

STUDENT-ATHLETES' PERCEPTIONS OF HEAD MEN'S BASKETBALL
COACHING COMPETENCIES AT 15 SELECTED NCCAA
DIVISION II CHRISTIAN COLLEGES

by

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A Dissertation Submitted to
the Faculty of The Graduate School at
Middle Tennessee State University
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Murfreesboro, TN
December 2007

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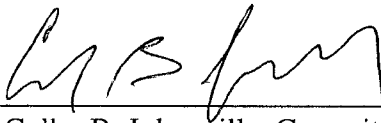
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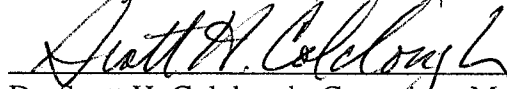
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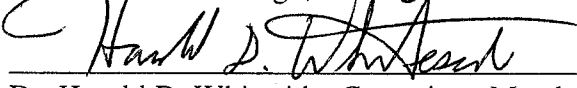
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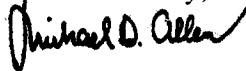
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PHILLIPS, MICHAEL B., Ph.D. Student-Athletes' Perceptions Of Head Men's Basketball Coaching Competencies At 15 Selected NCCAA Division II Christian Colleges. (2007)
Directed by Dr. Colby B. Jubenville. 114 pp.

The purpose of this study was to measure the perceptions of student-athletes concerning the coaching competency of 15 head men's basketball coaches at the Division II level in the National Christian Collegiate Athletic Association (NCCAA). The researcher utilized the Coaching Competency Scale (CCS) (Myers, Feltz, Maier, Wolfe, and Reckase, 2006b) to collect data on 138 student-athletes participating in men's basketball from 15 member institutions of the NCCAA. The CCS consisted of a 24-item questionnaire focusing on four specific categories of character building competency (CBC), game strategy competency (GSC), motivation competency (MC), and technique competency (TC). Each participant completed a 24-item questionnaire that rated their head coach's competency based on a 5-point Likert scale ranging from 5 (complete competence) to 0 (complete incompetence). The results were analyzed using the Statistical Package for the Social Sciences (SPSS) version 15.0 software to generate descriptive statistics including means and standard deviations. Amos 4.0 generated the Confirmatory Factor Analysis (CFA), which examined how well the data fit the model. Multivariate Analyses of Variance (MANOVA), Analyses of Variance (ANOVA), and Analyses of Covariance (ANCOVA) were computed to examine group differences for the 24 coaching competency factors based on the independent variables of starter or non-starter (2-group), team captain or non-team captain (2-group), and academic grade level (4-group).

The results indicated that the factors starter, non-starter, captain, non-team captain, and academic level were not significant predictors of the combination of coaching competency categories.

DEDICATION

The author would like to dedicate the hard work to complete this project to his wife Amanda and his two children, Nathan Michael and Bethany Leigh.

ACKNOWLEDGMENTS

The author would like to thank several individuals who made the completion of this project possible.

First, to his wife and best friend, Amanda, who has given up so much of her life so the author could pursue his dream. Amanda is the Most Valuable Player of this entire project. In fact, she has been the MVP of the author's entire life. Proverbs asks the question, "An excellent wife, who can find?" I did. Second, to his children, Nathan Michael and Bethany Leigh, who are the greatest gifts a man could receive on this earth. The author is looking forward to being the father he was called to be. To his parents, Mr. and Mrs. Don Phillips, who introduced the author to his Lord and Savior, Jesus Christ, and who afforded the author every opportunity to achieve his dreams. To his sisters, Mrs. Kay McClellan and Mrs. Stacy Holloway, who continually reminded the author that he could complete this project and that nothing worth having is ever easy.

To my committee chair, Dr. Colby Jubenville, who provided the author with tremendous leadership and encouraged the author to live his dream. John Maxwell says, "The true measure of leadership is influence, nothing more, nothing less." Dr. Jubenville influenced the author with his ability to build a relationship where he taught the author about character, integrity, and to value what was right over what was popular.

To his committee, the author would like to express his deepest gratitude to Dr. Scott Colclough, who motivated and encouraged the author in pursuit of his educational and coaching dreams and for his dedication to teaching excellence. Also, Dr. Jon MacBeth and Dr. Terry Whiteside must be recognized for their cooperation and input in completing this project. The author would like to sincerely thank Andrey Koval, who

spent countless hours assisting the author with the statistics and results on this project.

The author would like to extend his deepest gratitude and thanks to his father and mother-in-law, Mr. and Mrs. Harold Bilbrey, who sacrificially gave of their time to assist the author, his wife, and children while the author was completing this project. Without their unending love and tireless efforts, this project would not have been possible.

Finally, thanks be to God, who promises the author, “So do not fear, for I am with you; do not be dismayed, for I am your God. I will strengthen you and help you; I will uphold you with my righteous right hand. For I am the Lord, your God, who takes hold of your right hand and says to you, Do not fear; I will help you” (Isaiah 41:10 & 13).

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CHAPTER I

INTRODUCTION

The relationship between the coach and the student-athlete is an integral part of developing how both coaches and teams perform. Coaches are constantly making evaluations about student-athletes, based on a number of variables, and are continually seeking ways to improve the quality of that relationship in an effort to optimize the talent of each student-athlete. Slepicka (1975) postulated that the quality of the coach-athlete relationship has a great impact on the performance of that athlete. Bortoli, Robazza, and Giabardo (1995) commented that a good coach-athlete interaction tends to enhance motivation, induce pleasant emotions, and create a satisfactory and positive climate.

While the coach is constantly making evaluations about his athletes, student-athletes are also formulating assessments about their coach's personality and behavior. These perceptions of coaching competency could alter the performance of the student-athlete and could offer important insights into valuable information needed to improve this relationship (Cratty, 1983).

Other factors such as number of years of eligibility, player status as starter/non-starter, and team captain designation all play a vital role in understanding the student-athlete and the perceptions of the coach. As players progress through a program in both eligibility and status as starter and non-starter or team captain, one of the strongest factors that impact the relationship between the coach and the student-athlete is the student-athletes perception of the head coach (Jubenville, 1999).

An increased understanding of these roles, behaviors, and personalities could lead to a better experience and improved performance for all (Jubenville, 1999).

Along with the many different roles coaches perform, coaches are also placed under public scrutiny and are constantly being evaluated by the media, players, alumni, fans, and the student body. These groups place an enormous amount of pressure on coaches to win where often the single most important criterion for evaluation is the “bottom line” of winning (Margolis, 1979). This public mentality has led to an intense pressure within the coaching profession (Axthelm, 1986). Margolis (1979) agreed, “the values and virtues attributed to organized competitive athletics have been widely-publicized in an effort to gain respect for school sports programs ... Unfortunately, the pressure and demands on many coaches have caused them to subvert these values and betray the virtues attributed to sports in order to achieve the bottom line – winning” (p. 12).

If the student-athlete and coach relationship is an integral part to developing how both will perform, how then should the coaches be evaluated? Williams et al. (2003) claimed the coach is the most important person in determining the quality and success of an athlete’s sport experience. Should the media and the public set the standards for today’s coaches or should athletic directors and administrators be the sole judges and juries? Should the student-athlete be involved in evaluating his or her coach?

The literature suggested that student-athletes should play a central role in evaluating their coaches. Myers, Wolfe, Maier, Feltz, and Reckase (2006a & 2006b) stated that athletes’ perceptions and evaluations of a coach are believed to play a critical role in coaching effectiveness. Solomon (1999) reported that athletes are capable of

evaluating coaches' personalities and behaviors related to the coaching role. Kuga (1993) argued, "Athletes seem to recognize the value of coaching evaluations and are capable of identifying competencies which they perceive to be important to a coach's performance" (p. 86). With the regular and direct contact, athletes seem to have a first hand observation of their coach's personality and behaviors (Kuga, 1993).

The increased emphasis on accountability highlights the importance of evaluation as a process that can benefit all parties involved. Barber and Eckrich (1998) believed that performance evaluation is critical in maintaining effective coaching. One of the important elements in evaluation is that it allows coaches to improve their knowledge and skill (Barber & Eckrich, 1998). This tool enables them to evaluate their strengths and needed improvements which only solidifies congruency between the coach and athlete.

Alexander (1985) noted that evaluations of coaching personnel are as necessary for proper education as classroom teacher and administrative assessment. MacLean and Chelladurai (1995) said, "At the individual level, performance appraisals (a) reinforce and sustain good performance and/or improve performance, (b) provide insights into career goals, (c) pinpoint areas of strengths and weaknesses, and (d) suggest training needs" (p.195). What must be understood is that the evaluation process is intended to provide an objective point-of-view from the participant. The evaluation process should be about providing coaches an opportunity to enhance their abilities and to relate more effectively with the student-athlete (MacLean & Chelladurai, 1995).

The ability of the coach and student-athlete to communicate and to positively interact continues to be a motivating factor in the quality of the athletic experience of the student-athlete. In an article by Poskanzer (1989), sports sociologist, George H. Sage,

argued that because young men and women “tend to internalize personal-social characteristics of adults whom they admire and respect...coaches have the potential of powerfully influencing attitudes and values of their athletes ... “ (p. 10-11). According to Williams et al. (2003), if the athletes’ goals, personality, and beliefs are consistent with that of their coach, the interaction between the coach and the athlete will be positive and productive. Cratty stated that coaches who are in tune with their athletes can build a level of trust and increase coaching effectiveness more easily. These perceptions generally have a direct impact on his/her coaching and leadership style, motivational techniques, and overall level of coaching effectiveness (Cratty, 1973).

According to Jubenville (1999), assessment of the coach-athlete relationship has evolved into a focal issue with athletes due to the growing concern over changes in the way modern athletes perceive the authority of the coach and the role of athlete’s progress in small college athletics. In the last 25 years, coaches have not been as interested in their athletes’ perceptions of them; however, as player morale has become an ever-increasing factor in team performance, the evaluation of coaches and interest in athletes’ perceptions of coaches has become a prerequisite for determining maximum coaching effectiveness and achievement (Jubenville, 1999). If coaches better understand the opinions of their athletes concerning their coaching roles, they could be able to adapt their coaching styles to improve team unity and elicit from their athletes a more competitive spirit (Weiss & Fredrichs, 1986).

Purpose of the Study

The purpose of this study was to measure the perceptions of student-athletes concerning the coaching competency of head men’s basketball coaches at the Division II

level in the National Christian Collegiate Athletic Association (NCCAA). This study could provide feedback regarding perceptions of head coach's competency as defined by the Coaching Competency Scale (CCS), as well as general demographic information which could be useful in developing the knowledge base regarding elements of coaching competency. The study focused on both player and team perceptions related to coaching competency and the difference in that perception. The insight received from the perceptions of the student-athletes' could result in an improved experience for both student-athletes and coaches involved and could result in a deeper connection between the coach and the student-athlete.

Fifteen head NCCAA Division II men's basketball coaches along with their student-athletes were utilized for this study. The questionnaires were mailed out on September 1, 2007 with a return deadline of September 20, 2007.

Research Questions

The specific research questions addressed in this study included the following:

1. What effect does student-athletes' designation of starter or non-starter have on their perception concerning character building competency, game strategy competency, motivation competency, and technique competency about the head men's basketball coach?
2. What effect does student-athletes' designation of team captain or non-team captain have on their perception concerning character building competency, game strategy competency, motivation competency, and technique competency about the head men's basketball coach?

3. What effect does student-athletes' academic level have on their perception concerning character building competency, game strategy competency, motivation competency, and technique competency about the head men's basketball coach?

Hypotheses

The study's three hypotheses were analyzed through the use of Multivariate Analyses of Variance (MANOVA), Analyses of Variance (ANOVA), and Analyses of Covariance (ANCOVA). The following hypotheses were tested at the .05 alpha level of significance ($\alpha \leq .05$).

Hypothesis 1: A student-athlete who is classified as a starter will report a higher coaching competency score than a student-athlete who is classified as a non-starter.

Hypothesis 2: A student-athlete who is designated as a team captain will report a higher coaching competency score than a student-athlete who is not a team captain.

Hypothesis 3: Juniors and seniors will report a higher coaching competency score than student-athletes who are freshmen and sophomores.

Rationale for Hypotheses

The specific rationale for the hypotheses addressed in this study included the following:

Hypothesis 1: A student-athlete who is classified as a starter will report a higher coaching competency score than a student-athlete who is classified as a non-starter.

Rationale for Hypothesis 1: Previous research has indicated that the amount of playing time affects athletes' attitudes and responses toward coaches (Jubenville, 1999; Jubenville, Goss, & Phillips, 2007; and Kuga, 1993).

Hypothesis 2: A student-athlete who is designated as a team captain will report a higher coaching competency score than a student-athlete who is a non-team captain.

Rationale for Hypothesis 2: Previous research has indicated that the leadership role of the student-athlete affects athletes' attitudes and responses toward coaches (Chelladurai, Haggerty, & Baxter, 1989; Dupuis, 2006; Johnston, 1997; and Jubenville, 1999).

Hypothesis 3: Juniors and seniors will report a higher coaching competency score than student-athletes who are freshmen and sophomores.

Rationale for Hypothesis 3: Previous research has indicated that academic levels affect athletes' attitudes and responses toward coaches (Chelladurai & Carron, 1983; Horn, 2002; Jubenville, 1999; Kuga, 1993; Salminen & Liukkonen, 1996; Solomon, 1999; and Terry & Howe, 1984).

Definition of Terms

The following definitions were used for the propagation of the study:

Academic Level: a classification of freshman, sophomore, junior, or senior.

Determined by the number of academic hours successfully completed by the student-athlete.

Athletic
Administrator/
Head Coach:

at the men's basketball NCCAA Division II level, head coaches hold a dual role of both athletic administrator and head men's basketball coach.

Coaching Behavior: measured by two dimensions, leadership style and type of feedback coaches give to athletes in response to performance successes and failures (Horn, 2002).

Coaching Competency Scale (CCS):	a 24-item questionnaire designed to objectively evaluate a coach's teaching techniques, implementation of game strategies, motivation, and the ability to develop character. Authors titled the questionnaire, "Coaching Competence Questionnaire I" (Myers et al., 2006a & 2006b).
Coaching Competency:	the extent to which coaches believe that they have the ability to affect the learning and performance of their athletes (Myers et al., 2006a & 2006b).
Criterion:	a standard of behavior (Safrit & Wood, 1995).
Head Men's Basketball Coach:	a college or university employee who teaches and trains athletes while coordinating their efforts within a particular sport (Terry & Howe, 1984).
Evaluation:	the process of interpreting information or data (Wuest & Bucher, 1999)
NCCAA Division II:	National Christian Collegiate Athletic Association: an association founded in 1966 which consists of 49 Christ-centered collegiate institutions whose mission is to use athletic competition as an integral component of education, evangelism and encouragement (NCCAA Manual, 2007).
Non-Starter:	a player who began less than 12 games during the initial start of the 2006-2007 men's basketball season.

Perception:	recognition or grading of coaches' behaviors according to a participant through the use of the Coaching Competency Scale.
Starter:	a player who began 12 or more games during the start of the 2006-2007 men's basketball season.
Student-Athlete:	those individuals currently enrolled in an NCCAA Division II institution and who are members of the men's basketball team for that institution.
Team Captain:	a student-athlete who was chosen by the head coach or voted by teammates to represent the team as a leader on and off the court during the entire 2006-2007 season.

Assumptions

There were three assumptions made while using the CCS:

1. All athletes who completed the questionnaire did so honestly.
2. The student-athletes had knowledge of the information requested.

Delimitations

The study was delimited to the following:

1. The population included men's basketball players from 15 NCCAA Division II member institutions. The member institutions in this study consisted of six regions within the NCCAA. These included Central, South, West, Mid-East, Mid-West, and South-West respectively. The Central region consisted of one team from the state of Missouri. The South region consisted of two teams from the states of Florida and Georgia. The West region consisted of one team from the state of Arizona. The Mid-East region had the greatest

representation, which consisted of seven teams from the states of Kentucky, Ohio, Tennessee, and West Virginia. The Mid-West region consisted of one team from the state of Wisconsin. The South-West region consisted of three teams from the states of Nebraska, Oklahoma, and Texas.

2. The Coaching Competency Scale (CCS) was the instrument used for the study (Myers et al., 2006a & 2006b). The CCS allows athletes to evaluate a coach's ability to develop character, implementation of game strategies, motivation, and technique competency.
3. Athletes' perceptions of head basketball coaches' competencies were identified strictly by the CCS.
4. Independent variables include: status of student-athlete concerning designation as starter or non-starter, team captain status of student-athlete, and academic level of student-athlete were used for the study.

Limitations of the Instrument

1. The term coaching behavior was used to be consistent with Horn (2002). However, let it be noted that no instrument can completely and accurately measure the competency of today's coach (Myers et al., 2006a & 2006b).

Significance of the Study

The significance of the study is that student-athletes' perceptions regarding coaching competency about the head men's basketball coach will now be an added factor in the evaluation process. With this information, the evaluator (athletic administrators) will better understand coaches' behaviors and personalities and their relationship with the student-athlete. The use of this information will enable coaches to better understand the

student-athletes and what they perceive regarding the head coach's competency. Upon request, the head basketball coaches that participated in this study will receive a report of the results indicating his competency level.

According to Leland (1988), coaches perform better and are more satisfied with quality feedback regarding their performance. Coaches should realize that student-athletes have the ability to discern intelligence, laziness, fairness, and honesty. Chelladurai, Haggerty, and Baxter (1989) noted that coaching effectiveness is largely dependent on the quality of decisions made and the degree to which these decisions are accepted. Leland (1988) argued that student-athletes who work in concert with the head men's basketball coach at least three or four hours a day and up to 10 months a year have a unique vantage point to analyze the qualities of a coach.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The review of literature focuses on three main areas: the dynamics of the coach-athlete relationship in the National Christian Collegiate Athletic Association (NCCAA), evaluation and its impact on the coaching profession, and the development and implementation of the Coaching Competency Scale (CCS) and how it relates to competency in NCCAA college basketball coaches. The dynamics of the coach-athlete relationship in the NCCAA consist of six categories. These categories include: the history of the NCCAA division II, the role of the coach, the coach as teacher, characteristics of an expert coach, characteristics of a competent coach and the coach-athlete relationship. Evaluation and its impact on the coaching profession consist of seven categories. These categories include: defining the coaching evaluation as a tool, the foundation of evaluating coaches in college athletics, review of the assessment process in the coaching profession, creating competitive advantages through evaluation, coaching evaluation instruments, Coaching Evaluation Questionnaire (CEQ), and the Coaching Behavior Questionnaire (CBQ). The development and implementation of the (CCS) and how it relates to competency in college basketball coaches consist of two categories. These categories include: the construction of the (CCS) and using Confirmatory Factor Analysis (CFA) and the development of the CCS.

The Dynamics of the Coach-Athlete Relationship in the NCCAA

History of the NCCAA Division II.

The NCCAA was founded in 1966 in Canton, Ohio to promote athletic competition with a Christian perspective (NCCAA Official Handbook, 2007). The mission statement of the NCCAA is,

The NCCAA is an association of Christ-centered collegiate institutions whose mission is to use athletic competition as an integral component of education, evangelism and encouragement. We serve our members by setting association standards, developing communication resources, providing regional/national competition and partnering in outreach to our communities and the world. We are committed to equipping student-athletes and coaches to make a positive impact for Christ (NCCAA Official Handbook, 2007, p. 3).

The first sport established by the NCCAA was men's basketball in 1968. At this time, the NCCAA held its first men's basketball tournament in Detroit, Michigan.

In 1973, the NCCAA created more arenas of competition by introducing other sports such as cross country, track and field, and men's soccer. After the introduction of other sports, Bible colleges, which had competed well against liberal arts colleges, submitted a plan to compete in a second division (NCCAA Official Handbook, 2007). In 1975, the NCCAA developed a Division II for Bible colleges (non-scholarship) to compete in men's basketball along with national competition in wrestling (NCCAA Official Handbook, 2007). With growth and success of the first Division II sports, other sports evolved such as women's basketball, men's and women's volleyball, softball, men's golf, women's soccer, men's and women's tennis, baseball, football, and indoor track and field (NCCAA Official Handbook, 2007). The NCCAA believes that, "athletes

are a means to an end, not an end in themselves, that the process is as important as the performance, and that the person (student-athlete) is more important than the program” (NCCAA Official Handbook, 2007, p. 3).

Today, the NCCAA is made up of 50 Division I schools and 49 Division II schools (NCCAA Official Handbook, 2007). Each division follows the same rules and regulations except for the awarding of athletic grants-in-aid and the requirement of 20 hours of Bible courses in the students’ degree program. NCCAA member institutions in the Division I level are only required to be four-year Christian liberal arts institutions with no requirement on the number of Bible courses taken (NCCAA Official Handbook, 2007). Conversely, NCCAA member institutions in the Division II level may not grant athletic scholarships to any student-athletes and may not grant any special financial aid or scholarships to student-athletes unless offered equally to other members of the student body (NCCAA Official Handbook, 2008). Likewise, NCCAA member institutions in the Division II level are required to be designated as Bible colleges or institutions that require every student enrolled to graduate with 20 hours of Bible credits (NCCAA Official Handbook, 2007).

The member institutions in this study consisted of six regions within the NCCAA. These included Central, South, West, Mid-East, Mid-West, and South-West respectively. The Central region consisted of one team from the state of Missouri. The South region consisted of two teams from the states of Florida and Georgia. The West region consisted of one team from the state of Arizona. The Mid-East region had the greatest representation, which consisted of seven teams from the states of Kentucky, Ohio, Tennessee, and West Virginia. The Mid-West region consisted of one team from the state

of Wisconsin. The South-West region consisted of three teams from the states of Nebraska, Oklahoma, and Texas.

Jubenville (1999) argued, “Developing evaluation instruments in the coaching profession is a major concern facing administrators in the small, liberal arts college setting” (p. 38). With limited budgets and strict institutional guidelines, it is crucial that the administrators of these colleges precisely explain what is expected of the coaches and their staff (Jubenville, 1999). In most small liberal art colleges, administrators, teachers, and coaches alike wear several different hats and are required to perform many different functions in a given day. This alone presents a challenge to the administrators to create an evaluation method and then to implement the procedure. At the NCCAA Division II level, most coaches are not evaluated and are not confronted about their coaching effectiveness until something goes wrong. To some coaches, this complacency causes confusion and frustration. There are some coaches who want to know what is expected of them and want to adopt practices of improving their performance. However, many coaches feel threatened by the thought of evaluation and perceive evaluation as a method to diminish job security (Jubenville, 1999). As discussed earlier, it is the job of the administrator to evaluate their coaches and to explain the evaluation process. Furthermore, it is the job of the administrator to help explain how effective this process can be and the valuable feedback that can be obtained from coaching evaluations (Jubenville, 1999).

The evaluation of the coach by the athletic administrator and athletes are imperative for the success of the NCCAA Division II athletic department. Docheff (1989) argued that effective coaching is an important ingredient of successful athletic programs.

Coaching evaluation can be used as an administrative tool to measure the effectiveness of coaching personnel and to bridge the gap between the program goals and the day-to-day performances of the coaches (MacLean & Zakrajsek, 1994). There is little doubt that evaluation is imperative and it must occur for development of both the coach and the athlete. However, Lanning (1979) argued that until coaches begin to address personality issues surrounding the coach, attrition will be a major hurdle that coaches will have to face. There is little doubt that the NCCAA member institutions at the Division II level suffer greatly from attrition. With institutional policies and rules that some schools require, attrition will affect the ability of the coach to perform his or her job. Other issues such as entrance requirements, student-athletes' working, and the amount of time required to teach an individual their coaching system, successful coaches must be aware of each individual's needs.

The Role of the Coach.

Many authors, including Paling (2002), Vargas-Tonsing, Myers, and Feltz (2004), Jubenville, Goss, Vought, and Davis (2002), and MacLean and Zakrajsek (1994), concluded that coaches take on numerous roles in their day-to-day profession. According to Williams et al. (2003), the coach is the most important person in determining the quality and the effectiveness of an athletic program. If this statement is true, then the roles that each coach plays are significant to the overall success of the team's performance. Paling (2002) stated that coaches are required to perform many roles that are unlike other professions. For example, coaches are asked to be teachers, organizers, motivators, leaders, and counselors. Bandura (1997) stated that coaches must exude self

confidence (e.g., modeling high efficacy themselves), be able to provide accurate feedback, and be able to verbally persuade their athletes.

According to Poskanzer (1989), the classification of a coach can be quite difficult to define. In some cases the coach is hired as a special educator to teach moral lessons of fair play and competition. Sometimes the coach is hired to win at all costs? Another difficulty is the coach deciding who to be totally loyal to, the athletes he recruited or to fellow coaches. This debate over the coach's role continues to be debated and until it is clearly articulated to the coach, staff, and student-athletes, problems with coach classification will exist.

Jubenville et al. (2002) discussed the coaches' roles and their relationship with communicating the institutional goals at the small-college level. The authors explained, "Coaches play a highly visible role both in recruiting athletes and enhancing the public images of collegiate institutions. Consequently, they must diligently seek to effectively communicate the missions of the institutions to prospective student-athletes" (p. 16). During the recruiting sessions with student-athletes, coaches must recognize the goals of the prospective student-athletes to assess whether or not their goals are congruent with the goals of the institution. If both the student-athletes' goals and institutions' goals match, then all parties involved can benefit from the experience (Jubenville et al., 2002).

Rushall (1979) explained a coach's role this way: "The coach should be an engineer who designs and builds system components which teach sport and social skills, develop coping and adjustment capacities, stimulate a philosophy of sporting participation, and provide the opportunity for individuals to maximize the development of

their endowed capacities and needs” (p. 164). Doug Karnes, men’s head basketball coach at Johnson Bible College summed up his role,

Probably the one most important factor concerning my effectiveness as a coach is the care I express for the athletes here at this college. When I show concern and share advice with the student-athletes about their future and other issues they are having, they respond in a great way (D. Karnes, personal communication, October 20, 2006).

Coach Mark Harden, men’s head basketball coach at Cincinnati Christian University stated,

All of my players will go professional, but it most likely will not be as a basketball player. My job is to use basketball to teach them to be successful businessman, teachers, and preachers and to be godly men. I truly relish the fact that as a college coach we get much closer to our players than high school coaches and get to impact them when they are making some of the most important decisions in their lives. Basketball as a game and a season as a journey give us so many chances to prepare them for life after school. (M. Harden, personal communication, August 13, 2007).

Lastly, Coach Dwayne Hickman, men’s head basketball at Crown College said,

“Coaching, as is most effective teaching, is about influence. The opportunity to influence student-athletes is the most rewarding aspect of coaching at this level” (D. Hickman, personal communication, August 16, 2007).

Obviously a head coach in today’s athletic realm must be an individual who can perform many roles. What is unique about today’s coaches is that they are able to perform these duties and still have the ability to mentor, teach, and ultimately coach.

Coach as Teacher.

According to Chelladurai, Kuga, and O'Bryant (1999), organizations face issues concerning employee's involvement in more than one work role. This is a definite problem faced by high schools, colleges, and universities. The primary issue of the problem lies with the way in which the teacher-coach perceives and implements the dual role (Figone, 1994). Some may say that teaching is coaching and coaching is teaching. Research suggested that teaching and coaching are two distinct occupations (Figone, 1994). However, these two occupations are almost always linked together because of the dual role associated between the two (Chelladurai, Kuga, & O'Bryant, 1999). DeMarco and McCullick (1997) also suggested that expert coaching characteristics tend to relate with elements of effective teaching. Teachers must possess extensive and specialized knowledge which they obtain from their vast and diverse experience from their subject matter and their students (DeMarco and McCullick, 1997). Paling (2002) clearly discussed how both professions are similar. Coaching and teaching sessions are both preplanned and instruction is based on current and up-to-date material, all participants are involved, and knowledge is taught by using repetition of skills (Paling, 2002). The participants involved should be evaluated and should be able to demonstrate a mastery of knowledge learned (Paling, 2002). Teachers and coaches must have the ability to evaluate a students' progress and implement lesson plans according to their ability. They must be highly perceptive and superior problem solvers, must have the ability to know what is going on in the classroom at all times, and display "withitness" (DeMarco and McCullick, 1997).

When given an opportunity to focus on one role, evidence clearly shows that teacher-coaches tend to focus more attention on the coaching role (Figone, 1994). This is an important finding considering the environment for most NCCAA Division II basketball coaches. In most cases at this level, coaches will take on both roles as teacher and coach. Furthermore, some coaches could be heads of departments and advise students as well. Therefore, a balance must be obtained between teaching and coaching, and evaluation of these roles must be separated in the best interest of the employee (Jubenville, 1999).

Several authors have made suggestions regarding this dual role between the teacher and coach. One such author, Stier (1987), suggested that coaches be given the opportunity to become tenured as faculty members. Such an opportunity would allow coaches to obtain more job security in their positions (Stier, 1987). However, the negative aspect to being tenured is that some coaches would possibly be less inclined to perform their jobs effectively knowing they have reached tenure status. If the suggestion by Stier (1987) is accurate, then the question remains whether or not coaching is teaching. It has been stated previously that effective coaches are ultimately effective teachers (Paling, 2002 & Poskanzer, 1989). Martin, Arena, Rosencrans, Hunter, and Holly (1986) argued, "If the mission of an educational institution is to develop the "whole" person, intellectually, socially, and physically, then athletics can clearly contribute to the achievement of this end" (p. 49). If this statement is true then it could be said that coaches should be evaluated by the same criteria that are used to evaluate instructors.

Martin et al. (1986) further explained that sport pedagogy and coaching hold similar traits and that a coach with minimal or no teaching experience should be evaluated for tenure and promotion. The authors stated that tenure and promotion should be based on standard faculty criteria of scholarly and professional research, institutional teaching, and community service involvement. In their research, they list several ways in which the criteria for teaching can be transferred over into the coaching realm. One comparison was the evaluation of scholarly and creative performance could be equated with publishing articles for coaching publications, speaking at forums or athletic events pertaining to the discipline, and conducting clinics and workshops for prospective coaches (Martin et al., 1986). Other examples cited were involvement in associations pertaining to the coach's field such as the American Basketball Coaches Association (ABCA), the NCCAA, and others. The comparisons of evaluating coaching to the evaluation of teaching and advising included; communicating to student-athletes an enthusiasm for personal development, remaining current in his or her field, and developing clear instructional goals, to name just a few (Martin et al., 1986).

Coaches' involvement in the community through community service projects were also mentioned as a vital function of a college coach (Martin et al., 1986). Community service is an ideal shared by the NCCAA, "We serve our members by setting association standards, developing communication resources, providing regional/national competition and partnering in outreach to our communities and the world" (NCCAA Official Handbook, 2007). Ideas such as conducting clinics to local kids, organizing summer camps, and holding professional offices in local organizations can provide valuable services and instruction to the community. Clearly it can be seen that criteria

used to evaluate faculty teaching can be used to evaluate coaches in the NCCAA Division II setting. As the debate continues between evaluation criteria, coaches and administrators must decide on a common evaluation tool to help solidify the dual role conflict between the teacher-coach and to help determine the purpose of their programs.

Characteristics of an Expert Coach.

Research by DeMarco and McCullick (1997) determined that there are characteristics that define expert coaches. The authors' main objectives were to investigate characteristics that were common in legendary and successful coaches and then examine the role played by the coach. According to the authors there are five major characteristics that define expertise in coaching.

The first characteristic of an expert coach is that they possess extensive, specialized knowledge (DeMarco & McCullick, 1997). This extensive and specialized knowledge is obtained by the many years of experience and information they have received from their sport and from their athletes. For example, John Wooden was a standout basketball player in Indiana. After graduating from high school he attended Purdue University receiving a degree in education. He then matriculated to Kentucky where he taught and coached and then later moved back to Indiana to teach and coach. Coach Wooden was then hired by UCLA where he became the legendary coach he is today. The knowledge Coach Wooden handed down at UCLA was well formulated in his early years as a high school teacher and coach, which can be attributed to experience being critical to Wooden's success.

One of the most widely listed traits of competent coaches was possessing technical skills and knowledge (Hattlestad, 1984). A competent coach was recognized as

someone who could demonstrate a thorough knowledge of the sport (Kuga, 1993). Paling (2002) best describes this uncanny ability of the coach, “The goal of a superior coach is to facilitate a mastery of essential information so that the players can go out and do their jobs” (p. 53-54).

The second characteristic that expert coaches possess is that they organize knowledge hierarchically. DeMarco and McCullick (1997) stated, “In their long-term memory, expert coaches possess the ability to store and organize knowledge about their sport and athletes as learned in patterns or schemata” (p. 38). In other words, expert coaches have the ability to evaluate their athletes’ ability and place them into situations where they will be able to best perform. The Coaches Evaluation Instrument (CEI) created by Docheff (1989) also measured the ability of the coach to analyze and correct skills appropriately. MacLean and Chelladurai (1995) refer to this characteristic as direct task behavior. In other words, a coach should possess the ability to apply strategies and tactics to enhance the play of both the individual and the team.

The third characteristic of expert coaches is that they are highly perceptive and are superior problem solvers. Coaches have the uncanny ability to process quickly what they see in front of them and at the same time instruct orders to their players. Coaches that are highly perceptive will be able to notice problems as they arise and then quickly plan, diagnose, and implement the next order of business. DeMarco and McCullick (1997) also described how coaches with this trait have the ability to instruct greater amounts of knowledge and provide greater feedback to their players. One point that Paling (2002) highlighted that is critical in this dimension is whether or not the coach has the ability to substitute the proper personnel at the appropriate time and whether

adjustments are being made to neutralize the opponent's strengths. The fourth characteristic of expert coaches is that they exhibit automaticity during analysis and instruction. Since these coaches have so many years of experience, they find that their duties and responsibilities become routine and automatic. The importance of this trait is that the athletes can come to know what to expect and can in turn have routines as well. The concept of automaticity allows for information to be presented in a more succinct time frame during practice, time-outs, and half-time lectures. Paling (2002) describes this as being organized. The key here is that everything needs to be accounted for and that tasks are delegated properly and efficiently (Paling, 2002).

The fifth characteristic of expert coaches is that they have developed self-monitoring skills. In addition to their years of experience, expert coaches tend to evaluate and analyze their performances. Driven by the desire to be successful and to help instruct their athletes, coaches will watch film of their performances, analyze practice schedules, and maintain written records of every aspect of their job. For example, John Wooden would often make notes to himself to avoid certain situations or to remind him of specific instructions (DeMarco and McCullick, 1997).

Although DeMarco and McCullick (1997) discussed only these five characteristics, there are common coaching competencies that appear in much of the literature surrounding the instruments and the systematic evaluation of coaches. Hattestad (1984) classified these common characteristics into four categories. These four categories are teaching technical skills and knowledge, administrative skills, compliance with rules and regulations, and the ability to maintain proper public and personal relations (Hattestad, 1984 & Saunders, 1985).

Characteristics of a Competent Coach.

Various authors have defined characteristics of competent coaches. For example, Kuga (1993) surveyed both coaches and student-athletes to determine how both characterized a competent coach. MacLean and Chelladurai (1995) and MacLean and Zakrajsek (1994) proposed a six dimension model to evaluate coaching competency. Authors also developed instruments to help measure the most important characteristics and competencies of coaches (Alexander, 1985; Boyce 1993; Eckman, 1984; Hattlestad 1984; Johnson, 1987; MacLean & Zakrajsek, 1994; and Margolis, 1979).

Myers et al. (2006a) stated that there were three competency domains that were in the National Standards for Athletic Coaches (National Association for Sport and Physical Education, 1995) but were left out of the Coaching Behavior Questionnaire. Myers et al. (2006a) designed The Coaching Competency Scale (CCS) based upon these competencies. These competencies were listed as “(a) growth, development and learning of athletes, (b) psychological aspects of coaching, and (c) skills, tactics, and strategies” (Myers et al., 2006a, p. 452). Competency is defined by Myers et al. (2006a) as, “athletes evaluations of their head coach’s ability to affect athletes’ learning and performance” (p. 452). The specific competencies measured by the CCS included: character building competency (CBC), game strategy competency (GSC), motivation competency (MC), and technique competency (TC). The ability of a coach to affect athletes’ psychological mood and skills, to lead during competition, to instruct and diagnose athletes’ abilities, and to influence athletes’ personal development and positive attitude toward sport identified the characteristics necessary to be a competent coach.

The Coach-Athlete Relationship.

The coaches' behaviors, attitudes, and communication skills strongly influence the sport experience in athletes according to Bortoli, Robazza, and Giabardo (1995). The authors also stated, "A good coach-athlete interaction tends to enhance motivation, induce pleasant emotions, and create satisfactory and positive climate" (p. 1217). These statements are especially true at the National Christian Collegiate Athletic Association (NCCAA) Division II level where the coaches play a significant role in the student-athletes' life on and off the court. At this level, coaches are not only coaches, but in most cases, also professors in class and advisors out of class. Officer and Rosenfeld (1985) postulated that this coach-athlete relationship is very unique in that the coach is part teacher, part friend, part counselor, and part parent while the athlete plays the roles of student, friend, client, and offspring. The ability of the coach and the athlete to effectively communicate in these varied roles is critical in the relationship between these two parties. Another unique aspect of the relationship between the student-athlete and the coach is the student-athlete acceptance of the decisions that are made by the coach. This idea was best explained by Chelladurai, Haggerty, and Baxter (1989) who stated, "Coaching effectiveness is largely dependent on the quality of the decisions made and the degree to which these decisions are accepted by the athletes" (p. 201).

It is important that the coach emphasizes the goals of the institution during recruiting visits. The understanding of these goals by both parties could help strengthen compatibility issues between the coach and athlete and could strengthen overall player satisfaction. The inability to state the institutional goals could lead to player frustration and a loss of self-confidence in the athlete. In an article by Kenow and Williams (1999),

the authors stated, “If the athletes’ goals, personalities, and beliefs are consistent with those of their coach, the interaction of the individuals will likely be satisfactory to both parties producing a positive interpersonal atmosphere. Conversely, if the athlete is incompatible with the coach (i.e., the athlete’s goals, personalities, and beliefs are inconsistent with those of the coach), certain psychological needs for the athlete may not be met” (p. 257).

The athlete’s performance is another area in which the coach-athlete relationship plays a crucial role. Slepicka (1975) argued that the coach-athlete relationship plays a significant role in determining the success or failure of an athlete. Rosenfeild, Richman, and Hardy (1989) also stated that the self-esteem of an athlete was closely related to the performance of that athlete. Nevertheless, to maximize the performance of an athlete and a team, the coach must know what motivates his players, how they learn, and how each player handles discipline (Rosenfeild, Richman, & Hardy, 1989).

Lanning (1979) stated that an athletic program is a reflection of the personality of the coach. If this is true, then it is important that the coach understands that each player will relate and react differently to the coach’s personality. This is a response to not only the personality of the coach but the personality of the player as well. Salminen and Luikkonen (1996) contended that coaches who demonstrated a caring attitude and valued their players’ opinions were more likely to be perceived as effective coaches. Failure to consider the effect of the coach’s personality on the student-athletes is a failure to maximize the athlete’s ability to perform to their highest level (Lanning, 1979). Conversely, Anshel and Straub (1991) had athletes list negative factors or characteristics

of 81 football coaches. The major critique related to coaches' personalities was a lack of caring and coaches' inability to provide for individualized treatment of athletes.

Effective communication is also important in building a strong relationship between the coach and athlete. There is nothing more important than a coach putting emotions into words and delivering them at the right time with the right emphasis (Alexander, 1985). The relationship of the coach-athlete should be viewed as both parties working together to attain the same outcome. Weiss and Frederichs (1986) suggested that the coach is not the only one responsible for the communication process. The athlete must continually provide feedback to the coach concerning his opinions to build better communication. Research has found that encouraging positive self-talk, modeling confidence themselves, and using reward statements can be the most effective process in building efficacy beliefs in athletes (Vargas-Tonsing et al., 2004). Communication between the coach and athlete allows for better understanding by the athlete and belief in ability. Effective communication promotes common goals and ideas which allows for an atmosphere of clarity and order (Paling, 2002). Communication of goals and expectations will also instill a sense of purpose in players (Paling, 2002). However, according to Hoehn (1983), if the communication process breaks down, the athlete could lose interest and eventually discontinue his or her participation in the sport.

Perceptions of athletes regarding the coach have had lasting effects on almost every aspect of sport. Straub (1975) argued that the key to building team unity at any level was the positive relationship between the coach and the athlete. Carron (1982) stated that the coach who genuinely knows his athletes can provide the appropriate feedback that can lead to improved team morale. Leggett (1983) argued that coaches

who provide feedback concerning athletes' emotional needs improves the relationship with their athletes. Finally, Horne and Carron (1985) stated that athletes' perceptions of a coach were more important to the athlete than coaching behaviors alone.

The coach-athlete relationship is unquestionably one of the most important factor in a coach's ability to construct a successful player and team. However, it has also been proven that the relationship of the coach-athlete has influenced the small college-athlete in determining his or her institutional choice. Gabert, Hale, and Montalavo (1999) surveyed 246 freshmen student-athletes in an attempt to discover patterns that existed in the college choice process. Gabert et al. (1999) discovered that five of the ten characteristics were athletic related factors. Of the five factors, student-athletes identified the head coach relationship as one of the top three factors in making their decision to attend a specific college. Fielitz (2001) conducted a study of student college choice factors for student-athletes and non-athletes at the United States Military Academy (USMA). Fielitz discovered that athletes rated excellent teachers, playing for a NCAA Division I program, parental influence, college coach and coaching staff, and academic reputation as factors in their college choice. Other research also exists where student-athletes attribute their college choice based on their relationship with their coach or coaching staff (Mathes & Gurney, 1985; College Football Association, 1981; Doyle & Gaeth, 1990; and Klenosky, Templin, & Troutman, 2001).

If coaches use an instrument to measure the perceptions of athletes, improved overall performance and coaching effectiveness could occur. The coach will benefit in several ways by assessing the athletes' perceptions of the abilities and other characteristics of the coach. First, this evaluation will allow the coach to recognize

strengths and weaknesses. Second, it will allow the coach to better improve teaching style(s) which could help improve coaching effectiveness. Third, it will allow the coach to better understand athletes and their personalities, attitudes, and opinions. Fourth, this evaluation tool will enable the coach to construct an overall plan and strategy of progressing to become a more effective coach.

Evaluation and its Impact on the Coaching Profession

Defining Coaching Evaluation as a Tool.

Because it is believed that student-athletes play a vital role in coaching effectiveness, the evaluation of coaching competency by student-athletes is important to further develop coaching effectiveness models (Myers et al., 2006a & 2006b). It was also proposed that coaching effectiveness was best understood by the use of student-athletes' evaluation and recall (Smoll & Smith, 1989). As mentioned earlier, it is clear that research concludes the importance of evaluating coaching competency.

In an article by Kuga (1994), several criteria were discussed concerning coaching evaluations and why and how they should be conducted. Kuga (1994) first explained that coaches should realize how important and how effective these evaluations can be for their performance. As Pastore, Goldfine, and Riemer (1996) stated, most coaches do understand and appreciate the importance of such an evaluation. For coaches to realize the importance of the evaluation they must not feel threatened by the evaluation but perceive the process as something that can be used as a tool to better equip them in their coaching duties (Rushall & Wiznuk, 1985). Once the importance is understood, it is imperative that the evaluation process be continuous, flexible, and adaptable, and should include collaboration by both the coach and evaluatee. Finally, the school system must

know what they expect out of their coaches and must clearly communicate those expectations to their coaches (Kuga, 1994).

It is also important that the school system or administration properly define the evaluation tool that will be used to measure coaching effectiveness (Wilson, 2000). To do so, the administrators must construct a framework which will outline a possible course of action or preferred approach to how they want their coaches to be evaluated. Not only is it important to define the criteria, but it is also important to provide resources necessary for them to meet the criteria and be successful in attaining them (Barber & Eckrich, 1998). According to Kuga (1994), administrators are capable of asking five general questions in formulating their framework for evaluation.

The first question administrators must ask is why the procedure is being established (Kuga, 1994 and MacLean & Zakrajsek, 1994). In most cases, this procedure is established to help coaches develop and improve their coaching performances (Kuga, 1994). In other words, evaluations allow coaches to determine their strengths and needed improvements and allow them to improve before the next performance. Once a criterion is set then coaches can strive to meet the criteria and attempt to enhance overall performance and professional growth. Establishing a criterion is also very important in the evaluation process (Hattlestad, 1984; Kuga, 1994; MacLean & Chelladurai, 1995; and MacLean & Zakrajsek, 1994). In cooperation with the administration, coaches can determine a set of criteria in which they want to improve or the administration feels is worthy of evaluation. That is why the collaboration process between the administration and the coaches is important (Kuga, 1994 and MacLean & Zakrajsek, 1994).

Administrators set priorities for the program and coaches attempt to improve on areas that need improvement.

The second question pertains to gathering information to assist with decision making and change areas such as salary, promotion, tenure and termination (Kuga, 1994). This part of the evaluation process is usually an area in which coaches are most uncomfortable (Kuga, 1994). However, if the process is fair, consistent, and the coach understands how he or she is being evaluated, the coach should feel comfortable with this procedure (Kuga, 1994).

The third question involves knowing who will be conducting the evaluation and who will have access to the results (Kuga, 1994). Generally, the athletic director or school administrators conduct coaching evaluations (Kuga, 1993; Kuga, 1994; Saunders, 1985; and Solomon, 1999). However, it is important to involve other sources to make the process a broad and comprehensive profile of the coach's ability (Margolis, 1979). In fact, a Professional Development Plan (PDP) is constructed by the individual being evaluated (Wilson, 2000). With the PDP, the individual being evaluated is required to submit goals and objectives which fall in line with the college (Wilson, 2000). Coaches could perform self-evaluations or be evaluated by administrators (mentioned above), peers, student-athletes, or coaches from different sports. MacLean and Zakrajsek (1994) also stated that research supported the one being involved in the evaluation process. If the administrator and coach determine the goal of the evaluation is to improve coaching effectiveness, the student-athlete must have an opportunity to evaluate the coach (Docheff, 1989; Kenow and Williams, 1999; Kuga, 1993; Kuga, 1994; Margolis, 1979; Myers et al., 2006a & 2006b; Rushall and Wiznuk, 1985; Solomon, 1999; Solomon,

DiMarco, Ohlson, and Reece, 1998; Vargas-Tonsing et al., 2004; and Wann, Metcalf, Brewer, and Whiteside, 2000). Myers et al. (2006b) clearly supports this supposition: “the influence of a coach’s behavior on athletes’ self-perceptions, motivation, and performances is mediated, at least in part, by athletes’ evaluations of their coach’s behavior” (p. 112). The results show that coaches believe student-athletes should evaluate a coach’s performance because the student-athlete is the one with the most direct day-to-day contact with the coach (Kuga, 1994). Hence, if a coach does not understand a particular player’s needs or lacks in effective discipline, problems could arise between the coaches and players (Kuga, 1994). If the coach fails to display knowledge of the game then the athletes may not view the coach as credible and may not value his or her opinion (Kuga, 1993 and Kuga, 1994). It must be stated that student-athletes should only evaluate those day-to-day activities they witness a coach perform (Kuga, 1994). For example, student-athletes would be aware of practice organization, discipline, player/coach communication, knowledge of game, and ability to teach considering they are with the coach on a regular basis (Kuga, 1993). However, administrative duties and public relations activities would not be a part of the student-athlete evaluation (Kuga, 1994).

Coaches can also perform self-evaluations on their performance (Kuga, 1994 and MacLean & Zakrajsek, 1994). Coaches generally know better than anyone if they are meeting their objectives and are teaching appropriately (Kuga, 1993 and Kuga, 1994). Again, these evaluations will help provide feedback for the coach to better understand his or her effectiveness with the program.

The fourth question in evaluation is when the evaluation will take place (Kuga, 1994 and MacLean & Kakkrajsek, 1994). The administrators and coaches should determine what they want to gain from the evaluation (Kuga, 1994 and Saunders, 1985). For example, if the goal is to gauge a performance standard throughout the entire season, then a pre-evaluation at the beginning and one at the end of the season would be appropriate (Kuga, 1994). Other coaches could prefer to be evaluated periodically throughout the season to help them make improvements quickly and at important times in the season. Some administrators will choose to evaluate more often with novice or first-year coaches while the more experienced coaches may be evaluated every two or three years. Kuga goes further to state that some coaches could prefer to be evaluated in the off-season. This evaluation may be more objective due to a less heightened emotional state of the coach.

The fifth and final question is how the evaluation process will work. It is important to remember in the evaluation process that it should be the goal of everyone involved to look at the entire season performance of the coach (Kuga, 1994). In most cases, the win/loss record tends to be the measuring stick (Kuga, 1994; Margolis, 1979; and MacLean & Zakrajsek, 1994). If there is going to be trust built between the administrators and coaches, there should be a more thorough investigation of what the coach does in all aspects of the job. Administrators would review practice sessions, game performances, congruency of media and public relations, and overall relationships with the student-athlete (Kuga, 1994). The coach should be given the opportunity to highlight season accomplishments and provide evidence of scholarly participation in clinics and involvement in community service projects. Both parties should discuss and analyze the

results obtained from the student-athletes, peers, administrators, and other sources to help build the trust that is so important in the evaluation process (Kuga, 1994; MacLean & Zakrajsek, 1994; Margolis, 1979; Saunders, 1985; and Wilson, 2000).

The evaluation process is an integral part of the overall effectiveness of the coach and his or her relationship to the athletic organization (Alexander, 1985; Docheff, 1989; Kuga, 1993, Kuga, 1994, MacLean & Zakrajsek, 1994; Saunders, 1985; Solomon, 1999; and Wilson, 2000). Each of these five areas discussed could be equally important in the evaluation framework. It is up to both administrators and coaches to determine what are the most important criteria in evaluating coaches that is pertinent to their goals and objectives (Kuga, 1994). Once this task has been completed then administrators should focus on what evaluation tool will be implemented to best meet these goals and objectives (Kuga, 1994). It must then be determined who will evaluate the coach and who best can objectively determine his or her effectiveness (Kuga, 1994). Also, it must be decided when the appropriate time for the evaluation to take place and to examine the entire season in the overall effectiveness of the coach (Kuga, 1994).

The Foundation of Evaluating Coaches in College Athletics.

Over the past 35 years, research and investigation of coaching behaviors have become increasingly routine and are steadily gaining favor in the eyes of the athletic arena (Jubenville, 1999). Percival (1971) was one of the first to investigate sport leadership behaviors in coaches. Percival (1971) collected data on 66 coaches concerning their professional behavior and its relationship with coaching. Tharp and Gallimore (1976) were one of the first to use a systematic observation method in analyzing and evaluating coaches' behavior. Tharp and Gallimore (1976) constructed a 10-category

system for systematic observation in a teaching/coaching setting (Lacy and Darst, 1985). This system was first devised for observing legendary UCLA men's basketball coach John Wooden. Since the work by Tharp and Gallimore (1976), several observation systems have been employed to observe coaches and their behaviors. Williams (1978) constructed a modified version of Tharp and Gallimore's instrument to observe successful high school head basketball coaches. Langsdorf (1979) also used an instrument from Tharp and Gallimore (1976) to objectively observe Frank Kush, head football coach at Arizona State University. Lacy and Darst (1985) used a systematic observation system to analyze the teaching and coaching behaviors of winning high school head football coaches. These systematic observation systems first employed by Tharp and Gallimore (1976) helped institute an era of change in the evaluation process in coaching.

These objective measures have lead to a more comprehensive understanding of how evaluation processes should be constructed. These measures have created a new generation where researchers have developed tools or criteria commonly referred to as evaluative instruments (Jubenville, 1999). Jubenville (1999) stated that, "These instruments have given coaches the opportunity to specify their focus and, in some cases, put the responsibility of evaluation in their own hands. This evolution has given college coaches a vehicle that will allow them to immediately improve their coaching effectiveness" (p. 27).

Review of the Assessment Process in the Coaching Profession.

Assessment was deemed important by Radford, Schincariol, and Hughes (1995), who stated that assessment should be used to set goals, to find out whether the goals have

been met, to use the results as a basis for awards, and to assist the evaluatee in becoming more effective in his job roles. Evaluating employees is a significant process that enables companies to monitor subordinates' performances, keep track of their subordinates' progress, provide insights into their career goals, and most importantly, help pinpoint certain strengths and weaknesses of the employees. Wilson (2000) argued that a valid evaluation method must be put in place to better serve the students and the institution.

Understanding the language and characteristics of evaluation is crucial in the development of this systematic process. Several attempts have been made to address the entire scope of evaluation in the coaching realm (Hattlestad, 1984; Hutter, 1979; Rabinoff, 1978; Saunders, 1985; and Tharp & Gallimore, 1976).

Hutter (1979) suggested that accountability in the athletic realm has many sides and is simply not continuous. He argued that athletic directors must measure the external factors of athletics, such as the fans, the media and the general public. He also stated that the internal factors, such as implementing the mission through both the college employees and students, must be evaluated as well.

Rabinoff (1978) depicted a model in which the athletic director was the middle-man between the college staff below and the college-board above. Rabinoff (1978) implied the different levels of accountability in athletics and their co-reliance upon one another.

Hattlestad (1984) stated that some administrators believe that a systematic process of evaluation would lead to coaches leaving their profession. Hattlestad enforced the idea of just the opposite. He believed that effective coaches would learn from evaluation and would have a greater feeling of security during losing seasons.

Saunders (1985) postulated that athletic administrators do many things well, but one thing that has not been done well is evaluation of coaches. Saunders (1985) pointed to the fact that decisions about retention and the awarding of merit increases must be defensible in terms which are similar to the procedures of other departments within the universities. Not only would this evaluation procedure help with administrative decisions, it would be very helpful to the coaches as well.

In the assessment procedures, subordinates must clearly understand what is expected of them (Radford, Schincariol, & Hughes, 1995). Kuga (1994) stated, "Coaches should know exactly what criteria the coaching evaluation will include. More importantly perhaps, coaches should be permitted to discuss concerns and make suggestions for the evaluation instrument" (p. 21). The problem occurs when coaches are expected to meet criteria or expectations of the administrators that are unknown and possibly unattainable. Barber and Eckrich (1998) argue along with Leland (1988) that coaches have little knowledge regarding the process or criteria for which they are being evaluated. As mentioned earlier by Radford et al. (1995) and Kuga (1994), it is important for coaches to understand what is expected of their performances. Furthermore, precisely knowing what is expected allows coaches to perform their jobs more effectively. It allows coaches to compare their performances to a preset standard; to control what they need to improve; to receive boosts in motivation, effort, self-esteem, and performance; and to deal more effectively with administrators and fellow staff members (Herman, Aschbacher, & Winters, 1992).

Once coaches understand expectations and requirements, they tend to become more comfortable with the evaluation process. Coaches usually will shift their concerns

from themselves to the student-athletes and their role in the evaluation process. Kuga (1994) stated that coaches believe student-athletes should have the opportunity to evaluate coaches due to the direct day-to-day contact. In addition, Pastore, Goldfine, and Riemer (1996) identified that coaches do understand the importance of evaluation and the degree it plays in developing a positive coaching environment. Cashin (1988) stated, when assessing teaching performance, “student ratings tend to be statistically reliable, valid, and relatively free from bias, probably more so than any other data used for faculty evaluation” (p. 4). Under these circumstances, coaches should realize the importance of further study of athletes’ perceptions concerning their performance and coaching effectiveness.

Creating Competitive Advantages Through Evaluation.

MacLean and Chelladurai (1995) stated, “The focus on evaluating performance to enhance productivity is not unique to the business world. A variety of other organizations, including nonprofit agencies, endeavor to produce or provide outstanding products through people” (p. 195). If this statement is true, why have athletic organizations been slow to adopt these same policies? In relation to the above statement, MacLean and Chelladurai stated that athletic departments are organizations that try to produce and provide outstanding products through people. These people include athletic administrators, coaches, and support personnel, with coaches being the most important contributors to overall effectiveness (MacLean & Chelladurai, 1995). Williams et al. (2003) argued, “The coach is the most important person in determining the quality and success of an athlete’s sport experience, yet surprisingly, little research exists that identifies optimal coaching behaviors and factors that influence the effectiveness of

particular behaviors” (p. 16). If the coach is the most important person in the overall effectiveness of the athletic organization, then evaluating the coach could ultimately lead to an even greater overall effectiveness. Therefore, it is clear that a fair implementation of an evaluation process of the coach should be administered in all athletic organizations.

With the growing number of responsibilities that are placed on coaches and the importance of these tasks to administrators, it is highly important to determine a method of evaluating coaching success. When evaluation was first implemented in the 1970s at the collegiate level, there was not a strong desire from within the college community, nor was the process of evaluation given much credibility and how it could benefit the college employee (coach) (Elliot and Ryan, 1984). However, with so many pressures placed on the college coach, administrators realized that coaches needed an instrument to help them evaluate their effectiveness. For example, coaches are often being sent mixed messages regarding their employment status and the criteria for success.

With the increase in media coverage through television, radio, newspaper, and the Internet, greater sports awareness has allowed the public to inquire more about the coach and his or her responsibilities. As the responsibilities have increased, coupled with the Entertainment and Sports Programming Network (ESPN) devoting itself to sports coverage, as well as numerous regional sports programming, coaches have been placed under constant scrutiny.

Along with the growth and increased popularity of sport, analysis of coaching behaviors has also increased since the 1970s. Tharp and Gallimore (1976) were the first to report observational data on coaching behaviors. Since the 1970s, the process of systematically observing and coding coaching behavior has evolved into the development

of several specifically designed systems (Darst, Zakrajsek, and Mancini, 1989).

Alexander (1985) argued that the evaluation process is a learning situation that is used solely for improvement purposes and not as a threatening tool. MacLean and Zakrajsek (1994) postulated that athletic organizations were no different than any other companies in their need for employee performance evaluations. MacLean and Zakrajsek (1994) went on to say that since coaches are important contributors to the overall effectiveness of the organization, it is only logical that formal performance evaluation should be required of all coaches. Recently, authors Myers et al. (2006b) stated, “Because athletes’ perceptions and evaluations of coaches’ behaviors are believed to play a critical role in coaching effectiveness, a tool to assess athletes’ evaluations of key coaching competencies is important to the continued improvement of coaching and further development of coaching effectiveness models” (p. 111). The effectiveness of such an evaluation of coaching performance is best illustrated by a study conducted by Kuga (1993).

In this study, Kuga (1993) formed a sample of 50 coaches and 69 athletes who responded to a questionnaire designed to elicit perceptions of the evaluation of coaching performance. The coaches and athletes who responded to the questionnaire participated in men’s basketball and baseball and women’s basketball and softball respectively. It was also made known that a majority (76%) of the players was considered “starters” or “first string players.” The results of the study discovered many important characteristics about athletes and coaching. First, both coaches and athletes believed that coaches should be evaluated and that evaluation would enhance coaching effectiveness (Kuga, 1993). Second, a majority of the respondents agreed that athletes should have opportunities to

evaluate coaches and the coaching staff. With regard to the knowledge and skills characteristic, coaches' and athletes' perceptions were similar. For example, both coaches and athletes believed that "knowledge of the sport" was highly important. Other areas of agreement were "abilities to conduct an appropriate fitness and conditioning program" and "knowledgeable concerning prevention and care of athletic injuries." The perceptual differences between the coaches and athletes were that coaches believed that "personal appearance," "conducting themselves in a professional manner," and "organizing safe and effective practices" were more important than the perceptions of the athletes. Although the athletes decided that certain characteristics were important in coaches, their level of importance was not as high as the coaches. Therefore, based on the results, providing student-athletes with opportunities for evaluating coaching performance should be considered. Athletes seemed to recognize the value of coaching evaluations and are capable of identifying important coaching characteristics that are important to coach's performance (Kuga, 1993).

Coaching Evaluation Instruments.

Evaluators should include several criteria in evaluating a coaching staff. Administrators should evaluate coaching behaviors, communication, and athlete feedback just to name a few. Although every aspect of the evaluation is important, it is imperative that coaches be evaluated on specific areas that best relate to their coaching duties. Therefore, to effectively evaluate coaches, it is crucial that specific coaching criteria be established to help serve both the coach and the school (Jubenville, 1999).

Establishing an evaluative process is critical for both parties involved. Administrators send a message that high quality performance and expectations should be

upheld. The evaluative process allows coaches the opportunity to recognize strengths and weaknesses by documenting the growth and development of their coaching effectiveness. The following paragraphs contain several evaluative tools that are being used today to evaluate coaches and their behavior.

One of the first evaluation forms to be used was the Coaching Behavior Assessment System (CBAS). The CBAS was first used to evaluate coaching behavior in soccer coaches (Smith, Smoll, & Hunt, 1977). The observers carried portable tape recorders and performed a play-by-play analysis of the coach's behaviors and attitudes. The evaluation consisted of 12 behavioral categories broken up into two separate response categories. Those categories were reactive behaviors (desirable performances, mistakes/errors, and misbehaviors) and spontaneous behaviors (game related and game irrelevant).

Another evaluation form was created by Carol Eckman in 1984. The Eckman Evaluation Instrument (EEI) (Eckman, 1984) was a 42-item comprehensive questionnaire that focused on certain criteria such as personal and professional attributes, administrative duties, theory and coaching techniques, personnel management, and public relations skills.

The Alexander Coach Evaluation (Alexander, 1985) was an evaluation that was similar to the EEI. However, the main difference was that the Alexander evaluation focused on the perception of the athlete instead of the administrator or peer. Alexander (1985) argued that the athlete would have the greater ability to best analyze coaching behaviors and that he should be a part of the evaluation procedure. The evaluation

instrument focused on areas such as public relations, sport-specific knowledge, administrative duties, athlete character issues, and relationship building.

The Coaches Evaluation Instrument (CEI) was created by Phillips, Docheff, Dolch, and Lewis (Docheff, 1989). The CEI focuses on six performance categories of five items each and one item that relates to overall effectiveness. Docheff (1989) intended for this tool to be used by administrators to evaluate coaches, coaches to evaluate assistant coaches, and most importantly, for athletes to assess their coaches performance. According to Docheff (1989), since the athletes are the ones who attend every meeting, practice, and contest, they should be a part of the evaluation process. Some of the items being measured are methods and organization, communication, motivation, and knowledge of sport.

Lombardo (1989) developed a widely used method to measure and study the relationship between coaches and players. This instrument was known as the Lombardo Coaching Behavior Analysis System (LOCOBAS). Lombardo's intent was to evaluate and record the interaction between coaches and their players and other individuals. LOCOBAS allowed the evaluator to observe interactions with players, officials, assistant coaches, and managers.

One of the most important elements of this tool that was developed by Lombardo was to investigate the affect of communication or lack thereof between the player and the coach (Lombardo, 1989). The areas of communication consisted of positive verbal, positive nonverbal, neutral verbal, neutral nonverbal, negative verbal, and negative nonverbal behavior (Lombardo, 1989). Another area that Lombardo measured was on-task behavior. The instrument was constructed so that the evaluator was capable of

focusing on on-task behaviors while the coach was working within the game and off-task behaviors where the coach was performing duties that are unrelated to the participants around him (Lombardo, 1989).

Throughout a given season in sport the practice field is most often where a majority of the interaction takes place between a coach and a player. It is during this time that coaches provide instruction on proper techniques, teach discipline and strategy, and try and motivate their athletes to maximize their potential (Jubenville, 1999).

The Arizona State University Observation Instrument (ASUOI) was developed by Darst and Lacy in 1984. The instrument's main focus was to evaluate the practice time of athletic teams. The observation and analysis was divided into practice segments. For example, there was warm-up time, group or position work, team work, and conditioning. Eleven specific categories were included in this observation and analysis package including use of first name, praise, instruction, positive modeling, hustle, and management.

The Coaching Behavior Questionnaire (CBQ) was developed by Kenow and Williams in 1999. The questionnaire's purpose is to assess athletes' perceptions and evaluations of coaching behaviors. It consists of 28-items (20 actual items and 8 fillers) with each responding to a 4-point Likert scale. The CBQ allows athletes to measure their coach's typical behavior including negative activation and supportiveness/emotional composure (Myers et al., 2006a).

For the most part, the student-athlete had been left out of the coaching evaluation process (Rushall & Wiznuk, 1985). Although coaches were continually being scrutinized by the media, fans, and administrators; the perspective from the athlete had not been

evaluated. Rushall and Wiznuk (1985) stated that the student-athletes' perceptions should be an important part of the coaching evaluation process. With the student-athlete as the one who is directly influenced by the coach and who works side-by-side with the coach, there should be no question of whether the athlete should take part in the evaluation process. In fact, the most objective perception of how a coach is performing would most definitely come from the student-athletes themselves. By having the athletes evaluate, the coach should also receive the best data on which areas he or she is strong and which areas need improvement. Further, this process will not only help the coach but it will play a major role in the development of the athlete on and off the field of play (Jubenville, 1999).

Coaching Evaluation Questionnaire.

One of the first instruments to measure the coach's behavior assessed by the athletes is the Coaching Evaluation Questionnaire (CEQ). The CEQ was developed by Rushall and Wiznuk in 1985. Myers et al. (2006b) stated, "The CEQ allows athletes to evaluate a coach's personal qualities, personal and professional relationships, organizational skills, and performance as a teacher and coach" (p. 112). Myers et al. (2006b) also mentions that the CEQ is rarely seen in the literature. The 36-item questionnaire was developed to measure desirable characteristics of coach that could be considered valid and measured reliably (Rushall & Wiznuk, 1985). Rushall and Wiznuk (1985) stated, "It is intended to provide an objective evaluation of coaching performance from the participants' point-of-view" (p. 158).

Coaching Behavior Questionnaire.

Other coaching evaluation questionnaires were studied in relation to the CEQ. For example, Myers et al. (2006b) researched other coaching questionnaires and found that the Coaching Behavior Questionnaire (CBQ) (Kenow & Williams, 1999) and Myers et al. (2006b) own questionnaire, Coaching Competency Scale (CCS) would better evaluate an athletes' perception. However, the CBQ focused on the negative aspects of coaching behavior. The CBQ also did not fully explain the athlete's growth and development, psychological aspects of coaching, and skills, tactics, and strategies. Since the CEQ was rarely seen in the literature and the CBQ did not fully explain certain coaching ideals, the CCS was chosen to evaluate athletes and coaches perception of coaching competency.

The Development and Implementation of the Coaching Competency Scale (CCS)

Construction of the CCS.

The CCS was constructed from The Coaching Efficacy Scale (CES) which was developed by Feltz, Chase, Moritz, and Sullivan (1999). The CES was not originally designed to measure an athletes' perception of their coach's ability. The CES measured the coach's belief in his or her ability to influence the athletes' learning and performance.

Myers et al. (2006b) postulated,

However, according to coaching effectiveness models, how a coach's beliefs, like coaching efficacy, relate to athletes' self-perceptions and performance is based on how these beliefs influence a coach's behavior. However, the influence of a coach's behavior on athletes' self-perceptions, motivation, and performances is mediated, at least in part, by athletes' evaluations of their coach's behavior (p. 112).

The content areas of instructional techniques, motivation, game strategy, and character building were based on the athletes' perceptions of their coach's competency in these areas. Since the CES was not designed to measure athletes' evaluations of their coaches, the CCS was the instrument created to measure coaching competencies by the athletes.

Myers et al. (2006) provided several steps in validating the CCS questionnaire. First, the conceptual framework was established for the study. The CCS was originally intended for lower division intercollegiate college athletes. The purpose of the CCS was to offer the student/athlete an opportunity to evaluate his head coach's coaching competency. This competency was based upon the coach's ability to affect the athletes' learning and performance. The CCS was developed to be used in field, laboratory, and other educational type settings (Myers et al., 2006b). The scores obtained from the questionnaire are considered to be norm-referenced, so the interpretations of one coach's competency could be compared to other coaches.

The second element of validity was the CCS being constructed from an original coaching scale called the CES. The CES was developed so the researchers could validate the new CCS instrument. The CES was created during a five week seminar involving 11 coaches who had different levels of coaching experience and were graduate students in the field of sport psychology (Myers et al., 2006b). The National Standards for Athletic Coaches (NASPE, 1995) and the preliminary work on a coaching efficacy scale (Park, 1992), along with various coaching education literature, provided the framework for key discussions involving coaching efficacy. After several discussions regarding the literature, four themes evolved for the foundation of the coaching scale. The themes

included teaching technique, implementing game strategies, motivating athletes, and developing athletes' character (Myers et al., 2006b).

The seminar also generated a 41-item questionnaire that included the stem: "How confident are you in your ability to" The questionnaire was scored on a 10-point Likert scale which created categories that ranged from 0 (not at all confident) to 9 (extremely confident) (Myers et al., 2006b). Once these 41-items were generated, nine college and scholastic coaches were asked to evaluate the relevance of each item based on a scale from 1 (essential) to 3 (not essential). The group of evaluators agreed that all 41-items should be included in the questionnaire. However, 17-items were dropped from the original 41-items due to the results of factor analysis resulting in a 24-item questionnaire (Myers et al., 2006b). Although all items were considered to be relevant for the CCS, the stem was changed to, "How competent is your head coach in his or her ability to," and the rating scale was changed to 0 (not at all competent) and 9 (extremely competent). In the study by Myers et al. (2006b), the authors concluded that previous research from Myers, Wolfe, and Feltz (2005) and measuring attitudes from Likert (1932) suggested that the rating scale contained too many categories and should be reduced even further. Therefore, the 24-item scale was reduced to a 5-point Likert-type scale measuring 0 (complete incompetence) to 4 (complete competence).

One of the research questions answered in the article by Myers et al. (2006b) was how reliable were the rank orderings of coaching competency? In other words, how reliable were the four categories of motivation competence, game strategy competence, technique competence, and character building competence? In order to answer that question the authors conducted a study of 585 athletes who participated in lower division

intercollegiate soccer and ice hockey programs. These programs were selected for the study due to the fact that the both sports contained many team members, they were considered open team sports, and coaches of these sports tend to coach most, if not all, positions on the team (Myers et al., 2006b). A total of 41 ice hockey programs and 28 soccer programs were contacted to participate in the study. However, only 21 soccer teams and 11 hockey teams participated in the study ($N = 32$). The study consisted of 407 soccer players and 183 ice hockey players.

The authors of the study contacted the 32 teams' head coaches and each head coach explained the study to the athletes. Although the head coach explained the study, the questionnaire was administered by either a team trainer or a team manager.

The purpose of the study by Myers et al. (2006b) was to examine the following research questions: "To what degree did various internal models fit the data and how reliable were the rank orderings of coaching competency estimates" (Myers et al. 2006b, p. 114). Multilevel confirmatory factor analysis (MCFA) was the appropriate statistical methodology since the data were hierarchical and the athletes were nested within teams (Myers et al., 2006b). According to Hox and Maas (2001), a complete MCFA can be used when a within-group and between-group factor structure exists with a large sample size of 100 or more. In this study, four steps were followed in running the MCFA. First, factor analysis of the total covariance matrix was conducted by using exploratory factor analysis (EFA) and/or confirmatory factor analysis (CFA) depending on the adequacy of the internal model (Myers et al., 2006b). Second, the authors ran an estimate of the intraclass correlation coefficient (ICC) for each item. Third, an estimate was run on the

within-factor structure of the within-group covariance matrix. Fourth, there was an estimate of the between-group covariance matrix.

After performing a factor analysis on the original items from the CES, 24 items were chosen to evaluate the athletes' perceptions in the CCS. With the change in the number of items to the CCS, the stem question was also changed to "How competent is your head coach in his or her ability to ..." and the rating scale was changed to 0 (not at all competent) through 9 (extremely competent) (Myers et al., 2006b). The four areas that were examined for the 24-item questionnaire were teaching technique, implementing game strategies, motivating athletes, and developing athletes' character.

Using Confirmatory Factory Analysis (CFA) in the Development of the CCS.

In determining the results of the CFA for the research questions, the proposed unidimensional and multidimensional models were utilized on the total covariance matrix. The unidimensional model fit the data poorly, chi-square (χ^2) (252) = 3315.33, $p < .001$, $\chi^2/df = 13.16$, CFI = .81, TLI = .79, SRMR = .06, and RMSEA = .14 (Myers et al., 2006a). "According to the CFA, the multidimensional model exhibited only marginally acceptable fit to the data" (Myers et al., 2006b, p. 116). In step two of the CFA, the ICC values for the 24 CCS items ranged from .22 to .42 (Myers et al, 2006b). In step three of the CFA, the unidimensional and multidimensional model was used to estimate the within-factor structure of the within-group covariance matrix. The unidimensional model fit the data poorly, χ^2 (252) = 2285.19, $p < .001$, $\chi^2/df = 9.07$, CFI = .82, TLI = .80, SRMR = .06, and RMSEA = .12 (Myers et al., 2006b). "Again, the multidimensional model exhibited only marginally acceptable fit to the data" (p. 116).

The CFA suggested that there were correlated residual variances between some of the competencies. For example, game strategy competency question two (GSC2) (recognizing opposing team's strength's during competition) and GSC9 (recognizing opposing team's weaknesses during competition) and GSC9 and GSC8 (adapt to different game strategies) and motivation competency question 3 (MC3) loaded on motivation competency (MC) and game strategy competency. The final model marginally fit the data, $\chi^2(243) = 1,090.03$, $p. < .001$, $\chi^2/df = 4.49$, CFI, = .92, TLI = .91, SRMR = .04, and RMSEA = .08 (Myers et al., 2006b).

Since the data were hierarchical, multilevel confirmatory factor analysis (MCFA) was utilized to address the multilevel structure of the data. To measure the consistency of the competency categories, reliability estimates were measured by using Cronbach's (1951) alpha (α). Cronbach's α estimates were .90 (MC), .87 (GSC), .85 (TC), and .82 (CB) (Myers et al., 2006b). Myers et al. (2006b) stated, "These coefficients suggested very good to excellent internal consistency of multidimensional coaching competency estimates" (p. 117).

Regarding the questionnaire and the test item score, a numeric value is tabulated for each questionnaire item. A high score of (4) indicates that a coach is perceived by the athlete as having complete competence. A score of (3) indicates that a coach is perceived by the athlete as having high competence. A score of (2) indicates that a coach is perceived by the athlete as having moderate competence. A score of (1) indicates that a coach is perceived by the athlete as having low competence. A score of (0) indicates that a coach is perceived by the athlete as having complete incompetence. A total test score ranges between 0 and 96 and is obtained by adding all test item scores.

Conclusion

With the increasing pressure on coaches to win and to be successful, accountability has become one of the single most contributing factors to this pressure. The increasing savvy of the technology world allows everyone and anyone to place a microscope on the coach like never before. Coaches are evaluated from every angle by the media, fans, other coaches, students, student-athletes, and the administration. However, the coach need not look at the public perception of his or her coaching evaluation or performance. The most important concepts for coaches to understand are that they must rely on criteria that best assesses their performance and rely on the proper persons to perform the evaluation by athletic administrators.

Myers et al. (2006b) made it clear that there is a continued need to assess student-athletes' perceptions of their coaches. Prapavessis and Gordon (1991) and Glen and Horne (1993) also made it clear that many coaches are not aware of the perception of their athletes and that athletes view the coach-athlete relationship differently than the coach. In a study by Horne and Carron (1985), four specific behaviors were measured and the coaches perceived themselves as exhibiting more of the behavior than did the athletes. If these discrepancies in perception continue to exist between the coach and the athlete then further research in this area should continue. With changing needs of the athletes, coaches will have to rely on ways to better understand perceptions to meet these needs for better congruency between the coach and athlete.

Finally, previous research has indicated it is imperative that the coach be evaluated as well by the student-athlete (Docheff, 1989; Kenow & Williams, 1999; Kuga, 1993; Kuga, 1994; Margolis, 1979; Myers et al., 2006a & 2006b; Rushall & Wiznuk,

1985; Solomon, 1999; Solomon, DiMarco, Ohlson, & Reece, 1998; Vargas-Tonsing et al., 2004; and Wann, Metcalf, Brewer, & Whiteside, 2000).

CHAPTER III

METHODOLOGY

Introduction

This study focused on student-athletes' perceptions of the competency of their head coaches at 15 Christian colleges and universities in NCCAA Division II men's basketball teams. The teams chosen to participate in this study were selected from 49 NCCAA Division II institutions. Of the 49 Division II men's basketball programs, 23 teams were selected based upon their selection in the region or post-season national tournament during the 2006-2007 season. The student-athletes were identified by an athletic administrator at their respective colleges and universities and asked to complete a questionnaire indicating their perceptions of the competency of their head men's basketball coaches. Initial contact letters were mailed to the athletic administrators of 23 member institutions on September 1, 2007. Fifteen institutions returned the completed items by the deadline of September 20, 2007. Student-athletes were also asked to submit demographics information related to three independent variables. These independent variables include designation as a starter or non-starter, designation as a team captain or non-team captain, and academic level (freshmen, sophomore, junior, and senior).

Participating NCCAA Colleges and Universities

The participants selected for this study were student-athletes at 15 selected colleges and universities in the NCCAA Division II level. The 15 member institutions made up six regions within the NCCAA. These regions included Central, South, West,

Mid-East, Mid-West, and South-West respectively. These institutions were Appalachian Bible College, Atlanta Christian College, Boyce College, Cincinnati Christian University, Clearwater Christian College, Crown College, Dallas Christian College, Johnson Bible College, Free Will Baptist Bible College, Kentucky Christian University, Nebraska Christian College, Northland Baptist Bible College, Southwestern College, Southwest Christian College, and St. Louis Christian College.

Participants

The participants selected for this study were college male student-athletes at 15 selected colleges and universities in the NCCAA Division II level. The population consisted of 138 student-athletes who were considered to be a member of that institutions men's basketball team during the 2006-2007 season. The total number of student-athletes was determined by the returned questionnaires from each of the athletic administrators at the participating colleges and universities.

Procedures

Institutional Review Board approval (Appendix A) was obtained from Middle Tennessee State University to administer the Coaching Competency Scale (CCS) created by Myers, Wolfe, Maier, Feltz, and Reckase (2006b) titled Coaching Competence Questionnaire I. Athletic administrators/head men's basketball coaches at 15 of the 23 NCCAA Division II schools agreed to participate in the study after being contacted by letter (Appendix B). Packets for the study containing the permission form (Appendix C), proctor instructions (Appendix D), informed consent form (Appendix E), athlete demographics (Appendix F), and the questionnaire (Appendix G) were mailed to each of the athletic administrators/head men's basketball coaches on September 1, 2007. Athletic

administrators/head men's basketball coaches at each participating school were instructed to identify an objective third party proctor to administer and return the questionnaire and were provided proctor instructions for administering the questionnaire to the student-athletes. An informed consent form was placed in the packet indicating the purpose of the study, the voluntary nature of the study, the confidentiality of the study, and the instructions to complete the anonymous questionnaire. The informed consent form clearly stated that the participant had the option to decline participation in the study and the proctor was also given instructions to read the informed consent to all participants and ask anyone to dismiss themselves prior to completing the questionnaire. The completion of the informed consent form and questionnaire took approximately 40 minutes. The packet also contained a student-athlete demographics sheet which was filled out by each student-athlete. Once the participants completed the required materials, the student-athletes were instructed to return the completed information to the proctor. The proctor was asked to collect the data and mail it back to the researcher for analysis. The researcher received 141 questionnaires from 15 colleges and universities by the deadline date of September 20, 2007.

Of the 141 questionnaires received, two were signed and dated by student-athletes but had not been completed and were removed from the study. One other questionnaire was completed by a coach and was removed from the study. The final population consisted of 138 student-athletes enrolled in the 2006-2007 academic year. Fifteen out of 23 colleges and universities who agreed to participate in this study indicated a 65% rate of return.

Survey Instrument

The instrument selected for the study was the Coaching Competency Scale (CCS) (Appendix G) developed by Myers et al. (2006b). The 24-item questionnaire was developed for lower division collegiate athletes of team sports (Myers et al., 2006b). Myers et al. (2006b) stated that, “The intended purpose of the questionnaire is to measure the athletes’ evaluation of their head coach’s ability to affect their learning and performance” which is defined as coaching competency (p. 113). Myers et al. (2006b) went on to explain that there are certain areas of competency that a coach must provide to his athletes. Coaches must provide instruction that develops specific skills for that sport. Coaches must be able to demonstrate effective motivational skills, must provide effective practices that instill social/emotional growth, and provide and promote character and sportsmanship in athletes (Myers et al., 2006b).

The CCS was designed to measure four different categories. These four categories included character building competence (CBC), game strategy competence (GSC), motivation competence (MC), and technique competence (TC). Of the 24 items on the questionnaire, CBC was specified to measure four items and was defined as the coach’s ability to influence athletes’ personal development and positive attitude toward basketball. GSC was specified to measure seven items and was defined as the coach’s ability to lead during competition. MC was specified to measure seven items and was defined as the coach’s ability to affect athletes’ psychological mood and skills (Myers et al., 2006b). TC was specified to measure six items and was defined as the coach’s instructional and diagnostic abilities. (Myers et al., 2006b).

Data Analysis

The study's three research hypotheses were analyzed by using Multivariate Analyses of Variance (MANOVA), Analyses of Variance (ANOVA), and Analyses of Covariance (ANCOVA) statistical methods. These tests were computed for the independent variables of starter or non-starter (2-group), team captain or non-team captain (2-group), and academic level (4-group). An alpha level of .05 was used for statistical significance ($p \leq .05$). Also, Confirmatory Factor Analysis (CFA) was used to determine if the data fit the model. Data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 15.0. Each coach that requested the results will receive a condensed report of the study by electronic mail.

CHAPTER IV

RESULTS

Demographic Information

The Coaching Competency Scale (CCS) was mailed to 23 NCCAA Division II men's basketball teams. A total of 15 institutions completed the questionnaire and mailed back the completed forms by the deadline date. The researcher received 141 questionnaires by the deadline date of September 20, 2007. Of the 141 questionnaires received, two were signed and dated by student-athletes but had not been completed and were removed from the study. One other questionnaire was completed by a coach and was removed from the study. A total of 138 questionnaires were completed by the student-athletes from these teams. All student-athletes provided responses for all three of the student-athlete demographic variables. These variables included whether the student-athlete was a starter or a non-starter, whether the student-athlete was a team captain or a non-team captain, and their academic level (freshmen, sophomore, junior, and senior).

The study sampled a total of 138 subjects ($N = 138$), with nine subjects from Team 1 ($n = 9$, 6.5%), ten subjects from Team 2 ($n = 10$, 7.2%), eleven subjects from Team 3 ($n = 11$, 8.0%), eight subjects from Team 4 ($n = 8$, 5.8%), eleven subjects from Team 5 ($n = 11$, 8.0%), eight subjects from Team 6 ($n = 8$, 5.8%), seven subjects from Team 7 ($n = 7$, 5.1%), nine subjects from Team 8 ($n = 9$, 6.5%), twelve subjects from

Team 9 ($n = 12$, 8.7%), five subjects from Team 10 ($n = 5$, 3.6%), seven subjects from Team 11 ($n = 7$, 5.1%), thirteen subjects from Team 12 ($n = 13$, 9.4%), six subjects from Team 13 ($n = 6$, 4.3%), nine subjects from Team 14 ($n = 9$, 6.5%), and thirteen subjects from Team 15 ($n = 13$, 9.4%) (see Table 1).

Table 1.

Descriptive statistics for individual coaching competency

Coach	n^*	M	SD
1	9	3.03	0.30
2	10	3.22	0.52
3	11	3.11	0.26
4	8	2.52	0.88
5	11	3.24	0.34
6	8	2.49	0.47
7	7	3.21	0.26
8	9	2.95	0.37
9	12	3.57	0.27
10	5	2.98	0.49
11	7	3.54	0.57
12	13	3.54	0.45
13	6	3.67	0.22
14	9	3.43	0.42
15	13	2.17	0.62

$N = 138$, *number of players on the team

Regarding the independent variables of starters and non-starters, non-starters totaled 69 subjects ($n = 69$, 50.0%), with a mean total coaching competency score of 75.54 and a standard deviation of 16.67. Starters consisted of 69 subjects ($n = 69$, 50.0%), with a mean total coaching competency score of 72.99 and a standard deviation of 12.91 (see Table 2). Regarding team captains and non-team captains, the population consisted

of 113 non-team captains ($n = 113$, 81.9%), with a mean total coaching competency score of 74.91 and a standard deviation of 15.18. Those subjects who were a team captain totaled 25 ($n = 25$, 18.1%), with a mean total coaching competency score of 71.32 and a standard deviation of 13.54 (see Table 2). Regarding academic level, the population consisted of 51 freshmen ($n = 51$, 37.0%), with a mean total coaching competency score of 73.73 and a standard deviation of 13.68. Sophomores totaled 30 subjects ($n = 30$, 21.7%), with a mean total coaching competency score of 78.37 and a standard deviation of 12.85. Juniors totaled 34 subjects ($n = 34$, 24.6%), with a mean total coaching competency score of 75.03 and a standard deviation of 15.12. Seniors totaled 23 subjects ($n = 23$, 16.7%), with a mean total coaching competency score of 69.21 and a standard deviation of 18.47 (see Table 2). The total mean coaching competency score was 74.26 with a standard deviation of 14.91 (see Table 2). Also included in the table are the mean scores of each predictor on each of the four categories of coaching competency (see Table 2).

Table 2.

Descriptive statistics for starter, team captain, and academic level

Predictor	Level	n		Categories of Coaching Competency				Total score
				CBC	GSC	MC	TC	
Starter	No	69	<i>M</i>	3.57	3.17	3.02	3.00	75.54
			<i>SD</i>	0.57	0.73	0.85	0.80	16.67
	Yes	69	<i>M</i>	3.6	3.00	2.87	2.95	72.99
			<i>SD</i>	0.52	0.60	0.80	0.60	12.91
Team Captain	No	113	<i>M</i>	3.60	3.11	2.99	2.99	74.91
			<i>SD</i>	0.52	0.69	0.82	0.72	15.18
	Yes	25	<i>M</i>	3.60	2.94	2.74	2.90	71.32
			<i>SD</i>	0.53	0.60	0.84	0.62	13.54
Academic Level	Freshmen	51	<i>M</i>	3.61	3.08	2.92	2.90	73.73
			<i>SD</i>	0.45	0.65	0.78	0.63	13.68
	Sophomore	30	<i>M</i>	3.71	3.24	3.17	3.11	78.37
			<i>SD</i>	0.43	0.58	0.80	0.57	12.85
	Junior	33	<i>M</i>	3.61	3.15	2.97	3.02	75.03
			<i>SD</i>	0.48	0.62	0.84	0.78	15.12
	Senior	24	<i>M</i>	3.42	2.78	2.71	2.90	69.21
			<i>SD</i>	0.76	0.82	0.91	0.88	18.47
	Total	138	<i>M</i>	3.60	3.08	2.95	2.97	74.26
			<i>SD</i>	0.52	0.67	0.83	0.70	14.91

Confirmatory Factor Analysis Results

Hutcheson and Sofroniou (1999) stated, “In confirmatory factor analysis, indicator variables are selected on the basis of prior theory and factor analysis is used to see if they load as predicted on the expected number of factors” (p. 218). The prior theory used in this study was the multidimensional model of the Coaching Efficacy Scale (CES) created by Feltz, Chase, Moritz, and Sullivan (1999). Amos 7.0 (Arbuckle, 2006) generated the Confirmatory Factor Analysis (CFA) as shown on the Coaching Competency diagram (see Figure 1). The CFA placed all 24 items in one of four factors.

These four underlying factors included character building competence (CBC), game strategy competence (GSC), motivation competence (MC), and technique competence (TC). Figure 1 shows the R^2 values for each of the 24 items. The squared multiple correlation coefficients (R^2) are defined as the amount of variance the common factor accounts for in the observed variables (Hutcheson & Sofroniou, 1999). In CBC, three out of four items had R^2 values greater than 0.40. These items were recoded as moral character – 0.64, promote sportsmanship – 0.62, and attitude of respect – 0.56. One item had an R^2 value less than 0.40. This item was fair play – 0.25. In GSC, all seven items had R^2 values greater than 0.40. These items were recoded as recognize strengths – 0.52, strategies – 0.61, adapt – 0.65, recognize weaknesses – 0.56, critical decisions – 0.63, maximize strengths – 0.66, and adjust strategy to talent – 0.61. In MC there were seven items loaded with all seven items having R^2 values greater than 0.40. These items were recoded as maintain confidence – 0.73, mentally prepare – 0.49, self-esteem – 0.76, motivates – 0.73, team cohesion – 0.53, self-confidence – 0.78, and build team confidence – 0.78. In TC, five out of six items had R^2 values greater than 0.40. These items were recoded as demonstrate skills – 0.50, individual technique – 0.52, develop abilities – 0.69, recognize talent – 0.60, and teach skills – 0.67. One item had an R^2 value less than 0.40. This item was detect skill errors – 0.34 (see Figure 1).

The correlation between the factors is high. The correlation between GSC and CBC is 0.63. The correlation between CBC and MC is 0.63. The correlation between MC and TC is 0.80. The correlation between CBC and TC is 0.63. The correlation between GSC and MC is 0.83, and the correlation between GSC and TC is 0.90 (see Figure 1).

Factor Analysis: Coaching Competency

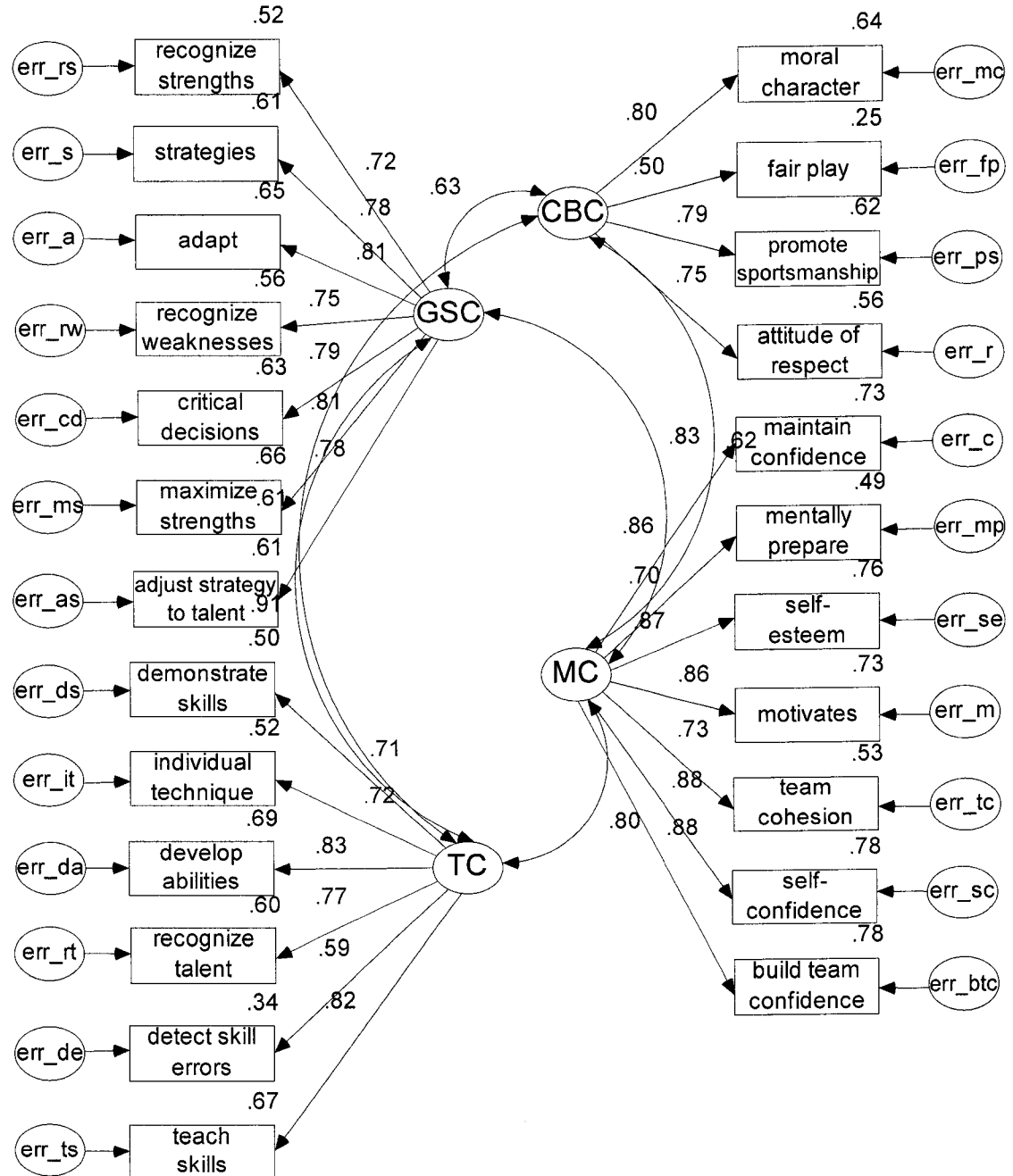


Figure 1. The tested factor structure of coaching competency.

According to Hutcheson and Sofroniou (1999), conducting CFA on the sub-samples of starter, non-starter, captain, non-team captain, and academic level could have affected the validity of this study. For example, the authors suggest that the sample size should be 10 times the number of variables. Therefore, to apply CFA to the sub-samples in this study, there should have been approximately 240 samples. The population size for this study was 138 ($N = 138$). Multivariate analyses of variance (MANOVA), analyses of variance (ANOVA), and analyses of covariance (ANCOVA) were utilized to analyze the data in this study.

Table 3 displays the factor loadings or standardized regression coefficients of each variable on the four factors CBC, GSC, MC, and TC. Standardized regression coefficients are estimates used to describe how well each item correlates with or “loads onto” the factor. With standardized regression coefficients, the higher the factor loading the closer the association between the latent variable and the individual item (Hutcheson & Sofroniou, 1999) (see Table 3).

Table 3.

Factor loadings				
	MC	CBC	GSC	TC
V1	0.857			
V3	0.697			
V6	0.873			
V10	0.855			
V12	0.729			
V15	0.883			
V23	0.882			
V5		0.801		
V13		0.503		
V19		0.787		
V24		0.748		
V2			0.721	
V4			0.783	
V8			0.807	
V9			0.748	
V11			0.792	
V17			0.812	
V21			0.778	
V7				0.707
V14				0.718
V16				0.828
V18				0.772
V20				0.587
V22				0.819

The criteria for an adequate model showed that the Chi-Square had a result of 453.603, $df = 246$, $p < .001$ (see Table 4). This result was significant which does not meet the requirement of an adequate model fit (Hu & Bentler, 1999). The Relative Chi-Square had a value of 1.84 which is < 2.0 . The Relative Chi-Square was significant in this CFA. The Goodness-of-Fit Index (GFI) was 0.777, which does not meet the criterion of ≥ 0.90 .

The GFI was not significant in this CFA. The Comparative Fit Index (CFI) was 0.912, which is \geq to 0.90. This result was significant in this CFA. The Root Mean Square Error of Approximation (RMSEA) was 0.078, which is not \leq to 0.06. This result was not significant in this CFA. The significant results for an adequate model include The Relative Chi-Square and the CFI (see Table 4).

Table 4

*Criteria for Confirmatory Factor Analysis Model for Coaching Competency
(n = 138)*

	Criteria	Measurement Model
1. Goodness-of-fit tests based on predicted vs. observed covariances:		
Chi Square (χ^2)	not significant	453.603, df = 246, p = <.001
Relative Chi Square (χ^2/df)	< 2.0	1.84
Goodness-of-fit Index (GFI)	> or = 0.90	0.777
2. Goodness-of-fit tests comparing the given model with an alternative model:		
Comparative fit index (CFI)	> or = 0.90	0.912
3. Goodness-of-fit tests based on predicted vs. observed covariances but penalizing for lack of parsimony (Parsimony measures):		
Root mean square error of approximation (RMSEA)	< or = .06	0.078

Sources:

Hu, L. and P. M. Bentler (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling* 6(1): 1-55.

Three-Way MANOVA

A three-way Multivariate Analysis of Variance (MANOVA) with starter (yes, no), captain (yes, no), and academic level (freshmen, sophomore, junior, and senior) as

between-subject factors were used to evaluate the combination of dependent variables: character building competence (CBC), game strategy competence (GSC), motivation competence (MC), and technique competence (TC). MANOVA indicated that the combination of class, captain, and starter is not a significant predictor of combination of coaching competency categories. No factor or interaction factors were found to be significant (see Table 5).

Table 5.

Multivariate test for predicting categories of coaching competency

Predictor	<i>F</i>	<i>df_n</i>	<i>df_d</i>	<i>p</i>	λ
starter	0.736	4	122.0	0.569	0.976
team	0.112	4	122.0	0.978	0.996
class	0.735	12	323.1	0.717	0.931
starter * team	0.518	4	122.0	0.723	0.983
starter * class	0.586	12	323.1	0.853	0.945
team * class	0.235	8	244.0	0.984	0.985
starter * team * class	0.520	4	122.0	0.721	0.983

alpha = .05

Individual MANOVAs

The population of levels of predictors is given in Table 6. Although it is usually not necessary for all combinations of predictors to be populated evenly to conduct comparison analyses, an under-representation of certain cells raises the issue of soundness of conducting MANOVA. Because interaction measures the degree to which predictors covary, it is ideal to have samples to compare. Note in Table 6 that not all conditions are populated. Therefore, a comparison can not be made within the individual

cells. There is also a question of testing analysis of variance (ANOVA) as well. Testing a combination of these predictors and the interaction of factors can become meaningless and do not allow for interpretation. Instead, individual MANOVAs were conducted to test whether individual factors are significant in predicting the combination of categories of coaching competency. Results showed that predictors starter ($F_{4,133}=1.563, p=.188$, Wilk's $\lambda = .955$), team ($F_{4,133} = .87, p = .484$, Wilk's $\lambda = .974$), and class ($F_{12,346.9} = 1.273, p = .233$, Wilk's $\lambda = .892$) were not significant.

Table 6.

Population across levels of predictors					
Starter	Captain	Academic Level			
		Freshmen	Sophomore	Junior	Senior
No	No	32	14	13	8
	Yes	0	0	1	1
Yes	No	19	14	6	7
	Yes	0	2	13	8
$N = 138$					

One-Way MANOVA

It is important to note that the questionnaire was administered to 15 different teams, where 15 different coaches were evaluated for coaching competency. One-way multivariate ANOVA was conducted to test whether the predictor coach (1 through 15) was significant in predicting a combination of CBC, GSC, MC, and TC competency categories. The results showed that the combination of categories of coaching competency was significantly different across the levels of predictor, $F(56,468.9) = 3.896, p < 0.001$, Wilks' $\lambda = 0.226$).

Univariate One-Way ANOVA for Coaching Competency

The univariate one-way Welch ANOVA also showed that the total score on the competency scale was different across coaches, $F(14, 42.16) = 7.63$, $MSE = 124.326$, $p < .001$. Separate Welch ANOVA's were run to test individual competency categories and all produced significant results. For results see Table 7.

Table 7.

Univariate tests for predicting individual categories of coaching competency

Category	Welch's F	df_n	df_d	p
cbc	3.405	14	42.6	0.001
gsc	8.686	14	42.524	0.000
mc	14.127	14	42.535	0.000
tc	7.127	14	41.912	0.000
Total score	7.627	14	42.159	0.000

alpha = .05, predictor = coach

Univariate One-Way ANOVA for Individual Factors

Univariate one-way ANOVA's were conducted to test whether individual factors were significant predictors of categories of coaching competency with no control for the coach. Results for starter, team, and class are given in tables 8, 9, and 10 respectively. Results showed that no factor is a predictor of any of the categories or the total score on the competency scale.

Table 8.

Univariate tests for predicting individual categories of coaching competency

Category	Welch's F	df_n	df_d	p
cbc	0.279	1	131.774	0.598
gsc	2.313	1	130.433	0.131
mc	1.124	1	135.658	0.291
tc	0.196	1	125.809	0.659
TotalSum	1.010	1	128.007	0.317

alpha = .05, predictor = starter

Table 9.

Univariate tests for predicting individual categories of coaching competency

Category	Welch's F	df_n	df_d	p
cbc	0.002	1	35.373	0.967
gsc	1.648	1	39.404	0.207
mc	1.807	1	34.887	0.188
tc	0.406	1	40.028	0.528
Total Score	1.376	1	38.553	0.248

alpha = .05, predictor = team

Table 10.

Univariate tests for predicting individual categories of coaching competency

Category	Welch's F	df_n	df_d	p
cbc	0.995	3	62.006	0.401
gsc	1.862	3	63.943	0.145
mc	1.302	3	63.702	0.281
tc	0.897	3	62.707	0.448
TotalSum	1.578	3	63.015	0.203

alpha = .05, predictor = class

Controlling for the Quality of Coaching

Evidently from previous results, the personal qualities of each coach have the only significant influence on the evaluation of individual categories of coaching competency by student-athletes and the total score of the scale. It is necessary to control for this extraneous factor in this design. The mean score for each coach was computed by averaging the totals scores of all players on the team (see descriptive statistics in table 1). Separate one-way MANOVAs with control for coaching competency were conducted with factors starter, team captain, and academic level. Results showed that predictors starter ($F_{4,132} = 2.183, p = .074$, Wilk's $\lambda = .938$), team captain ($F_{4,133} = 1.773, p = .138$, Wilk's $\lambda = .949$), and academic level ($F_{12,344.2} = 1.282, p = .227$, Wilk's $\lambda = .891$) were not significant. However, a noticeable decrease in p-values in the predictor starters (from $p = .188$ to $p = .074$) and a somewhat smaller decrease in the predictor team (from $p = .484$ to $p = .138$) is evident. Individual univariate ANCOVAs with control for coaching competency showed that starter was a significant predictor for game strategy competence ($F_{1,135} = 4.82, p = .03$, $Adj R^2 = .447$), and team was a significant predictor for motivation competence ($F_{1,135} = 5.267, p = .023$, $Adj R^2 = .510$) (see Tables 11, 12, and 13).

Table 11.

One-Way Univariate ANOVA predicting coaching competency controlling for goodness of coach

Category	<i>F</i>	<i>df_n</i>	<i>df_d</i>	<i>p</i>
cbc	0.248	1	135.000	0.619
gsc	4.820	1	135.000	0.030*
mc	2.823	1	135.000	0.095
tc	0.484	1	135.000	0.488
Total score	2.629	1	135.000	0.107

*- significant result at alpha = .05, predictor = starter

Table 12.

One-Way Univariate ANOVA predicting coaching competency controlling for goodness of coach

Category	F	df1	df2	Sig.
cbc	0.015	1	135.000	0.904
gsc	3.526	1	135.000	0.063
mc	5.267	1	135.000	0.023*
tc	0.991	1	135.000	0.321
Total score	3.702	1	135.000	0.056

*- significant result at alpha = .05, predictor = team captain

Table 13.

One-Way Univariate ANOVA predicting coaching competency controlling for goodness of coach

Category	F	df1	df2	Sig.
cbc	1.257	3	133.000	0.292
gsc	2.518	3	133.000	0.061
mc	1.506	3	133.000	0.216
tc	0.114	3	133.000	0.952
Total score	1.795	3	133.000	0.151

alpha = .05, predictor = academic level

Reliability and Power

Cronbach's alpha estimates were .79 (CBC), .91 (GSC), .94 (MC), and .88 for (TC) respectively. The estimate for the entire scale was .96. The Spearman-Brown split-half reliability estimates were .80 (CBC), .91 (GSC), .94 (MC), and .87 for (TC) respectively. The Spearman-Brown split-half reliability estimate for the entire scale was .94. These coefficients suggest very good to excellent internal consistency for the coaching competency model. According to Cohen (1992), the proper number of subjects to receive a medium effect size at alpha = .05 is 64 subjects. Therefore, power is not a concern in this study.

Testing Distributions

Due to the high rate of insignificant results a check of equality of distribution between levels of predictors was conducted. Distributions of each variable were compared (v1 through v24) between the levels of starter and team captain, and also among the academic levels (see Tables 14, 15, and 16).

Table 14.

Pearson Chi-Square test for equality of distribution between starter levels

Variable	χ^2	df	p
V1	1.0176	4	0.907
V2	1.3151	3	0.726
V3	3.7943	4	0.435
V4	4.1561	4	0.385
V5	1.1896	3	0.755
V6	1.8656	4	0.760
V7	2.6146	4	0.624
V8	5.7453	4	0.219
V9	12.101	4	0.017*
V10	4.2581	4	0.372
V11	7.6598	3	0.054
V12	0.0558	4	1.000
V13	2.2464	3	0.523
V14	0.7994	4	0.939
V15	4.0275	4	0.402
V16	8.9282	4	0.063
V17	5.3213	4	0.256
V18	5.2766	4	0.260
V19	4.8189	4	0.306
V20	1.8995	3	0.594
V21	7.8143	4	0.099
V22	4.8433	4	0.304
V23	6.4661	4	0.167
V24	6.1633	3	0.104

alpha = .05

Table 15.

Pearson Chi-Square test for equality of distribution between team captain levels

Variable	χ^2	df	p
V1	5.89	4	0.208
V2	3.17	3	0.367
V3	0.61	4	0.962
V4	8.88	4	0.064
V5	0.77	3	0.857
V6	4.97	4	0.290
V7	0.94	4	0.918
V8	3.90	4	0.419
V9	3.35	4	0.501
V10	6.02	4	0.198
V11	5.74	3	0.125
V12	1.61	4	0.807
V13	1.10	3	0.776
V14	0.67	4	0.956
V15	7.52	4	0.111
V16	3.39	4	0.495
V17	7.92	4	0.094
V18	3.25	4	0.517
V19	0.60	4	0.963
V20	6.81	3	0.078
V21	4.33	4	0.363
V22	6.75	4	0.150
V23	6.09	4	0.193
V24	6.44	3	0.092

alpha = .05

Table 16.

Pearson Chi-Square test for equality of distribution among academic levels

Variable	χ^2	df	p
V1	13.50	12	0.334
V2	11.00	9	0.275
V3	16.93	12	0.152
V4	13.92	12	0.306
V5	8.82	9	0.454
V6	10.40	12	0.581
V7	11.44	12	0.491
V8	14.22	12	0.287
V9	10.07	12	0.610
V10	11.71	12	0.469
V11	14.52	9	0.105
V12	8.27	12	0.764
V13	13.16	9	0.156
V14	27.62	12	0.006*
V15	15.44	12	0.218
V16	11.97	12	0.448
V17	17.76	12	0.123
V18	19.00	12	0.088
V19	11.62	12	0.477
V20	8.10	9	0.524
V21	11.31	12	0.503
V22	12.19	12	0.431
V23	19.13	12	0.085
V24	10.34	9	0.324

alpha = .05

There were only two significant results, which allow us to conclude that the distributions of scores were similar across levels of factors. We eliminate equality of distribution as a possible contamination factor in our results.

Another issue that was addressed was the variability of scores. If the corridor of the possible scores is narrow, lack of variability would confound the results and render them un-interpretable. To check the assumption of sufficient variability in scores, frequency distributions were tested for all items (see Table 17). Histograms of score

distributions for each item were inspected as well to examine lack of variability. The overall results did not present a concern for inequality of distributions.

Table 17.

Descriptive statistics for items on the coaching competency questionnaire

Variable	N	Range	Min	Max	M	SD	S2
V1	138	4	0	4	2.93	0.938	0.879
V2	138	3	1	4	3.25	0.726	0.526
V3	138	4	0	4	2.93	0.917	0.841
V4	137	4	0	4	3.18	0.848	0.719
V5	138	4	0	4	3.67	0.641	0.411
V6	138	4	0	4	2.88	1.011	1.023
V7	138	4	0	4	3.07	0.909	0.827
V8	137	4	0	4	3.01	0.800	0.643
V9	137	4	0	4	3.14	0.842	0.709
V10	137	4	0	4	2.91	1.025	1.051
V11	137	3	1	4	3.01	0.862	0.743
V12	138	4	0	4	3.03	0.896	0.802
V13	137	3	1	4	3.39	0.740	0.548
V14	137	4	0	4	2.64	1.048	1.099
V15	138	4	0	4	2.86	1.050	1.103
V16	138	4	0	4	2.8	0.903	0.815
V17	138	4	0	4	2.96	0.832	0.692
V18	138	4	0	4	3.06	0.852	0.727
V19	138	4	0	4	3.67	0.654	0.428
V20	138	3	1	4	3.09	0.763	0.582
V21	138	4	0	4	3.02	0.900	0.812
V22	138	4	0	4	3.17	0.868	0.753
V23	138	4	0	4	3.09	0.955	0.912
V24	138	4	0	4	3.65	0.624	0.389

CHAPTER V

DISCUSSION

The purpose of this study was to measure the perceptions of student-athletes concerning the coaching competency of head men's basketball coaches at the Division II level in the National Christian Collegiate Athletic Association (NCCAA). This study utilized 15 Division II men's basketball teams who provided feedback regarding perceptions of head men's basketball coach's competency as defined by the Coaching Competency Scale (CCS). The 24-item questionnaire was developed for lower division collegiate athletes of team sports. The intended purpose of the questionnaire was to measure the athletes' perception of their head coach's ability to affect their learning and performance (Myers et al., 2006b). It also provided feedback of general demographic information which could be useful in developing the knowledge base regarding categories of coaching competency. The insight studied from the perceptions of the student-athlete could result in improved experience for both the student-athlete and coach as well as develop player and coach potential and result in a deeper connection between the coach and the player.

Participants were 138 men's basketball players from 15 selected NCCAA Division II institutions who competed during the 2006-2007 basketball season. Each participant completed a CCS questionnaire and each student-athlete provided demographic information related to the three independent variables of starter/non-starter, captain/non-team captain, and academic level (freshman, sophomore, junior, and senior).

Each athletic administrator was sent a packet of information relating to the completion of the questionnaire. Instructions were provided for each athletic administrator to acquire a proctor from their department to administer the questionnaire and then return by mail the completed questionnaires to the researcher.

Data analysis included descriptive statistics and a statistical analysis of Confirmatory Factor Analysis (CFA) for model fit and the use of Multivariate Analyses of Variance (MANOVA), Analyses of Variance (ANOVA), and Analyses of Covariance (ANCOVA) on the sub-samples.

Conclusions

Hypothesis 1: A student-athlete who is classified as a starter will report a higher coaching competency score than a student-athlete who is classified as a non-starter.

Analysis of the student-athletes responses using a three-way MANOVA test found no significant differences in the student-athletes' perceptions of the combination of coaching competency categories between starter and non-starter playing status of the student-athlete. Individual MANOVAs were also run to detect if individual factors could predict the combination of categories of coaching competency. This test also found no significant differences in the student-athletes' perceptions of the head coach. A univariate one-way ANOVA was ran to detect whether individual factors were significant predictors of categories of coaching competency with no control for the coach. Results from this test found no significant differences in the student-athletes' perceptions of the head coach. This hypothesis was rejected. This finding is in agreement with the results of studies by Jubenville (1999) and Jubenville, Goss, and Phillips (2007). This lack of significance could be explained in the participation time of starters and non-starters. As noted by

Jubenville (1999), in the NCAA Division I and Division II levels, there may be a group of student-athletes who play a majority of the contest while a group may only play sparingly. Conversely, in lower division college athletics, due to roster sizes, as noted in this study and/or mission or scope of the institution's athletic department, most student-athletes could play a majority of the time and could possibly play an important role in the contest (Jubenville, 1999).

However, after conducting a one-way MANOVA to test whether the predictor coach was significant in predicting a combination of the competency categories, it was found that the combination of categories of coaching competency was significant. Therefore, since differences were significant across levels of coach predictor, it was necessary to control for this extraneous factor. Individual univariate ANCOVAs with control for coaching competency showed that the predictor starter was a significant predictor for game strategy competence. The results showed that non-starters had a higher perception of their coach on game strategy competence than did starters.

Hypothesis 2: A student-athlete who is designated as a team captain will report a higher coaching competency score than a student-athlete who is not a team captain.

Analysis of the student-athletes responses using a three-way MANOVA test found no significant differences in the student-athletes' perceptions of the head coach between captain and non-team captain. Individual MANOVAs were also run to detect if there were individual factors in predicting the combination of categories of coaching competency. This test also found no significant differences in the student-athletes' perceptions of the head coach. A univariate one-way ANOVA was run to detect whether individual factors were significant predictors of categories of coaching competency with

no control for the coach. Results from this test found no significant differences in the student-athletes' perceptions of the head coach. This hypothesis was rejected.

One explanation to these results could be the number of team captains in this study. This study included only 25 team captains out of a possible 138 subjects. With the sample of the captains being so low, there may not have been enough variance between the subjects to show significant results.

The results of the one-way MANOVA showed that coach was a significant predictor of the combination of coach competency categories. Therefore, since the personal qualities of each coach had significance, it was necessary to control for this extraneous factor. Individual univariate ANCOVAs with control for coaching competency showed that the predictor team captain was a significant predictor for motivation competence. The results showed that non-team captains had a higher perception of their coach on motivation competence than did team captains.

Hypothesis 3: Juniors and seniors will report a higher coaching competency score than student-athletes who are freshmen and sophomores.

Analysis of the student-athletes responses using a three-way MANOVA test found no significant differences in the student-athletes' perceptions of the head coach between the four academic levels (freshman, sophomore, junior, and senior). Individual MANOVAs were also run to detect if there were individual factors in predicting the combination of categories of coaching competency. This test also found no significant differences in the student-athletes' perceptions of the head coach. A univariate one-way ANOVA was run to detect whether individual factors were significant predictors of categories of coaching competency with no control for the coach. Results from this test

found no significant differences in the student-athletes' perceptions of the head coach. This hypothesis was rejected. This finding is in agreement with the results of studies by Jubenville (1999), Jubenville, Goss, and Phillips (2007), Salminen and Luikkonen, (1996), and Terry and Howe (1984). However, this finding went against the results of a study by Solomon (1999).

After use of a one-way MANOVA to test whether the predictor coach was significant in predicting a combination of the competency categories, it was found that the combination of categories of coaching competency was significant. The mean score for each coach was computed by averaging the total scores of all the players on the team. The overall competency of each coach was used as a covariate in the ANCOVA procedures in the attempt to control the influence of coach goodness on players' difference in evaluation. Individual univariate ANOVA's with control for coaching competency showed that academic level (freshman, sophomore, junior, and senior) was not a significant predictor for game strategy competence. However, the result indicated a value of $p = .061$, which is very close to the arbitrary alpha level of $p < .05$.

One point of interest in this study concerning academic level is the overall success of several of the teams in this study during the 2006-2007 basketball season. Three of the 15 schools surveyed in this study competed in the National Christian Collegiate Athletic Association (NCCAA) national tournament. This tournament is a 12 team tournament based upon the team's ability to either win their regional tournament or receive an at-large bid. Therefore, of the 49 teams competing at the Division II level, three of the twelve teams which competed at the national tournament were included in the study. Also, two of the 15 teams surveyed in this study competed in the Association of Christian

Collegiate Athletics (ACCA) national tournament. This is a 10 team tournament based on an invitation only opportunity to compete. Both of these teams competing in the ACCA national tournament ultimately competed against each other in the national championship game. Therefore, an assumption could be made that the coaches involved in this study were very good coaches and the perceptions of the student-athletes simply conveyed those results.

Other Findings

The univariate one-way Welch ANOVA was utilized to show that the total score on the coaching competency scale was different across coaches. The separate Welch ANOVAs were run to test individual coaching competency categories and all produced significant results. This result clearly showed that the perception of the coach is strictly dependent upon the coach and can truly depict how important the coach is in the coach-athlete relationship.

Through the course of this study it was determined that CFA would provide insight regarding factor loadings of each variable and to determine whether or not this data fit the model. The four factor model proposed by earlier research does not fit our data. The evaluation of coaching competency categories among the student-athletes surveyed did not differ across starter, non-starter, captain, non-team captain, and academic level (freshman, sophomore, junior, and senior). These results coincide with previous research by Myers et al. (2006a). In that study, the authors concluded that the unidimensional model fit the data poorly and the multidimensional model marginally fit the data. The factors in the retained model were also moderately to highly correlated as

was the case in the current study. Internal reliability ranged from very good to excellent as was also the case in the current study.

After completing the CFA, several explanations were noted. First, the current study would benefit by having a larger sample size which could have attributed to more results. It is important to also note that Myers et al. (2006b) stated that the student-athletes did not use the original rating scale as it was intended.

In Myers et al. (2006a), the authors noted that there was limited discriminant validity between items from the GSC and TC subscales and that refining the definitions could lessen the overlap among the subscales. One last observation could be that the design of the current study was not comparable with the original study. It is quite possible that the type of sport utilized in the current study was not compatible with the sports utilized in the original study. Perhaps, the type of sports under question, would influence the goodness of fit model.

Recommendations for Further Study

1. This study should be replicated with other men's collegiate basketball teams at the NCCAA level.
2. Further studies should be conducted concerning other team sports to continue to help support and study the coach-athlete relationship.
3. Considering the CCS has only been utilized at the lower division level of college athletics, it would benefit to study this same instrument at the NCAA Division I level of college athletics.
4. Expanding the demographics to include a coach's years of experience, winning percentage, and whether or not the coach participated as a college athlete. This

could provide insight into whether year's of experience equates to winning and how it contributes to the overall success of the program.

5. This study should be replicated with men's and women's collegiate basketball teams at the NCCAA level to compare the differences in perceptions of coaches between male and female collegiate basketball players.

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APPENDIXES

APPENDIX A

Institutional Review Board Approval

Office of Compliance

Business and Aerospace Building S245
Middle Tennessee State University
Murfreesboro, Tennessee 37132
Office: (615) 494-8918 • Fax: (615) 904-8020
www.mtsu.edu/~research/compliance.html



August 28, 2007

Michael B. Phillips & Dr. Colby Jubenville
Department of Health and Human Performance
mphillips@fwbbc.edu, jubenvil@mtsu.edu

Re: Protocol Title: "Athlete's Perceptions of Coaching Competency Among National..."
Protocol Number: 08-025

Dear Investigator(s),

I found your study to be exempt from Institutional Review Board (IRB) continued review. The exemption is pursuant to 45 CFR 46.101(b)(2) which involves the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, there are no identifiers involved; and, any disclosure of the human subjects' responses could not reasonably place the subjects at risk. Your study expires on **August 28, 2010.**

Please note, although you submitted an informed consent document to be signed by participants, it is not necessary for your study. Since you are using an innocuous survey, in order to not be burdensome on your participants, you can provide the informed consent language as a cover page to your survey and not require a signature. 45 CFR 46.116 (d)

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting data and you are ready to submit your thesis and/or publish your findings. Should you not finish your research within the three (3) year period, you must submit a Progress Report and request a continuation prior to the expiration date. Please allow time for review and requested revisions

Any change to the protocol must be submitted to the IRB before implementing this change. According to MTSU Policy, a researcher is defined as anyone who works with data or has contact with participants. Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project. If you need further assistance, please call me at 494-8918. Once your research is completed, please send us a copy of your final report to the Office of Compliance.

Also, all research materials must be retained by the PI or **faculty advisor (if the PI is a student)** for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,



Tara M. Prairie
Compliance Officer



A Tennessee Board of Regents University

MTSU is an equal opportunity, non-racially identifiable, educational institution that does not discriminate against individuals with disabilities.

APPENDIX B

Contact Letter

Dear Athletic Administrator:

I am conducting doctoral research in the area of athletes' perceptions of head basketball coaches in the NCCAA. The study has been approved by the Health and Human Performance Department at Middle Tennessee State University and involves the implementation and interpretation of answers from the **Coaching Competency Scale**. The instrument is based on coaching characteristics and behaviors of an effective coach. It provides a total score which can be interpreted by the coach as a measure of how much of an "ideal" coach exists in him/her. The instrument has been validated by a panel of experts and takes approximately 15 minutes to administer.

The target populations for the study are NCCAA Division II basketball players who can be identified as currently enrolled in an NCCAA member institution. I am respectfully requesting your assistance in achieving an appropriate population for this study. It is necessary to request a letter of permission from you and your college or university to survey your student-athletes during the end of the 2007 basketball season.

In agreeing to participate in the study, your designee will be asked to serve as on-site coordinator for the administration and collection of the research instrument. The researcher will mail the instruments at a predetermined time agreed upon by the on-site supervisor.

The tentative title of my dissertation is:

“Athletes’ Perceptions of Coaching Competency Among
National Christian Collegiate Athletic Association
Division II Head Men’s Basketball Coaches”

Thank you for your consideration and assistance in this project. I will be in contact with you soon in an attempt to finalize the details of my request.

Sincerely,

Michael B. Phillips
Department of Health and Human Performance
Middle Tennessee State University

APPENDIX C

Permission Form

School Letterhead

Date, Year

Your Name

Title

School Name

Address

City, State, Zip

Michael B. Phillips
Free Will Baptist Bible College
3606 West End Ave.
Nashville, TN 37205

Dear Michael,

Thank you for contacting our institution about participating in your dissertation research. The information you would gather by performing a coaching competency survey within NCCAA Division II men's basketball would benefit all members of the NCCAA. It would help develop a more effective coaching evaluation and relationship between the coach and student-athlete.

YOUR SCHOOL NAME, gladly supports your efforts and would willingly participate in your study. It is our understanding that you would be surveying only NCCAA Division II men's basketball student-athletes after the completion of the 2007 season. We appreciate your concern for their anonymity in this process and only ask in return that you provide the composite results of your findings to our institution to share with our coaching staff.

Sincerely,

Signature

Your Name

Title

APPENDIX D

Proctor Instructions for the Coaching Competency Questionnaire I

Proctor Instructions for Coaching Competency Questionnaire I

1. Arrange a time and place for the student-athletes to meet to complete the Coaching Competency Questionnaire.
2. Provide pencils to complete the Questionnaire.
3. Distribute the Consent to Act as a Human Subject form.
4. While the participants follow along, the administrator should read the eight steps of the Consent to Act as a Human Subject to the student-athletes before taking the questionnaire.
5. Have the student-athletes sign and date the Consent to Act as a Human Subject Form.
6. Distribute the student-athlete demographics form. Have each participant complete the demographics form and return with the other materials (consent form and questionnaire).
7. Distribute the questionnaires to the student-athletes.
8. Provide time for all participants to complete the questionnaire and return the completed questionnaire to the proctor (Approximately 25 minutes).
9. Once all student-athletes have completed the questionnaire, please seal the Consent to Act as a Human Subject form, demographics form, and questionnaires in an envelope and return to the researcher.

Thank you for your help in this matter. Please call me at 615-844-5276 if you have any questions, comments, or concerns.

Sincerely,

Michael B. Phillips
Free Will Baptist Bible College
Nashville, TN

APPENDIX E

Informed Consent Form

Consent to Act As A Human Subject

Subject's Name _____

Date of Consent _____

Consent is hereby given to participate in the study entitled:

Athletes' Perceptions of Coaching Competency Among National Christian Collegiate Athletic Association Division II Head Men's Basketball Coaches

1. The purpose of this study will be to identify and describe strengths and weaknesses of Division II head men's basketball coaches in the National Christian Collegiate Athletic Association.
2. There are no known risks involved in data collection through the use of a survey/questionnaire and every effort will be made to minimize risks.
3. One survey/questionnaire will be given to each participant. The survey will take approximately 15 minutes to complete.
4. Your participation is completely voluntary and you may choose to discontinue participation at any time without risk of prejudice or penalty.
5. Data collected from the survey will be kept secure after completion of the study in a locked desk possessed by the primary researcher. Only the researchers, Michael B. Phillips and Dr. Colby B. Jubenville will view and have access to the data. The surveys will be destroyed two years after data collection is completed.
6. You will not be identified by name when results of the study are published.
7. The procedures and/or investigations to be followed and their purposes were fully explained to me by the on-site survey administrator.

8. This project has been reviewed by the Institutional Review Board which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to Tara Prairie, Compliance Officer, Sam H. Ingram Building, 011B, and P.O. Box 134, Murfreesboro, TN 37132.

Signature of Subject

Date

Signature of Researcher

Date

APPENDIX F

Student-Athlete Demographics

APPENDIX G

Coaching Competency Questionnaire I

Coaching Competence Questionnaire I

Coaching competence refers to the extent to which coaches believe that they have the capacity to affect the learning and performance of their athletes. As an athlete, think about how competent your coach is in the following items below. **(Circle the most appropriate category)**

How competent is your head coach in his or her ability to:		Complete Incompetence	Low Competence	Moderate Competence	High Competence	Complete Competence
1	Help athletes maintain confidence in themselves?	1	2	3	4	5
2	Recognize opposing team's strengths during competition?	1	2	3	4	5
3	Mentally prepare his/her athletes for game strategies?	1	2	3	4	5
4	Understand competitive strategies?	1	2	3	4	5
5	Instill an attitude of good moral character?	1	2	3	4	5
6	Build the self-esteem of his/her athletes?	1	2	3	4	5
7	Demonstrate the skills of this/her sport?	1	2	3	4	5
8	Adapt to different game situations?	1	2	3	4	5
9	Recognize opposing team's weakness during competition?	1	2	3	4	5
10	Motivate his/her athletes?	1	2	3	4	5
11	Make critical decisions during competition?	1	2	3	4	5
12	Build team cohesion?	1	2	3	4	5
13	Instill an attitude of fair play among his/her athletes?	1	2	3	4	5
14	Coach individual athletes on technique?	1	2	3	4	5
15	Build the self-confidence of his/her athletes?	1	2	3	4	5
16	Develop athlete's abilities?	1	2	3	4	5
17	Maximize his/her team's strengths during competition?	1	2	3	4	5

18	Recognize talent in athletes?	1	2	3	4	5
19	Promote good sportsmanship?	1	2	3	4	5
20	Detect skill errors?	1	2	3	4	5
21	Adjust his/her game strategy to fit his/her team's talent?	1	2	3	4	5
22	Teach the skills of his/her sport?	1	2	3	4	5
23	Build team confidence?	1	2	3	4	5
24	Instill an attitude of respect for others?	1	2	3	4	5