimental designs will be briefly outlined and the rational for the design selected
for this study will be discussed. Each of these designs has their qualities and inadequacies and will be outlined in the discussion. For the following discussion the symbol X represents exposure of the group to the treatment of interest, O refers to the observation or measurement of the dependent variable, and R represents the random assignment of subjects to groups. The placement of the symbols from left to right represents the sequential order of these factors.

1. The Randomized Posttest-Only Control Group Design – two groups are formed by random assignment where one group receives the treatment (independent variable) while the other does not. Both groups are then post-tested on the dependent variable. A diagram follows:

\[
\begin{align*}
R & \quad X_1 & \quad O \\
R & \quad O
\end{align*}
\]

**Figure 3.1**: Illustrative summary of the posttest-only control group design

The strength of this design is that it controls for all seven of the internal threats for true experiments discussed earlier due to the use of randomization and two groups. The shortcomings of this design are the threats to external validity. The non-utilization of a pre-test avoids the threat of the interaction of testing and X but possible threats to this design would include interaction of selection and X (a possible unique characteristic of this group that would limit generalizability) and reactive arrangements (refers to the
artificiality of the experimental setting and the subject's knowledge that he is participating in an experiment).

2. The Solomon Four-Group Design – involves the random assignment of subjects to four groups with two of them being pre-tested and two not. One of the pre-tested groups and one of the un-pre-tested groups is exposed to the independent variable. All four groups are then post-tested. A diagram follows:

```
R O X1 O
R O X2 O
R X1 O
R X2 O
```

**Figure 3.2:** Illustrative summary of the Solomon four-group design.

All threats to internal validity are met with this design. This design is a combination of the pretest-posttest control group (to be discussed) and the posttest only control group designs but this strength is also a weakness, practicality of this design becomes an issue, as a large sample is required and the researcher is effectively conducting two experiments concurrently.

3. The Randomized Pretest-Posttest Control Group Design – differs from the posttest-only control group because of the use of the pretest. Two groups of subjects are used, with both groups being observed or measured twice. The first measurement serves as the pretest and the second as the posttest. Random assignment is used to form the two
groups. The measurements or observations are collected at the same times for both groups. A diagram follows:

\[
\begin{array}{ccc}
R & O & X_1 & O \\
R & O & & O \\
\end{array}
\]

**Figure 3.3**: Illustrative summary of the pretest-posttest control group design

This design controls for all threats to internal validity. The use of a control group assures that any effect, such as history, maturation, or testing, on the experimental group will also be seen on the control group. Both groups are tested with the same standardized instrument to control testing effects.

The deficiency of this design stems from the use of a pretest. A pretest can serve to alert the members of the experimental group, thereby causing them to do better (or worse) on the posttest than the members of the control group. However, this design does give the researcher the opportunity to ascertain if the groups are actually equivalent and a pretest is necessary if the amount of change over time is to be assessed. Due to the nature of this experiment and the time lag between the pretest and the independent variable it might not have the same impact of the receiving a treatment just after a pretest. Campbell and Stanley (1963) cite the example of students taking a pretest regarding anti-Semitism and then being shown a film regarding prejudice. In this study the time span between the pretest and the posttest could be as long as eight weeks and would serve to
lessen this shortcoming of this design. Ary, Jacobs, and Razavieh (2002) state that the pretest-posttest design is widely used in educational research because and the interaction between pretest and treatment is not a serious problem unless the testing procedures are somewhat novel or motivating in nature. Neither of those conditions applies in this study.

Due to the nature of this study, the designs of choice are the pretest-posttest design and the randomized post test control group design. To test hypotheses 1-4, a modified pre-test, post-test design will be implemented

\[
R \quad O \quad (O \quad X_1 \quad O) \quad O \\
R \quad O \quad (O \quad O) \quad O
\]

**Figure 3.4:** Illustrative summary of modified pretest-posttest design

In this design, the independent variable \(X_1\) represents the live coaching education program. The coaches will be pre-and post-tested to ascertain their levels of knowledge before and after the intervention. Further, it has been hypothesized that the coaches education workshop will have an effect on the self-regulated motivation of the players of these coaches. By employing strategies that satiate the needs for competence, autonomy, and relatedness the players motivation to continue to participate in basketball will become more self-regulated. The players score on the dependent variable, the Sport Motivation Scale (SMS-28) will increase showing higher scores and more self-regulated motivation. The education program, as well as the strategies will be discussed in greater detail later in this dissertation.
To test hypotheses 5-7, a post-test control group design will be utilized. In this design, the variable $X$ represents gender and $O$ represents SMS scores. Further, $X_2$ represents the coaches’ workshop, and $0_1$ and $0_2$ represent satisfaction and intention to continue participation.

| R | 0 | $X_1$ | 0 |
| R | 0 | 0     | 0 |

| R | $0_{1,2}$ | $X_2$ | $0_{1,2}$ |
| R | 0         | 0     | 0         |

**Figure 3.5:** Post-test control group design

Please refer to Table 3.1 to see the hypotheses and corresponding independent variables, dependent variables, measures, and data analyses that will be utilized in the study.
<table>
<thead>
<tr>
<th>HYPOTHESIS</th>
<th>IV</th>
<th>DV</th>
<th>MEASURES</th>
<th>ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coaching Workshop</td>
<td>Understanding of motivation</td>
<td>Pre-post test scores on knowledge assessment test</td>
<td>t-tests of mean scores</td>
</tr>
<tr>
<td>2</td>
<td>Coaching Workshop</td>
<td>Understanding of self-determination theory</td>
<td>Pre-post test scores on knowledge assessment test</td>
<td>t-tests of mean scores</td>
</tr>
<tr>
<td>3</td>
<td>Coaching workshop</td>
<td>Understanding of strategies that employ the self determination theory</td>
<td>Post-workshop Evaluation (Appendix F)</td>
<td>Post-workshop evaluation</td>
</tr>
<tr>
<td>4</td>
<td>Coaches workshop</td>
<td>Athletes SMS scores</td>
<td>Pre-post test on SMS scale</td>
<td>MANOVA &amp; ANOVA</td>
</tr>
<tr>
<td>5</td>
<td>Gender</td>
<td>Athletes SMS scores</td>
<td>Score on post test of SMS</td>
<td>MANOVA &amp; ANOVA</td>
</tr>
<tr>
<td>6</td>
<td>Coaches workshop</td>
<td>Propensity to continue participation</td>
<td>Score on “intention to participate items”</td>
<td>MANOVA &amp; ANOVA</td>
</tr>
<tr>
<td>7</td>
<td>Coaches workshop</td>
<td>Athlete satisfaction</td>
<td>Score on satisfaction item</td>
<td>ANOVA</td>
</tr>
</tbody>
</table>

**Table 3.1:** Summary of hypotheses, IV’s, DV’s, Measures, and Statistical Analyses Utilized in the Study.

### DEPENDENT VARIABLES

**Motivation**

The question of why individuals participate in activities other than those required for survival has captivated the imagination of researchers for quite some. Certainly this question has been a focus of the sport domain and a much-researched topic. Involvement in sport is broadly characterized by two forms of motivation, intrinsic and extrinsic (Vallerand and Fortier, 1998). Intrinsic motivation is defined as “the impetus to perform
an activity for itself and the pleasure and satisfaction derived from participation”
Vallerand and Fortier, 1998, p.83). An example of this would be the basketball player
who loves to practice shooting just to hear the ball swishing through the net. Conversely,
when an individual is extrinsically motivated they “do not participate in an activity for
the inherent pleasure they may experience while performing it, but rather in order to
receive something positive or avoid something negative once the activity is terminated”
(Vallerand and Fortier, 1998, p.83). A basketball player who participates in basketball to
be popular among classmates or avoid the wrath of a parent for not participating would
be an example of extrinsic motivation.

An intrinsically motivated individual will be focused on the process, such as
practice or playing in a game, while the extrinsically motivated person will be focused on
the outcome or the benefits that may be obtained following participation. An
extrinsically motivated individual will be focused on such things as the trophy for
winning the contest or the approval of a parent. Vallerand and Fortier (1998) use the
example of exercisers; if given the opportunity to either exercise and lose weight or take
a pill and get the same results, the intrinsically motivated person will choose to exercise
(process) while the extrinsically motivated person will choose the pill (outcome). There
is a clear difference in the rewards between intrinsically and extrinsically motivated
individuals. The intrinsically motivated person sees the reward as the participation itself
and how it makes them feel while the extrinsically motivated individual may seek to
obtain social, or in the realm of professional sport, financial rewards (Deci and Ryan,
1985). Deci and Ryan, (2002) opine that once these rewards are removed from the
activity it will have a deleterious effect on the continued participation in that activity. Self-Determination theorists posit that this lack of a need for a reward leads to a more positive affect for the intrinsically motivated person, as the benefit of participating always exists.

Intrinsically motivated behavior leads individuals to experience pleasant emotions and to feel free and relaxed, there is little pressure or tension and they are focused on the task. Conversely, extrinsically motivated individuals experience tenseness and pressure as the participation of the activity is tied to their performance (Vallerand and Fortier, 1998). If a win is needed to acquire the trophy one could see how this could lead to pressure for the athlete.

The Sport Motivation Scale (Pelletier et al, 1995) assesses individual’s motivation for engaging in sport’s activities and is based upon the tenets of self-determination theory. Originally written in French, it has been translated to English via a three-step translation procedure. The Sport Motivation Scale operationalizes motivation as the perceived reasons for participating or the “why” of behavior (Vallerand and Fortier, 1998, p. 94). The instrument contains the stem “Why do you practice your sport?” and items represent the possible reasons for participation. A panel of experts assessed and categorized responses from 40 athletes as to why they participate in sport. Additional experts were also asked to generate additional reasons to create a larger collection of reasons that could serve as scale items. Judges were then asked to evaluate the content validity of the items and this left a total of 10 items per subscale. This version was distributed to 195 athletes and an exploratory factor analysis revealed a seven-factor
solution (the seven different types of motivation) that explained 69% of the variance. The researchers decided to keep the four factors from each subscale that had the highest factor loadings leading to a 28-item scale. Follow-up studies were conducted involving approximately 500 athletes from a number of different sports. These studies found the Sport Motivation Scale to have satisfactory internal-consistency levels (mean alpha score of .82) as well as moderate to high test-retest correlations (ranging from .54 to .82). Confirmatory factor analysis (using LISREL software) confirmed the seven-factor structure. Construct validity was confirmed by a series of correlational analysis among the seven subscales, as well as between these scales and other psychological constructs relevant to the sports context (Vallerand and Fortier, 1998).

Correlations among the different forms of motivation showed that the neighboring subscales on the continuum showed high positive correlations and the subscales at the opposite ends of the continuum showed weak or negative correlations. Additionally, correlations between the self-determined forms of motivation were found to be positively related to perceptions of competence, while negative correlations were obtained with non self-determined forms of motivation, in particular, amotivation (Vallerand and Fortier, 1998). Social desirability of this instrument has not been directly assessed but the authors claim that similar scales have been tested and been found to be unrelated to social desirability and would suggest the same for their instrument.

Vallerand and Fortier (1998) point out certain limitations of the tool. Although internal-consistency levels have been acceptable, an alpha level of .63 was obtained with the identified regulation subscale. They attribute this to the fact that there are only four
items on the subscale. Secondly, this instrument is not recommended for individuals under the age of 10 or intellectually challenged individuals due to the cognitive sophistication of some of the items. This sample will consist of sixth-grade boys and girls all over the age of ten.

The Sport Motivation Scale assesses 7 subscales of motivation: intrinsic motivation toward knowledge, accomplishment and stimulation, as well as external, introjected and identified regulations, and amotivation. It contains 28 items (4 items for each of the 7 sub-scales) assessed on a 7-point scale. Each item represents a possible reason for participating in sport. This scale has been found to have high internal consistency levels and a stable seven-factor structure (Sarrazin, et al, 2002, Vallerand, Fortier, Guay, 1997).

Initial research on intrinsic and extrinsic motivation focused on the dichotomy between those two concepts. Advances in self-determination theory have found that this dichotomy does not accurately capture the range of motivational levels and has led to a multidimensional approach to levels of motivation. Vallerand (1997) developed the Hierarchical Model of Intrinsic and Extrinsic Motivation (HMIEM) and this model posits that the level of motivation of an individual is represented on a continuum that moves from amotivation (lack the intention to behave) to intrinsic motivation. Vallerand (1997) states that extrinsically motivated behaviors are not always controlled but move along a continuum from where they are self-determined versus controlled. It largely depends upon the degree of internalization of the individual. Internalization is defined as “an active natural process in which individuals attempt to transform socially sanctioned
mores or requests into personally endorsed values and self-regulations” (Deci and Ryan, 2000, p. 236). As displayed in Figure 3.7, an individual will be extrinsically motivated when the internalization process is hindered and regulations and values will either remain external or be only partially internalized. The three types of extrinsic motivations are described below:

1. **External regulation** – an individual’s behavior is controlled by either receiving a reward or avoiding punishment. This type of regulation has been found to undermine intrinsic motivation and motivation for the task will diminish once the contingencies are withdrawn. The basketball player who goes to practice to avoid the ire of his/her father would be externally regulated.

2. **Introjection** – While external regulation comes from contingent consequences, introjected regulations come from within the individual (pride, guilt, shame, public self-consciousness). Introjection is a partial internalization but has not been assimilated to the self and therefore is not self-determined. Since introjections have been partially internalized they are more likely than external regulations to be maintained over time but are still considered to be relatively unstable form of regulation. For example, the basketball player that attends practice because she knows she will feel guilty if she doesn’t.

3. **Identification** – individuals recognize and accept the underlying value of a behavior. An individual that exercises because she knows it is good for her would be an example of identification. These actions are endorsed by the self and, therefore, self-determined and can lead to higher levels of commitment and
performance. The basketball player that chooses to lift weights to improve his basketball skills, even though he doesn’t enjoy lifting weights, would be an example of this type of extrinsic motivation.

At the far right of the continuum is intrinsic motivation and is the model of self-determined activity and is the standard upon which extrinsically motivated behavior should be compared. Three types of intrinsic motivation as depicted by Sarrazin, et al (2002) are described below:

1. Intrinsic motivation toward knowledge – engaging in sport for the pleasure and satisfaction that one experiences while learning, exploring or trying to understand something new. Basketball players who play because they enjoy learning more about the intricacies of the game would be an example of this.

2. Intrinsic motivation toward accomplishment – results from practicing a sport for the pleasure and satisfaction of out-doing oneself, and the process of trying to reach new personal objectives. A basketball player who experiences pleasure by being able to make more consecutive free throws than the day before would be an example. It should be noted these accomplishments are self-referenced rather than normative.

3. Intrinsic motivation toward experiencing stimulation – refers to engaging in sport in order to experience stimulating sensations (e.g. sensory pleasure, aesthetic experiences, as well as fun and excitement) derived from one’s engagement in the activity. The basketball player who feels herself gliding in the air to make a lay-up ahead of the field could experience this intrinsic stimulation.
At the far left of the continuum is amotivation. An individual is most likely to feel amotivated when they don’t feel competent or they lack a sense of control in regard to the desired outcome. This constitutes a lack of motivation and has been associated with learned helplessness (the idea that individuals may not be able to control their own lives (Weiner, 1992)). Vallerand and Fortier (1998) state that research has shown that consequences are decreasingly positive as motivations move from intrinsic motivation to amotivation on the continuum.

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Non-self-determined</th>
<th>Self-determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Motivation</td>
<td>Amotivation</td>
<td>Extrinsic Motivation</td>
</tr>
<tr>
<td>Type of Regulation</td>
<td>Non-regulation</td>
<td>External Regulation</td>
</tr>
<tr>
<td>Locus of Causality</td>
<td>Impersonal</td>
<td>External</td>
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</tbody>
</table>

**Figure 3.6:** The self-determination continuum, showing the motivational, self-regulatory, and perceived locus of causality bases of behaviors that vary in the degree to which they are self-determined. Adapted from Deci and Ryan (2000).

Vallerand (2002) contends that motivation exists at three levels of generality; the global, the contextual, and the situational levels. The global level refers to a “general motivational orientation to interact with the environment in an intrinsic, extrinsic, and/or amotivated fashion” (p.44). It is akin to a personality trait and considered to be the most stable.

At the contextual level motivation is influenced by contextual factors and leads to contextual consequences. “Individuals develop motivational orientations toward each life
context that are moderately stable, although they can be influenced to an extent by social factors that are specific to each context” (p. 44-45). When viewing motivation from the situational or state level the interest is in understanding why an individual is engaged in a specific activity at a particular time. “Motivation at this level is assumed to be unstable because of its responsiveness to the environment” (p. 45).

The focal point of this study will be the contextual level or “distinct spheres of activities such as education, work interpersonal relationships, and the sport/physical activity setting” (Vallerand & Fortier, 1998 p. 86). Individuals have developed motivational orientations on the contextual level that are stable but still responsive to the individual’s environment. Contextual factors, such as the behavior of important social agents (e.g., coaches) have an important impact on athlete’s motivation towards sport (Sarrazin, et al, 2002). Coaches design practice sessions, give recognition, evaluate performance, and shape the sport setting; they create the motivational climate for the athletes (Ames, 1992). Coaches who facilitate a sense of autonomy and competence in athletes foster high levels of intrinsic motivation and identified regulation but low levels of external regulation and amotivation toward athletic activities (Hagger, Chatzisarantis, Culverhouse, & Biddle, 2003; Mageau, & Vallerand, 2003; Ntoumanis, 2001; Rodriguez, Wigfield, & Eccles, 2003; Standage, Duda, & Ntoumanis, 2003; Pelletier, Fortier, Vallerand, & Briere, 2001).

There have been differing opinions regarding the relationship between extrinsic and intrinsic motivation. One school of thought suggests that there is an interactional relationship between the two constructs. In other words, an individual high in intrinsic
motivation for a particular activity would be low in extrinsic motivation for that same activity (two end points of a continuum). Others state that intrinsic and extrinsic motivation has an additive relationship (lie on two different continua) meaning that intrinsic and extrinsic motivations unite in producing a higher level of motivation. Vallerand and Fortier (1998) state that the nature of the relation between the two constructs depends on the type of extrinsic motivation involved. At the contextual level athletes may participate for both intrinsic and extrinsic reasons, but this should be mainly the case for identified regulation and intrinsic reasons. Intrinsic motivation and introjected and external regulation “should be orthogonal, or slightly negative” (Vallerand and Fortier, 1998).

The coaches education workshop is both sport and age specific. Appropriate behavior and expectations for dealing with sixth grade basketball players will be discussed in great detail. Most importantly, coaches will be introduced to the psychological needs of the sixth grade basketball player. Chelladurai (1993) posited that if the coach displays appropriate leadership behaviors, and meets the needs and desires of the players, then there will be player satisfaction. Allen and Howe (1998) investigated the relationship between coaching behaviors and satisfaction (with the coach and team involvement) and found that the perceptions of coaching behaviors such as praise, information, encouragement, and corrective information (skills to be detailed in the coaches education workshop) were related to higher levels of satisfaction. Satisfaction will be measured with three items to be added to the post-test Sport Motivation Scale (SMS-28).
Strong support has been found for higher dropout levels for high school students that perceived themselves as being less competent and autonomous than their peers, and perceived parents, teachers, and administrators as being more controlling (Vallerand, Fortier, & Guay, 1997). Among competitive athletes, Pelletier, et al. (2001) found that swimmers who were self-regulated or intrinsically motivated showed greater persistence to continue swimming than athletes who were amotivated and withdrew from the sport. Propensity to continue with this activity will be measured by one item to be added to the Sport Motivation Scale (SMS-28) post-test.

Along with the principles of self-determination theory, coaches will be introduced to methods to actually employ the theory in a youth basketball context. Specifically, coaches will be introduced to strategies that positively enhance the competence, autonomy, and relatedness of their athletes. These strategies are discussed in detail in The Coaches Education Workshop program material (Appendix C) Coaches will pre-and post-tested on their knowledge of self-determination theory as well as strategies that directly employ the theory in youth sport setting.

INDEPENDENT VARIABLES

Coaching Education Program

Research has clearly shown that adults do not learn the same way as pre-adults (Gehring, 2000, Imel, 1989, Knowles, 1980, Lieb, 1991, Merriam, 2001, Okezie, 2003, Zmeyov, 1998). Adults do not want to be lectured to but, rather, prefer to be a part of the process. The goal of this coaching education program is to meet the educational needs of
the adult coach. The principles of andragogy and transformative learning will be applied to meet one of the adult educational needs, as defined by Zmeyov (1998), learning for the purpose of leisure time and personal development. The life experience, as well as coaching experience, of the coach will be factored in to the program and the material to be discussed will be linked directly to life situations.

In this workshop the adult coaches will be invited to take initiative in discussions and direct his/her own learning. The coach’s self concept will be strongly considered and they will not be treated like children. The physical learning environment will be one where an adult feels comfortable; a lounge will be used rather than a classroom. These adult learners will not be told what they will learn but that they should be involved in the process of self-diagnosis for learning. The instructor will explain to the coaches that he/she is in a learning position as well and looking forward to learning from their experiences. The instructor will assume the role of a guide rather than a teacher. The instructor will serve as a procedural guide or a content resource. The instructor will avoid staying in lock step with a set program and look for teaching moments when they arise.

Crucial to the success of the workshop will be the opportunity for the coaches to learn ways to apply what they have learned in the workshop. The curriculum will be organized towards solving a problem and that will be the focus. We have established many assumptions about youth sport and youth sport coaching and during this workshop we will discuss many of these assumptions. Coaches will be assisted to become critically aware of how and why these assumptions have come to constrain their approach to youth
coaching. Through discussion and reflection, coaches will be given the opportunity to revise some of these assumptions and will be provided with coaching methods that are more consistent with these new assumptions. The learning climate will be open, safe, and trusting with an emphasis on participation, reflection, and autonomy. The learner will be assisted in participating effectively in discourse while being supplied with new information. Learners will be encouraged to challenge, defend, explain, and judge arguments.

Coaching education programs have been criticized for a lack of a contextual approach and educators must realize that coaches do not operate in a vacuum. An emphasis of this educational program will be on the micro level with an emphasis on the why and how of coaching rather than the what of coaching (Potrac, 2001). Coaches will be asked to consider more than physical skill acquisition as part of their role as a youth coach and will be asked to view coaching as a social process. Abraham and Collins (1998) claim that coaching is a cognitive skill rather than an art and must look to the realm of cognitive psychology for coaching education ideas. In a cognitive approach, coaches’ procedures are challenged and explained as to why they may be incorrect. This forces the coach to be truly reflective of his/her methods. The coaches “who make top billing are those who are truly reflective, and this trait is an essential prerequisite for the experiential approach to be effective” (p. 73).

Learners will be asked to solve problems as a group and those problems will be directly related to their coaching contexts. As Pilling-Cormick (1997) stated, not all learning environments can become transformative but the opportunity should exist.
Instructors must go beyond offering technical skills and aim for transformative learning. Grabove (1997) states that there is no single model of transformative learning. Transformative learning can be rational, analytical, cognitive process or it can be an intuitive, creative, emotional process. The instructor is responsible for fostering critical reflection that may lead to transformation.

Volunteer coaches are assuming increasingly important roles in youth sport. Training programs should be designed to educate and develop coaches to have a positive impact. The goal of this education program is for coaches to learn context specific content that they can and will use once they return to their coaching activities. Currently, coaching education does not define the role and function of the coach. Coaches should be given a goal of specific positive outcomes for their players. Research has shown that even short workshops have produced positive results and programs that enhance confidence in coaching should produce more positive coaches (Malete & Feltz, 2000).

Townsend et al (2003) developed a theory-driven approach to design a development workshop. These researchers posit that educators can apply their methods to “systematically use theory in the development, implementation, and evaluation of their workshops, staff trainings, and curricular materials for professionals and consumers” (p. 312). They described their theory-driven approach to nutrition education: “Given that theory describes events and explains relationships by organizing principles and concepts, theory-driven approach has the potential to greatly improve the effectiveness of nutrition education” (p. 312). The primary focus of this coaching intervention is to modify the
behavior of the coach; Townsend et al (2003) state that educators cannot ignore behavior change research in designing an intervention.

As described above adults do not want to be lectured to and educators must be mindful of the differences between pre- and adult learners. In their workshop, Townsend et al (2003) employed the theory of planned behavior as they felt it best applied to their target audience. For many of the reasons described above this study will be employing the principles of transformative learning for this coaching workshop. Taylor (1997) stated that there has been a great deal of research regarding transformative learning as a viable model for adult education.

A key component of transformative learning is the fostering of reflective thought. Moon (2004) says that, for a variety of reasons, short course and workshops often have no impact on practice and are a waste of money. She states that if learners believe that, at a workshop, they need only to passively absorb what the teacher gives them, then the learning outcomes will not be achieved. Moon differentiates between learners that take a ‘deep’ approach rather than a ‘surface’ approach. A learner that takes a deep approach set out with the intention of learning and applying the material and ideas. Learners with a surface approach just feel they have to garner the ideas that are presented and will be more concerned with facts than reasoning. Their approach is most likely to influenced by the instructor or facilitator of the course.

Moon (2004) states that a quality facilitator of a workshop will encourage a deep approach to learning, be aware of the state of learning of the learners by checking in advance of the course the level of knowledge on the subject, and have good technical
skills such as the ability to convey credibility and enthusiasm, good communication and good use of voice, and good organization of material. The workshop must be designed so that the notion of impact is constantly in mind. “This is based on the idea that to change practice, it is important that the course participants are aware of the nature of their current practice with respect to the area of potential change. Moon’s (2004) framework to improve impact of learning in short courses is provided below:

- Develop awareness of the nature of the current practice.
- Clarify the new learning and how it relates to current understanding.
- Integrate new learning and current practice.
- Anticipate or imagine the nature of improved practice.

As discussed in the sections on andragogy and transformative learning, it is imperative to relate theory to practice. Adult learners want to learn material that they will be able to employ to solve real problems and issues. The problem with many workshops is that they are “divorced from their context” (Moon, 2004, p. 8). They are not normally conducted in their correct context and other participants may not be colleagues. It is here that reflective learning as part of the transformative process, can be seen to bring the current practice into the course, relating it to the new learning, and therefore enabling a consideration of how the two relate to the future changed practice. Moon defines reflection/reflective learning as a “form of mental processing – like a form of thinking – that we may use to fulfill a purpose or to achieve some anticipated outcome or we may simply ‘be reflective’ and then an outcome can be unexpected. Reflective learning…in the academic or educational context is also likely to involve a conscious and stated
purpose for the reflection, with an outcome specified in terms of learning, action or clarification” (p. 9).

This reflective process of mulling over learned ideas, reorganizing them, and considering of how what has been learned will fit into patterns of the environment to improve practice can be incorporated in a number of ways. Moon (2004) suggests periodic “stop and think” breaks where learners will have 5 to 10 minutes to jot down reflections, ideas, and thoughts and these thoughts can be incorporated in a log or course journal. Learners must be asked to envision how to incorporate what was discussed and how it would change their current environment. Learners must take this reflective time very seriously; this should be a very quiet time and should not be used to take a break. It is also useful to have the learners follow up with the facilitator after the course to reflect on how the implementation of the ideas went.

Due to the short duration of the workshop it is strongly suggested that every aspect of the workshop should work towards the transformative process and the achievement of impact of the course. Moon (2004) suggests 10 components, or activities, that have a common purpose. They are:

- Course planning or administrative duties.
- Activities that involve actual instruction or the delivery of information.
- Activities that facilitate group functioning to improve the learning resource of the group and the learning environment.
- Activities to support the learner in implementing change in practice.
- Provision of overviews of the course: introductory or summarizing activities.
- Activities to deepen or enable integration of learning (other than reflective activities).
- Reflective activities.
- Activities to support individual learning or coping behaviors.
- Assessment activities to evaluate personal learning.
- Course evaluation activities.
Coaches will be asked to maintain a journal for the day to be used for notes and for the reflection periods. The researcher will send follow-up information, based upon group discussions regarding suggested coaching practices.

The coaching education program outline is detailed in Appendix C. The reader must keep in mind that it is just an outline with suggested topics. It will be the role of the facilitator to keep the discussion moving and on schedule to cover most of the suggested material. Of course, some of the material must be covered, such as the components of self-determination theory and its related coaching strategies, and that will also be the responsibility of the facilitator. It is expected that these experienced coaches will add many suggestions to the ones that appear on the outline. As described above, adult learners do not want to be lectured to and want to be a part of the learning process through discourse and reflective thinking. The outline, as presented, gives the adult coach the opportunity to do just that. The current goal for the workshop is to be a four-and-a-half-hour program. The proposed schedule for the education workshop can also be found within Appendix C.

Ryan and Deci (2002) state that self-determination theory “begins by embracing the assumption that all individuals have natural, innate, and constructive tendencies to develop an ever more elaborated and unified sense of self” (p.5, italics added). While some research had detected some gender differences for participation motivation in exercise, for example, in measuring exercise motivation gender differences were found for body-appearance and fitness motivation however, no gender differences were found
for interest/enjoyment, competence, or social motives (Frederick-Recasino, 2002). Frederick-Recasino (2002) states that much of the gender difference in motivation research stemmed from societal pressures where female athletes were “viewed as less desirable role models than competent male athletes, later research shows no such effects. Female sport and exercise participants may now feel that it is more acceptable to express their desires to achieve and become competent as motivating factors in their participation, without experiencing social stigma” (p.285).

Ryska (2003) found no significant gender differences in levels of perceived success, dimensions of intrinsic motivation, and activity enjoyment. In studying goals, interests, and learning in physical education, Chen and Ennis (2004) concluded that “the discrepancy between high and low responses to high situational interest in physical activity was likely caused by lack of skill rather than gender. The result suggests that offering gender-appropriate physical activities for the sake of motivating boys and girls separately may be unfounded” (p. 334). Robinson and Lieberman (2004) found no gender differences in self-determined motivation among the vision impaired.

**SELECTION OF SAMPLE/SUBJECT DESCRIPTION**

The Central Ohio Boys Basketball Association (COBBA) and the Central Ohio Youth Girls Basketball Association (COBGA) organizes a league of 4th through 6th grade traveling basketball teams in the Central Ohio area. Players are required to try-out for these teams and rosters are often limited to 12 players or less, which will often necessitate the “cutting” of players. There are no playing time requirements and there is a great emphasis within the league placed on winning. These teams play a competitive schedule
against neighboring towns and are coached by volunteers, normally a mother or father of a player or a local volunteer that offers to coach the team. There is no experience necessary to become a COBBA or COBGA coach but the level of experience will range from coaches with collegiate or high school coaching experience to coaches with no experience at all. The league does not require, nor offers, any coaches training in technical expertise, sportsmanship, or the psychological aspects of coaching a pre-adolescent. The teams use Ohio High School Athletic Association (OHSAA) rules and teams, even at the youngest age groups, utilize the same strategies that are used on the high school level. The only accommodation made for the younger players is the use of an intermediate size basketball for the boys (girls use the intermediate size ball at every level).

This particular study will focus on sixth grade boys and girls and their coaches. The focus is on the sixth grade level due to the measurement instrument for the dependent variable and its suggested use for individuals over the age of 10. This will be described in greater detail later. Talent levels of the players and the teams will vary. It is the goal of this study that the randomly selected players will be representative of different ethnic and socio-economic groups. Further, it is a goal of this study that the coaches represent different age, gender, ethnic, and socio-economic groups.
SAMPLE SIZE

Inferential statistics is the science of making reasonable decisions with limited information (Ary, Jacobs, & Razavieh, 2002). A researcher must consider what he/she observes as well as what is known about sampling error to reach imperfect but logical decisions about a population (the group to which the researcher would like the results of a study to be generalizable). The researcher must perform what is known as tests of significance. A basic tool of these statistical tests is the null hypothesis. The null hypothesis is a statement that any difference between obtained sample statistics and specified population parameters is due to sampling error or “chance” (Fraenkel and Wallen, 2003). Essentially, the null hypothesis states that there is no actual relationship between the groups and that any observed difference is a matter of chance. The researcher will state a null hypothesis that group A is equal to group B (random samples assumed) on the variable of interest as follows:

\[ H_0: \mu_A = \mu_B \]

Where

- \( H_0 = \) null hypothesis
- \( \mu_A = \) mean of group A on variable of interest
- \( \mu_B = \) mean of group B on variable of interest
The researcher must decide if any differences between group A and group B are due to chance (the null hypothesis) or the relationship between the variables (the research hypothesis) and “must do so without knowing the ultimate truth concerning the populations of interest. This choice is based on incomplete information and is therefore subject to possible error (Ary, Jacobs, & Razavieh, 2002, p 177).

The researcher will either retain or reject the null hypothesis and either decision may be correct or incorrect. If a true null hypothesis is rejected then the researcher has made a Type I error, symbolized by a Greek lowercase letter, alpha (α). The researcher thinks they have found something when there is actually nothing there. The researcher may recommend changes based upon results that do not support those changes. Conversely, the retention of a false null hypothesis is labeled a Type II error, symbolized by a Greek lowercase letter, beta (β). The researcher concludes there is nothing there when, in fact, there is something. There was a significant difference between the groups, on the variable in question, but the status quo was maintained. Generally, Type I errors are considered more serious than Type II errors due to changes that may not be necessary.

\begin{table}
\centering
\begin{tabular}{ccc}
\hline
Investigators decision after making test of significance & Real situation in the population & \hline
& H₀ is true & H₀ is false \\
\hline
Rejects H₀ & Type I error & Correct \\
Retains H₀ & Correct & Type II error \\
\hline
\end{tabular}
\end{table}

\textit{Ary, Jacobs, and Razavieh (2002)}

\textbf{Table 3.2} Schematic Representation of Type I and Type II Errors (Ary, Jacobs, & Razavieh, 2002).
The researcher must weigh the consequences of a Type I or Type II error and decide, prior to experimentation, how strong the evidence must be before they would reject the null hypothesis. This predetermined level at which a null hypothesis would be rejected is called the level of significance. Therefore, the probability of a Type I error is directly under the control of the researcher. The researcher might decide the consequences of a Type I error could be very serious and might set a very conservative level of significance of .001 which means that the estimated probability of the observed relationship caused by mere luck is one chance in a thousand or less. The researcher must consider that such a conservative level of significance also increases the risk of a Type II error, declaring there is no relationship when one does exist.

A researcher may or may not be concerned with the direction of the test. If a researcher is concerned whether a treatment will make a difference, and just a difference, in either direction between groups then he/she will conduct a nondirectional or two-tailed test. For this study, the researcher is concerned with the effects of an intervention that increases levels of self-regulated motivation and a directional, one-tailed, test would be required. In a directional test the critical region is located in only one of the two tails of the distribution. This means that the null hypothesis will be retained unless the observed difference is in the hypothesized direction. A directional test requires a smaller $z$-value (expresses how far a score is from the mean in terms of standard deviation units) than a nondirectional test so a directional test makes it easier to reject the null hypothesis and increases the probability that the null hypothesis will be rejected if the difference is in the hypothesized direction.
The next step for the researcher would be to specify a meaningful effect size ($\Delta$). The effect size is defined as the difference between experimental and control groups divided by the standard deviation of the control group. Effect sizes are interpreted the same way that $z$-scores are interpreted. Effect size can be used to compare the relative magnitude of the relationships various independent variables have with a common dependent variable. It can also help decide whether the difference an independent variable makes on the dependent variable is strong enough to recommend a practical change.

In a recent study, Prusak, et al (2004) employed the Sport Motivation Scale for Physical Education (SMSPE) and the Situational Intrinsic Motivational Scale (SIMS) to investigate the effects of choice on the motivation of 1,110 adolescent girls in physical education. Effect sizes were reported for the SIMS only and were found to be moderate (.623) to large (1.496). Cohen (1988) defined effect sizes as small (.20), medium (.50) and large (.80). To determine the necessary sample size, the researcher needs to posit the alpha ($\alpha$), effect size, and desired power (the fractional value between 0 and 1.00 that is defined as $1 - \beta$) (Cohen, 1992). Power is important to the researcher as it increases the odds of rejecting a false null hypothesis. To capture small to medium effect sizes this study will posit an effect size of .35, a 90 percent chance of rejecting the null hypothesis with a one-tailed .05 alpha.
Based upon the formula:

\[ N = \left( \frac{1}{\Delta} \right)^2 (z\alpha + z\beta)^2 \]

Where

- \( N \) = the number needed in the sample
- \( \Delta \) = the specified effect size
- \( z\alpha \) = the z-score for the level of significance
- \( z\beta \) = the z-score for the desired probability of rejecting the null hypothesis

\[ N = \left( \frac{1}{.35} \right)^2 (1.645 + 1.28)^2 \]
\[ = (2.86)(2.925)^2 \]
\[ = (8.17)(8.56) \]
\[ = 69.93 \]

With a random sample of 70 subjects from a population of 6\textsuperscript{th} grade boys and girls basketball players, this study has a 90 percent chance of rejecting the null hypothesis at the one tailed .05 level if the true effect size is .35 or better. However, this study will attempt to have at least 6 coaches receive the independent (treatment) variable and at least 6 coaches in the control group. Assuming a minimum of ten players for each coach this study will have a random sample of approximately 120 subjects being administered the dependent variable.

**DATA COLLECTION PROCEDURES**

As depicted above all athletes will be pretested on the SMS scale. In the beginning of the season players will be asked to take home a consent form to their parents for them to participate in the study. All players that bring back a signed consent form will be allowed to participate, Appendix I. The players will be pre-tested two to three
weeks into the season so that they will be able to develop their perceptions of the coach and the motivational climate. Players will be approached either before or after practice and instructed by a trained researcher on the purpose of the study and the Sport Motivation Scale (SMS-28), they will be asked to fill out the survey. The researcher, to ensure that all the participants are accounted for, will collect the instruments. Players will be ensured confidentiality but will need to be identified so as to be able to compare pre-and post-test scores. Teams will then be randomly selected among both boys and girls teams as to which coaches will be asked to attend the coaches education workshop. One-week prior to the end of the season, following the same procedures as in the pre-test, all of the same players will be administered the Sport Motivation Scale (SMS-28) again along with the three items pertaining to athlete satisfaction as well as one item pertaining propensity to continue to participate in basketball next season.

DATA ANALYSIS PROCEDURES

To test hypotheses 1 and 2, pre and post test scores will be derived on the coaches’ knowledge of the different areas. T-tests will be conducted to test for differences between the means. Hypothesis 3 will be tested by a post-workshop evaluation. However, due to such a small sample size, these tests will provide only suggestive, not conclusive, evidence of the workshop’s effectiveness.

ANOVA and MANOVA will be used to analyze Hypotheses 4, 5, and 6. The group (control, treatment) will serve as the independent variable and post-test scores on the Sport Motivation Scale will serve as the dependent variable. Hypotheses 7 will be tested by ANOVA. The groups (control, treatment; male, female) will serve as the
independent variables and the dependent variables will be scores on the propensity to
continue item, mean score of the three items that relate to athlete satisfaction with the
coach scores on the Sport Motivation Scale.

PILOT TESTING

Prior to the study, a pilot test of the coaching intervention workshop will be
conducted with graduate students and other volunteers to ascertain that the schedule can
be maintained and that all the significant information is disseminated to the participants.
Any modifications necessary will be made prior to the actual coaches’ workshop. The
pilot test will consist of 6 to 8 individuals with varying degrees of coaching experience.
The primary goal of the pilot test is to simulate the actual workshop and to detect any
correctable defects prior to the live workshop. The pilot test subjects will be pre-and
post-tested for their knowledge of self-determination theory and their feedback will be
solicited to enhance the content quality of the workshop.
CHAPTER 4

RESULTS

The purpose of this chapter is to provide the results of the study. The first section provides the demographic information concerning the sample of the study. The next section discusses the coaches’ workshop and hypotheses 1, 2, and 3. Scale qualities will discussed next in conjunction with hypotheses 4 and 5. Gender will be discussed in the next section along with hypothesis 6 and finally, player satisfaction, along with hypothesis 7 will follow.

SAMPLE CHARACTERISTICS

Data were collected from 125 athletes competing on sixth-grade travel basketball teams in central Ohio. The teams were selected from the Central Ohio Girl’s Basketball Association (COGBA) and the Central Ohio Boy’s Basketball Association (COBBA). Two coaches eventually dropped out of the study, one citing a lack of time to participate and the other stated that the parents refused to sign the consent for the player’s participation form. At that point it was considered too late to recruit additional coaches and the decision was made to initiate the study with fourteen coaches (teams).
Table 4.1: Demographic characteristics – coaches.

All of the coaches in the sample are male, twelve are Caucasian (86%) and two are African-American (14%), and have an average of 13.2 years of coaching experience (a range of 1 to 40 years of experience). All but three of the coaches (21%) have children on the team with one of the coaches having two children on his team. The mean age of a coach in this study is 44 years old. Half of the coaches have received some first aid training, 3 of the 14 coaches (21%) had received some training in the psychological aspects of coaching youth sports (none of these coaches were randomly selected for the workshop), and 6 of the 14 (43%) coaches had received training in the technical aspects (skills, “X’s and O’s”) of coaching and the sport of basketball. The level of education ranged from one coach that did not complete high school, two that had high school degrees, one that had some college, two with bachelor’s degrees, to six coaches with advanced degrees (three with master’s degrees, three with law degrees). See Table 4.1
The athletes in the sample, according to league rules, had to be in the sixth grade to compete in this league. Sixty-two boys and 63 girls were pre-tested and 54 boys and 53 girls took the post-test. All of the athletes lived within the confines of central Ohio.

COACHES WORKSHOP

A pilot test of the workshop was conducted with four Ph.D. (Sport Management) students along with a recent Ph.D. (Physical Education) graduate. The goal of the pilot test was to simulate the actual workshop and to ascertain if the information was being conveyed in a clear, concise, and timely manner. Modifications to the presentation were discussed by the group and implemented by the researcher. At the conclusion of the pilot test there was a consensus that the modifications enhanced the program and the information, as described by the researcher, was being conveyed to the audience. Further, the pilot group confirmed that there was an opportunity for discourse and reflection during the workshop. Group knowledge of self-determination theory as well as related coaching strategies was increased due to the pilot testing program.

The coach’s workshop was held during the holiday break of the season. Seven coaches were randomly selected to participate and all invited coaches attended. The workshop was held in the athletic lounge of a local liberal arts college. The carpeted room has a large window overlooking the basketball court and there is a large boardroom-like table in the center of the room. As suggested in the adult-learning literature, the atmosphere was designed for adults rather than children. There was food and beverages available throughout the session and participants were invited to help themselves during the workshop.
Upon arriving coaches were given nametags and invited to help themselves to food and the researcher facilitated introductions as coaches arrived.

Coaches were invited to find a place at the board table and then the pre-test was administered. Coaches were then asked to introduce themselves to the group. The basic premise and the format of the workshop were discussed with the coaches. It was explained that the role of the researcher was to facilitate the instruction and to introduce ideas and topics. It was pointed out that there were many decades of experience in the room and we should do our best to take advantage of that experience and coaches were advised that the instructor was looking forward to learning from them as well. Coaches were invited to take a proactive role in the workshop, to ask questions of the instructor, and of each other, and to feel free to respectfully agree or disagree with each other. They were advised that it would be most important to embrace concepts rather than facts. It was explained that it was imperative to create a safe environment where ideas could be exchanged.

Moon’s (2004) workshop framework was used and coaches were provided information that enabled them to develop the nature of current practices in youth sport. Many issues regarding youth sport was discussed including the growth and reliance of organized youth sport, the increasingly earlier entry ages, and the adoption of the win-at-all-cost model that has become pervasive even at the youngest ages. Coaches took advantage of the opportunity to enter into discourse on the topic and that led to some lively discussions. At the end of this session the coaches were asked to reflect quietly
upon the material discussed and to make entries into a journal that they were asked to keep for the day.

In the next session step two of Moon’s framework was implemented where the new learning was clarified and related to current understanding. At this point the concepts of extrinsic and intrinsic motivation was introduced as well as self-determination theory. Coaches were introduced to ideas and concepts regarding the promotion of a motivational climate that fosters intrinsic motivation. A visual representation of self-determination theory was presented to the coaches in the form of excerpts from *Mr. Holland’s Opus* starring Richard Dreyfus. In the video Dreyfus plays a music teacher that is working individually with a student. She is driven to be a good clarinetist. Dreyfus proves to be quite the taskmaster and the student works very hard but sees very little improvement. Dreyfus is shown to be a demanding and controlling teacher. Eventually the student decides to quit. She is not seeing the improvement that she expected. Dreyfus asks why she wanted to play the clarinet in the first place. She explains how every member of her family, from her brother who plays quarterback to her mother that wins the art contest at the state fair, has been successful at something, she has not. It is clear that her goals for the clarinet have been extrinsic. Dreyfus starts to realize how controlling he has been and how it had not been an enjoyable experience for the student. The movie represents the primary principles of self-determination theory very well. Dreyfus makes the student feel autonomous as he allows her to play and think of whatever pleasant thought she desires. She mentions the sunset and Dreyfus asks her to “play the sunset.” Relatedness is portrayed in the movie as Dreyfus shows the student
that she is truly cared for and how music should be enjoyable. As the student starts to relax and “play the sunrise” she improves and Dreyfus is quick to point that out. The student feels competent. In the next scene in the movie they show the student, now a few years older, with a featured role in the student orchestra. The primary principals of self-determination theory have enabled the girl to stay involved music.

The coaches were moved by this visual depiction and one coach stated that he wanted to rent the movie that night! Many of the coaches felt that they had seen more glimpses of themselves as the controlling teacher rather than the evolved Mr. Holland. It was explained that many times we think a controlling approach is the best way to motivate and that perhaps that might not be the case. At this point coaches were again given the opportunity to reflect on the discourse and to make journal entries.

Moon’s third step of her framework requires integrating new learning and current practice. At this juncture coaches were introduced to strategies that they could use to create a motivational climate where their athletes could perceive themselves as being self-determined. Coaches were told that these were suggestions and that they could be as creative as they desired utilizing these concepts. Coaches discussed different ideas they had and different approaches they could take. Their experience as coaches was truly tapped into and interesting ideas were shared. Coaches were once again asked to reflect upon the discussion and make journal entries.

In Moon’s fourth step coaches were asked to imagine the nature of the improved practice. The possible benefits of a less controlling approach were discussed as were
ways of implementing new methods. Some coaches were skeptical but stated they were willing to give it a try.

The goal of the workshop was for transformative learning to occur. The premise was that the coach’s workshop, and some of the ideas and concepts, would serve for the coaches to become aware of holding a “limiting or distorted view” (Cranton, 2002, p. 64). The critical reflection was implemented to enable coaches to question their current ideas about coaching, their validity, their sources, and underlying principles (Cranton, 2002). Finally, the final goal of the workshop, and an integral aspect of transformative learning, was for coaches to adopt behaviors that are more consistent with this new perspective.

**Hypothesis 1: Coaches that participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of motivation in a youth sport setting.**

**Hypothesis 2: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of self-determination theory.**

Fourteen coaches participated in the study and seven of these coaches were randomly selected to participate in the coaches’ education workshop, the independent variable in this experimental design. It was hypothesized that coaches will show a significant increase in their understanding and knowledge of motivation in a youth sport setting. To test these hypotheses, pre- and post-tests were administered to the coaches before and after the workshop. The tests were composed of 10 questions worth 10 points
each for a total of 100 points. Some questions had more than one part and coaches were

given partial credit for answers considered correct.

<table>
<thead>
<tr>
<th></th>
<th>Workshop Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
</tr>
<tr>
<td>Coach 1</td>
<td>0</td>
</tr>
<tr>
<td>Coach 2</td>
<td>0</td>
</tr>
<tr>
<td>Coach 3</td>
<td>20</td>
</tr>
<tr>
<td>Coach 4</td>
<td>0</td>
</tr>
<tr>
<td>Coach 5</td>
<td>10</td>
</tr>
<tr>
<td>Coach 6</td>
<td>15</td>
</tr>
<tr>
<td>Coach 7</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 4.2: Workshop pre- and post-test scores

A comparison of pre-test scores ($M = 8.57$) and post-test scores ($M = 82.86$)
showed that there was a significant increase ($t(6) = -11.820$, $p > .000$) in coaches pre- and
post-workshop knowledge supporting hypotheses 1 and 2. These results, however, must
be interpreted with some caution due to the small sample size.

Hypothesis 3: Coaches who participate in the coaches’ education workshop will
demonstrate a high propensity to utilize coaching strategies that employ the
principles of self-determination theory.

Hypothesis 3 was tested by an anonymous post-workshop evaluation and was also
supported. A 1 – 10 Likert scale was employed, coaches were asked if their ideas
regarding the role of the youth sport coach had been modified and if they plan to use the
information presented in the workshop. Both means were above the mid-point of the
scale ($M = 7.33$, $SD = 1.633$, and $M = 9.17$, $SD = 1.169$ respectively), and provide an
indication that the coaches planned to utilize the information they learned from the workshop, see Table 4.3.

<table>
<thead>
<tr>
<th></th>
<th>Knowledge of role of coach</th>
<th>Intention to employ SDT strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coach 1</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Coach 2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Coach 3</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Coach 4</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Coach 5</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Coach 6</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 4.3: Coaches post-workshop evaluation

SCALE QUALITIES

Sport Motivation Scale (SMS-28), (Pelletier et al, 1995).

Results of the reliability estimates and item to total correlations can be found in Table 4.4. Reliability estimates (Cronbach’s alphas) for multi-item variables were as follows: intrinsic motivation to know ($\alpha = .796$), intrinsic motivation to accomplish ($\alpha = .715$), intrinsic motivation to experience stimulation ($\alpha = .678$), extrinsic motivation – identified ($\alpha = .552$), extrinsic motivation – introjected ($\alpha = .634$), extrinsic motivation – external regulation ($\alpha = .670$), amotivation ($\alpha = .719$), and player satisfaction ($\alpha = .674$).
Item-to-total correlations (Table 4.4) were determined for the seven factors of the dependent variable.

<table>
<thead>
<tr>
<th>item no.</th>
<th>intknow</th>
<th>intacc</th>
<th>intstim</th>
<th>extid</th>
<th>extintr</th>
<th>extext</th>
<th>amot</th>
</tr>
</thead>
<tbody>
<tr>
<td>(intknow) 1</td>
<td>0.614</td>
<td>0.358</td>
<td>0.461</td>
<td>0.329</td>
<td>0.015</td>
<td>0.153</td>
<td>-0.172</td>
</tr>
<tr>
<td>2</td>
<td>0.66</td>
<td>0.418</td>
<td>0.387</td>
<td>0.345</td>
<td>-0.029</td>
<td>0.124</td>
<td>-0.009</td>
</tr>
<tr>
<td>3</td>
<td>0.518</td>
<td>0.585</td>
<td>0.461</td>
<td>0.41</td>
<td>0.07</td>
<td>0.142</td>
<td>-0.062</td>
</tr>
<tr>
<td>4</td>
<td>0.653</td>
<td>0.637</td>
<td>0.543</td>
<td>0.352</td>
<td>0.051</td>
<td>0.207</td>
<td>-0.065</td>
</tr>
<tr>
<td>(intacc) 5</td>
<td>0.409</td>
<td>0.494</td>
<td>0.344</td>
<td>0.306</td>
<td>0.126</td>
<td>0.089</td>
<td>0.061</td>
</tr>
<tr>
<td>6</td>
<td>0.607</td>
<td>0.55</td>
<td>0.568</td>
<td>0.466</td>
<td>0.136</td>
<td>0.19</td>
<td>0.077</td>
</tr>
<tr>
<td>7</td>
<td>0.513</td>
<td>0.407</td>
<td>0.548</td>
<td>0.334</td>
<td>0.138</td>
<td>0.275</td>
<td>-0.009</td>
</tr>
<tr>
<td>8</td>
<td>0.373</td>
<td>0.558</td>
<td>0.434</td>
<td>0.394</td>
<td>0.08</td>
<td>0.123</td>
<td>-0.022</td>
</tr>
<tr>
<td>(intstim) 9</td>
<td>0.368</td>
<td>0.377</td>
<td>0.405</td>
<td>0.401</td>
<td>0.137</td>
<td>0.182</td>
<td>-0.029</td>
</tr>
<tr>
<td>10</td>
<td>0.462</td>
<td>0.515</td>
<td>0.535</td>
<td>0.421</td>
<td>0.114</td>
<td>0.231</td>
<td>-0.018</td>
</tr>
<tr>
<td>11</td>
<td>0.361</td>
<td>0.437</td>
<td>0.407</td>
<td>0.268</td>
<td>0.169</td>
<td>0.287</td>
<td>-0.017</td>
</tr>
<tr>
<td>12</td>
<td>0.508</td>
<td>0.529</td>
<td>0.558</td>
<td>0.465</td>
<td>0.207</td>
<td>0.27</td>
<td>-0.099</td>
</tr>
<tr>
<td>(extid) 13</td>
<td>0.25</td>
<td>0.331</td>
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<td>0.318</td>
<td>0.349</td>
<td>0.281</td>
<td>0.064</td>
</tr>
<tr>
<td>14</td>
<td>0.483</td>
<td>0.398</td>
<td>0.382</td>
<td>0.309</td>
<td>0.051</td>
<td>0.191</td>
<td>0.053</td>
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<tr>
<td>15</td>
<td>0.317</td>
<td>0.385</td>
<td>0.427</td>
<td>0.354</td>
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<td>0.29</td>
<td>0.172</td>
</tr>
<tr>
<td>16</td>
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<td>0.252</td>
<td>0.29</td>
<td>0.366</td>
<td>0.391</td>
<td>0.453</td>
<td>0.047</td>
</tr>
<tr>
<td>(extintr) 17</td>
<td>-0.038</td>
<td>0.064</td>
<td>0.133</td>
<td>0.317</td>
<td>0.439</td>
<td>0.513</td>
<td>0.172</td>
</tr>
<tr>
<td>18</td>
<td>0.061</td>
<td>0.131</td>
<td>0.22</td>
<td>0.344</td>
<td>0.521</td>
<td>0.478</td>
<td>0.153</td>
</tr>
<tr>
<td>19</td>
<td>0.133</td>
<td>0.176</td>
<td>0.17</td>
<td>0.171</td>
<td>0.212</td>
<td>0.22</td>
<td>0.072</td>
</tr>
<tr>
<td>20</td>
<td>-0.106</td>
<td>0.063</td>
<td>0.093</td>
<td>0.267</td>
<td>0.525</td>
<td>0.563</td>
<td>0.307</td>
</tr>
<tr>
<td>(extext) 21</td>
<td>0.206</td>
<td>0.186</td>
<td>0.33</td>
<td>0.359</td>
<td>0.457</td>
<td>0.356</td>
<td>0.145</td>
</tr>
<tr>
<td>22</td>
<td>0.177</td>
<td>0.198</td>
<td>0.18</td>
<td>0.282</td>
<td>0.334</td>
<td>0.401</td>
<td>0.166</td>
</tr>
<tr>
<td>23</td>
<td>-0.002</td>
<td>0.058</td>
<td>0.153</td>
<td>0.366</td>
<td>0.526</td>
<td>0.471</td>
<td>0.23</td>
</tr>
<tr>
<td>24</td>
<td>0.18</td>
<td>0.194</td>
<td>0.314</td>
<td>0.303</td>
<td>0.48</td>
<td>0.588</td>
<td>0.239</td>
</tr>
<tr>
<td>(amot) 25</td>
<td>-0.21</td>
<td>-0.071</td>
<td>-0.18</td>
<td>0.034</td>
<td>0.232</td>
<td>0.191</td>
<td>0.491</td>
</tr>
<tr>
<td>26</td>
<td>-0.085</td>
<td>0.045</td>
<td>-0.057</td>
<td>0.062</td>
<td>0.137</td>
<td>0.086</td>
<td>0.51</td>
</tr>
<tr>
<td>27</td>
<td>-0.253</td>
<td>-0.092</td>
<td>-0.169</td>
<td>-0.019</td>
<td>0.118</td>
<td>0.182</td>
<td>0.591</td>
</tr>
<tr>
<td>28</td>
<td>0.189</td>
<td>0.146</td>
<td>0.156</td>
<td>0.225</td>
<td>0.253</td>
<td>0.338</td>
<td>0.472</td>
</tr>
</tbody>
</table>

Table 4.4: Reliability estimates and item-to-total correlations

Results of the item-to-total correlation analysis proved problematic as 12 of the 28 items correlated higher with other dimensions than the dimension it was intended to measure. This indicates that the seven factor subscale structure was not established with this sample.
Thus, exploratory factor analysis procedures (oblique rotation, direct oblimin) were conducted to determine a better scale structure for the items. Because the sample was not large enough to run all of the items in one factor analysis, factor analyses for the intrinsic motivation items, extrinsic motivation items, and amotivation items were run separately.

**Intrinsic items**

The twelve intrinsic items were subjected to exploratory factor analyses. The principal component analysis with oblique rotation showed that two components had an eigenvalue of 1.0 or above explaining 53% of the variance in the data. However, one component was close to an eigenvalue of 1.0 (.99), see Table 4.5. Analysis of the scree plot, Figure 4.1, showed a leveling off after the 2nd component. Accordingly, two more factor analyses were conducted for a two factor and three factor solution respectively. A perusal of the items and their factor loadings in all of these solutions showed that a two component solution explained 53.1% of the variance in the data and was, conceptually, the most logical solution. Thus, it was decided to use these two components as the intrinsic motivation dimensions.
**Figure 4.1:** Scree plot - 12 intrinsic items.

**Table 4.5:** Total variance explained - Intrinsic factors

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.225</td>
<td>43.539</td>
<td>43.539</td>
</tr>
<tr>
<td>2</td>
<td>1.144</td>
<td>9.533</td>
<td>53.072</td>
</tr>
<tr>
<td>3</td>
<td>0.992</td>
<td>8.269</td>
<td>61.341</td>
</tr>
<tr>
<td>4</td>
<td>0.882</td>
<td>7.348</td>
<td>68.689</td>
</tr>
<tr>
<td>5</td>
<td>0.758</td>
<td>6.315</td>
<td>75.004</td>
</tr>
<tr>
<td>6</td>
<td>0.642</td>
<td>5.350</td>
<td>80.354</td>
</tr>
<tr>
<td>7</td>
<td>0.519</td>
<td>4.328</td>
<td>84.682</td>
</tr>
<tr>
<td>8</td>
<td>0.474</td>
<td>3.953</td>
<td>88.635</td>
</tr>
<tr>
<td>9</td>
<td>0.448</td>
<td>3.730</td>
<td>92.365</td>
</tr>
<tr>
<td>10</td>
<td>0.340</td>
<td>2.837</td>
<td>95.202</td>
</tr>
<tr>
<td>11</td>
<td>0.310</td>
<td>2.584</td>
<td>97.786</td>
</tr>
<tr>
<td>12</td>
<td>0.266</td>
<td>2.214</td>
<td>100.000</td>
</tr>
</tbody>
</table>
The criteria for the selection of the items to represent a component was that an item’s loading on the factor should be at least .55 and its loading an any other component should be lower by at least .20. The components, the selected items, and their loadings are shown in Table 4.6. These two components are explained below:

<table>
<thead>
<tr>
<th>Intrinsic Items:</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Factor One - Intrinsic Skills:</td>
<td></td>
</tr>
<tr>
<td>For the pleasure I feel while learning new skills that I have never tried before.</td>
<td>0.550 -0.254</td>
</tr>
<tr>
<td>When I learn to do something difficult in basketball it brings great satisfaction.</td>
<td>0.639 0.013</td>
</tr>
<tr>
<td>For the satisfaction I experience while I am perfecting my skills as a basketball player.</td>
<td>0.697 -0.127</td>
</tr>
<tr>
<td>For the pleasure I feel while executing difficult skills.</td>
<td>0.777 0.158</td>
</tr>
<tr>
<td>For the intense emotions I feel of doing a sport I like.</td>
<td>0.678 0.060</td>
</tr>
<tr>
<td>Intrinsic Factor Two - Intrinsic Excitement/Enjoyment:</td>
<td></td>
</tr>
<tr>
<td>I enjoy learning more about the sport of basketball.</td>
<td>-0.901 -0.141</td>
</tr>
<tr>
<td>For the pleasure of discovering new basketball skills.</td>
<td>-0.787 -0.010</td>
</tr>
<tr>
<td>I like excitement and basketball is exciting.</td>
<td>-0.612 -0.016</td>
</tr>
<tr>
<td>For the excitement I feel when I am really involved in basketball.</td>
<td>-0.554 0.247</td>
</tr>
</tbody>
</table>

**Table 4.6: Factor loadings – two intrinsic factors.**

Intrinsic factor one, Intrinsic-Skills, seems to capture the intrinsic motivation of learning and executing new and difficult skills for the game of basketball. Intrinsic factor two, Intrinsic-Excitement/Enjoyment, seems to capture the intrinsic motivation of being involved in basketball and the excitement of learning new basketball skills.

**Extrinsic items**

The twelve extrinsic items were subjected to exploratory factor analyses. The principal component analysis with oblique rotation showed that four components had an eigenvalue of 1.0 or above explaining 64 % of the variance in the data. However, one component was just above an eigenvalue of 1.0 (1.019), see Table 4.7. Analysis of the scree plot, Figure 4.2, showed a leveling off after the 3⁰d component. Accordingly, three more factor analyses were conducted for a two, three and four factor solution.
respectively. A perusal of the items and their factor loadings in all of these solutions showed that a three component solution explained 55.5% of the variance in the data. And was, conceptually, the most logical solution. Thus, it was decided to use these three components as the extrinsic motivation dimensions.

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>3.942</td>
<td>32.850</td>
</tr>
<tr>
<td>2</td>
<td>1.469</td>
<td>12.243</td>
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<tr>
<td>3</td>
<td>1.254</td>
<td>10.454</td>
</tr>
<tr>
<td>4</td>
<td>1.019</td>
<td>8.488</td>
</tr>
<tr>
<td>5</td>
<td>0.827</td>
<td>6.894</td>
</tr>
<tr>
<td>6</td>
<td>0.692</td>
<td>5.764</td>
</tr>
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<td>7</td>
<td>0.602</td>
<td>5.017</td>
</tr>
<tr>
<td>8</td>
<td>0.559</td>
<td>4.659</td>
</tr>
<tr>
<td>9</td>
<td>0.533</td>
<td>4.446</td>
</tr>
<tr>
<td>10</td>
<td>0.436</td>
<td>3.637</td>
</tr>
<tr>
<td>11</td>
<td>0.355</td>
<td>2.956</td>
</tr>
<tr>
<td>12</td>
<td>0.311</td>
<td>2.592</td>
</tr>
</tbody>
</table>

Table 4.7: Total variance explained – extrinsic factors
Figure 4.2: Scree plot – 12 extrinsic items.

The criteria for the selection of the items to represent a component was that an item loading on the factor should be at least .55 and its loading on any other component should be lower by at least .20. The components, the selected items, and their loadings are shown in Table 4.8. These three components are explained below:
Extrinsic Items Factor Loadings

Extrinsic Factor One - Extrinsic Appearance
- I have to play basketball to stay in shape. 0.753 -0.030 -0.082
- Because I always have to play a sport. 0.700 -0.214 -0.075
- For the prestige of being an athlete. 0.660 0.188 0.072
- Because people around me think it is important to be in shape 0.758 0.024 -0.171
- To show others how good I am at basketball. 0.682 0.050 0.144

Extrinsic Factor Two - Extrinsic Development
- It helps me to develop other aspects of myself. -0.097 0.888 -0.062
- Basketball is a good way to learn lots of things which could be useful to me in other areas of my life. 0.101 0.808 0.021

Extrinsic Factor Three - Extrinsic Friends
- It is one of the best ways to make friends. -0.132 0.010 -0.851
- Because it is one of the best ways to hang around with my friends. 0.252 0.050 -0.786

Table 4.8: Factor loadings – three extrinsic factors.

Extrinsic motivation is defined as “behaviors carried out to attain contingent outcomes” (Vallerand & Ratelle, 2002, p.37). Extrinsic Factor One is related to the contingent outcome of appearance both as a basketball and player and in one’s physical appearance. Extrinsic Factor Two’s contingent outcome is related to the benefit of using the game of basketball to learn about yourself and to apply lessons learned in the game of basketball to other aspect of one’s life. Extrinsic Factor Three relates to the social aspect of being involved in sport and the contingent outcome of playing basketball to stay associated with friends.
Amotivation

The four amotivation items were subjected to exploratory factor analyses. The principal component analysis with oblique rotation showed that one component had an eigenvalue of 1.0 or above explaining 55% of the variance in the data, see Table 4.9. Analysis of the scree plot, Figure 4.3, lent further evidence that a one factor solution was at work. Thus, it was decided to use just one component for the amotivation dimension, see Table 4.10.

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.211</td>
<td>55.269</td>
</tr>
<tr>
<td>2</td>
<td>0.769</td>
<td>74.489</td>
</tr>
<tr>
<td>3</td>
<td>0.618</td>
<td>89.947</td>
</tr>
<tr>
<td>4</td>
<td>0.402</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Table 4.9: Total variance explained – amotivation factor.
Figure 4.3: Scree plot – 4 amotivation items.

<table>
<thead>
<tr>
<th>Amotivation items</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>I used to love to play basketball but now I am wondering why I still play.</td>
<td>0.735</td>
</tr>
<tr>
<td>I don't know any more. I don't know if I will ever be good at basketball.</td>
<td>0.727</td>
</tr>
<tr>
<td>I don't know why. I don't really think my place is in playing basketball anymore.</td>
<td>0.816</td>
</tr>
<tr>
<td>I often ask myself; I can't seem to achieve the goals I set for myself.</td>
<td>0.690</td>
</tr>
</tbody>
</table>

Table 4.10: Factor loadings – one amotivation factor.
Player satisfaction

The three player satisfaction items were subjected to exploratory factor analyses. The principal component analysis with oblique rotation showed that one component had an eigenvalue of 1.0 or above explaining 61% of the variance in the data, see Table 4.11. Analysis of the scree plot, Figure 4.4, also suggested a one factor solution. Thus, it was decided to use just one component for the player satisfaction dimension.

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Total</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.837</td>
<td>1.837</td>
<td>61.219</td>
<td>61.219</td>
</tr>
<tr>
<td>2</td>
<td>0.833</td>
<td>0.833</td>
<td>27.757</td>
<td>88.977</td>
</tr>
<tr>
<td>3</td>
<td>0.331</td>
<td>0.331</td>
<td>11.023</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Table 4.11: Total variance explained – player satisfaction.

![Scree Plot](image)

Figure 4.4: Scree plot – 3 player satisfaction items.
Table 4.12: Factor loadings – one player satisfaction factor

<table>
<thead>
<tr>
<th>Player satisfaction items</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>All in all, I am satisfied with my coach.</td>
<td>0.902</td>
</tr>
<tr>
<td>In general, I don't like my coach.</td>
<td>0.648</td>
</tr>
<tr>
<td>In general, I like playing on this team</td>
<td>0.777</td>
</tr>
</tbody>
</table>

**Hypothesis 4:** Athletes, whose coaches experience the coaches’ education workshop, will demonstrate significant increases in their self-regulated motivation scores was tested by first calculating difference scores (post-test – pre-test) for each of the factors, see Table 4.13.
Two MANOVA’s and an ANOVA were conducted to test hypothesis four. In the first, the independent variable was coach attendance at the workshop and the dependent variables were the difference scores (post-test – pre-test) on the two intrinsic factors. The MANOVA was not significant, Wilks $\Lambda = .959$ ($2, 104), p > .05$. A second MANOVA was conducted with coach attendance at the workshop as the independent variable and the three extrinsic variable difference scores as the dependent variables. The MANOVA was also not significant, Wilks $\Lambda = .967$ ($3, 103), p > .05$. Finally, an ANOVA was conducted with attendance at the coaching workshop as the independent variable and the dependent

Table 4.13: Pre- and post-test difference scores.

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>workshop</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Skills difference score</td>
<td>yes</td>
<td>53</td>
<td>-0.2896</td>
<td>1.046</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>54</td>
<td>0.0759</td>
<td>1.056</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>107</td>
<td>-0.1051</td>
<td>1.062</td>
</tr>
<tr>
<td>Intrinsic Excitement/Enjoyment difference score</td>
<td>yes</td>
<td>53</td>
<td>-0.2106</td>
<td>0.928</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>54</td>
<td>0.0787</td>
<td>0.772</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>107</td>
<td>-0.0646</td>
<td>0.861</td>
</tr>
<tr>
<td>Extrinsic Appearance difference score</td>
<td>yes</td>
<td>53</td>
<td>-0.2189</td>
<td>1.312</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>54</td>
<td>-0.2148</td>
<td>1.346</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>107</td>
<td>-0.2168</td>
<td>1.323</td>
</tr>
<tr>
<td>Extrinsic Development difference score</td>
<td>yes</td>
<td>53</td>
<td>-0.6132</td>
<td>1.389</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>54</td>
<td>-0.0741</td>
<td>1.570</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>107</td>
<td>-0.3411</td>
<td>1.501</td>
</tr>
<tr>
<td>Extrinsic Friends difference score</td>
<td>yes</td>
<td>53</td>
<td>-0.1226</td>
<td>1.617</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>54</td>
<td>0.0000</td>
<td>1.145</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>107</td>
<td>-0.0607</td>
<td>1.394</td>
</tr>
<tr>
<td>Amotivation difference score</td>
<td>yes</td>
<td>53</td>
<td>0.0581</td>
<td>1.425</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>54</td>
<td>-0.0370</td>
<td>0.794</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>107</td>
<td>0.0101</td>
<td>1.146</td>
</tr>
</tbody>
</table>
variable was the amotivation difference score; no significance was found, $F (1, 105) = .183$, $p > .05$. These results indicate that coaches that attended the workshop had no significant impact on the motivation of their athletes relative to coaches that did not attend the education workshop.

**Hypothesis 5:** Athletes, whose coaches experience the coaches’ education workshop, will demonstrate a significantly higher propensity to continue participation in basketball than athletes whose coaches do not participate in the education program.

This was tested by a single item (the chances of me playing basketball next season are…) where the athletes was asked to estimate his/her likelihood of participating in basketball the following season on a scale of 0 to 100 percent see, Table 4.12.

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>workshop</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intent to play next season (pre)</td>
<td>49</td>
<td>yes</td>
<td>86.33</td>
<td>23.16</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>no</td>
<td>90.38</td>
<td>20.66</td>
</tr>
<tr>
<td></td>
<td>102</td>
<td>Total</td>
<td>88.43</td>
<td>21.88</td>
</tr>
<tr>
<td>Intent to play next season (post)</td>
<td>49</td>
<td>yes</td>
<td>88.98</td>
<td>22.10</td>
</tr>
<tr>
<td></td>
<td>53</td>
<td>no</td>
<td>92.08</td>
<td>16.45</td>
</tr>
<tr>
<td></td>
<td>102</td>
<td>Total</td>
<td>90.59</td>
<td>19.34</td>
</tr>
</tbody>
</table>

**Table 4.14:** Descriptive statistics – intent to play next season.

An ANOVA was conducted with intent to play difference scores as the dependent variable and attendance at the coaching education workshop as the independent variable. Results of ANOVA for intent to played found no significance for coaches attendance of the workshop and athlete’s intention to play the following season, $F (1, 100) = .054$, $p > .05$. 

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GENDER

Hypothesis 6: There will be no significant difference in self-regulated motivation due to the gender of the player.

Two MANOVA’s and an ANOVA were conducted to test to hypothesis six. In the first, the independent variable was gender and the dependent variables were the difference scores (post-test – pre-test) on the two intrinsic factors. The MANOVA was not significant, Wilks $\Lambda = .981$ (2, 104). A second MANOVA was conducted with gender as the independent variable and the three extrinsic variable difference scores as the dependent variables. The MANOVA was also not significant, Wilks $\Lambda = .987$ (3, 103). Finally, an ANOVA was conducted with gender as the independent variable and the dependent variable was the amotivation difference score; no significance was found, $F (1, 105) = .061$, $p > .05$. These results support hypothesis 6 as there were no significant differences found.

SATISFACTION

Hypothesis 7: Athletes, whose coaches experience the education workshop, will demonstrate a significantly higher level of satisfaction than athletes whose coaches do not participate in the education program.

This hypothesis was tested by ANOVA. Coaches’ attendance at the education workshop was the independent variable and difference scores of pre- and post-test player satisfaction items were the dependent variable, see Table 4.15.
### Table 4.15: Descriptive statistics – player satisfaction

Results of ANOVA, $F(1, 104) = 1.575$, $p > .05$, indicated no support for this hypothesis as no significant difference was found between the two groups.

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>workshop</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Player satisfaction pre-test</td>
<td>52</td>
<td>yes</td>
<td>5.924</td>
<td>1.362</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>no</td>
<td>6.377</td>
<td>1.034</td>
</tr>
<tr>
<td></td>
<td>106</td>
<td>Total</td>
<td>6.155</td>
<td>1.222</td>
</tr>
<tr>
<td>Player satisfaction post-test</td>
<td>52</td>
<td>yes</td>
<td>5.417</td>
<td>1.721</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>no</td>
<td>6.210</td>
<td>1.111</td>
</tr>
<tr>
<td></td>
<td>106</td>
<td>Total</td>
<td>5.821</td>
<td>1.490</td>
</tr>
</tbody>
</table>
CHAPTER 5

DISCUSSION

The present study was concerned with investigating the effects of a coaching education workshop on the motivation of 6th grade male and female basketball players. More specifically, the study attempted to test the effect a coaching education workshop would have on motivational levels of players that participated on teams of “workshop” coaches versus players that participated on teams of “non-workshop” coaches. Further, this study also investigated whether a coach’s education workshop, designed by applying the tenets of transformative learning theory and adult learning theory, would have an impact on knowledge attainment of coaches as well as intent to apply strategies presented in the workshop.

A discussion of the results of this study are presented in the following eight sections of this chapter: (1) Survey Instrument; (2) Coaches Education Workshop; (3) and Motivation of Players; (4) Intention to Continue to Participate in Basketball and Player Satisfaction; (5) Motivation of Players and Gender; (6) Summary of the Study; (7) Recommendations for Future Research and, (8) Limitations of the Study.

The sections are ordered in this manner to present a discussion of the results based on the variables in the study and as a means of grouping predominant themes of the research. Each of the sections concludes with a discussion of the results for that section.
The survey instrument used for this study, the Sport Motivation Scale (SMS-28) (Pelletier et al, 1995) which measures intrinsic and extrinsic motivation from a multidimensional perspective, was found to have some validity concerns and was not found to be stable with our sample. Other researchers (Chantal et al, 2005; Diehm & Armatas, 2004; Li & Harmer, 1996) have found the SMS-28 to both valid and reliable with adult populations. Vallerand and Fortier (1998) have stated that because the instrument “asks participants to assess the pertinence of different reasons for explaining their participation in sports, it necessitates a certain level of cognitive sophistication. Thus, it would be difficult to use such a scale with children younger than 10 years of age, or with intellectually challenged individuals” (p. 95). This current study’s results seem to indicate that perhaps the optimum age could be significantly older than 10. The subscale structure of the instrument did not hold in our sample and this may have been due to the fact that many in our sample (6th grade – 11 or 12 years old) did not possess the cognitive sophistication necessary for the instrument.

Researchers are unsure as to what age children are able to make different judgments regarding their motivation. Further, researchers disagree how perceptions of intrinsic motivation evolve with children. Researchers have found that young children often have exaggerated levels of intrinsic motivation as well as competence (Bouffard et al, 2003). Bouffard et al (2003) state that there are a few reasons for this “unrealistic optimism” such as the tendency to make judgments consistent with desires and positive yet arbitrary feedback from instructors (p. 173). Levels of unrealistic optimism regarding
intrinsic motivation may also be related to an inflated competence level. Nicholls (1992) found that children before the age of 12 are not able to discern the difference between effort and ability. Unable to differentiate between the two, children perceive trying hard as being competent. As children get older they see that “someone who tries hard and achieves little is less able than someone who tries little and achieves a lot” (Bergin & Habusta, 2004, p. 384). Jacobs et al (2002) described this decline in self-belief as becoming “reality based” as children age and find the competitive nature of sports increasing (p. 522). Thus, it may be that participants in the sample were not old enough to have developed the full structure of intrinsic and extrinsic motivation factors as conceptualized by Pelletier et al (1995).

COACHES EDUCATION WORKSHOP

A discussion of hypotheses 1, 2, and 3 will be included in this section. These hypotheses deal with the effect of the coaching workshop on levels of understanding of motivation and the workshop’s impact on the motivational climate in a youth sport setting, coaches’ knowledge of self-determination theory and its applications, and on coaches’ intention to employ coaching strategies that impact the motivational climate of their practice and games.

Hypothesis 1: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of motivation in a youth sport setting.
Hypothesis 2: Coaches who participate in the coaches’ education workshop will demonstrate a significant increase in their understanding of self-determination theory.

Coaches, upon arrival at the workshop, were pre-tested on their knowledge of motivation in a youth sport setting and on some of the primary principles of self-determination theory (Appendix D). Post-test scores ($M = 82.86$) were significantly higher than pre-test scores ($M = 8.57$) as coaches demonstrated an increase in their understanding of motivation in a youth sport setting and of their understanding of self-determination theory.

Thus, the results suggest that the coaches gained an understanding of motivation in a youth sport setting due to the workshop. The results suggest that coaches also learned the primary tenets of self-determination theory as well as strategies that can be applied during practice and games so that they could implement the theory into practice.

The adult education literature is generally supportive of the notion that adults learn differently than children and adolescents and that those teaching adults should employ a different style of teaching from the methods used with pre-adults (Imel, 1989). Researchers have called for the importance of including discourse and reflective thinking within the coaching education realm. The workshop designed for this study introduced a cognitive approach to coaching. Abraham and Collins (1998) criticized current modes of coaching education and suggested that a cognitive approach is the best way to modify existing approaches to address the specific needs of coaches.
This study also highlights the importance of a contextual based workshop. Adult learners want to learn material that they will be able to employ to solve real problems and issues. The problem with many workshops is that they are “divorced from their context” (Moon, 2004, p. 8). Workshops are normally not conducted in their correct context and other participants may not even be coaching the same sport. Coaches were also given the opportunity to pause and reflect at points during the workshop. This reflective process of mulling over learned ideas, reorganizing them, and considering of how what has been discussed, enables the learner to fit the material into patterns of the environment to improve coaching practices (Moon, 2004).

Another goal of the workshop was to affect transformative learning for the coaches. Cranton (2002) describes transformative learning as a simple yet elegant concept. “Through some event, which could be as traumatic as losing a job or as ordinary as an unexpected question, an individual becomes aware of holding a limiting or distorted view. If the individual critically examines this view, opens herself to alternatives, and consequently changes the way she sees things, she has transformed some part of how she makes meaning out of the world” (p. 64). It is safer and easier, Cranton (2002) maintains, to hold on to habits of mind rather than let them go but the key is for the adult learner to partake in critical reflection. Through critical reflection, adult learners question their ideas, their validity, their sources, and underlying principles. “It helps to talk to others, exchanging opinions and ideas, receiving support and encouragement, and engaging in discourse where alternatives are seriously weighed and evidence brought forth” (p. 65).
Pilling-Cormick (1997) states that not all learning environments can become transformative but that opportunity should exist. It is difficult to ascertain whether approaches to coaching and youth sports were transformed but through discourse and reflective thinking, the opportunity existed within this coaching workshop. Coaches’ responses to post workshop evaluations strongly indicate an openness to alternatives and a willingness to adopt new behaviors that are more consistent with a new coaching perspective.

**Hypothesis 3:** Coaches who participate in the coaches’ education workshop will demonstrate a high propensity to employ coaching strategies that utilize the principles of self-determination theory.

Moon (2004) describes impact of a workshop as a “relevant change in practice” at the end of the workshop (p. 4). One way chosen to judge the impact of the workshop was to ask coaches of their intent to use the information presented in the workshop. Mean scores ($M = 9.17$, $SD = 1.169$) strongly indicated that coaches did in fact plan to employ the strategies discussed in the workshop.

At certain points during the workshop coaches were asked to take a few minutes to reflect upon the material presented as well as their thoughts of the discourse between coaches. “Reflection is the mulling over of ideas that have already been learned – the reorganizing of them – the considering of how, for example, what has been learned will fit into the patterns of the workplace to improve practice” (Moon, 2004, p. 8). Coaches were asked what the most important ideas they learned from the workshop. Their replies included the following:
o “Self motivation, self-determination, priorities of kids, what video games do psychologically and their value to the kids.”

o “Make it fun for all the players, focus on positive input.”

o “Instilling ownership, autonomy.”

o “The connection between youth sports and childhood obesity, the key is really to create conditions as a coach in which kids motivate themselves, self-determination theory.”

o “Self-determination theory and the types of motivation. It was interesting to understand what motivates kids and how the different types of motivations can impact how the kids feel about their participation in sports.”

o “The importance of autonomy and relatedness in the motivation of young athletes. The alternatives to the “controlling” coach paradigm that is so prevalent today.”

In order for transformative learning to occur, the learner must be able to articulate assumptions through discourse (Cranton, 2002; Mezirow, 1997). Coaches were able to express their ideas and to have those ideas challenged in a safe environment. As evidenced by these comments of the responding coaches, when asked what they liked most about the workshop, coaches were able to enter into discussions and learn from their peers:

o “The group interaction with other coaches as facilitated by the presenter, the PowerPoint presentation and the binder (workshop materials) and the food and the boardroom setting.”
“Talking with all the coaches, I enjoy learning new ways to coach.”

“Sharing of info with other coaches, discussion of what ultimately motivates kids.”

“I thought the forum was good, a discussion led by the presenter where there was input from all of the coaches. Although the selection of the coaches was random, it worked out that we had coaches of varying backgrounds and coaching experience which I thought was helpful.”

“This is my first exposure to these concepts. Having an opportunity to gain exposure to these concepts and at the same time, hear other coaches experiences was beneficial. The handout materials were excellent. I enjoyed reading the material.”

Thus, it appears from the results that coaches did, indeed, learn the principles of self-determination theory and wanted to create positive motivational climates that fostered intrinsic motivation.

MOTIVATION OF PLAYERS

Intrinsic Motivation

Hypothesis 4: Athletes whose coaches experience the coaches education workshop will demonstrate significant increases in their self-regulated motivation scores.

This hypothesis was not supported. Players in this sample displayed high levels of self-regulated motivation to play the sport of basketball in the beginning of the season and remained so at the end of the season. Post-test scores showed that players of coaches that did attend the workshop were slightly less intrinsically motivated than their
counterparts, none of these differences were significant and all players remained well above the mid-point of the scale for intrinsic motivation. These results suggest that coaches in our sample, whether they attended the workshop or not, managed to produce a climate that maintained a high level of intrinsic motivation for their players.

*Extrinsic Motivation*

Pre-test mean scores for all players Extrinsic Appearance (EA) showed scores slightly above the midpoint (3.54) and dropped below the midpoint (3.40) on the post-test. Pre-test mean scores for Extrinsic Development (ED) were above the midpoint of the scale (4.88) as were post-test scores (4.64). Pre-test mean scores for the third extrinsic factor, Extrinsic Friends (EF), were slightly above the midpoint (3.82) while post-test mean scores inched a bit closer to the midpoint (3.77). There were no significant differences between the pre- and post-test scores of players relative to whether their coach had attended the workshop. Similarly, there were not significant differences between the two groups on amotivation scores.

Thus, what these numbers appear to indicate is that both groups showed high levels of more self-determined extrinsic motivation (EA) on both the pre- and post-test, lower levels of less determined extrinsic motivation (ED and EF) and pre- and post test amotivation means remained well below the midpoint. The coaches’ workshop had no significant effect on the motivation of players. Levels of intrinsic motivation remained high both in the beginning and at the end of the season.
Obviously, the researcher had anticipated that players whose coaches had attended the workshop would experience increases in their self-regulated motivation scores as the workshop was designed to give the coaches the knowledge and tools to produce a motivational climate that would foster such development. Further, results suggested that coaches intended on implementing what they had learned in the workshop.

One possible explanation for the insignificant result could be the age of the players. The Michigan Youth Sports Institute found that 80 percent of children ages 12 to 17 stop taking part in sport (Hopper, 1988). The players in this sample were in the sixth grade (11 or 12 years old). Perhaps they have to reach a higher level of cognitive sophistication or begin to view their levels of competence differently before they begin to truly assess their reasons for playing, or not playing, a sport.

Another reason that the workshop did not produce the anticipated results could be the number of years of experience of the coaches in the workshop. Workshop coaches averaged over 16 years of coaching experience with a range of 6 to 40 years. Cushion et al (2003) discussed the experienced coach by stating that “the established coach arrives at coach education courses with a long-standing and deep-rooted habitus, a set of beliefs and dispositions that guides actions and is tempered by years of experience in the sport” (p.221). Many times coaches feel pressured to create the appearance of acceptance “while harboring and restricting their disagreement with, and rejection of, the official coaching orientation” (p.221). Cushion et al (2003) state that many coaches probably never accept or “appropriate the program behaviors” but merely appear to (p. 221). Therefore, while the coaches in this sample stated that they would use the information...
from the workshop, perhaps they merely gave the socially appropriate response. Or, given their experience level, perhaps they fell back on established practices. Whichever the reason, it appears from the results that a one-day workshop did not impact the climate provided to the players enough to significantly impact their intrinsic and extrinsic motivation scores.

These findings have many implications for practice. Most would agree that the quality of the youth sporting experience is largely contingent upon the quality of the coach and his/her competence. One might assume that educational programs for coaches would be in demand but that is not the case. Roughly 90% of youth sport coaches do not receive any training in even the most rudimentary aspects of coaching (Seefeldt & Ewing, 1996). Directors of youth sport organizations must be made aware of the benefits of a trained youth sport coaching staff and training should be an inherent part of coaching youth sport. This study showed that the one-day coaching workshop was well received and that coaches were able to increase their knowledge; however, from the results it appears it may not have been enough to impact the motivational climate provided by the coach.

However, the harsh reality of it is that many youth sport organizations are reluctant to ask more time of a volunteer than they are already giving. In offering continuing education programs, there is always a struggle to balance time and content. One is very reluctant to ask a volunteer for more of his/her time and other youth sport organizations have found that they cannot force coaches training through legislation (Diegmueller, 1995). Perhaps the most logical step would be to create information
delivery systems that ease access to information, for example, a more technology-based training that a coach could access at his/her home and at his/her convenience. User friendly options could even enhance the opportunity for parent education and augment congruency on team goals. Further, technology based education programs could deliver instruction on a consistent basis as other researchers have claimed that large scale education programs are currently not meeting that need and technology based instruction could also be designed to be context specific (Gilbert & Trudel, 1999).

INTENTION TO CONTINUE PARTICIPATION AND PLAYER SATISFACTION

Hypothesis 5: Athletes whose coaches experience the coaches’ education workshop will demonstrate a significantly higher propensity to continue participation in basketball than athletes whose coaches do not participate in the education program.

Player’s pre-season intention to play was very strong as players of workshop coaches scored, on average, an 87% (0 to 100%) chance of playing next year with players of non-workshop coaches scored on average a 90.4% chance of playing the following season. Post-test scores were higher for both groups as 89% of workshop players intended to play next year and 91.9% of non-workshop players stated their intention of playing basketball next year. However, none of these scores were statistically different.

Still, these numbers are surprisingly high as it is thought that attrition from youth sports starts at age 10 and reaches its peak at age 14-15 (Ewing, Seefeldt, & Brown, 1996; Lindner & Johns, 1991). As indicated by the motivation scores, these players are still intrinsically motivated and enjoying the sporting experience and are looking forward
to continued participation. Research has shown (Butcher, Lindner, & Johns, 2002) that the primary reason for withdrawal from sport is lack of enjoyment and it appears that there is still a high level of enjoyment in this sample. “As compared to their extrinsically motivated counterparts, young athletes who participate in sport for primarily intrinsic reasons have been shown to expend greater effort and persist longer” (Ryska & Hohensee, Cooley, & Jones, 2002, p. 201). This certainly holds true with this sample of athletes.

There were no significant differences found between intention to continue participation for workshop and non-workshop athletes at this age level. However, for many children, as they continue to participate in sport, the level of competition, time demands, and pressure increases. Citing the move to interscholastic sports in the middle schools, Butcher, Lindner, and Johns (2002) discovered a substantial increase in percentage of dropouts in seventh grade, as compared to second through sixth grades and Raedeke, Lunney, and Venables (2002) found the ages of 12 to 15 to be the most “burnout” prone years for competitive swimmers. The focus on results and performance becomes more pronounced and intensifies the need for a coach trained in enhancing the intrinsic motivation of his/her athletes. Training of coaches truly becomes a necessity as athletes move into more competitive realms.

Again, it appears that the workshop did not effect coaching practices enough to make a significant difference in player’s intentions to return. However, because their intentions were high, it may be that this study’s sample was too young to begin really
thinking about leaving the sport. Thus, training may have a greater impact with coaches of slightly older athletes.

**Hypothesis 7:** Athletes, whose coaches experience the education workshop, will demonstrate a significantly higher level of satisfaction with their coach and team than athletes whose coaches do not participate in the education program.

Consistent with the balance of the findings, pre-test means of player satisfaction for players of workshop coaches (5.983) and non-workshop coaches (6.367) were also very strong and well above the midpoint of the 1 to 7 scale. Post-test means, although lower for both workshop coaches (5.438) and non-workshop coaches (6.203), remained well above the midpoint of the scale. Pre- and post-test differences between the groups were not significant and no support was found for Hypothesis 7. Players, in general, were satisfied with their coach, liked their coach, and liked playing on the team.

We have discussed in earlier sections that self-determination theory as a content or need based theory and Chelladurai (1993) has posited that if the coach displays appropriate leadership behaviors, and meets the needs and desires of the players, then there will be player satisfaction. Burton (1992) posited that attrition in sport will occur when young athletes are no longer getting their needs met. Self-determination theory posits that there are three primary needs that need to be met to motivate human behavior, competence, autonomy, and relatedness and satisfaction of those needs has “reliably been shown to be necessary for intrinsically motivated behavior” (Frederick-Recasino, 2002, p. 279). In discussing sport participation motivation and self-determination theory,
Frederick-Recasino (2002) posited that “as individuals, we seek support for these needs in order to have a healthy psychological environment in which to exist” (p. 279).

MOTIVATION OF PLAYERS AND GENDER

Hypothesis 6: There will be no significant difference in self-regulated motivation due to the gender of the player.

Results of two MANOVA’s and an ANOVA supported this hypothesis as there were no significant differences in self-regulated motivation due to the gender of the player. Male players showed higher pre-test means of intrinsic motivations for both Intrinsic – skills (IS) (5.61 to 5.27) and Intrinsic Excitement/Enjoyment (IEE) (6.12 to 5.82) as well as post-test means for IS (5.46 to 5.22) and IEE (5.94 to 5.87).

Interestingly, only the IEE means for females improved slightly from pre- to post-test. Females also showed slightly lower means for all three extrinsic factors than their male counterparts on both pre- and post-tests. Female players were also slightly less amotivated than males on pre-and post-tests. Males displayed slightly higher levels of player satisfaction and intention to play than females on both pre- and post-tests. Differences in means, although slightly different, were not found to be statistically significant.

Chen and Ennis (2004) found that interest in physical activity was more a result of skill than gender and that “offering gender-appropriate physical activities for the sake of motivating boys and girls separately may be unfounded” (p.334). A recent study into the relation of sportspersonship, motivation, and gender (Miller, Roberts, & Ommundsen, 2004) found no significant differences in gender differences over motivational climate.
Their explanation was that currently boys and girls are being socialized into sport in the same manner and that coaches treat the players the same regardless of gender. Further, Yan and McCullagh (2004) found no gender differences among American children regarding their motivation for participation in sports.

**SUMMARY OF THE STUDY**

The results of the study showed that the instrument, the Sport Motivation Scale (SMS-28), and its seven-factor subscale structure was not established with this sample. Exploratory factor analysis procedures determined a six factor scale structure for the items.

Inconsistent with much of the youth sport literature and high dropout and attrition rates (Barnett, Smoll & Smith, 1992; Butcher, Lindner, & Johns, 2002; Lindner, Johns, & Butcher, 1991; Oden & Avans, 2001; Ryska et al, 2002; Stewart & Taylor, 2000), this sample showed the athletes to be motivated to participate in basketball both at the beginning and at the end of the season. Levels of intrinsic motivation for both male and female players remained high throughout the season and their intention to play basketball next season averaged 87.9 % at the pre-test and 90 % at the post-test. Players also displayed high levels of satisfaction with their coach and their team both at the pre-test (6.18) and at the post-test (5.82).

There were a number of primary purposes to this study. The first purpose was to design and present an effective, contextual, coaching education workshop. The workshop, designed using the principles of andragogy (adult learning theory) attempted to create an opportunity for transformative learning for the coaches. Based upon the
post-workshop evaluations, as well as the post-workshop comments by the coaches, the workshop does appear to produce learning in coaches and coaches strongly intended to apply the principles imparted during the workshop. However, results of the study would seem to indicate that although there was learning experienced by the coaches it may not have been transformative learning. Transformative learning takes place not only when perspectives are questioned, new ways of looking at practices take place, and views are revised but also when one acts on their new perspectives (Sokol, & Cranton, 1998). Perhaps the coaching education workshop was successful in effecting simple learning (learning that further elaborates the learner’s existing paradigm) as opposed to transformative learning (the learner’s paradigm becomes so significantly different as to become a new one) (Robertson, 1996).

This study also was effective in designing an education workshop that appeared to teach “modern day coaching practitioners are not only responsible for directing practice and training sessions but also for the overall social and psychological well-being of their athletes” (Potrac et al, 2000, p. 187). The workshop, with an emphasis on contextual social factors answered “the increasing call among scholars of coaching science to recognize that our sports fields and gymnasiums are not immune from our social worlds” (Potrac et al, 2000, p. 187). Coaches, after the workshop, had indicated that their knowledge of youth sports, their role as a youth coach, their knowledge of self-determination theory, as well as their intent to employ strategies that could potentially positively enhance the motivational climate of their players, was very strong.
One of the stated goals of this research was to develop a training model that employs strategies and theories that engage the adult learner and perhaps transform his/her approach to coaching youth sport. Results of that goal show that it was not met. There was not a significant impact on the self-determined motivation of players. However, players began with very high levels of motivation in both the experimental and control groups and remained there on post-tests. Perhaps this study also extended the coaching science research in that future research should focus on older participants as such strong levels of intrinsic motivation was discovered on all athletes in both pre- and post tests. A focus on older athletes in more competitive environments might yield different results.

The second purpose of the study was to test whether coaches that attended the workshop would have a significant positive impact on the self-determined motivation of their players. On the basis of existing theoretical propositions and empirical findings it was anticipated that athletes of coaches who attended the workshop would show significantly higher levels of self-determined motivation than a control group. The coaches were taught methods and strategies that were less controlling and more autonomy supportive. The most important interpersonal relationship in sport is that of coach and athlete. This relationship has a profound impact on performance, persistence, and satisfaction. “We believe that the coach’s behavior can have a crucial impact on athlete’s motivation as well” (Vallerand & Losier, 1999, p.150).
The coach’s behavior should have important effects on athlete’s motivation because it will likely influence their perceptions of competence, autonomy, and relatedness (Vallerand & Losier, 1999). However there are other factors that play a significant role in the motivation of the athlete. Other social factors such as success and failure and an emphasis on competition rather than cooperation can play a significant role. The focus of this study was on the interaction between the coach and the player and the impact a coaching intervention might have on that relationship.

One question that begs an answer is whether the coaching education workshop was successful in modifying the coach’s interacting style. Results of the pre- and post-test of the independent variable would seem to indicate that it was not. One possible reason for this may be that one four-and-a-half-hour coaching workshop may not be sufficient to modify the behavior of a coach. The coaches involved in the intervention had an average experience of over 16 years in youth sport. Perhaps it was a bit Pollyannaish to expect a significant impact on the behavior of such a tenured group. Reeve (2002) found that teachers did learn to be autonomy supportive but “their prior beliefs about the nature of motivation strongly affected how willing they were to accept the merits of an autonomy supportive style” (p. 189). Further, Reeve (2002) stated that enduring conceptual change will only be seen to the “extent that they see autonomy support as a superior alternative to their pre-existing strategies” (p. 189). They must be able to “brave the waters of conceptual change” (p. 199). Even if there was a conceptual change, Robertson (1996) points out that there is a period of resistance of letting go of the
old way of thinking before embracing the new way of thinking. “Resistance to letting go of the old paradigm and entering a transition process is typical, as is grieving and a certain epistemological nostalgia for the old paradigm” (p. 43). Pilling-Cormick (1997) pointed out that not all learning experiences can become transformative, nor should they be expected to, but the opportunity for transformative learning should exist.

Another outside factor not considered is that many of these teams also had assistant coaches that also had a significant impact on the motivational climate of the team. It is not known whether the coaches shared the information from the workshop and asked their assistants to alter their approach as well. Sometimes an assistant coach can be a stronger presence than the head coach. Two of the teams of coaches that attended the workshop had their local high school coach sitting on the bench during games observed during the season.

RECOMMENDATIONS FOR FUTURE RESEARCH

The following are recommendations stemming from the present study for further investigation:

1. Conduct a similar study with older athletes in a more competitive atmosphere where there is more coaching contact and more of an emphasis on outcome. Much of the research on dropout and attrition in youth sport strongly indicates that as level and intensity of sport participation increases the greater the chance for withdrawal from sport.

2. Conduct a similar coaching intervention where athletes are shown to be less motivated or “at risk” to continue in sport on a pre-test. Results of the coaching
workshop (coaches learning and intention to use strategies) was promising but yielded insignificant results as levels of intrinsic motivations were high (well above the midpoint of the scale on both pre- and post-tests). A coaching intervention where athletes are more extrinsically motivated, or perhaps amotivated would be an interesting study that could extend coaching science research.

3. Conduct research with athletes that are considered “at risk” for sport withdrawal in an attempt to ascertain what about the sporting environment is hindering their motivation in an attempt to further the research regarding what athletes think about their sporting experiences. More specificity from the athletes perspective (defining what is meant by “fun”) could further withdrawal and attrition research.

4. Conduct a similar intervention on a smaller scale where coaches have exhibited, or admitted to, use of controlling methods of coaching. A more hands-on approach by researchers to work with coaches and test whether specific strategies outlined in this research do in fact foster self-determined motivation in athletes.

5. Conduct longitudinal research on competitive athletes as to when their motivation for sport participation becomes less intrinsic and more extrinsic. Researchers have found that young children often have exaggerated levels of intrinsic motivation as well as competence (Bouffard et al, 2003). Bouffard et al (2003) state that there are a few reasons for this “unrealistic optimism” such as the tendency to make judgments consistent with desires and positive yet arbitrary feedback from instructors (p. 173). Further research regarding the relationship
between competence and intrinsic/extrinsic motivation could be important to withdrawal and attrition research.

6. Conduct research with different delivery methods (CD, DVD, or website) are employed and similar content is offered. Technology has created the ability to “bring the mountain to Mohammed” and offers the opportunity for youth sport coaches to be trained at their convenience from their comfort of their home or office. As discussed, it is estimated that 90% of youth sport coaches receive no training at all and technology based instruction could dramatically increase the number of coaches that have access to the import sport science research that is being produced.

7. Investigate other social factors (success/failure, competition/cooperation (Vallerand & Losier, 1999) and its impact on motivation among athletes.

8. Conduct further research with the Sport Motivation Scale and its seven factor approach with other pre-adolescent groups. The survey instrument used for this study, the Sport Motivation Scale (SMS-28) (Pelletier et al, 1995) which measures intrinsic and extrinsic motivation from a multidimensional perspective, was found to have some validity concerns and was not found to be stable with our sample. Further research should be conducted to ascertain whether the SMS-28 is a viable instrument for a pre-adolescent population.

9. Conduct further research to test the malleability of coaching styles. In this study most of the coaches were very experienced with an average of over 13 years of
experience. Further research regarding the ability of coaches to adjust their methods based upon training would further advance coaching science research.

LIMITATIONS OF THIS RESEARCH

This research was conduct in the central region of one Midwestern state and only the sport of basketball was used. Further, only male coaches participated in the study (two female coaches were selected but declined to participate). Generalizations to other populations may be limited.

In conclusion, it is encouraging to note that this group of pre-adolescent male and female athletes was enjoying their sporting experience. It is also very encouraging that many are strongly intending to participate again next year.
APPENDIX A. Consent to participate in social and behavioral research form.

CONSENT FOR PARTICIPATION IN SOCIAL AND BEHAVIORAL RESEARCH

Protocol title:

Protocol number:

Principal Investigator:

I consent to my participation in (or my child’s participation in) research being conducted by_________________ of The Ohio State University and his/her assistants and associates.

The investigator(s) has explained the purpose of the study, the procedures that will be followed, and the amount of time it will take. I understand the possible benefits, if any, of my participation (and/or my child’s participation).

I know that I can (and/or my child can) choose not to participate without penalty to me (and/or my child). If I agree to participate, I can (and/or my child can) withdraw from the study at any time, and there will be no penalty.

I have had a chance to ask questions and to obtain answers to my questions. I can contact the investigators at . If I have questions about my rights as a research participant, I can call the Office of Research Risks Protection at (614) 688-4792.

I have read this form or I have had it read to me. I sign it freely and voluntarily. A copy has been given to me.

Print the name of the participant: ________________________________________________

Date: _________________________________  Signed: ________________________________

Signed: ________________________________Signed: ________________________________

(Witness: _______________________________)

(Print Principal Investigator or his/her authorized representative) (Person authorized to consent for participant, if required)
APPENDIX B: The Sport Motivation Scale

THE SPORT MOTIVATION SCALE (SMS-28)

Luc G. Pelletier, Michelle Fortier, Robert J. Vallerand, Nathalie M. Brière, Kim M. Tuson and Marc R. Blais, 1995

Journal of Sport & Exercise Psychology, 17, 35-53

WHY DO YOU PRACTICE YOUR SPORT?

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently practicing your sport.

<table>
<thead>
<tr>
<th>Item</th>
<th>Does not correspond at all</th>
<th>Corresponds a little</th>
<th>Corresponds moderately</th>
<th>Corresponds a lot</th>
<th>Corresponds exactly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. For the pleasure I feel in living exciting experiences.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. For the pleasure it gives me to know more about the sport that I practice.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. I used to have good reasons for doing sport, but now I am asking myself if I should continue doing it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. For the pleasure of discovering new training techniques.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. I don't know anymore; I have the impression of being incapable of succeeding in this sport.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Because it allows me to be well regarded by people that I know.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Because, in my opinion, it is one of the best ways to meet people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Because I feel a lot of personal satisfaction while mastering certain difficult training techniques.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Because it is absolutely necessary to do sports if one wants to be in shape.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. For the prestige of being an athlete.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Because it is one of the best ways I have chosen to develop other aspects of myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. For the pleasure I feel while improving some of my weak points.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. For the excitement I feel when I am really involved in the activity.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td></td>
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</tr>
<tr>
<td>14. Because I must do sports to feel good myself.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. For the satisfaction I experience while I am perfecting my abilities.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Because people around me think it is important to be in shape.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Because it is a good way to learn lots of things which could be useful to me in other areas of my life.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. For the intense emotions I feel doing a sport that I like.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. It is not clear to me anymore; I don’t really think my place is in sport.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. For the pleasure that I feel while executing certain difficult movements.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Because I would feel bad if I was not taking time to do it.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. To show others how good I am good at my sport.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. For the pleasure that I feel while learning training techniques that I have never tried before.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Because it is one of the best ways to maintain good relationships with my friends.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Because I like the feeling of being totally immersed in the activity.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Because I must do sports regularly.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. For the pleasure of discovering new performance strategies.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. I often ask myself; I can’t seem to achieve the goals that I set for myself.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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KEY FOR SMS-28

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200
KEY FOR SMS-28

# 2, 4, 23, 27  Intrinsic motivation - to know
# 8, 12, 15, 20  Intrinsic motivation - to accomplish
# 1, 13, 18, 25  Intrinsic motivation - to experience stimulation
# 7, 11, 17, 24  Extrinsic motivation - identified
# 9, 14, 21, 26  Extrinsic motivation - introjected
# 6, 10, 16, 22  Extrinsic motivation - external regulation
# 3, 5, 19, 28  Amotivation

Coaches

Workshop
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Welcome coaches to the Coaches Workshop! Former Princeton Men’s Basketball Coach, Pete Carrill has said that youth sport coaches are America’s unsung heroes and as a volunteer youth coach for over twenty years I heartily agree! As a youth sport coach you have undertaken an extremely important role, a role that will have an important impact upon your player’s athletic careers as well as their physical activity for the rest of their lives. Over the next few hours you are invited to participate in discussions regarding youth sport in general as well as methods and strategies to make it the best possible experience for you and for your players; methods and strategies that you will be able to employ at your very next practice session.

As youth sport coaches, you bring valuable experiential knowledge as well as community oriented aspirations to the workshop that you are invited to share with the other participants. As a matter of fact, the very success of the workshop will depend upon the sharing of your experiences and of your opinions. Through the sharing of coaching experiences and knowledge we will all have the opportunity to critically reflect upon and reevaluate assumptions we have made about youth sport coaching. You will be asked to become open to alternatives and new approaches to coaching.

My role today is to act as a facilitator of discussions, not to instruct. I am here to learn from your experience as well. My goal is to create a safe, open, and trusting environment that allows for participation, collaboration, exploration,
critical reflection, and feedback. I truly feel that this can be a fun process as well as a learning one and I look forward to spending the next few hours with you.
Schedule for the Workshop

8:30 – 9:00……………………………………………Welcome and Pre-test

9:00 – 9:50……………………………………..Overview of youth sport in America

9:50 – 10:00……………………………………Critical reflection and journal entry

10:00 – 10:05………………………………………………………..Break

10:05 – 10:50……………………………………Psychological aspects of coaching

10:50 – 11:00……………………………………Critical reflection and journal entry

11:00 – 11:05………………………………………………………..Break

11:05 – 11:50……………………………………Applying the principles

11:50 – 12:00……………………………………Critical reflection and journal entry

12:00 – 12:30………………………………………………………..Lunch

12:30 – 1:00…………………………………………Post-test and conclusion
Introduction

Youth sports have grown dramatically in the United States. It is estimated that approximately 50 million children participate in organized sport across America. Youth sport has probably changed a great deal since you were a child. It has become more organized and children are participating at increasingly younger ages. Children as young as 7 or 8 are playing on traveling teams and being asked to choose one sport to play year-round. Alvin Rosenfeld, a New York psychiatrist who specializes in adolescents, says that structured sports time has doubled while family dinners have been cut by a third and family vacations have decreased 28 percent. Many have questioned whether we have become too organized. Sport psychologist, Ken Ravizza, has said,"Kids don’t go to the playground anymore. When they practice there’s a coach telling what to do and how to do it. What happens to the kids’ passion and heart in all this?"

Just a generation ago, children would meet at the playground and play “pick-up” games. It is hard to imagine today but in some areas eighteen kids would get together and play sandlot baseball. The children would organize themselves by picking teams. That would start by ensuring that the two best players were on opposite teams. The draft would continue, with some arguing, as a best effort was made to make certain that the teams would be fair. If, after playing a while, they found the teams to be imbalanced, new rules would be introduced. Either players would be moved around to make it more equitable or the best players would be handicapped. A good hitter would only be allowed to
hit from his/her weak side or a good pitcher would not be allowed to pitch, he/she would have to play another position while someone else would get a turn to pitch. If there was a dispute, the players had to figure it out on their own, honing their arbitration skills. Players would flip a coin, choose it out or just agree to make the next call go in the other teams favor on the next dispute. Everyone had an opportunity to play and the end result would be getting to play different positions, everyone having a chance to develop skills, and the ability to be creative. Good players got even better as they were handicapped and forced to use other skills. When kids got tired it signaled the end of the game. It is easy to see the goals of the children when left to their own devices. They wanted the games to be competitive, they wanted everyone to play, and they wanted it to be fun.

Those same 18 kids show up to the playground today only to be met by an adult with a clipboard. The adult organizes the activity and makes the rules. The adult picks the best 12 players and summarily dismisses the other 6 players. Players get assigned positions and instead of playing they spend most of the time practicing and drilling. Practice time starts and finishes when the coach decides, not necessarily when the players have had enough. The goal then becomes to take those 12 players and travel to the next town and play their best players. Adults come to watch and scream directions to their child and yell at the umpires when a call goes against their side. The six players that were sent home because they had a bad tryout, are late bloomers, or they aren’t that skilled, are sent off to try and find another sport or activity. After a few years
many of the 12 players decide that this isn’t a great deal of fun and are off to find a new activity as well. Wayne Gretzky, considered by many to be the greatest hockey player of all time states that we have let youth sport become too organized. Players are afraid to play outside of the coach’s “system.” We have let too much of the fun slip away from youth sport and he fears that the end result will be the loss of creativity among players.

The consequences of such organization are not yet fully understood, but sports physicians say stress injuries among kids are way up and coaches say some of the most talented athletes drop out by their teens. Some researchers cite dropout rates as high as 70% by the time children reach adolescence. (What would you do with a business that had a 70% failure rate?) Further, experts have stated that dropout from youth sport has reached epidemic proportions and we are seeing the effect of inactivity in children that have become more sedentary, opting to watch television or play video games, and related health problems such as obesity. Inactivity as a child only compounds the problem as researchers have found that physically inactive children will likely become physically inactive adults.

For many youngsters, organized sport has become their primary source of physical activity. Physical education programs in many schools and municipal recreation leagues have been cut dramatically and there clearly has been a shift away from unorganized sports and “pick-up” games towards private clubs and organizations. The options seem to be organized sport or nothing at all and it
seems that most of these programs are designed by people who have forgotten what it is like to be a child. Whose goals and needs are we meeting in youth sports?

Many parents register their children for sports with the best of intentions. Parents want their children to be physically active, to have a positive social outlet, to learn the valuable lessons that can be learned from sport, and most importantly – to have fun. However, organized sport is letting many of these children and parents down. What do we want our children to learn from participating in youth sports? What should the goals be, particularly with younger participants? We have seen the professional sport model, the “win-at-all-cost” model, pervade to the lowest level of youth sport. Winning becomes the goal and the other important positive benefits of sport, the social aspect, the learning of values, and fun are ignored. The outcome becomes paramount and the process suffers. Hall of Fame baseball manager Sparky Anderson said that what is going on in youth sport in the United States is a disgrace. “We’re asking kids to compete to win. Why not ask them to compete to have fun? We’re trying to build our own egos on little children.”

Studies have shown that given a choice between having fun and winning, 95 percent of children said they would rather have fun. Also 90 percent of children said they would rather play on a losing team than sit on the bench of a winning team. Many coaches equate winning with fun and that may be the case
for adults but children are not little adults, they are children! They don’t think like adults and do not have the same goals as adults.

Due to the growth of media in this country, we have become very familiar with professional sports. Media coverage of professional sport has become pervasive and powerful and, unfortunately, has become the model for many involved in youth sport. The primary goal for professional sportsmen is to win. It is OK to break the rules as long as you don’t get caught. The primary goals for youth sports should be to have fun, to be physically active, and to learn valuable life skills such as perseverance, teamwork, and the value of effort. The lines have clearly become blurred between youth and professional sport as winning has become paramount. Many youth coaches rely on that model to create a coaching philosophy and until there are widespread educational programs they will continue to do so. In effect, ESPN will continue to be the training ground for our youth coaches. On ESPN, and other networks, we are exposed to the tactics and approaches of coaches who are paid to win, it is their livelihood and if they don’t win they are out of a job. Clearly they have different goals than the youth coach, whose goals, methods, and tactics should be entirely different.

As winning becomes increasingly important, youth sport becomes exclusive; children of “lesser” talent are excluded and the focus is on the children who are more advanced. Late bloomers are shunned in favor of the early maturing youngsters. To combat this parents sign their children up at increasingly younger ages to make sure that their skill development offsets their
lack of physical development. Anecdotal evidence abounds of organized sport for the pre-kindergarten child such as organized soccer leagues for children under the age of four and “wee-ball” leagues as a pre-cursor to “tee-ball” leagues. The Amateur Athletic Union (AAU) recently sponsored a nationwide under-8 (2nd – grade) national basketball tournament and held their finals in Memphis, Tennessee. The AAU was so pleased with the turnout that they are contemplating an under-7 tourney for next year. We have created a system in youth sport that is very similar to the caste system in India. At very early ages we send the children a very clear message regarding where they stand athletically. The children chosen for the A team are the best athletes and the children chosen for the B team are not as good as those kids. The B team stigma is very difficult for the kids the shake. When you were growing up was the best athlete at 8 or 9 the best athlete at 12 or 13? Was the best athlete at 12 or 13 the best in high school?

As former NBA player Bob Bigelow points out, parents are taking tremendous risks by involving them in elite youth sport where winning is the ultimate goal. They would include:

- Undermining your child’s self-esteem by getting cut at a young age;
- Your child may not play if he/she is not good enough or a late-bloomer;
- Practices are work-like and not very much fun and you might have to force them to attend;
• Your child may quit before he/she fully realizes how good they may have been;
• Forcing to choose one sport at an early ages creates overuse injuries and may cause permanent damage;
• Over-involvement by adults stifles creativity, the ability to arbitrate with his/her peers, and the ability to interpret rules on his/her own;
• Over-involvement by adults suppresses being spontaneous and taking risks which are important life skills;
• Overzealous coaches may contradict important lessons you have taught your child about fair-play, sportsmanship, commitment, and leadership;
• All of these pressures may result in your child hating their sport of choice.

Sport sociologist Jay Coakley suggests that we have seen a cultural shift in defining a “good parent.” A good parent is very involved in their child’s life and one area in particular that lends itself very easily to parental involvement is youth sport. Coakley suggests why youth sports have become so important to parents, “Youth sports become sites where dads and moms can establish and prove their moral worth as parents. This increases the stakes associated with youth sports. This link between parents’ moral worth and their children’s achievements in sports, leads many parents to take youth sports seriously.” This also puts tremendous pressure on the youth sport coach. Youth sport coaches are
supposed to produce results for these parents. These results are measured in the improvement they see in their children and in the success (wins) they enjoy on the field.

In the realm of youth sport we accept behavior that in any other realm may be considered abusive. The National Youth Sports Safety Foundation (NYSSF) defines abusive as “rejecting, ignoring, isolating, terrorizing, name calling, making fun of someone, putting someone down, yelling, and saying things that hurt feelings.” How many of those elements have you seen in a youth sport setting? The NYSSF cites examples of emotional abuse as such things as forcing a child to participate in sports, not speaking to a child after a poor performance, hitting a child after a disappointing performance, yelling or punishing a child for not playing well or losing, and criticizing or ridiculing for poor play.

Clearly, coaches play an integral role in youth sport. The majority of youth sport coaches are volunteers and the majority of these volunteers are not trained to understand the psychological aspects of dealing with the pre-adolescent athlete. Many coaches are technically capable in the X’s and O’s and are able to teach the requisite skills to play the game but many coaches are not proficient, nor are they required to become proficient, in the psychological aspects of coaching. This is a crucial area of coaching that is often overlooked. When a coach volunteers his/her time they should be keenly aware that they are not only responsible for the athletic aspect of coaching but they are also responsible for the physical and psychological well-being of his/her players. In particular,
coaches need to be aware of physical and psychological distinctiveness of the age group he/she is dealing with.

James Toner points out that coaches are, in fact, teachers and "as teachers they should be familiar with the principles involved in the process of education. Coaches should share with other educators a common concern for developing the person intellectually, socially, ethically, and physically. A coach's goal should be the total development of the athlete in mind and body." Athlete-focused coaches will be eager to learn the skills needed to become a successful teacher. Many coaches have the best of intentions and often cite the important values that a child should learn from sport participation. However, in a recent study, coaches were asked how they specifically taught these values and most could not provide an answer. Many coaches felt that just by participating in sports the values would be learned. Further, many coaches feel that winning is synonymous with fun. Kids will say this is not the case. This study also pointed out that although many coaches were able to articulate about the importance of their role as a youth coach, there were many inconsistencies in their behavior.

Coaching behavior is the best indicator of coaching philosophy!

It is important for a coach to honestly evaluate his or her reasons for volunteering. Are they there for themselves or for the players? For example, we have all seen the coach that criticizes his/her player after making a mistake in a game. The coach will very publicly announce what that player should have done. The coach is using that moment to validate his/her existence as a coach, letting
the parents and spectators know that he/she understands the game and the error made by the player. Clearly this coach is not considering the feelings of the player being criticized.

The word coach is derived from the Hungarian word for stagecoach, kocsi. The derivation of the word is a great reminder that you, as a coach, are responsible for taking your players on a journey. It has been said that it is the journey, not the destination, which is important. In many ways we have become too focused on the destination and not enough on the journey.
Focus of the Workshop

The focus of this workshop is the psychological aspect of coaching youth sport; in particular, we will be discussing the creation of a motivational climate that is age appropriate, conducive to learning and optimum performance, and leads to more self-regulated forms of motivation. The motivational climate refers to the situational cues influencing individual perceptions of what constitutes success and failure. Coaches, and the way they define success, are largely responsible for creating the motivational climate.
As discussed earlier, children do not think like adults, they think like children, and tremendous potential psychological harm can be done to children who are exposed to motivational climates that are structured in such a way that does not consider the children’s varied levels of cognitive development. Coaches that stress outcomes and peer comparisons may be creating stressful situations that drive children away from sport and physical activity. These coaches justify this approach by stating that children prefer a highly competitive atmosphere and that winning is very important to children while there is compelling evidence against this accepted wisdom.

A recent *Sports Illustrated* article profiled the head boy’s football coach at De La Salle High School in California. The De La Salle football team is perennially the number one ranked prep team in the country. Although they lost their first game of the season this year, they had not lost a game since 1991 despite playing the best competition from around the United States and having an enrollment of just 1000 students. When head coach Bob Ladouceur is asked how his team has won so many games his response is always the same, by NOT concentrating on winning. In the De La Salle program, the process, and not the outcome, is paramount. Coach Ladouceur encourages his players to play other sports and is concerned with his impact on his athletes, “I want them to learn that it’s not so much what you do as how it affects the world. I’m passionate about coaching, but it’s not about football. It’s about being important to those kids.”
John Wooden, former UCLA basketball coach, and considered by many to be one of the greatest coaches of all time, compiled a 885-203 overall career win-loss record (a percentage of .813). Under Wooden, UCLA won an unprecedented 10 NCAA championships, including seven consecutive (1966-73). Included in the string is one of the most amazing win streaks in all of sports, 38 straight NCAA tournament victories. Another amazing fact about Wooden is that he never mentioned the words win or winning to his players. He talked about effort and striving for excellence but never talked about winning with his players.

Many untrained coaches focus on the outcome (winning) and not the process (the practice time, the skill building, the camaraderie, enjoying sports and physical activity). The outcome, winning, is important to all of us. However, it is just one important aspect of many of which a coach should be concerned. The focus of this workshop will be on creating and implementing strategies that not only lead to successful results but that also leads to positive outcomes regarding the athletes’ decision to stay involved in sport or physical activity. During this workshop we will be addressing the athlete’s motivation towards basketball and your role in enhancing that motivation.
Motivation

When many of us think about motivation we may think of a coach trying to fire up his/her players for a big game. We have all heard the famous Knute Rockne “win one for the Gipper” speech and have seen Bob Knight yelling and screaming at his players to motivate them. Players on Tennessee women’s basketball team seem to play harder just from receiving a fiery glare from Pat Summitt. This is certainly a form of motivation but not the type of motivation that we will be focusing on. Motivation can be defined as a concept used to describe the factors within an individual which arouse, maintain and channel behavior towards a goal. Another way to say this is that motivation is goal-directed behavior. The first step to understanding motivation is to differentiate between intrinsic and extrinsic motivation.

**Intrinsic motivation** describes behaviors performed out of interest or enjoyment. The student who reads on his/her own because they love to read or a basketball player that plays basketball because he/she enjoys the feeling of taking off into the air for a lay-up or the sound of a ball swishing through the net would be intrinsically motivated. They choose to play basketball for the enjoyment gained from playing basketball. The reward is internal. A state of intrinsic motivation is associated with feelings of satisfaction, enjoyment, competence, and the desire to remain involved with the activity.
Extrinsic motivation describes behaviors performed for outcomes that are separate from the activity itself. A student who reads solely to get a good grade or the basketball player who plays the game just to please his/her parents or to win a trophy is extrinsically motivated. Here, the reward is external. The issue with extrinsic motivation is that when the person does not achieve the intended rewards he/she has little use for the activity. Even achieving the reward may provide little motivation for staying involved in the activity. Imagine the person who dislikes their job and goes to work solely to collect a paycheck, they are clearly extrinsically motivated. What do you think is the first thing they would do if they won the lottery? Rewards, for many, tend to reduce the intrinsic motivation for the activity as the focus changes from partaking in the activity for enjoyment to partaking for the expected reward.

It is important to note that there have been age-related differences in sport motivation. When dealing with youngsters, the primary reasons for participating are intrinsic ones (fun, enjoyment, skill-building, socializing). Young and middle-aged adults have a more diverse set of motives driving them to participate in sport (fitness, weight-loss, stress relief). Coaches, interested in having players enjoy the playing experience AND performing at their best should be interested in creating a motivational climate that fosters intrinsic motivation.
Research now supports the idea of a motivation continuum that ranges from amotivation to intrinsic motivation. This is depicted on the diagram below.

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Nonself-determined</th>
<th>Self-determined</th>
</tr>
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<tbody>
<tr>
<td>Type of Motivation</td>
<td>Amotivation</td>
<td>Extrinsic Motivation</td>
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<table>
<thead>
<tr>
<th>Type of Regulation</th>
<th>Non-regulation</th>
<th>External Regulation</th>
<th>Introjected Regulation</th>
<th>Identified Regulation</th>
<th>Integrated Regulation</th>
<th>Intrinsic Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locus of Causality</td>
<td>Impersonal</td>
<td>External</td>
<td>Somewhat External</td>
<td>Somewhat Internal</td>
<td>Internal</td>
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**Figure WS1.** The self-determination continuum, showing the motivational, self-regulatory, and perceived locus of causality bases of behaviors that vary in the degree to which they are self-determined. Deci and Ryan (2000).

Furthest on the left end of the continuum is amotivation, the state of lacking the intention to act. This state result from feeling unable to achieve desired outcomes due to a lack of contingency, a lack of perceived competence, or a lack of value for the outcomes associated with the activity. Furthest on the right hand of the continuum is the previously described intrinsic motivation. The four types of regulation in the center of Figure 1 characterize extrinsically motivated behaviors.

**External regulation** is the least autonomous form of extrinsic motivation and can be best described as being motivated by rewards or to avoid punishment. External regulation has an external locus of causality. An example of this would be the basketball player that plays on the team only so that her parents will not be angry with her.
Introjected regulation involves an external regulation having been mildly internalized and not truly accepted as one’s own. An athlete that plays only to avoid personal guilt or anxiety or to stroke his own ego would be an example of introjected regulation.

Regulation through identification is a more self-determined form of extrinsic motivation as it involves a conscious valuing of a behavioral goal or regulation, an acceptance of the behavior as personally important. The identification represents an important aspect of the process of transforming external regulation into self-regulation. An individual that exercises because he knows it is good for him would even though he dislikes it would be an example of regulation through identification.

Integrated regulation represents the most autonomous form of extrinsically motivated behavior and results when identifications have been evaluated and brought into correspondence with personally endorsed values, goals, and needs that are already a part of the self. An individual may choose to participate in a sport, have a good diet, and a balanced social life to achieve the ultimate goal of a healthy way of life. Integrated regulation shares many characteristics with intrinsic motivation but these activities are done to attain personally important outcomes rather than done for their inherent interest or enjoyment. A basketball player that lifts weights during the off-season even though he doesn’t enjoy the activity would demonstrate integrated regulation.
Applied Sport Psychology

The United States is the world leader in sport science research yet little of this research finds its way to college or high school coaches much less the youth sport coach. Other countries around the world, such as Canada and England, have benefited by the implementation of research done by U.S. researchers. With the incredibly high dropout rates we are seeing in youth sport it is clear that now is the time to start applying some of the research that has been conducted. That is a goal of this workshop.

Sport psychology is the scientific study of the psychological factors that are associated with participation and performance in sport, exercise, and other types of physical activity. Sport psychology professionals are interested in two main objectives: (a) helping athletes use psychological principles to improve performance (performance enhancement) and (b) understanding how participation in sport, exercise, and physical activity affects an individual's psychological development, health, and well-being throughout the life span. Applied sport psychologists focus on professional practice and application of sport psychology in sport, exercise, and physical activity settings. Typically, these individuals assist athletes with performance enhancement and/or clinical issues, provide workshops for coaches and administrators, or function as consultants to teams.
In this workshop you will be introduced to some of the psychological theory involved with coaching youth sport but the primary focus will be on the application of that theory. You will be introduced to simple, yet, effective ways of creating a motivational climate that can lead to higher levels of enjoyment for you and your athletes. The information provided here will also enable the youth sport coach to create the guidelines to develop his/her own personal coaching philosophy. This will aid the coach in decision-making and act as a guide in building relationships with the athletes.
Self-Determination Theory: An Overview

As humans, we all have needs. We have physiological needs such as air, water, food, sleep, sex, etc. When these are not satisfied we may feel sickness, irritation, pain, discomfort, etc. These feelings motivate us to alleviate them as soon as possible and once they are alleviated, we may think about satisfying psychological needs. In self-determination theory we are concerned with three psychological needs that all humans, and at all stages of development, share - the need for competency, the need for relatedness, and the need for autonomy. Let’s define these three needs.

**Competency** - refers to feeling effective in a particular context and having the opportunity to express one’s skills. The need for competence leads people to seek challenges that are best for their skills and to be persistent in maintaining and enhancing those skills. Competency is when a person perceives that he/she is doing their best with their personal skill set and they are motivated to continue because they do feel competent. The goal for the youth sport coach should be to make each player, although of different talent levels, to feel competent.

**Relatedness** - refers to feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community. This is the social aspect of sport that is so important to children but ignored by many coaches.
**Autonomy** - refers to being the perceived source of one’s behavior. When an individual perceives that he/she is involved in the decision-making process they will feel both initiative and value towards those decisions. Athletes, even if they are being asked to do certain things by a coach, will endorse these decisions if they agree with them. The player that feels that he/she is the one making decision to play basketball will be more motivated than the player who feels they are being forced to be there by parents or coaches.

When these needs are satisfied it leads to healthy functioning by the individual. The satisfaction of these needs is essential for the growth and well-being of the individual’s personality. If an individual is unable to meet these needs they will gravitate towards contexts that will. Needs are very much different from motives, desires, or strivings and coaches must understand that reaching one’s goals is not enough for psychological well-being.

Many coaches become very controlling and this makes it very difficult for an athlete to meet his/her needs for competence, relatedness, and in particular, autonomy. Why then are so many coaches so controlling. Even coaches with the best of intentions become controlling. Here are some reasons why it is easier to be a controlling coach than an autonomy-supportive coach:

1. Limited practice time/gym availability – forces coaches to have to do a great deal in a limited amount of time.
2. Untrained coaches – most coaches (perhaps as much as 90%) are untrained in how to design practices that promote autonomy.
3. Recognizing interest in others is difficult – coaches, like most people, have a difficult time discerning the level of interest among players and don’t make adjustments.

4. Coaches are controlled themselves – Coaches too are subjected to controlling pressuring conditions within their roles. Youth sport organizations may only view quality coaching as winning.

5. Parents – put tremendous pressure on coaches as they see fees paid to participate as “investments” in their son or daughter and want to see an immediate “return” in the form of increased skills and winning.

6. Players – become disinterested in the methods of a controlling coach and force him/her to become even further controlling.

7. Incentives – parents and coaches adhere to the “maximal operant” principle of motivation – the belief that the larger the incentive, the greater the motivation.

8. Motivation – coaches underestimate the ability of players to motivate themselves.

9. Ego – coaches tie their value as a coach into wins rather than as a teacher and instructor.

10. Fixed trait – some coaches view motivation as a fixed trait in players and when it is low they resort to controlling methods to overcome the perceived deficit.
11. Culture – American culture identifies coaches as powerful actors and players as relatively weak actors.

12. Ratings – parents consider controlling coaches as being more competent.

13. Won’t work – coaches feel that being autonomy supportive will not work.

Coaches must learn to work beyond space and time limitations and to not be controlling. Coaches must learn to be in charge without having to resort to controlling methods.

Over the years I have spoken to many successful coaches in a range of levels of play. Most of these successful coaches had one thing in common, a love for practice, a love to teach and spend quality time with players. To them that was the essence of coaching. I played for a very successful coach who used to sit with his legs crossed during games. I asked him about his relaxed attitude during games and he told me that he thought he did his coaching during practice. There wasn’t a great deal he could do during the game and he enjoyed watching his players, which had worked so hard, just play. This particular coach won two USA Today national high school championships and took my college team to the NCAA Division III Final Four. I would counsel anyone interested in coaching sports at the youth level to seriously consider how they feel about practice time and teaching. If it’s all about playing the game then perhaps youth sports is not where you should be coaching.
Phil Jackson, a highly successful NBA coach, is known for his innovative approach to coaching at the professional level. A recent research article discussed Jackson’s approach, “For Jackson, the primary concern is with practice of basketball. His love affair is with the activity rather than the result of winning. Jackson has been extremely successful in terms of product; he, unlike many coaches, however, sees past the narrow-minded product – only focus.”

Youth sport coaches must learn to value the process rather than only the outcome. The process is defined by Douglas Hochstetler as the journey of sport experience, not only those end points in sport (e.g., completing a period, crossing the finish line, besting an arch rival) but also those elements of sport that happen in between – the stages or phases of the competitive project. Hochstetler states that these endpoints are a component of the process as well but that “…if we have enjoyed or found meaning in the process, we are more likely to feel at peace with the outcome, regardless of the result.” Further, Hochstetler discusses the implication of when the process is not enjoyable or no meaning is to be found there, “When there is little joy in the doing, when the practice may even become unbearable, the practitioner may discontinue rather than persist…”
Self-Determination Theory: An Example

We have seen the components of self-determination theory and now its time to look at the mechanics of the theory; how the meeting of those basic needs lead to more self-regulated forms of motivation. Perhaps it is easier if we review a hypothetical example of the theory in practice.

Susie, a sixth grader, is the type of girl who engages in activities because she likes them. She interacts with friends, plays the piano and goes to school because of the pleasure those activities bring. This is not the case when it comes to basketball. Susie plays because she feels obliged to, not because she likes it. Primarily she plays to please her parents, and in particular, her dad who played basketball in high school. She also feels very pressured by her coach who never appears satisfied with her performance. Her coach, Mr. Johnson, is a very controlling coach and never provides his players with an opportunity to experience choice and he provides poor competence feedback.

Susie would like the opportunity to play a position where she has the opportunity to shoot more. Coach Johnson has her playing the point guard position and, in his offense, the point guard rarely shoots the ball. Further, he is always pressuring Susie to be a more vocal player when that isn't a role she feels comfortable with. For Susie, playing basketball is associated with feeling controlled and lacking competence and autonomy. As a consequence, the level of her play suffers and she does not derive much satisfaction from playing basketball.
Recently, Mr. Johnson was relocated to another city by his employer. Mr. Smith agreed to step in and coach the girls. Mr. Smith’s approach is vastly different from that of Mr. Johnson; he is much more autonomy-supportive and gives Susie and the other girls the opportunity to express themselves. Mr. Smith lets the girls play other positions during scrimmage time and encourages Susie to shoot the basketball. Lately, Susie finds herself wanting to go to basketball practice and actually enjoying it. Coach Smith even has the team practice a last second shot that called for Susie to take the last shot. Susie practices her shooting diligently in case that situation comes up. Susie is experiencing feelings of autonomy because she feels that she is a part of the decision-making process.

In a recent game Susie’s team was tied with their opponent with just a few seconds to go. Mr. Smith called a timeout to outline a play for the last shot. Mr. Smith asked Susie if she was ready to run the play that called for her to shoot the last shot. She just looked down. Mr. Smith said that she didn’t have to take the shot if she preferred not to. Feeling relieved of some of the pressure; Susie looked up and said she wanted to take the last shot.

The final play ran just as they had practiced it. Susie felt comfortable as she moved shoulder-to-shoulder off of the double screen. She caught the ball in rhythm and let go a high arching shot. The ball bounced off the front of the rim and off the back of the rim before falling to the ground as the buzzer sounded. Susie missed. She turned to see a smiling Mr. Smith calling her into the huddle. He told her she ran the play exactly as they had practiced it and it was a great
shot. He also told her it takes a lot of courage to want to take the last shot and
she should be proud of herself. Susie felt proud and satisfied with her
performance. She even went on to score four points as her team won in
overtime. That afternoon after the game Susie, rather than talk on-line with her
friends, took her ball to the backyard and practiced her shooting.

As we can see from this story there are a collection of motivations differing
in types and levels of generality. Susie shows intrinsic motivation towards school
and playing the piano and extrinsic motivation towards playing basketball; in
general she does things out of enjoyment, which is her global level. On the
contextual level we see that she differs from playing the piano, where she is
intrinsically motivated, and playing basketball. At the situational level she was
intrinsically motivated to shoot the basketball during the game.

We can also see that other individuals can have a substantial impact on
our motivations. Despite the fact that Susie is intrinsically motivated in general,
her old basketball coach, Mr. Johnson, was powerful enough to make her
become extrinsically motivated towards basketball. Conversely, Mr. Smith’s
support in providing choice and positive competence feedback allowed her to feel
autonomous which made her intrinsically motivated to play.

We can also see how a change in the motivational climate shifted Susie’s
motivation from an extrinsic orientation to a more intrinsic motivation. Success
was defined by a player doing their best rather than performing up to standards
set by someone else. Consequently, she started to enjoy playing basketball
more to the point where she even started to practice more on her own.

Motivation, in this case, is associated with important consequences.

There is also a bottom-up influence of situational motivation on contextual motivation. The more situational intrinsic motivating activities, together with experiencing their beneficial consequences will play a role in facilitating contextual intrinsic motivation. Susie is now more intrinsically motivated towards playing basketball although her contextual level may not be as strong as she has only played for Coach Smith for a short time.
Theory into Practice: Applications

How can we apply some of the principles of this theory and perhaps have a positive influence on the motivation of our players. What can we do to enhance the chances that the level of motivation of the players will move further to the right of the continuum, towards self-regulated motivation and towards intrinsic motivation? In the following pages we will discuss some strategies that you can
employ to create a motivational climate that is supportive of choice, relatedness, and where the athlete will perceive him/herself to be competent.

**Competence**

Parent and coach feedback are an important source of competence information for children and adolescents. Whether evaluative feedback is seen as positive or negative is a function of age. Many coaches believe that providing praise should result in players feeling good about themselves and that criticism should have the opposite effect. Research has shown that this is true for children under the age of 11 but not necessarily true for children over the age of 11. Children believe that adults base their feedback on the level of effort a child puts into the activity. Children under the age of 11 view effort and ability as the same while older children see a difference. They start to notice how hard they have to try to equal the performance of others. If a child has to work very hard to equal the performance of others and the coach praises him or her and not the other children then the child starts to think that he/she is not as able as the other children. Therefore the liberal use of praise may not be the most effective way to make an athlete feel competent.

Research has shown that a high frequency of informational feedback will lead to perceptions of ability in young athletes. Informational feedback is defined as a response from the coach, either after a success or a mistake, which provides skill relevant information about the performance that is designed to instruct the athlete in some way. An example of informational feedback following
a mistake would be “You went off the wrong foot on that lay-up, next time go off of your right foot.” Athletes who receive informational feedback, particularly after skill errors, are getting indirect feedback from coaches that they are capable of performing better in the future. For example, after a missed free throw a coach may tell the player to hold his/her follow through next time. This tells the player that the coach thinks that he/she is just a minor adjustment away from making the free throw the next time. Evaluative feedback in the form of criticism (“What are you doing? That shot wasn’t even close!”) contains the most negative message. For the athlete this is interpreted as the least positive sign of ability, effort, and future success.

Coaches who provide higher frequencies of informational feedback are associated with athletes that reported higher levels of perceived competence. Athletes, who played for coaches trained in positive feedback for desirable behaviors (effort, technique), encouragement following skill errors, and instruction following performance attempts, were higher in perceived ability, enjoyment, and intention to continue playing. Further, these athletes showed lower levels of anxiety and attrition rates. Most importantly, these athletes showed increases in global levels of self-esteem from the beginning of the season, surely a goal for the youth coach.

Motivational climates where the emphasis is on effort and personal improvement will also enhance the competence of the athletes. Effort and improvement are personally controlled by the player and makes it easier for the
player to feel good about their abilities in a sport context. Players that are constantly being compared to players more skilled than them will not feel these same levels of competence as the skill level of the other players is not in their control.

Here are some ways that a coach can make his/her players feel more competent:

- **Mistakes** – (or as John Wooden called them, “stepping stones to achievement”), coaches must understand that mistakes are an excellent way for players to learn. How you, as a coach deal with mistakes, will have a significant impact on the player’s feeling of competence. Players will play with less stress and perform better if they know they are not going to be criticized for making mistakes. Most times the player knows that he/she has made a mistake. Coaches should expect mistakes and be prepared for them. Many coaches have adopted rituals for mistakes such as a tap to the forehead or making a “flushing” gesture (flushing the mistake away) as a way of communicating with the player. The player learns without being criticized or embarrassed. A simple gesture will let the player know that a mistake has been made, to forget about it, and move on to the next play. In the words of John Wooden, “Failure will make us stronger if we accept it properly.”
• **Success** – how you define success for your team will be an important component of building competence among your players. Success should be defined in terms of self-improvement rather than in terms of winning and losing. Reward effort rather than outcome. Effort is something that player can control and feel autonomous about. Winning, to a large extent, is not. Your players can play the absolute best game of their lives and not win the game. Can you tell them they have not been successful?

• **The game** – make an effort to teach the players about the game itself. Let them feel really comfortable with their knowledge of the game. One way of doing this is to teach the players about the rules of the game. Take one rule each practice, e.g., a backcourt violation, and demonstrate what the referee is looking for. This will help the coach and the players. Don’t assume that the players know all aspects of the game. Introduce them slowly to the terminology of the game. What does weakside, off the ball or downscreen mean? As the players feel they really know the game it will only enhance the chances of truly embracing the game.

• **Effort** – always find a way to reward effort, particularly on an unsuccessful play. If a player steals the ball and races up the court only to miss a lay up be sure to complement the player on the steal and the effort to get to the basket (he/she knows they missed the shot!). The old coaching adage always applies – **find them doing something right!**
• **Criticism** – the coach must ask if he/she is saying something that a player will learn from or wound him/her. John Wooden, considered by many to be the greatest coach of all time, used the “sandwich” technique. He would say something positive, make the correction, and then say something positive again. For example after a bad shooting game a coach can say to his/her player, “You are doing a great job of squaring your body to the basket but your elbow is pointing too far to the outside, but don’t stop taking those good shots!”

• **Positive!** – Coaches are truly tested when things go really bad in a game or during a practice. Players can’t seem to do anything right. Coaches have to make a choice regarding how they are going to handle this situation. Choose being positive, totally, completely, positive. It will take the pressure off of the players and they will respond. They know as well as anyone that they are not doing well. A coach can decide to push them further down or pick them up…pick them up! Coaches should be positive but also be realistic. The positive comments should be specific and meaningful so that the athletes know they are valid. Be a coach, not a cheerleader!

• **Public/Private** - try and positively recognize your players publicly and criticize them privately. No one likes to be criticized in front of others so try and do it privately (and use the sandwich technique). Make it a point to
recognize players publicly, especially those players that don’t have the opportunity to get recognized as much as others.

- **Peer comparisons** – don’t overemphasize peer comparisons of performance. Peer comparisons inevitably do the greatest motivational damage to those who need encouragement the most, those with low ability. Coaches should consider perceptions that are created by their evaluation procedures. In particular, since athlete’s abilities at this age are determined to a considerable degree by genetics and level of maturation, the use of ranking players by ability or comparing athletes to each other is questionable. Focus on the individual mastery of skills and be cognizant that it happens at different stages for every athlete. Coaches should avoid separating their players by talent level, try and make the group as homogeneous as possible for drills and for learning offenses and defenses. Try not to create an internal caste system on your team of higher and lower ability players.

- **Goal Setting** – goal setting is an important aspect of building competence. To be successful at anything we must learn to set and attain goals. Goals keep the athletes focused, raise effort, increases persistence, and force the athlete to be creative in achieving that goal. Goals should be specific and measurable and they should be difficult but realistic. For example, during practice you can ask players to shoot twenty free throws and then get their results. If player A makes 10 out of
twenty free throws then perhaps a realistic, but difficult goal, would be to make 14 out of 20 for three practices in a row. This can be charted and discussed individually with the player as to her progress. The goals should be specific and targeted toward a certain date. Put them in writing and discuss them with the player. It would also be helpful to explain to the player that to do this it will require practicing outside of the scheduled practice time. Even if she doesn’t have access to a hoop a player can practice her form and develop her shooting muscles by reclining on the floor and shooting up in the air or to practice form shooting against a wall. Coaches should find short-term goals that tackle the players’ individual weaknesses and create goals. Once they have been met you can raise the bar a little bit more. If the player struggles to reach goals remind the player where she started from and that she is capable of doing it with effort. Goals should be expressed in positive terms such as making more free throws rather than missing less.

Meet with the players individually and discuss goals for them. Ask the player where they see the weaknesses in their game and discuss ways to create goals. Goals should be tailored to the individual player and their level of skill. Just as you would ask the limited player not to overextend him/herself don’t be wary of asking the advanced player to push his/her limits.
• **Effort goals** – a great way to raise competence is to give your players goals that are measurable and achievable with effort. For example, rather than asking a player to get 8 rebounds, ask that player to box out on every shot. Instead of asking your best scorer to score 15 points, ask him/her to take 4 good shots per quarter, or to get a player to be more aggressive offensively, set a goal of getting to the free throw line 5 times in a game. Find the effort behind the ultimate goal and use that as the goal for the player. Always encourage effort and don’t demand results.

• **Stress** – stress affects how athletes feel and perform. Athletes under stress will have lowered levels of enjoyment, sleep disturbance, disrupted eating habits, susceptibility to injuries, impaired performance, and a higher potential to dropout. Much of the stress comes from fear of failure. When the goal of youth sport is to win no one wants to be responsible for the loss and this creates a great amount of stress internally. This stress is only compounded by pressure put on the athletes by their coaches and parents. (See the attached inverted U-curve regarding stress and performance.) However, when the goal is to do your best the athlete is relieved of much of that stress. Athletes and teams can still be successful despite what the scoreboard indicates.

This fear of failure can have a significant impact on the young athlete going forward. This fear of failure can inhibit their desire to take chances and try new and different things. In the words of Louis Boone,
“Don’t fear failure so much that you refuse to try new things. The saddest summary of a life contains three descriptions: could have, might have, and should have.”

Coaches should avoid stress by overloading players with directions during a game. Picture the 11 or 12 year old player that is concentrating on dribbling the ball with his/her head up, running the offense, with his/her four teammates calling for the ball. On top of that the parents are either yelling encouraging words or instructions and you, the coach, are doing the same. By the time the child has processed “shoot the ball!” it is probably too late! Children this age or not equipped to deal with this information overload and it can be very stressful.

As far as strategy is concerned most children this age don’t possess the spatial skills to understand that either. They are just starting to understand the complex set of relationships between three or more people moving at the same time. Imagine looking up and seeing nine!

**Autonomy**

Autonomy support concerns the extent to which adults enable and encourage initiative and choice in the athlete, and share in his/her perspective when solving problems or offering advice. The opposite of autonomy support is control, as when coaches or parents are more directive, authoritarian, and pressuring. Thus, involvement is the extent to which an adult partakes in a child’s activity, whereas autonomy support qualifies this involvement in terms of the
degree to which the adult controls the child’s activity, or supports the child’s initiative.

Coaches should be able to provide appropriate and meaningful information, offer opportunities for choice while at the same time minimizing the controlling features of the motivational climate. An environment low in controlling features, where coaches give players responsibilities, and offer choices and options, is more likely to enable the athlete to feel that he/she is in control of his/her own destiny and is the sees themselves as the origin of their own behavior.

This does not mean that this is not a structured environment. As a matter of fact, children want and need a structured environment where you, as the coach, are in charge. Team rules are an important way of creating structure and enhancing autonomy. Team rules can be made by the players and coaches will agree to take on the responsibility to enforce them. This can be done by:

- Explaining to the team why rules are necessary (they keep things organized and efficient and enhance the chance of achieving team and individual goals).
- Explaining why the team rules should be something that they can agree upon as a group (it should be their rules and their responsibility to enforce them).
- Asking the athletes for suggestions for rules, listening, and showing them that their ideas are valued.
• Using these suggestions to create rules for the team. Team rules can include always showing respect for each other, being on time and prepared for practice, always trying your hardest, and always cheering on teammates.

• Discussing the kinds of penalties that you will use for rules violations. Penalties should be to deprive the athlete of something they value. You can start with not allowing the player to participate in practice scrimmages for initial violations and move up to reductions in game playing time if the violations continue. Running or other physical punitive measures are not encouraged as they are important aspects of a positive practice and should not be related to punishment.

It is important for coaches to find different ways of giving the players choices regarding their athletic experience. The first thing to keep in mind is that it is their athletic experience, not yours. Unfortunately our time has past and we must now concentrate on the well-being of the athletes we coach. There will be more than enough time for the child to learn about the real world. This is youth sports and it is supposed to be fun!

There are many ways to give autonomy support to players. They are discussed below:
• **Choice, choice, choice** – Coaches should find as many ways as possible to let their athletes have a say in their athletic experience. Let the players choose what kind of pre-game drills they would like to use. Give them a few suggestions that accomplish everything you want them to do before the game but let them design it. If you are purchasing a t-shirt, let them have a say in what goes on the shirt. Ask their opinions during the game, particularly of the players on the bench. Ask the players to scout a player from the other team, are they righty or lefty, how does their shot look, how is your player’s ball handing skills? What is the opposing team trying to do offensively and defensively? Ask the players their opinions at halftime. This keeps the players interested in the game and learning at the same time.

When several different drills meet the same objectives (dribbling around chairs, dribbling keep-away game, or timing the entire team dribbling up and down the court and setting a standard that can be used to gauge improvement) ask the players which one they would like to do.

• **When in doubt...** - ask your players. What is it they like about playing sports, what is it they dislike? What are some ways to make practice fun? Let them guide as you as to which decisions you make.
• *Explain and rationalize* – when you have drills or teaching to do, explain to the children what you are doing and tell them how long you will be doing it for. For example, if you are going to do a dribbling drill, explain that every player, no matter what his/her size, needs to learn how to handle the basketball. Tell them you know that it can be boring to dribble through cones but we will only do it for 10 minutes and then we will move on to the next part of the practice, acknowledge their feelings. If possible use a clock so that players know exactly how long they will be doing the drill. This point also emphasizes the importance of having a practice plan written for every practice. An index card with your practice plan easily fits into your pocket and is the best way to communicate with your players exactly what you will be doing and the length of time dedicated to it.

• *Flexible* – even with a written practice plan, a coach can still be flexible and give the players the autonomy they need. For example, if you have three things you need to accomplish for that practice, dribbling, shooting, and teaching a press break offense, you can ask the players which of the three they would like to do first, second, and third. Give them a choice and let them feel like the practice is theirs as, after all, it is!
• **Strategy** – one of the primary difficulties with coaching competitive basketball is playing in leagues where there are no limitations on the rules. Many 6th graders have a great difficulty playing with high school rules and it limits the time for your primary mission – to teach. You can always tell the coach who is playing for himself rather than his kids. They will start the game in a packed in zone forcing the opponent to take high percentage outside shots and then when his/her team scores it is right into the trapping full court press. You know you are playing teams like this and are forced to spend your practice times preparing for that rather focusing on passing, shooting, and dribbling as a 12-year old player should. If we are truly concerned with the enjoyment, and development of our youngsters we should convince our league organizers to limit the rules. If your child came home from school and told you that they were going to skip basic math and move right to algebra I am sure you would be on the phone to your child’s math teacher. How can they learn the advanced material before they know the basics? Well, it is the same here in basketball, full-court presses and trapping defenses are advanced strategies and are only used to win, not to teach. Dealing with these strategies can be learned very easily when they are older and more physically and mentally mature. Man-to-man defenses should only be used at this age
group and your league administrators should be made to agree. Fight the urge to give in and practicing only strategies. If you truly have the best interest of your player at heart you will know that he/she has to be fully versed in the fundamentals of the game. Spend time on dribbling, shooting and passing every practice. Shooting the basketball, as evidenced by the men’s U.S. Olympic team this summer, has become a lost art due to the focus on strategy at the earliest levels of play.

Unfortunately, there may not be a great deal of immediate gratification in youth sport. You may not know how good a coach you were for years to come. One day a player will come up to you and say that he/she had so much fun playing basketball when they played for you that it became their favorite sport. They just wanted to thank you and let you know they just made the J.V. team at the high school!

- **Consequences** – try to avoid making students right, wrong, good, or bad for their actions. Rather, hold them accountable for the consequences of their choices. Players learn to evaluate alternatives when they are held accountable for the consequences of their choices, rather than judges or labeled.
Relatedness

Children will respond to how they are treated to significant individuals, such as coaches, in their lives. A child with low self-esteem who is treated shabbily by a coach will have enforced perceptions of low self-esteem. Conversely, a sense of relatedness can function as a source of motivation in a challenging or difficult situation. Athlete’s who feel that a coach will support them unconditionally, tend to respond much more positively in trying situations. Children have a need to feel accepted, included, important, and interpersonally supported. In an athletic environment a coach can ensure that those needs are met. When these needs are met the children will be more engaged in the activity and will display higher levels of effort, persistence, and participation. In classroom research, children who felt a sense of relatedness felt more confident, worked harder, coped more adaptively, showed more positive affect, and performed better in school. Coaches can foster a sense of relatedness between him/her and the players by employing the following strategies:

- **Communication** – work with players on communication skills that will not only enhance their feelings of relatedness but will increase their focus and intensity on the basketball court. Many great teams take communication very seriously and attribute much of their success to that communication – particularly on the defensive end of the court. Coaches can introduce the importance of communication by playing the old game of “telephone”.

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Write a phrase (e.g., Communication will be an important key to our success both on and off the floor. Let’s communicate on every defensive possession!) on an index card or piece of paper and position the players around the gym, whisper the phrase once to the first player and have him/her relay the message to the next player stationed a few feet away and have them do the same until the message reaches the last player. Compare what the last player says to what you have written down. The players will enjoy the exercise and learn the importance of communication at the same time. This exercise also points out the importance of listening, certainly a key ingredient to successful communication.

- **Team** – stress the importance of team – as an entire unit – and not just the best players. Teach players the skills of acceptance and interpersonal support by ensuring that players don’t continually participate in drills with the same teammates. If you have a two-man drill, tell players that they must participate in the drill with a different player every time. Further, they must communicate with the other player during the entire the drill (good shot, way to go, etc). Fill the gym with communication!

- **Conflict resolution** – one of the sad realities of the pervasiveness of organized sport is that kids do not get a chance to practice their conflict resolution skills. There is always a coach/parent/referee/umpire/official there to do it for them. It is important to teach your players to do it on their own and have fun at the same time. Have them “choose it out” (odds or
evens, or rocks, papers, scissors), flip a coin or whatever method you are familiar with and let them resolve it themselves.

- **Cooperative learning** – have the students work together as an entire team towards a goal. For example, time the entire team to see how long it takes to make twenty full court layups, set a benchmark and see if the entire group can improve upon that mark in subsequent practices. The same can be done for dribbling or passing drills. Make it competitive – against the clock – rather than each other.

- **Individual accountability** - find ways of reinforcing the notion that each individual achievement is important to the team meeting its goals. For example, “Susie has been working on her ball handling and she has improved her left hand dramatically, now we will have another player that can handle the ball against the press.” Or, “Tom has improved his free throw shooting by 20 percent in practice, which will really boost our free throw shooting in the games.” The contributions of the individual should be recognized for the success of the team. What a coach should avoid doing is comparing his players to others as discussed earlier.

- **Penalties** – avoid penalizing the entire group for the behavior of others. Don’t fall into the controlling trap of “Well Billy won’t stop fooling around, so we are all going to run!” Just penalize the offender by forcing him/her to sit out. Most times not being allowed to participate is the worst
punishment. If the poor behavior persists, up the ante, and start eliminating game time for the player.

- **Rewards** – avoid tangible rewards for players as they reduce intrinsic motivation. Don’t make the reward the goal as it changes the goal of the task. However, there is clearly nothing wrong with small incentives like lollipops, or Gatorades for the team.

- **Feedback** – check with the players to make sure that they feel they are part of a group; talk to them individually and collectively. When you see a player going out of his/her way to include a teammate make sure to acknowledge that. Relate the importance of togetherness and the power of a team over the power of an individual.

- **Surprise them** – with a team event rather than a scheduled practice. Coordinate it with the parents that when they show up for practice that you and the parents will take the players out for pizza or bowling. It is something they will remember more than some of the games and practices and gives players (and some of the parents) the chance to get to know each other outside of basketball. Also end the season with a parent/player game. This is something else that fosters relatedness and is very memorable for the players. The parents will be impressed with the improvement of their son or daughter at the end of the season.
WINNING

“You cannot find a player who ever played for me at UCLA that can tell you that he ever heard me mention “winning” a basketball game. He might say I inferred a little here and there, but I never mentioned winning. Yet the last thing I told my players, just before tipoff, before we would go on the floor, was, “When the game is over, I want your head up – and I know of only one way for your head to be up – and that’s for you to know that you did your best…this means to do the best YOU can do. That’s the best; no one can do more….You made that effort.”

John Wooden
Head Men’s Basketball Coach, UCLA (1948-75)

During his 27-year tenure at UCLA, Coach John Wooden led his UCLA team to four 30 – 0 seasons, an 88-game winning streak, 38 NCAA tournament game victories, 19 PAC-10 championships, 10 National championships (including 7 in a row), and was named NCAA College basketball Coach of the Year six times – all without mentioning winning. Did Coach Wooden and his players want to win? Should you, as a youth coach want your players to win? Of course, what better way is there to feel competent about your skills as an athlete than to win? However, what is clear, through his quote above, is that he never applied pressure on his players to win; his focus was on their effort and doing the best they can. He was focused on the process rather than the outcome.

As a youth sport coach, we can learn from John Wooden and emphasize effort rather than outcome. That is the easiest way to help your athletes feel competent and to develop positive self-esteem. It is in trying as hard as we possibly can where we learn the most about ourselves and, with the proper guidance, learn to feel good about ourselves. Recently a youth soccer coach
sent out an email to the parents of his under-12 traveling team stating that the players can no longer accept losing as an option and that just trying hard would not be enough. This coach was gently reminded that he is right losing, or winning for that matter, is not an option, it is an OUTCOME of which we don’t have a great deal of control. Imagine the implications of convincing a 12 year-old that trying hard is not enough!

Athletes at this age, hopefully, are still in love with the sports they are playing. Coaches should focus on the process aspect of coaching with the goal that the children will carry forward that some love for the sport into high school and college. Players, who are taught the importance of the process, rather than the outcome, are more likely to value the sport and, in the words of Positive Coaching Alliance founder Jim Thompson, “honor the game.” They are less likely to take ethical shortcuts if they are not in a “win at all cost” environment. Teach your players to value the competition as well as their competitors. Hochstetler defined competition by looking at the derivation of the word – *com* – *petitio* which means to question or to strive together. Define your opponents as worthy opponents and if they, their coaches, or their parents fail to act in an appropriate manner use it as a teaching moment.

Once again, just to be sure we are clear on this point; there is nothing wrong with winning! I love to win but I don’t necessarily love to beat my opponent and it is not how I will measure my success as a coach or as a player. Let’s just play harder than your opponent, try harder than your opponent, execute better
than your opponent and see what happens... I think you will be pleased with the results.
You have been introduced to a great deal during this coaching workshop. For some of you this is new material and for others you may have been employing many of these strategies by instinct or former training. It is the primary goal of this workshop to instill the youth coach with a philosophy. A philosophy that is consistent and adhered to. The youth coach must constantly ask him/herself before practices how they will make each child feel competent that day, how will I foster a sense of togetherness and let each child know that he/she is cared for? The youth coach must ask him/herself how they will involve the kids in the practice decisions. The youth coach must constantly remind him/herself that the players must be kept first! It is not about us anymore it is about them. Remember what the gym would be like if the adults were not there, remember what the goals of the players are.

Ask yourself after practice whether you accomplished your goals and adhered to your philosophy as well. Did you say something you regret to a player? I was at a coaching clinic where the speaker asked a volunteer to come up and empty a tube of toothpaste. The volunteer emptied the tube and it was quite amusing. The speaker then asked the volunteer to put the toothpaste back in the tube. The volunteer looked at the speaker with a puzzled look. The speaker said it is the same way with talking to a young player; you can't put the words back in your mouth any more than you can squeeze this toothpaste back into the tube. That is why we need to be very careful about the things we say to
our players. I am sure you can remember to this day some things that a coach or teacher said to you that they probably wish they could take back!

Coaches must try and emulate those that instilled in them the passion for something they love. It could be the teacher that introduced you to the first book that opened the world of reading to you, or a music teacher that taught you to love music. If you were fortunate, it may even be a coach that taught you how to love a particular sport. Remember to be the teacher, ask yourself whether your players are learning, are they becoming more skilled, are they enjoying the company of their teammates, are they practicing on their own to meet those short term goals? As mentioned earlier, if you are looking for that immediate gratification then perhaps youth sport is not the venue for you. Be the type of coach that meets his players a few years later and is thanked for making it a great experience! Keep in mind that a good coach will make you a better player. A great coach will make you a better person.
Sayings of the Day

Start each practice with an inspirational saying. Many times some of the things we would like to say have been said by others with a great deal of eloquence, take advantage of that. It may not mean a great deal to the players now but it might some day…

Opportunity seems to have an uncanny habit of favoring those who have paid the price of years of preparation.

--Anonymous

Your opponent, in the end, is never really the player on the other side of the net, or the swimmer in the next lane, or the team on the other side of the field, or even the bar you must high-jump. Your opponent is yourself, your negative internal voices, your level of determination.

--Grace Lichtenstein American Writer & Editor

All winning teams are goal-oriented. Teams like these win consistently because everyone connected with them concentrates on specific objectives. They go about their business with blinders on; nothing will distract them from achieving their aims.

--Lou Holtz, University of South Carolina football coach
Individual commitment to a group effort -- that is what makes a team work a company work, a society work, a civilization work.

--Vince Lombardi

First master the fundamentals.

-- Larry Bird

The best teams have chemistry. They communicate with each other and they sacrifice personal glory for the common goal.

-- Dave DeBusschere

Nobody who ever gave their best effort regretted it.

-- George Halas

Ability is what you’re capable of doing. Motivation determines what you do. Attitude determines how well you do it.

-- Lou Holtz
If I had stood at the free-throw line and thought about 10 million people watching me on the other side of the camera lens, I couldn't have made anything. So I mentally tried to put myself in a familiar place. I thought about all those times I shot free throws in practice and went through the same motion, the same technique that I had used thousands of times. You forget about the outcome. You know you are doing the right things. So you relax and perform.

-- Michael Jordan

I just love the game of basketball so much. The Game! I don't need the 18,000 people screaming and all the peripheral things. To me, the most enjoyable part is the practice and the preparation.

-- Bobby Knight

The harder you work, the harder it is to surrender.

-- Vince Lombardi

In great attempts it is glorious even to fail.

-- Vince Lombardi
The secret of our success is found in our daily agenda.

-- John C. Maxwell

Our attitude is the primary force that will determine whether we succeed or fail.

-- John C. Maxwell

I am a big believer in the 'mirror test'. All that matters is if you can look in the mirror and honestly tell the person you see there, that you've done your best. -- John McKay

It is impossible to excel at something you don't enjoy.

-- Jack Nicklaus

Excellence is the unlimited ability to improve the quality of what you have to offer.

-- Rick Pitino
The road to happiness lies in two simple principles: find what interests you and that you can do well, and put your whole soul into it - every bit of energy and ambition and natural ability you have.

--John D. Rockefeller III

He who makes no mistakes makes no progress.

-- Theodore Roosevelt

A life spent in making mistakes is not only more honorable but more useful than a life spent doing nothing.

-- George Bernard Shaw

Spectacular achievements come from unspectacular preparation.

-- Roger Staubach

You’ve got to think about big things while you’re doing small things, so that all the small things go in the right direction.

-- Alvin Toffler
If you don’t invest much of yourself, then defeat doesn’t hurt very much and winning isn’t very exciting.

-- Dick Vermeil

Confidence comes from being prepared.

-- John Wooden

Loyalty is very important when things get a little tough, as they often do when the challenge is great. Loyalty is a powerful force in producing one’s individual best and more so in producing a team’s best.

-- John Wooden

"I can’t do it" never yet accomplished anything; "I will try" has performed wonders.

--George P. Burnham

The price of success is hard work, dedication to the job at hand, and the determination that whether we win or lose, we have applied the best of ourselves to the task at hand.

-- Vince Lombardi
Eagles come in all shapes and sizes, but you will recognize them chiefly by their attitudes.

--Charles Prestwich Scott

What you get by achieving your goals is not as important as what you become by achieving your goals.

--Zig Ziglar

I demand more of myself than anyone else could ever expect.

--Julius Irving

You can’t build a reputation on what you’re going to do.

--Henry Ford
**KEEP IT IN PERSPECTIVE!**

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<td>76</td>
</tr>
<tr>
<td>Percent High School to NCAA</td>
<td>2.9</td>
<td>3.1</td>
<td>5.8</td>
<td>5.6</td>
<td>12.9</td>
<td>5.7</td>
</tr>
<tr>
<td>Percent NCAA to Professional</td>
<td>1.3</td>
<td>1.0</td>
<td>2.0</td>
<td>10.5</td>
<td>4.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Percent High School to Professional</td>
<td>0.03</td>
<td>0.02</td>
<td>0.09</td>
<td>0.5</td>
<td>0.4</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Table WS1: Estimated probability of competing in athletics beyond the high school interscholastic level
The Inverted –U

The Relationship Between Stress, Anxiety, Performance

Figure WS2: The inverted U curve (Yerkes & Dodson, 1908)

This diagram depicts the inverted U – curve which demonstrates that a moderate amount of physiological arousal leads to optimum performance. Coaches that stress outcome and beating the opponent, two areas of which the athlete has very little control can lead to higher levels of anxiety and lower levels of performance. Coaches can reduce the level of anxiety by stressing individual effort and increase performance levels. Keep in mind that many of the great winning coaches did NOT stress winning.
APPENDIX D. Coaching Education Workshop Pre-Test/Post-Test

Directions: Please answer the following questions to the best of your ability.

1. Self-determination theory suggests that if situational factors allow an athlete to perceive that he/she is __________________, __________________, and __________________ then that athlete will show increased levels of self-regulated or intrinsic motivation.

2. Research now supports the idea of a motivation continuum that ranges from to ____________________.

3. Integrated regulation represents the most autonomous form of ____________________ behavior.

4. Some of the reasons coaches resort to controlling methods would include:
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

5. A motivational climate can be best described as:

6. A coaching philosophy that adheres to self-determination theory will benefit my players in the following ways:
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

7. A ____________________ coaching style can undermine the ____________________ motivation of my athletes.

8. The amount of stress that leads to optimum performance is represented by the ____________________.

9. The percent of male high school basketball players that go on to play at any NCAA collegiate level is _____________.

10. The percent of female high school basketball players that go on to play at any NCAA collegiate level is _____________.

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APPENDIX E: Athlete satisfaction/propensity to continue playing basketball.

Circle the best response for the following statements:

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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Somewhat Disagree</td>
<td>Neither Agree nor Disagree</td>
<td>Somewhat Agree</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. All in all, I am satisfied with my coach

2. In general, I don’t like my coach

3. In general, I like playing on this team.

4. The chances of me playing basketball next season are:

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
APPENDIX F: Coaches Education Workshop / Post-Workshop Evaluation

Date of Workshop: January 2nd, 2005

1. I would rate the presenter (XXXX) as: (Please circle one number)

<table>
<thead>
<tr>
<th>Poor</th>
<th>Good</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>1</td>
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</table>

2. As a direct result of this program, my knowledge about self-determination theory has increased: (Circle one)

<table>
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<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Greatly</th>
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3. As a direct result of this program, my knowledge about youth sports in general has increased: (Circle one)

<table>
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<tr>
<th>Not at all</th>
<th>Somewhat</th>
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</table>

4. As a direct result of this program, my knowledge about youth sports coaching has increased: (Circle one)

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<th>Greatly</th>
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</table>

5. As a direct result of this program, my ideas regarding my role as a youth sport coach have changed: (Circle one)

<table>
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<th>Not at all</th>
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<th>Greatly</th>
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6. I plan to use the information presented in this workshop: (Circle one)

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</table>
7. If I were to receive additional educational information on youth sport coaching, I would prefer it via: (number 1 through 5, with 1 being your first choice)

   ____ workshop
   ____ publications
   ____ audio tapes
   ____ video tapes
   ____ computer software

8. The most important ideas I learned from the workshop were:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

9. What I liked best about the workshop was:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

10. What I would like to see be improved about this workshop is:

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Are there any additional comments you would care to make?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

THANK YOU!
LIST OF REFERENCES


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Most high school coaches are untrained. USA Today Magazine, 125(2615), 14-15.


Will the increase of paid coaches for youth sport travel teams or elite teams increase the pressure to win at all costs for the coach and players? *JOPERD*, 68(4), 10 – 11.


