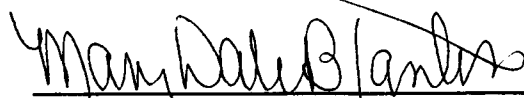


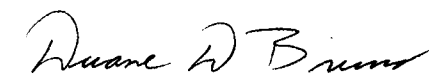
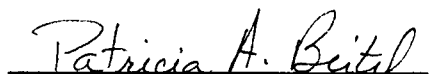
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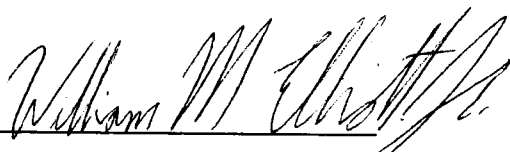
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THE RELATIONSHIPS OF PRACTICE ACTIVITIES TO TEAM
SUCCESS FOR NCAA DIVISION I MEN'S SOCCER TEAMS

A Thesis
Presented for the
Master of Science
Degree
The University of Tennessee, Knoxville

William M. Elliott Jr.

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ABSTRACT

Due to the instability of pro soccer, collegiate soccer is the highest level of league soccer with strong roots and a definite future in the United States in 1993. Intercollegiate soccer exists at the NAIA, NCAA Division I, II, and III levels. In order to raise the level of the intercollegiate game, college players will need coaches who are not just experienced players, but who are also knowledgeable about the training of college players. Currently, if college coaches in the United States wish to read research articles about soccer, they must turn primarily to foreign research articles or youth oriented research, because there is limited data available at the intercollegiate level in the United States.

The purpose of this study was to provide American based research which can assist in the development of intercollegiate soccer teams. The problem was to determine if there was a relationship between the areas of coaching emphasis during regular season practice sessions and team success for NCAA Division I men's soccer teams.

The study utilized the Division I Men's Soccer Survey developed by the researcher for this study in 1993. The instrument was designed from information obtained in the literature search and through the use of a jury of experts. The statistical methods used to analyze the data included a one-way analysis of variance, crosstabulations, and the Pearson product-moment coefficient of correlation.

The statistical analysis of this study indicated only one significant formal relationship between coaches winning percentage and regular

season practice activities. There was a significant but weak relationship between increasing emphasis on shooting and increasing winning percentages.

Although not statistically significant, there were some notable comparisons of frequency and percentage. The successful coaches spent 48% of their total instruction time focusing on individuals, compared to 44% by the unsuccessful coaches and 41% by the moderately successful coaches. A second notable comparison was that 50% of the successful coaches used praise the majority of the time, compared to 35% of the moderately successful group and 46% of the unsuccessful group. An interesting pattern was also revealed by mean percentages among the scrimmage formats. Coaches who used mostly the 11 a side scrimmage format had a mean winning percentage of 47%. Coaches who used mostly small sided scrimmages, while using some 11 a side scrimmages as well, one had a mean winning percentage of 55%. Although only two coaches used all small sided scrimmages, their mean winning percentage was 61%.

The following recommendations are made by the researcher for further research in the area of collegiate soccer coaching. Research should be conducted to: (1) document what successful college soccer coaches are having their teams do during pre-season; (2) evaluate what successful college soccer coaches do different to prepare their team for games than their less successful counterparts; and (3) evaluate the recruiting techniques being utilized by soccer coaches at the NCAA Division I level.

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CHAPTER 1

INTRODUCTION

Soccer is claimed to be the worlds most popular sport. Morris (1981) stated, "It has been claimed that over 1,000 million people tuned into the finals of the last World Cup roughly one in four of the entire human population." (Morris, 1981, p. 1) However the sport is, for the first time, experiencing wide spread popularity in the United States. Youth soccer has been growing at astonishing rates in recent years and shows no signs of a let down. In 1974 the United States Youth Soccer Association had about 103,000 members, in 1990 there were 1.6 million members and this is not the only youth soccer association which has grown this quickly (Chase,1990). The young players of the United States of America are as enthusiastic as any other young players in the world. However, without knowledgeable coaches or professional players to look up to, the highest level of soccer being played in this country will never be able to equal that of some global competitors.

There have been a series of professional soccer leagues in this country which have appeared and then vanished. The North American Soccer League existed for most of the 1970's. Since that time, there have been the American Soccer League and the Major Indoor Soccer League which also folded. Currently, there is the National Professional Soccer League, American Professional Soccer League, and a few other

regional leagues. However, the immediate future of professional soccer in this country is very uncertain.

Due to the instability of pro soccer, collegiate soccer is the highest level of league soccer with strong roots and a definite future in this country. Intercollegiate soccer exists at the NAIA, NCAA Division I, II, and III levels. Due to the scholarship limits, size of the school, budgets, and rules imposed on universities by the governing organizations, NCAA Division I has emerged as the dominant league.

In order to raise the level of the intercollegiate game, college players will need coaches who are not just experienced players, but who are also knowledgeable about the training of college players. Currently, if college coaches in the United States wishes to read research articles about soccer, they must turn primarily to foreign research articles or youth oriented research, because there is very little available research at the intercollegiate level in the United States.

Most coaches will agree that practice is the key to developing skillful players in any sport. Participants of all sports have no doubt heard the phrase " Practice makes perfect" uttered by their parents, teachers, or coaches. Malcome Cook writes;

"To win League Championships, and to be consistently successful over a period of time, a coach must prepare his team thoroughly by hours, months and years of high-quality, intensive practice. It is easy to identify the worried coaches who dart about just before the match giving the players last-minute instructions which they cannot possibly assimilate at that time. Such coaches merely transmit their anxieties to the already nervous players. Good coaches do all their work during the week to prepare their players for the stress to come in the actual game."

(Cook, 1982, p. 51)

Soccer has long been known to many people as the players game, because once a game starts there are no time-outs or huddles in which the coach can continuously make decisions for, or give instructions to, players. There is a short half time but this is intended to allow players a drink and rest. The NCAA has also proposed a rule change which will place even greater importance on preparing players in advance for games. The change, on which coaches are currently voting, states that coaches will not be allowed to coach players who are on the field from the sidelines. For these reasons, it is imperative that coaches become knowledgeable on running high-quality practice sessions which will prepare their team for the rigors of game day.

Statement of the Problem

The purpose of this study was to determine if there was a relationship between the areas of coaching emphasis during regular season practice sessions and team success.

Hypotheses

The following hypotheses were tested:

1) Successful coaches use more of their instruction time for specific individual instruction than moderately successful or unsuccessful coaches.

2) Coaches who use praise or a balance of praise and scold are more likely to produce successful records than coaches who use scolding the majority of the time.

3) Coaches who use more small sided scrimmage formats than full sided, while using some combination of both have a better winning percentage than;

a) coaches using more than 50% of total scrimmage time for full sided, or

b) coaches using only small sided scrimmages.

4) Successful coaches, on the average, place a higher emphasis on shooting in practice than moderately successful or unsuccessful coaches.

5) Coaches who use between 50% and 20% of total practice time in each of the following formats: A) group, B) team and C) individual work, have higher winning percentages, than:

a) coaches who use less than 20% of total practice time on one or more of the formats or

b) coaches who use over 50% of total time on one of the formats.

Delimitations

The study was delimited to the following parameters:

- 1) The sample was limited to only NCAA Division I schools with varsity men's soccer programs.
- 2) Only regular season practice sessions were included.
- 3) The following selected aspects of practice were included: format, scold vs. praise for motivation, general type instructions vs. specific technical instruction, small sided and full sided scrimmages, and specific aspects of the game worked on most.

Limitations

The limitations of this study were:

- 1) All teams consisted of players with different talents.
- 2) Other factors such as game conditions, recruiting, game day preparation, and number of home games may have an effect on the record of each team.

Assumptions

The following assumptions were made in this study:

- 1) Coaches responded with honesty and accuracy to the survey.
- 2) That team play was affected in some way, be it positively or negatively by coaching received in practice sessions.

- 3) The play of individual soccer players was influenced by coaching which was received in practice sessions.
- 4) The questionnaire was a valid and reliable instrument.

Definition of Terms

For the purpose of this study the following definitions were used:

- 1) Successful Coaches: Coaches with a NCAA Division I winning percentage of 65% or better.
- 2) Moderately Successful Coaches: Coaches with NCAA Division I winning percentages between 40 % and 64 %.
- 3) Unsuccessful Coaches: Coaches with winning percentages which fall below 40%.
- 4) Winning Percentage: Calculated by dividing the total number of wins as a NCAA Division I coach by the number of games coached as a NCAA Division I head coach over the last five years.
- 5) NCAA Division I Schools: Universities who have varsity soccer programs and are members of the National College Athletic Association Division I.
- 6) Technical instruction: Instruction from a coach to a player on how to perform specific individual techniques with or without the ball.

- 7) General team oriented instructions: Instructions, encouragement, or criticism directed at the entire team and not at individuals.
- 8) Scold: To express disapproval or comment in a dominantly negative way to a player or players regarding individual or team play.
- 9) Praise: To express approval or comment in a dominantly positive way to a player or players regarding individual or team play.
- 10) Small sided scrimmage format: Scrimmages which involve from 3 to 9 players per team.
- 11) Full sided scrimmage format: Scrimmages which involve 10 or 11 players per team.
- 12) Individual work: When a player works alone or with one other person with the focus on individual ball skills.
- 13) Group work: When players are divided into small groups for specialized work.
- 14) Team work: When the whole team is involved in the same drill or scrimmage.
- 15) Balanced combination of group, team and individual formats: When each category has a minimum of 25% and a maximum of 40% of the total time spent in practice.

Significance of Study

This study was significant for two reasons. First it increased the amount of American based research about the sport of soccer. Secondly it studied the development of intercollegiate teams, which was an area virtually ignored by past researchers.

CHAPTER 2

REVIEW OF LITERATURE

The problem was to determine if there was a relationship between the areas of coaching emphasis during regular season practice sessions of NCAA Division I men's soccer teams and team success.

The review of literature was divided into three categories:

(a) research on coaching, (b) research on soccer, and (c) other literature on the coaching of soccer.

Research on Coaching

There has been some research conducted on the profession of coaching, which although not specifically related to soccer, seems important to this study. Lacy (1983) conducted a study in which the purpose was analyzing the behaviors of winning high school head football coaches during practice sessions. Coaches were observed at three points during their season; pre-season, early season and late season. Their behaviors were recorded in 11 defined behavior categories including praise, scold, and instruction. Practice sessions segments were classified as warm-up (when players were involved in light running and stretching preceding the more strenuous segments to follow), group (when players were divided into small groups for individual skill specialization), team (when the whole team was involved

in the same activity), and conditioning (strenuous activity during the middle or end of practice which is designed to improve fitness). The intensity of coaching style was determined by the number of interactions the coach had with players; the more interactions the more intense the coaching. The results of this study indicated that all the coaches displayed a more intense coaching style during the pre-season than at any other phase of the season. The coaches also tended to use the group format most during pre-season and the team format most during both the early and late season. Instruction was found to be the most common coaching behavior and praise was used twice as often as scold behaviors (Lacy 1983).

Pickman (1980) conducted a study in which the problem was "to determine the relationship between the leadership styles of male high school basketball coaches and team success.". (Pickman, 1980, p. 3) The study determined leadership styles of coaches by using the Least Preferred Co- Worker scale. Pickman (1980) concluded that leadership styles of male high school basketball coaches appeared to be unrelated to team success, and coaches which were task-oriented seemed to be more successful in post-season play. Pickman (1980)

Summers (1991) assessed the relationship between an athletes perception of his own ability and responsiveness to coaching and technical instruction. This descriptive research project was conducted using Canadian lacrosse coaches and their players (N = 127) between the ages of 13 and 16. All players and coaches were surveyed with questionnaires during the middle one-third of their season preceding a

practice session. The questions were designed to measure: (a)coach technical instruction, (b)athlete's effort, (c)athlete's satisfaction, and (d)athlete's perceptions of their own ability (Summers, 1991).

The independent variable in the study was the self perceived ability of each player. The dependent variable was the effort exerted by each player in response to instructions by the coach. Results indicated that the more able the players perceived themselves, the greater the effort was in response to technical instruction by the coach. According to Summers, it seemed likely that intrinsic motivation played a significant role in the athletic participation of these athletes. Therefore, the coaches input was viewed as an aid and was welcomed by the players. He suggested that these results reflected the unique leadership relationship of a coach to his players. Therefore, Summers (1991)concluded that traditional worker-boss leadership principals are not very valid when relating to the coach-player relationship in amateur sports.

Soccer Research

There is much research on the sport of soccer which is particularly relevant to this study. One study by Schmid (1981) compared the 6 a side scrimmage format with the 11 a side scrimmage format to determine which provided greater opportunities for repetition of basic skills and for the cultivation of team offensive and defensive principles. By using video tapes of three scrimmages 25 minutes in length, frequency charts were maintained for each player and all the

opportunities to perform basic skills and tactics were recorded. Utilization of rewind and slow motion allowed the researcher to record the data correctly. It was concluded by the researcher that 6 vs. 6 scrimmages increased the chances for the performance of all basic skills except for heading. It was also concluded that: a) each player was confronted more frequently with tactical decisions of supporting teammates; b) offensive players participating as defensive threats; and c) defensive players participating as offensive threats. It was suggested that small sided scrimmages would facilitate quicker learning and also be more useful in the maintenance of previously learned skills than an 11 a side format. Schmid writes "By creating small-sided, limited field scrimmages the players cannot help but have more contacts with the ball and therefore develop greater skill and game sense." (Schmid, 1981, p. 2).

One study by Leads and Carnegie in 1976 was conducted using English professional soccer players. The study determined the approximate following percentage breakdowns of time spent on the various training routines: (a) calisthenics, circuit-training, and recovery each account for under 10% of the total training time, (b) warm-up 12%, (c) running 14%, (d) drills 15%, (e) skills practice 19%, and (f) games 25% (Reilly 1979).

According to some research, skills practices are more efficient when conducted at a moderate level and where fatigue is absent (Kanamoto, 1977). In English professional soccer, it is common to peak with the most strenuous practices during mid-week and a reduction in

intensity the day preceding a game. English professional soccer players were reported to spend an average of 75 minutes on training per day, while in season (Edmonton, 1978). Reilly (1979)

One descriptive study by Barbour (1989) analyzed the goal scoring during the World Cup of 1986 in Mexico. The objectives of the study were to determine: (a) location (where the goals were scored from), (b) technique and skills required by goal scorers, (c) the role of free kicks, (d) the route to goal, (e) the timing of the goals and the importance of taking the lead, and (f) the implications for coaches. The study revealed that only 10% of the goals came from outside of 18 yards, 18% of the goals came between 18 and 12 yards, 52% of the goals came between 12 and 6 yards and 20% of all goals came inside of 6 yards. The study also revealed that 68% of the goals were the result of only one touch on the ball by the shooter and another 20% involved only two touches. Thirty percent of the tournaments goals resulted from restart situations. The route to goal most common accounting for 40% of all goals was repossessing the ball from the defense in their third of the field. The originating point for the other 60% of goals was evenly divided between the midfield and defending thirds. It was also found that 65% of the time the teams which scored first won. The implications of these facts for coaches are that players should be well trained in shooting the ball on the first touch with both feet and well schooled in heading to produce goals. This training should comprise a large percent of practice time, since goals are what win games. Barbour wrote: "We must make shooting the primary

objective for every player." (Barbour, 1989, p. 33). It is also important that coaches spend time on restarts since 30% of goals came on restarts (Barbour, 1989). Similar results were reported by (Reilly, 1989) on a series of studies on English professional soccer.

Other Literature on Soccer Coaching

Additional literature was reviewed by the author with the following question in mind. What type of elements do authors feel will aid in building a winning team?

Waters, Hawk, and Squires in 1943 offered the following suggestions for soccer coaches: (a) keep things simple by focusing on one thing at a time; (b) use positive reinforcement not punishment to motivate players; (c) use charts and films to increase learning; (d) review fundamentals at least once a week; (e) condition at the end of practice; and (f) it's better to under train than to overtrain.

Winterbottom suggested in 1952 that each practice session should include time for individual skills practice; time for small group specialization, i.e., defense or offense; and tactical work with the entire team. In 1967 Wade went so far as to outline a training schedule for amateur teams which practice about three times a week. College teams fall in this category, since they get one day off per week according to NCAA rules and most teams play two or three games a week during the season. Wade (1967) suggested the following schedule:

" Day 1: 10 minutes warm up with a ball; 60 minutes functional, phase

or team practice (half-hour shooting practice for forwards and half-backs); 35 minutes endurance and speed training; 15 minutes 5 or 6-a-side football. Day 2: 10 minutes warm up; 90 minutes match practice; 20 minutes pressure training (shooting practice for forwards and half-backs). Day 3: 15 minutes team discussion; 60 minutes team practice; 35 minutes speed and endurance work; 15 minutes individual skill practice or 5 v 5 football; 15 minutes shooting practice for forwards and half-backs."

In more recent publications Bien (1977) recommends that coaches take a minimum of 30 minutes to pre-plan each practice. He argued that if the coach is organized that players will respond better to coaching. Bien insists that basics ball skills and simple tactics are the essence of a winning team. Bien goes on to emphasize the importance of practice activities which simulate game situations by forcing players to compete with one another. Other modern authors such as Morris (1981) and Gardner (1992) agree that coaches should be cautious not to over drill players. They advocate plenty of unmolested scrimmage time which allows the game to be the teacher and facilitates creative play. Gardner writes, "The modern coaching emphasis on fitness, team play and one-touch soccer has put the squeeze on the creative superstars." (Gardner, 1992, p. 12)

Alan Maher (1983) recorded in detail what he observed while visiting professional and semi-professional practice sessions in Holland. The first team observed was the semi-professional Deventer Eagles.

They began practice with a series of drills which all involved shooting at goal and concluded practice with a small sided scrimmage.

The second team observed was AZ'67 the professional team of Alkmaar. They persisted the whole practice with small sided 3 v 3 and 6 v 6 scrimmages. The goalkeepers practiced separately.

The third team visited was den Hague. They started practice with light jogging and stretching. The team then split into two groups the midfield and forwards practiced finishing and the defenders practiced heading. The groups then combined and played small side scrimmages. This was followed by returning to groups and the defenders practiced finishing while forwards worked on passing in a drill format. In conclusion, there was a full 11 v 11 scrimmage. The final team reported on was the Division I professional team Sparta of Rotterdam. They began with stretching and then moved quickly to a series of passing drills. Small sided scrimmages followed and practice was concluded with a 45 minute talk in which the coach made observation about the play of the team and certain individuals (Maher, 1983).

The literature tends to suggest that there are many soccer coaches who share the same or similar ideas about practice organization and techniques which should be taught. What is hard to distinguish is which combination of these basic ideas produce winning teams, if indeed there is a better combination at all.

CHAPTER 3

PROCEDURES

The problem was to determine if there was a relationship between the areas of coaching emphasis during regular season practice sessions of NCAA Division I men's soccer teams and team success.

Identification of the Sample

The population selected by the investigator were all head coaches of NCAA Division I varsity men's soccer teams who were members of the Intercollegiate Soccer Association of America. The The Division I Men's Soccer Sutvey (Appendix B) was mailed to all 184 coaches in the population. A letter (Appendix A) was included with the survey to explain that returning the questionnaire would be considered consent to participate in the study. There were no questions referring to school or name of coach and these both remained confidential.

Method of Collecting Data

The investigator mailed all 184 head coaches the questionnaire (Appendix B). Included with each questionnaire and cover letter, there was a stamped envelope to encourage returns. The instrument was mailed out during the second week of February, 1993. The coaches

in the sample were given until February 19th to respond. Coaches who failed to return surveys by February 21st received phone calls encouraging their response.

Development of the Instrument

The survey method was chosen because the investigator wanted to reach a high percentage of coaches, in order to find out what college coaches were doing to produce successful teams. This was the most economical way to reach all the coaches in the NCAA Division I who are Intercollegiate Soccer Association of America (ISAA) members.

The survey instrument used in this study was developed by the researcher. After the review of literature, it was determined that no instrument was available which could properly meet the needs of this study. The survey (Appendix B) was therefore designed to determine if there was a relationship between coaching emphasis during regular season practice sessions and team success. The questions were specifically designed to allow the researcher to test the hypotheses.

Selection of the Jury

A preliminary survey instrument was developed by the researcher and then evaluated by a jury of experts. The jury included one reviewer with expertise in research methods and two who were professionals in soccer coaching and administration. A Professor, at

the University of Tennessee, the Head Soccer Coach, at Maryville College in Maryville Tennessee, and the manager of the Soccer House in Knoxville Tennessee and a part time soccer coach. Revisions recommended by the reviewers included: (a) adding a question which would determine the amount of time each coach spends planning the average practice; (b) requesting the number of days practiced per week; (c) that the period of time in which winning percentage is calculated be limited to the last five years; and (d) the categories in questions 7 and 8 should be listed in alphabetical order to eliminate possible bias. The final draft (Appendix B) was based on these recommendations.

Evaluation of Information

The analysis of data was analyzed using the Statistical Analysis System (SAS) package. The procedures used to address the purpose of this study and it's sub-problems were descriptive statistics including means, percentages, frequencies, a one way analysis of variance and the Pearson product-moment coefficient of correlation.

CHAPTER 4

RESULTS AND DISCUSSION

The purpose of this study was to determine if there was a relationship between the areas of coaching emphasis during regular season practice sessions for NCAA Division I men's soccer teams and team success. Five hypotheses were tested.

The data collected consisted of responses by NCAA Division I soccer coaches to the Division I Men's Soccer Survey (Appendix B), which was developed by the researcher in 1993. The surveys were mailed to 184 head coaches of NCAA Division I men's soccer programs, eighty-eight of the coaches responded. Statistical procedures included the Pearson product-moment coefficient of correlation, one-way analyses of variance, and the crosstabulation of frequencies. The data was analyzed using the Statistical Analysis System (SAS).

This chapter includes results of the analyses organized by the specific hypothesis tested as follows: (a) level of coaching success and instruction time for individuals, (b) level of coaching success and coaching style, (c) level of coaching success and scrimmage formats, (d) level of coaching success and emphasis on shooting, and (e) level of coaching success and practice formats. Within each section the statistical results are presented, followed by discussion of the results.

Level of Coaching Success and Instruction Time for Individuals

Results

The first hypothesis tested suggested that successful coaches use more of their instruction time for specific individual instruction than moderately successful or unsuccessful coaches. The information used in the analysis of this hypothesis was obtained from questions 1 and 11 of the Division I Men's Soccer Survey (Appendix B). Question 1 provided information about the coaches record over the past five years. Question 11 obtained data on the percentage of total instruction time coaches focused on individuals.

A one-way analysis of variance was performed on instructional time for three levels of coaching success. The results indicated that there was no significant difference between the successful, moderately successful, and unsuccessful levels of coaching success (Table 1). Therefore, the statistical analyses did not provide support for hypothesis one (Chapter 1, pp. 4).

TABLE 1. Percentage of Total Instruction Time Spent on Individuals
by Level of Coaching Success *

Coaching Success	Unsuccessful	Moderately Successful	Successful
Winning Percentage Range	0-44%	45-64%	65-100%
Number of Coaches	29	43	16
Mean Percent for Individual Instruction Time	44%	41%	48%
Standard deviation	16.898%	16.360%	14.829%

* $F(2,85) = .99$, $p = .38$

Discussion

There was no statistical difference in the amount of individual instruction time provided by the unsuccessful, moderately successful, and successful coaches in this study. It is important to note that the most successful group of coaches spent the greatest amount of time on individual instruction. However, a comparison of means (Table 1) showed that the coaches grouped into the successful category spent 4-6% more of the total instruction time focusing on individuals than their counterparts in the other two groups. The successful coaches spent an average of 48% of total instruction time focusing on individual instruction, compared to 44% by the unsuccessful coaches and 41% by the moderately successful coaches.

The trend is consistent with Hypothesis 1.

In fact the successful group of coaches used individual instruction about 48% of the time, almost half of their total instruction time. The 1992 NCAA Division I Final Four coaches symposium featured Bora Multionovich as the main speaker. He is now the head coach of the United States national team and has experienced a great deal of past success in international soccer. He lectured to coaches for three hours on the importance of focusing on details when teaching the game to players of all ages. His main point was that often coaches become so involved with team tactics, they forget to focus on the individuals who carry out the tactics. The comparison of means above suggests that many of the coaches believe in the importance of Multionovich's point, that in order to be successful, coaches must not only present their team with tactics and skills, but teach each the individual how to carry these out in a game situation.

Level of Coaching Success and Coaching Style

Results

The second hypothesis tested suggested that coaches who use praise or a balance of praise and scold are more likely to have successful records than coaches who use scold a dominant part of the time. The data used to evaluate this hypothesis was obtained from questions 1 and 13 of the Division I Men's Soccer Survey (Appendix B). The level of coaching success was determined using information

obtained from question 1. Question 13 provided information on the coaches dominant attitude toward players. The coaches expressed that they were dominantly positive by choosing praise, that they were dominantly negative by choosing scold, or that they used an equal combination of praise and scold by choosing balance.

A cross tabulation of coaching success with the results of question 13 was used to analyze this data (Table 2). The Chi square statistic could not be applied to the crosstabulation since all of the criteria could not be met. Therefore, only frequency and percentages are referred to in the results (Table 2). Among the successful coaches, 50% said they primarily used praise and 50% claimed they balanced praise and scold. Within the moderately successful group of coaches, 62.79% indicated they used a balance, 2.33% stated they scolded more often, and 34.88% answered that they praised most often. The unsuccessful group also had a larger percentage of coaches using a balance of scold and praise 53.57%. Only 46.43% of unsuccessful coaches selected praise as their dominant attitude. No statistical support or pattern of frequency of response was found, using crosstabulation, for Hypothesis 2.

TABLE 2. Coaching style when dealing with players by level of coaching success

Level of coaching success	<u>Coaching style</u>		
	Praise	Scold	Balance
Unsuccessful			
Winning Percent 0-44%	13	0	15
Percent of total	14.94%	0%	17.24%
Percent of row	46.43%	0%	53.57%
Moderately successful			
Winning percent 45-64%	15	1	27
Percent of total	17.24%	1.15%	31.03%
Percent of row	34.88%	2.33%	62.79%
Successful			
Winning percent 65-100%	8	0	8
Percent of total	9.2%	0%	9.2%
Percent of row	50%	0%	50%

Discussion

The style which a coach uses when dealing with his players is very important to the attitude of the team. Although no significant statistical differences were established using these analyses, there are some numbers among the results which are important in the real world of coaching. The first important point is that only one coach of the eighty-eight respondents claimed to scold his players significantly more than he praised them. This should tell coaches that at the NCAA Division I level coaches feel it is important to avoid being dominantly negative when dealing with their team. The other important point is that 50% of the successful coaches used praise a dominant part of the time. This was the highest percentage of any group. This data seems to suggest that it is better in most cases for a coach to use praise more often than scold.

Level of Coaching Success and Scrimmage Formats

Results

The third hypothesis tested was: Coaches who use more small sided scrimmage formats than full sided, while using some combination of both have a better winning percentage than;

- a) coaches using more than 50% of total scrimmage time for full sided, or
- b) coaches using only small sided scrimmages.

The information used to evaluate this hypothesis was obtained from questions 1 and 12 of the Division I Men's Soccer Survey (Appendix B). The answers to question 1 were used to determine if coaches were successful, moderately successful and unsuccessful. Question 12 asked what percentage of total regular season practice scrimmage time was spent in each of the following scrimmage formats: (a) 11 a side restricted play, (b) 11 a side unrestricted play, (c) small side restricted play, and (d) small side unrestricted play. The percentage of total scrimmage time devoted to 11 a side play was derived by adding the percentages in answers for a and b above. The percentage of total scrimmage time devoted to small sided play was then calculated by adding the percentages from the last two answers.

A one-way analysis of variance was conducted on scrimmage formats and there was no significant difference among the variables (Table 3). The mean winning percentage and number of coaches, who fall into each of the following three types of scrimmage format were: (a) those coaches using more than 50% of total scrimmage for 11 a side scrimmages, (b) coaches using more than 50% of their time on small sided scrimmages while using some combination of both, and (c) coaches using only small sided scrimmages (Table 3).

TABLE 3. Winning percentage and scrimmage formats *

Group	FS>50%	SS>FS	SS only
Number of Coaches	26	56	2
Mean Winning Percentage	47.25%	55.06%	61.25%
Standard Deviation	13.68%	15.63%	15.91%
FS = Full sided SS = Small sided			

* $F(2,81) = 2.71$, $p = .0723$

The 26 coaches in group 1 have a mean winning percentage of 47.25% and a standard deviation of 13.68%. The 56 coaches in group 2 have a mean winning percentage of 55.06% and a standard deviation of 15.63%. The 2 coaches in group 3 have a mean winning percentage of 61.25% and a standard deviation of 15.91%. These statistical results did not provide support for the hypothesis.

Discussion

In this data group the statistical difference was not significant (Table 3). However, coaches should consider the obvious trend which appeared among the winning percentages across groups. Mean winning percentages were 14% better and were 50% or above for coaches with greater amounts of scrimmage time devoted to small sided scrimmages. This trend supports the conclusions reached by Schmid in 1981. After

he conducted a comparison of small and full sided scrimmage formats, Schmid concluded that small sided scrimmages should facilitate faster learning and provide a better environment for skills maintenance than the eleven a side format. The important thing coaches can do, based on the results of this study and Schmid's study, is to use small sided scrimmages more often in the teaching process than eleven a side scrimmages.

Level of Coaching Success and Emphasis on Shooting

Results

The fourth hypothesis suggested that successful coaches, on the average, place a higher emphasis on shooting in practice than moderately successful or unsuccessful coaches. The data used to evaluate this hypothesis were winning percentages based on question 1 of the Division I Men's Soccer Survey (Appendix B). The amount of emphasis on shooting in practice was determined using the responses to question 15. The coaches ranked the following areas from 5 to 1, with 5 being the area emphasized most during the regular season and 1 being the area emphasized least. The areas were dribbling, heading, passing, shooting, and trapping.

The Pearson product-moment correlation coefficient was used to analyze the relationship of winning percentage with mean emphasis on shooting. The sample size was $N = 84$ and the sample correlation coefficient was $r = .24085$, with $p = .0314$. The results indicated a

significant, but weak, relationship among the variables. Based on the results of this analysis of data, there is a positive relationship between increasing emphasis on shooting and higher winning percentages which provided support for Hypothesis 4. The data was then sorted by the level of success of the coach as determined by winning percentage, to depict the trends in the data set (Table 4).

TABLE 4. Relationships of coaches winning percentages to emphasis on shooting

Level of Success	Unsuccessful	Moderately Successful	Successful
Coaches Winning Percentage	0-44%	45-64%	65-100%
Number of Coaches	27	42	15
Mean Rank Emphasis on Shooting	3.593	3.881	4.133
Standard Deviation	1.217	.942	.743

Range = 1 to 5 with 5 being most important

Discussion

The review of literature revealed that many members of the soccer community felt shooting was an important area of emphasis for coaches. Barbour wrote: "We must make shooting the primary objective for every player." (Barbour, 1989, p.33). Alan Maher (1983) reported that every professional practice he visited included work on finishing.

The significant correlation in this study and the trend in the data supports these writers. The positive relationship between increasing the emphasis on shooting and higher winning percentages, should highlight for coaches the importance of placing a high emphasis on scoring in practice sessions.

Level of Coaching Success and Practice Formats

Results

The fifth and last hypothesis suggested that coaches who use between 20% and 50% of total practice time in each of the following formats: (a) group, (b) team and (c) individual work, have higher winning percentages, than:

- a) coaches who use less than 20% of total practice time on one or more of the formats or
- b) coaches who use over 50% of total time on one of the formats.

The information used to test this last hypothesis was extracted from question 1 and question 10 (Appendix B). Question 1 requested the coaching record of the coach responding to the survey. Question 10 asked the coach what percentage of time he spent during regular season practice sessions using individual, group, and team formats (Tables 5, 6, 7 respectively).

A one-way analysis of variance was run on each of the three types of practice formats. The statistical analyses revealed no significant differences ($p > .05$). Therefore, no statistical support

Table 5. Winning percentage by individual practice format *

	Coaches using < 20%	Coaches using 20-50%	Coaches using > 50%
Number	33	51	0
Mean Winning Percentage	52.5%	53%	—
Standard Deviation	13.69%	16.49%	—

* $F(1,82) = .02$, $p = .8781$

was provided for Hypothesis 5 of this study.

Category one focused on what percentage of time was spent in the individual format (Table 5). It was discovered that no coach spent more than 50% of their time working with their team in an individual format. Thirty-three coaches spent less than 20% of their time in a individual format. The mean winning percentage for these coaches was 52.5% with a standard deviation of 13.69%. Fifty one coaches used the individual format between 20% and 50% of the time. The mean winning percentage for this group was 53% with a standard deviation of 16.48%.

Category two focused on what percentage of time during regular season practices coaches spent using the group format. It was discovered that no coach used the group format less than 20% of the time. Only seventeen coaches used the group format more than 50% of the time. The mean winning percentage for this group was 48.4% with

a standard deviation of 16.9%. The largest group of coaches, sixty seven, used the group format between 20% and 50 % of the time. The mean winning percentage for this group was 53.9% with a standard deviation of 14.88%.

Table 6. Winning percentage by group practice format *

	Coaches using < 20%	Coaches using 20-50%	Coaches using > 50%
Number	0	67	17
Mean Winning Percentage	—	53.9%	48.4%
Standard Deviation	—	14.9%	16.9%

* $F(1,82) = 1.77$, $p = .187$

The third category focused on what percentage of regular season practice time coaches spent using the team format. Only three coaches used less than 20% of practice time in the team format. These coaches had a mean winning percentage of 39.8% and a standard deviation 13.07%. Sixty nine coaches used the team format between 20% and 50% of the time during practice. These coaches had a mean winning percentage of 52.9% and a standard deviation of 15.39%. Twelve coaches used the team format over 50% of the time. These coaches had a mean winning percentage of 55.6% and a standard deviation of 15.23%.

Table 7. Winning percentage by team practice format *

	Coaches using < 20%	Coaches using 20-50%	Coaches using > 50%
Number	3	69	12
Mean Winning Percentage	39.78%	52.86%	55.63%
Standard Deviation	13.07%	15.39%	15.23%

* $F(2,81) = 1.29$, $p = .2808$

Discussion

There are many things that coaches can learn from their colleagues are doing. In this case coaches can learn from what their counterparts are not doing. No coach used the individual practice format more than 50% of the time or used the group format less than 20% of the time (Table 5). In the individual, group and team formats it was discovered that the majority of coaches used the formats between 20% and 50% of the time. This should tell coaches that as a group they felt it was important to provide variety in their teaching methods.

This point is supported by the review of literature conducted for this study. Leads and Carnegie reported in 1976 that among English professional players 15% of practice time is spent on drills, while 19% is spent on skills practice and 25% spent on games. If possible it is

suggested by this researcher that coaches use a balance of teaching formats when attempting to improve their teams.

Summary

This chapter presents the results of the NCAA Division I Men's Soccer Survey which was completed by 88 NCAA Division I coaches across the United States. Frequencies and percentages were utilized to present the results. A one-way analysis of variance was used to determine the relationships among variables in hypothesis one, three and five. In hypothesis 1 the results indicated there was no significant difference between the percentage of total instruction time spent on individuals and the three winning percentage groups. In hypothesis three results indicated no significant difference between the use of scrimmage time and the coaches winning percentage. Hypothesis five also revealed no significant differences among the three practice format variables and the coaches winning percentage.

Hypothesis two was analyzed using a cross tabulation of coaches success and the dominant attitude of the coach in dealing with the players. However, the Chi squared statistic could not be applied since all the criteria could not be met. The fourth hypothesis was evaluated using the Pearson product-moment correlation coefficient. The results indicated a significant but weak relationship among increased importance on shooting and increasing winning percentages.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter contains a summary of this study and presents the conclusions reached by the researcher. This chapter is divided into three parts: (a) summary, (b) conclusions, and (c) recommendations for further study.

Summary

The purpose of this study was to determine if there was a relationship between the areas of coaching emphasis during regular season practice sessions of NCAA Division I men's soccer teams and team success. The participants in the study were eighty eight NCAA division I soccer coaches from all over the United States. The subjects ranged in experience as a NCAA Division I coach from zero to thirty years.

The study utilized the Division I Men's Soccer Survey developed by the researcher for this study in 1993. The instrument was designed from information obtained in the literature search and through the use of a jury of experts.

The statistical methods used to analyze the data included one-way analyses of variance, crosstabulations, the Pearson product-moment correlation and the comparison of group means.

The statistical analyses of the data in this study indicated only one significant formal relationship between coaches winning percentage and regular season practice activities. There was a significant but weak relationship between increasing emphasis on shooting and increasing winning percentages.

Although not statistically significant, there were some notable comparisons of frequency and percentage among the results. The successful coaches spent 47.813% of their total instruction time focusing on individuals, compared to 43.621% by the unsuccessful coaches and 41.163% by the moderately successful coaches. A second notable comparison was that 50% of the successful coaches used praise the majority of the time, compared to 34.88% of the moderately successful group and 46.43% of the unsuccessful group. Only one coach in 88 claimed to have used scold more often than praise when dealing with players. An interesting pattern was also revealed by mean percentages among the scrimmage formats. Coaches who used mostly the 11 a side scrimmage format had a mean winning percentage of 47.25%. Coaches who used mostly small sided scrimmages, while using some 11 a side scrimmages as well, had a mean winning percentage of 55.06%. Although only two coaches used all small sided scrimmages their mean winning percentage was 61.25%.

Conclusions

Within the limitations of this study, and based on the statistical analysis of the data collected, the following findings and conclusions are reported by the researcher.

1. Data analysis revealed no significant relationship between the level of success achieved by coaches and the amount of time spent focusing on individual instruction.

2. No formal statistical relationship could be established between the level of coaching success and the coaches dominant attitude toward players, due to the distribution of the responses.

3. The data set for use of scrimmage time revealed no significant relationship between coaches winning percentage and the breakdown of small and full sided scrimmages.

4. There was a significant but weak relationship between increasing emphasis on shooting in practice and increasing winning percentages for coaches.

5. There were no significant relationships revealed between the percentage of time coaches used in different practice formats and winning percentage of coaches.

Recommendations

Based on the findings of this study, the following recommendations are made for further research in the area of collegiate soccer coaching. Further studies should be conducted to:

1. Document what successful college soccer coaches are having their teams do during pre-season.

2. Evaluate what successful college soccer coaches do different to prepare their team for games than their less successful counterparts.

3. Evaluate the recruiting techniques being utilized by soccer coaches at the NCAA Division I level.

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APPENDICES

APPENDIX A
Letter to Coaches

Dear Coach,

My name is Bill Elliott and I am currently the assistant soccer coach at Maryville College in Maryville, TN and a graduate student working towards a Master of Science degree at the University of Tennessee. In fulfillment of my thesis requirement, I would like to conduct a survey of Division I men's soccer coaches and their coaching methods over the past five years.

The purpose of the study is to attempt to determine a relationship between the areas of coaching emphasis during regular season practice sessions of NCAA Division I men's soccer teams and team success. I am interested in this project because I would like to increase the amount of research on college soccer in order to help coaches improve their methods and the quality of the college game.

Your techniques as a Division I soccer coach are of great importance to the improvement of college soccer and I would greatly appreciate your participation in this study. Your name and the name of your school will remain confidential since only group data will be used in the write up of this study.

If you are willing to participate, please complete the 15 question survey and return it in the enclosed, self addressed stamped envelope. Completion of the survey will take approximately 15 minutes of your time. Returning the survey will be considered your agreement to participate in the study. Please return this survey by February 24.

I appreciate greatly your time and hope you will choose to participate in this study. I look forward to your rapid response.

Thank you,

Bill Elliott

_____ Check here if you would like to receive the results of this study by June 1st.

Return address: 2005 Sutters Mill Ln. Knoxville, TN 37909

APPENDIX B
Survey Questionnaire

DIVISION I MEN'S SOCCER SURVEY

code _____

I appreciate your participation in this study. Through your efforts, valuable information will be collected and used to help improve collegiate soccer programs. The information you provide on this survey is confidential and only group data will be used in presenting results.

Important: Please complete all of the following questions based on what you have done as a coach on the average over the past five years.

Non-practice related questions

1) What is your coaching record during the past five seasons while serving as a head coach at the NCAA Division I level ?

_____ WINS

_____ LOSES

_____ TIES

2) How many years have you worked as the head coach at your present school? _____

3) How many assistant coaches do you have? _____

4) Do you use game films during the season to aid in teaching players?
_____ 1)NO _____ 2)YES

If yes, in what ways and for what types of information do you use films?

Practice related questions

5) How many minutes does your average practice last during the regular season? (excluding practices on days preceding games)

6) How many minutes does your average practice last on the day preceding a game?

7) How many days a week do you practice during the regular season?

8) How many minutes per week do you spend planning practice sessions during the season? _____

9) What percentage of time do you spend during regular season practice sessions on tactical and technical work ? Please answer so that the total percentage equals 100.

_____ TACTICAL (scrimmages, drills or talks in which team strategy is the focus).

_____ TECHNICAL (scrimmages, drills or talks in which individual ball skills or fitness are the focus).

10) What percentage of time do you spend during regular season practice sessions on individual, group, and team work ? Please answer so that the total percentage equals 100.

_____ INDIVIDUAL (when a player works alone or with one other person with the focus on ball skills)

_____ GROUP (when the team is divided into small groups for specialized work)

_____ TEAM (when the whole team is involved in the same drill or a scrimmage)

11) When you give instructions during regular season practice sessions what percentage is specific and aimed at individuals and what percent is general and team oriented ? Please answer so that the total percentage is equal to 100.

_____ SPECIFIC INDIVIDUAL INSTRUCTIONS

_____ GENERAL TEAM ORIENTED INSTRUCTIONS

12) What percentage of total scrimmage time during regular season practice is: Please answer so that the total percentage equals 100. Restricted play is any scrimmage time with special rules such as one touch.

_____ 11 a side restricted play

_____ 11 a side unrestricted play

_____ small side restricted play

_____ small side unrestricted play

13) When commenting on play to both individuals and the team within practice sessions, do you use more praise or scold or do use a even balance of the two? (check only one of the following)

- _____ 1) PRAISE (to express approval or comment in a dominantly positive way)
_____ 2) SCOLD (to express disapproval or comment in a dominantly negative way)
_____ 3) BALANCE (50% praise and 50% scold)

14) Rank the following areas, from 5 to 1 with: for the area emphasized most during regular season practice sessions, to 1 for the area emphasized least?

- _____ CONDITIONING
_____ DEFENSE
_____ OFFENSE
_____ RE-STARTS
_____ SCRIMMAGES

If other area emphasized heavily please comment.

15) Rank the following areas, from 5 to 1 with: for the area emphasized most during regular season practice sessions, to 1 for the area emphasized least?

- _____ DRIBBLING
_____ HEADING
_____ PASSING
_____ SHOOTING
_____ TRAPPING

If other area emphasized heavily please comment.

Thank you for your time and valuable input. Once again be assured that this information is confidential. Please return the questionnaire in the envelope provided to:

Bill Elliott
2005 Sutters Mill Ln
Knoxville, TN 37909

VITA

William Morris Elliott Jr. was born in Memphis, Tennessee on June 24, 1967. He was raised in Chattanooga, Tennessee and attended The University of Tennessee where he received a Bachelor of Science Degree in May, 1991 with a major in Marketing.

Upon graduation, he traveled through Europe for two months. He returned to live in Knoxville, Tennessee where he coached youth soccer and waited tables for six months.

In the Spring of 1993, he began his study toward a Master of Science Degree in Recreation and Leisure Studies at The University of Tennessee. In the Summer of 1993 he accepted a graduate assistantship at Maryville College in Maryville Tennessee as the assistant soccer coach.

The author is a member of the National Soccer Coaches Association of America and a United States Soccer Federation licensed referee. He played Division I soccer on the first ever varsity team at The University of Tennessee, Knoxville and went on to become both the captain and coach of the club team after the varsity program was dissolved. He looks forward to becoming the head coach of a varsity program sometime in the near future.