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# Dimensions Coaching Performance: Determining the Validity and Reliability of the State University of New York College at Brockport Student Athlete Assessment Form (SAAF)

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Dimensions of Coaching Performance:  
Determining the Validity and Reliability of The State University Of New York  
College At Brockport Student Athlete Assessment Form (SAAF)

A Thesis Presented To the Department Of Physical Education and Sport,  
State University Of New York, College at Brockport,  
Brockport, New York

In Partial Fulfillment of the Requirements of  
Master's of Science in Education

By  
Gregory W. Lund  
State University of New York, College at Brockport

July, 1998

STATE UNIVERSITY OF NEW YORK

COLLEGE AT BROCKPORT

BROCKPORT, NEW YORK

Department of Physical Education and Sport

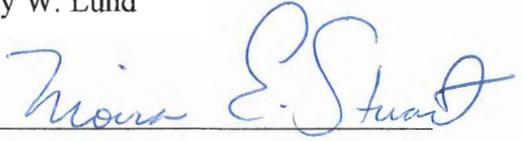
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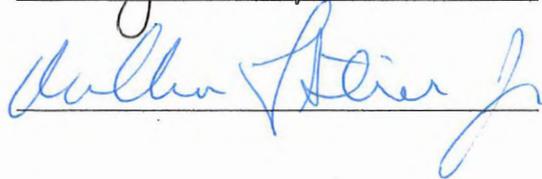
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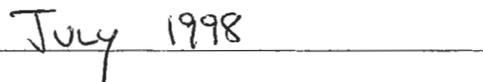
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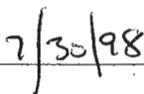
  
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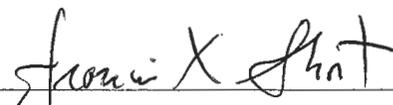
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Accepted by the Department of Physical Education and Sport, State University of New York, College at Brockport, in partial fulfillment of the requirements for the degree Master of Science in Education (Physical Education, Athletic Administration).

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## ABSTRACT

DIMENSIONS OF COACHING PERFORMANCE:  
DETERMINING THE VALIDITY AND RELIABILITY OF THE STATE  
UNIVERSITY OF NEW YORK COLLEGE AT BROCKPORT STUDENT  
ATHLETE ASSESSMENT FORM (SAAF)

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COLLEGE AT BROCKPORT, 1998  
DR. MOIRA STUART

Literature pertaining to the evaluation of coaches concurs that the process of evaluating coaches should be formalized and specific (Leland, 1988; Levy, 1989; Stier, 1983; MacLean & Chelladurai, 1995). SUNY Brockport has employed the Student Athlete Assessment Form (hereafter referred to as the SAAF), to evaluate the effectiveness of its' coaches at the end of each athletic season. Despite being used in various forms for 14 years as a significant data source for the overall evaluation of coaches, the validity and reliability of the SAAF are unknown. This study was conducted to determine the validity and reliability of the SAAF. Between fall 1986 and spring 1991, over 800 student-athletes completed the SAAF. The data were

collected and stored, but further analysis had not been performed. Principal Components Factor Analysis with a varimax rotation was performed to develop factors. Only those factors which exceeded an eigenvalue of 1.0 during initial extraction, were retained in the final analysis. Six reliable factors were extracted and subsequently named Athlete Enjoyment, Coach Communication Style, Coaching Skills, Coaches' Behavior, Coaches' Sport Knowledge, and Overall Satisfaction.

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## Chapter I

### Introduction

According to Leland (1988), “The most challenging task of an athletic director’s job is to evaluate the performance of coaches and to help them improve weaknesses or build on strengths (p. 21).” Leland also stated that few coaches have the luxury of operating under a formalized system of evaluation. “Much of the evaluation in athletics is informal: ‘Nice job,’ or ‘Tough loss’ (p. 21).” The timing, quality, and quantity of feedback have consistently been identified as important factors in improved performance, and as a powerful positive motivator for change (Drucker, 1954; Hilgard & Bower, 1975; King, 1984; Krumholtz & Krumholtz, 1972; Schmidt, 1982). Many full-time coaches play a prominent role in both the athletic department and the total institution. (Sabock, 1985; Sage, 1975). Therefore, it seems logical that a comprehensive formal evaluation would be required of all coaches. However, Bennice (1990) stated that coaching evaluations have been avoided due to the difficulty of collecting accurate data and implementing the evaluation process.

MacLean and Chelladurai (1995) developed a valid and reliable instrument to measure coaching performance called the Scale of Coaching Performance. Confirmatory factor analysis and internal consistency estimates yielded a psychometrically sound instrument. However, MacLean and Chelladurai acknowledged that their study only assessed the perceptions of two components of an athletic program; the coaches and athletic administrators. They concluded however:

“there are equally, if not more significant constituencies, such as the student-athletes (p. 205).” They suggested that student-athletes should be involved in the evaluation process.

The State University of New York, College at Brockport uses the Student Athlete Assessment Form (hereafter referred to as the SAAF), to evaluate the effectiveness of its’ coaches at the end of each athletic season. Since it’s development in 1984, the SAAF has been revised twice. The first revision was designed to utilize computer tabulation of scores. The second revision occurred in 1991. The Likert scale was changed and 39 questions were arbitrarily removed. Despite being used in some form for 14 years as a significant data source for the overall evaluation of coaches, the validity and reliability of the SAAF are unknown.

#### Purpose of the Study

The purpose of this study was to determine the validity and reliability of the State University of New York, College at Brockport, Student Athlete Assessment Form (SAAF).

#### Assumptions

Prior to conducting the investigation, the investigator assumed the following:

- 1) The SAAF was understood by the student-athletes in the manner in which it was intended.
- 2) The student athletes responded honestly to the SAAF.

### Delimitation

The data were collected from all male and female intercollegiate student-athletes upon completion of their seasons at the State University of New York, College at Brockport between Fall Semester 1986 and Spring Semester 1991, inclusively. It is during this time that the SAAF contained 79 questions.

### Limitations

Shortcomings of the investigation that may have affected the validity and/or reliability of the data included the following:

1. The data that was used for this study were collected only from college student-athletes at the State University of New York, College at Brockport.
2. Social desirability factors could have influenced the student-athletes' responses (Thomas & Nelson, 1996).

### Definitions

1. Exploratory Factor Analysis. A method used to describe and summarize data by grouping together variables that are correlated (Thomas & Nelson, 1996).
2. Cronbach's Alpha Coefficient. A coefficient that reflects the internal consistency of the respondents' answers.

## Chapter II

### Review of Literature

#### Introduction

Coaching evaluation literature generally concludes that the process of evaluating coaches should be formalized and specific (Leland, 1988; Levy, 1989; Stier, 1983; MacLean & Chelladurai, 1995). Clearly identifying appropriate criteria to evaluate coaches is crucial to a successful evaluation (MacLean & Chelladurai, 1995). In order to effectively evaluate coaches, many questions need to be answered: Why evaluate coaches? What qualities characterize a good coach? How should evaluations take place, and; Who should be involved? (Stier, 1993). In an attempt to develop an effective evaluation tool, many institutions and researchers have addressed the answers to these questions.

#### Why Coaches Should Be Evaluated

Athletics plays an important role in the development of the “whole” person through intellectual, social, and physical stimulation. (Martin, Arena, Rosencrans, Hunter & Holly, 1986). The coaching staff is instrumental in the overall effectiveness and success of a school’s athletic program. Coaching is teaching, with a focus on the development of the individual student-athlete (Martin, et al., 1986). Therefore, coaches, as teachers should be evaluated to enhance the productivity of a school’s athletic program. Martin et al. (1986) and Bennice (1990) discussed the

appropriateness of evaluating a coach for the purposes of retention, tenure, promotion and merit, according to the criteria established for all academic faculty at the institution.

### Qualities of a Good Coach

There is no standard definition of coaching effectiveness. It can be inferred from the literature that the qualities a good coach should possess are reflected in how coaches are evaluated. The function of the coach relating to team practices, strategy selection, equitable treatment of players, and management ethics are all valuable components needed to evaluate coaches. In addition, a significant aspect of student-athlete satisfaction includes the coach's techniques for training and instructing players, as well as providing feedback and recognition to the athletes (Chelladurai & Riemer, 1997). Therefore, an effective coach will possess extensive knowledge and teaching techniques of their sport, exemplary interpersonal and public relation skills, as well as successfully performing administrative duties (Leland, 1988; MacLean & Zakrajsek, 1994; MacLean & Zakrajsek, 1996; Martin et al., 1986; Pflug, 1980; Stier, 1993; Stier & Humm, 1987). Examples of extensive sport knowledge include awareness of safety factors, appropriate skill development drills, effective game preparation, and incorporation of new developments in the sport (Leland, 1988; MacLean & Zakrajsek 1994; Pflug, 1980; Stier, 1987). Quality interpersonal and public relation attributes are demonstrated by good communication with athletes, staff and officials, promotion of the athletic program, and motivation of players (Leland, 1988; MacLean & Zakrajsek, 1994; Stier 1993; Pflug, 1980). Administrative duties

include care of equipment, problem solving, effective recruiting, and enforcement of team rules (Leland, 1988; Pflug, 1980; Stier & Humm, 1987).

### Effective Evaluations

Team and player successes, such as school, conference or state records broken, individual and team medals, and championships won, provide an indication of successful coaching performance (Martin, et al., 1986). However, these factors do not provide a comprehensive understanding of a coach's overall effectiveness. Many coaches are evaluated by the media and public based solely on their win/loss record. This assessment does not take into account the many facets of a coaching.

There are several issues that must be addressed before a meaningful and reliable assessment can take place. Bennice (1990) suggested that athletic directors and coaches agree upon a philosophical statement and long-range goals. He also stated that policies must be clearly defined and communicated to the athletic staff. Before the season begins, each coach must be informed of the specific criteria to be used in the evaluation process, and how these standards will be used in the overall evaluation (Stier, 1993). The formal process will help identify goals and clarify priorities for the athletic program, as well as increase the level of communication between coaches and athletic directors (Leland, 1988). This teamwork approach may improve communication and set the standards for a quality athletic program. It is also important for the evaluation to be reliable.

The methods used to obtain various individuals' assessments about a particular coach are often unique to each school and situation (Stier, 1993).

Techniques used to evaluate a coach often are dependent upon an institution's goals, beliefs, and philosophies. Many schools rely on a formal written evaluation instrument in which individuals can provide opinions on a coach's competency in a number of areas. Martin, et al. (1986) suggested that a coach's self-assessment would be beneficial to the evaluation process. Individual performance appraisals reinforce and pinpoint coaches' strengths and weaknesses, which provides an opportunity for professional growth (MacLean & Chelladurai, 1995). The timing of these assessments is a critical factor in providing immediate feedback and serving as a motivator for change. In many cases, the student-athlete has been left out of the coaching evaluation procedure (Rushall & Woznuk, 1985; Steinbrecher, Kearney, & Noland, 1978; Chelladurai & Riemer, 1997; MacLean & Chelladurai, 1995; Stier 1993).

#### Student-Athlete Involvement

The student-athlete has the most interaction and experience with the coach and therefore should be involved in the evaluation process. Chelladurai and Riemer (1997) explained that a greater focus on the student-athlete would eliminate many of the problems in intercollegiate athletics. The student-athlete is the primary beneficiary and has an enormous role in the objectives and goals of the athletic program (Chelladurai, 1987). Therefore, as Chelladurai and Riemer (1997) stated "more attention needs to be paid to the attitudes and affects of this essential human resource" (p. 135). Further, Rice (1990) and Chelladurai and Riemer (1997) noted

that the athletic departments' primary function must always be their responsibility to the student-athlete.

Importantly, Kuga (1993) recognized that student-athletes may not be fully aware of the many roles and responsibilities of the coaching profession. As a result, student-athletes would only evaluate coaching performance in areas related to player and team performance. He also suggested that factors such as the student-athletes' grade level and amount of playing time might affect their attitudes toward their coaches. Therefore, the use of responses regarding team records and playing time in the evaluation is discouraged.

The athlete's assessment of a program may include a complete evaluation of the structures, processes, and outcomes of the total athletic experience. As a result, it is necessary to measure student-athlete satisfaction from many different perspectives to achieve an accurate evaluation (Steinbrecher, Kearney, & Noland, 1978).

Chelladurai and Riemer (1997) classified two facets of satisfaction relevant to athletics: a) outcomes of athletic participation and b) the process associated with achieving these outcomes. They posited that classifications could be further divided into two categories: intrinsic and extrinsic rewards. Intrinsic rewards focus on an individual's feelings, sense of accomplishment, pride, and task mastery. These rewards and personal satisfaction are unique to each individual. Extrinsic rewards, such as trophies, plaques, or player of the week awards, however, are controlled by external sources, such as the coach, media, or teammates. Although these facets of student-athlete satisfaction were distinctively defined by Chelladurai and Riemer

(1997), many of them are interrelated and work together to determine the overall effectiveness of an intercollegiate athletic program.

### Satisfaction Scales

Athletes' satisfaction is directly related to how they will evaluate the coach. There have been two attempts to develop student-athlete scales of satisfaction (Whittal and Orlick, 1978; Chelladurai, Imamura, Yamaguchi, Oinuma & Miyauchi, 1988). Whittal and Orlick (1978) developed an 84-item scale to measure six facets of satisfaction in sport/game practice, coaches, teammates, opposition, and performance. Chelladurai, et al., (1988) explored the differences between Japanese and Canadian university level male athletes in their perceptions of leader behaviors, their leader behavior preferences, their satisfactions with leadership and personal outcome, and the relationships between leader behaviors and satisfactions. Both studies measured facets of student-athlete satisfaction, but are not designed for assessing performance.

### Assessment Tools

Whereas Chelladurai and Riemer (1997), Chelladurai et al., (1988) and Whittal and Orlick (1978) sought to determine facets of student-athlete satisfaction, Rushall and Wiznuk (1985) developed a questionnaire to provide an assessment tool to judge coaching performance that would be appropriate for completion by student-athletes. They developed a valid and reliable questionnaire, which indicated the desirable characteristics of a coach. The questionnaire consisted of 36 Likert scale questions (ranging from 1, never, to 5, always) in its final form, which focused on

assessing the personal qualities, personal and professional relationships, organizational skills, and performances of the individual, as a teacher and a coach. This instrument was developed to provide insight into coaching performance from the student-athlete perspective. The goal of implementing this instrument into coaching evaluations was to ascertain the strengths and weaknesses of the coach, which in turn would enhance the quality of the athletic program, coach, and ultimately the experience of the student-athlete.

Rushall and Wiznuk (1985) concluded that the assessment tool allowed the administration to understand the range of student-athlete's perceptions, and that it may serve as a motivating factor for coaches to exhibit more positive behaviors that athletes find desirable in their coach. The questionnaire focused on primarily positive attributes. By focusing primarily on positive attributes, the questionnaires may have failed to detect negative characteristics of a coach. A coach, who rated high on this positive oriented evaluation, could possibly have displayed negative characteristics that were not determined.

The Coaches Evaluation Instrument (CEI) was developed by Phillips, Docheff, Dolch, and Lewis (1995) to measure behaviors that relate to coaching effectiveness (Docheff, 1989; Feeney, 1997; Lewis 1987). Six sub-scales or "performance categories" were identified in the CEI: methods and organization, communication, professional, ethical, and personal behaviors, motivation, knowledge of sport, and management of players (Docheff, 1989). The CEI was determined to be content-representative and criterion-related valid (Lewis, 1987). It was also deemed reliable for each sub-scale (Feeney, 1997). This instrument was similar to Rushall

and Wiznuk's, in that the questions pertained only to positive attributes that a coach might exhibit. The CEI differs from the SAAF and Rushall and Wiznuk's questionnaire in that it was developed to be used by coaches, administrators, and students (Docheff, 1989). The SAAF on the other-hand was developed to obtain the student-athletes perceptions about their coach (Stier & Humm, 1988).

Whereas Rushall and Wiznuk (1985) and Lewis (1987) developed questionnaires focusing primarily on positive characteristics, Stier and Humm (1984) sought to develop a comprehensive instrument to evaluate a coach's performance. In 1984, Stier and Humm developed the Student-Athlete Assessment Form (SAAF), a 79-question survey to assist in obtaining students' perceptions of the overall athletic experience. The first five questions were demographic and questions 72 through 79 were narrative response questions. The remaining 66 questions were Likert scale questions, ranging from strongly agree (1) to strongly disagree (5) and were separated into eight theoretical categories: Coach's Skills and Knowledge, Interpersonal Relationships, Teaching/Coaching Techniques, Administrative Skills, Coach's Behavior and Image, Conditions and Resources, and Students' Perceptions. This document was used in this form as a significant portion of a coaches overall evaluation between 1986 and 1991. It was during this time that data were collected and stored. In 1991, the Director of Intercollegiate Athletics at SUNY College at Brockport, arbitrarily removed 27 questions "due to the lengthiness of the form and repetitiveness of the questions (Edward Matejkovic, personal communication, December 7, 1997)." A perceived benefit of the SAAF is that it set out to determine both positive and negative characteristics of a coach, thus providing a comprehensive

evaluation of the coach. The data were collected and stored, but further analysis had not been performed and the validity and reliability of the SAAF was not determined.

## **Chapter III**

### Methods and Procedures

The purpose of this chapter is to describe the methods and procedures that were used to determine the validity and reliability of the State University of New York, College at Brockport Student Athlete Assessment Form (SAAF). Specifically, this chapter will address selection of subjects, instrumentation and its' administration, and the data analysis.

### **Methods**

#### Selection of Subjects

This study, utilizing data collected previously from student-athletes of all sports at the conclusion of every season between 1986 and 1991. The subjects for the investigation were 893 student-athletes, 618 males and 275 females at the State University of New York, College at Brockport who properly completed the SAAF. Questionnaires that included skewed data, such as scores not in the proper range of 1-5, and missing data, were not utilized in the study.

#### Instrument

The Student-Athlete Assessment Form (Stier & Humm, 1988) served as the questionnaire for this study. The questionnaire consisted of 79 questions, with the

first five questions measuring demographic information. Questions 6-71 were Likert scaled questions ranging from strongly agree (1) to strongly disagree (5). Questions 72-79 were narrative response questions such as “What could this coach do to become an even better coach?”

Of the 79 items on the questionnaire, 13 were eliminated from statistical analysis for one of two reasons. The first set of questions eliminated (items 1-5) was due to their demographic nature, which precluded them from being statistically analyzed. Students indicated their year in school, transfer status, number of years of participation in the sport at SUNY Brockport, number of years in which they received a varsity certificate or letter, and how frequently they were a "starter" during that particular season. The second set of questions (items 72-79) eliminated from statistical analysis was due to their narrative response format, which precluded them from being statistically analyzed.

## **Procedures**

### Administration of the Instrumentation

The questionnaire was administered to student athletes at the conclusion of their season by a trained facilitator, who assured their anonymity. The coaching staff was not present. The questionnaire took approximately 30 minutes to complete, however student-athletes were given as much time as they required. General directions for each section were verbalized and subjects were encouraged to answer all questions honestly. Student-athletes were reminded that there were no “right or

“wrong” answers, and that the SAAF sought to ascertain their perceptions of the total athletic experience. They were also instructed that questions that deal with the “coach” refer to the head coach only.

### Statistical Analysis

SPSS in both Windows and DOS formats was used to analyze the data. In order to determine whether the 66 coaching evaluation items could be reduced to a smaller number of categories, a principle axis factor analysis using varimax rotation was conducted. Varimax rotation, the most commonly used of all the rotations available, was utilized because of easier interpretability and low factor interrelations (Tabachnick & Fidell, 1989). The goal of varimax rotation is to simplify factors by maximizing the variance of the loadings within factors across variables. The spread in loadings is maximized; loadings that are high after extraction become higher and loadings that are low become lower. Varimax also tends to re-apportion variance among factors so that they become relatively equal in importance; variance is taken from the first factors and extracted and distributed among the later ones (Tabachnick & Fidell, 1989). The researcher decides on a criterion, a priori, for meaningful correlation, collects the variables with loadings in excess of the criterion, and searches for a concept that unifies the items (Tabachnick & Fidell, 1989). For this study, items with a factor loading of .40 or higher were considered to load on a factor and contribute to its interpretation. Items with a loading of .40 or higher on two or more factors were considered complex and were not used in the final analysis. Factor analysis grouped related questions together as a factor, to which this researcher has

given a label. Cronbach's alpha was calculated to determine the reliability or internal consistency of the factors. Factors scoring greater than .70 were considered internally consistent (Tabachnick & Fidell, 1989). Reliability (internal consistency) therefore was indicated by an alpha coefficient of greater than .70. Means and standard deviations for each item were determined.

## Chapter IV

### Results

#### Factor Analysis

The analysis produced seven interpretable factors for the evaluation of a coach, and explained for 41.1 % of the common variance in the items (Table 1).

Table 1 Factor Loadings

Item	Factor Name	Factor Loadings						
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
	<b>Factor 1: Student-Athlete Enjoyment</b>							
19	Athletic experience was enjoyable	.711	.204	.036	.077	.040	.108	.219
8	Experience was interesting and challenging	.675	.068	.082	-.009	.228	.122	.122
9	I enjoyed practice	.650	.160	.092	.136	.137	.105	.068
21	I would come out for the team again	.626	.220	.005	-.081	.120	-.014	.112
14	Selections of starters was fair	.556	.284	.064	.055	-.043	.013	.032
22	I have become more proficient in this sport	.505	.127	.160	-.100	.231	.086	.099
13	During contests, decisions were appropriate	.478	.305	.141	.078	.112	.219	.161
11	Coach was organized	.444	.187	.107	.016	.283	.140	.149
	<b>Factor 2: Coach Communication Style</b>							
65	Felt comfortable speaking with coach	.263	.653	.058	.073	-.037	.046	-.027
35	Coach respected players	.070	.617	.078	.095	.137	.016	.090
30	Felt comfortable speaking with coach outside practice	.227	.612	-.004	.093	.057	-.037	-.018
52	Coach represented a positive image	.227	.611	.056	.032	.146	.263	.123
59	Coach communicated with athletes	.194	.608	.132	.067	.118	.077	.149
38	Coach was sensitive to students' feelings	.195	.568	.102	.239	.155	-.003	.003
53	Coach enhanced athletic experience	.341	.489	.121	.124	.215	.143	.203
12	Coach presented experience in a positive fashion	.326	.467	.000	.201	.358	.113	.096
63	Coach behaved professionally	.184	.464	-.001	.200	.200	.216	.124
	<b>Factor 3: Coaches' skills as a coach</b>							
61	Coach failed to increase my understanding of the sport	.135	.048	.629	.112	-.090	-.026	-.033
10	Coach not concerned with skill mastery	.110	.048	.627	.081	-.090	.041	.029
16	Coach was not available	-.084	.147	.607	-.002	.000	.053	-.074
50	Coach did not seem interested in coaching	.098	.150	.599	.119	.199	.107	.020
43	Coach failed to provide discipline	.075	-.095	.585	.230	.021	-.016	.104
46	Coach failed to scout opponents	.049	-.068	.580	.007	.098	-.022	.060
36	I did not respect the coach	.236	.236	.558	.321	-.064	.168	-.013
24	Coach failed to provide feedback	-.024	.086	.542	.263	.065	-.042	.057

56	Coach failed to provide constructive criticism	.026	.078	.508	.263	.025	.064	-.024
32	The athletic experience was not worthwhile	.358	.018	.493	.307	-.026	.109	.083
<b>Factor 4: Coaches Behavior</b>								
55	Coach humiliated student-athletes	.009	.240	.240	.666	.034	.051	.008
37	Coach intimidated me or other student-athletes	-.053	.164	.180	.664	.018	.140	.035
34	Coach played favorites	.130	.024	.274	.580	-.002	.049	-.055
57	Coach emphasized winning or loosing	-.038	-.002	.207	.565	-.031	-.081	-.013
39	Coach embarrassed student-athletes	-.030	.157	.267	.540	.027	.008	.012
<b>Factor 5: Coaches Knowledge</b>								
44	Coach was familiar with the rules of the sport	.091	.107	-.061	-.015	.714	.032	.079
6	Coach has good knowledge of the sport	.342	.160	-.106	.004	.578	.165	.009
7	Coach clarified concepts	.363	.189	.093	.004	.564	.085	.037
<b>Factor 6: Coaches Professional Development</b>								
40	Coach provided adequate physical training	.183	.066	.063	.023	.067	.757	.089
49	Coach had knowledge of sport conditioning	.244	.150	.022	.089	.353	.557	.088
54	Coach was abreast of new developments in the sport	.163	.193	.056	.049	.315	.446	.158
<b>Factor 7: Student-Athletes' overall satisfaction</b>								
28	I am satisfied with the team's performance	.210	.059	-.001	.023	-.014	.084	.766
20	I can take pride in the team's performance	.344	.052	.036	.063	.172	.007	.708
62	The team accomplished objectives	.136	.160	.020	-.057	.059	.143	.690
<b>Percent of Variance (41.1)</b>		<b>19.6</b>	<b>7.6</b>	<b>3.6</b>	<b>3.3</b>	<b>2.7</b>	<b>2.3</b>	<b>2.0</b>

In order to reduce bias in labeling the factors, non-complex items for each factor were presented to two independent raters who were considered experts in the area of coaching and athletic administration with open-ended headings. The factors were subsequently named: Factor 1: Student-athlete enjoyment, Factor 2: Student perception of coaches' communication style, Factor 3: Student-athlete's perception of coaching skills, Factor 4: Student-athlete's perception of coaches' behavior, Factor 5: Student-athlete's perception of coaches' sport knowledge, Factor 6: Student-athlete's perception of coaches professional development, and Factor 7: Student's overall satisfaction of the season.

### Reliability

Cronbach's Alpha was used to determine the reliability of the seven extracted factors. The use of Cronbach's Alpha determined that seven factors demonstrated adequate internal consistency with alpha coefficients greater than .70 (Nunnally, 1978). Consequently, the items for each factor were averaged to obtain a composite score. Factor scale reliabilities using Cronbach's (1951) coefficient alpha were: Factor 1, .87; Factor 2, .90; Factor 3, .83; Factor 4, .75; Factor 5, .78; Factor 6, .70, and Factor 7, .77.

### Descriptive Statistics

Descriptive statistics were calculated for the seven interpretable and reliable factors. The means and standard deviations are presented in Table 1.

Table 1 Descriptive Statistics

<b>Factor</b>	<b>Name</b>	<b>Min.</b>	<b>Max.</b>	<b>Mean</b>	<b>Std. Dev.</b>
1	Student-Athlete Enjoyment	1.00	4.00	1.9495	0.7049
2	Coach Communication Style	1.00	4.22	1.8081	0.6597
3	Coaches' Skills	1.90	4.70	2.9343	0.5431
4	Coaches' Behavior	2.00	5.00	3.0525	0.6797
5	Coaches Knowledge	1.00	4.00	1.4835	0.6428
6	Coaches Professional Development	1.00	4.00	1.5977	0.6519
7	Student-Athlete Overall Satisfaction	1.00	4.00	2.1001	0.8121

It was not an intention of this study to examine the coaching scores at SUNY Brockport, however by interpreting the descriptive data a better understanding of the SAAF's usefulness may result. The means and standard deviations of the factors comprise a simple method of assessing the coach. An athletic director could administer the survey, and almost instantly judge how the student-athletes perceived

the athletic experience as it relates to the coach. In the SUNY Brockport sample, (data entered between 1986 and 1991), several conclusions can be made regarding the coaching staff as a whole. In general, the descriptive statistics demonstrate that SUNY Brockport student athletes rated their experience favorably in regards to their enjoyment of the season, and their coaches communication style and knowledge. (Factors one, two, five and six, respectively.) They rated their experience as neutral in regards to their coaches' skills, and behavior. The Student-athletes agreed that the season overall was satisfying.

#### Items not Contributing

In all, 30 items did not load on a factor or did not contribute to a factor's reliability (Appendix B). Questions one through five contained background information and were retained. Items 31, 33, 67, and 68 loaded on a factor of their own at .40 or higher, however, it was not reliable, earning an alpha coefficient of .55. Questions 17, 41, and 48, loaded on a factor of their own at .40 or higher, however, it was not reliable, earning an alpha coefficient of .64. Questions 18 and 71, loaded on a factor of their own at .40 or higher, however, it was not reliable, earning an alpha coefficient of .46. Questions 27 and 70, loaded on a factor of their own at .40 or higher, however, it was not reliable, earning an alpha coefficient of .27. Questions 15, 23 and 58 were complex (loading on two or more items) and subsequently was removed from the analysis. Questions 25, 26, 29, 42, 45, 47, 51, 60, 64, 66, and 69 did not load at the a priori of .40 on any factors. Questions 18, 27, 31, 67, 68, and 71 related to the total athletic experience, however, they are not directly related to

qualities of a head coach and it is understandable as to why they did not load on reliable factors.

#### Follow-up Factor Analysis.

Upon determining which questions did not load on factors or contribute to a factors' reliability, the researcher re-ran a varimax rotation factor analysis on the remaining data (Appendix C). The analysis of the data produced six interpretable factors for the evaluation of a coach and explained 46.7 % of the common variance in the items. Factor six, Coaches professional development, was eliminated because item 54 loaded on another factor at .40 or higher, making it complex (loading at .40 or higher on two factors). With the removal of item 54, factor six (items 40 and 49) did not meet reliability standards. With factor six Coaches' professional development) removed, factor seven Student-athletes' overall satisfaction will now be referred to as factor six.

Table 4 Follow-up Factor Loadings

Item	Factor Name	Factor Loadings						
		1	2	3	4	5	6	7
<b>Factor 1: Student-Athlete Enjoyment</b>								
19	Athletic experience was enjoyable	.721	.223	.038	.070	.036	.119	.221
8	Experience was interesting and challenging	.677	.087	.103	-.032	.254	.093	.130
9	I enjoyed practice	.684	.166	.096	.127	.157	.134	.044
21	I would come out for the team again	.645	.219	-.007	-.079	.108	.003	.089
14	Selections of starters was fair	.515	.311	.044	.073	.003	.031	.093
22	I have become more proficient in this sport	.506	.165	.179	-.092	.263	.040	.137
13	During contests, decisions were appropriate	.470	.291	.120	.120	.142	.198	.193
11	Coach was organized	.420	.256	.164	-.084	.279	.201	.139
<b>Factor 2: Coach Communication Style</b>								
65	Felt comfortable speaking with coach	.287	.708	.057	.022	-.115	.027	.024

35	Coach respected players	.017	.627	.090	.089	.177	.105	.011
30	Felt comfortable speaking with coach outside practice	.240	.671	.013	.009	-.052	.001	.014
52	Coach represented a positive image	.186	.616	.044	.102	.238	.282	.124
59	Coach communicated with athletes	.191	.613	.122	.094	.170	.019	.178
38	Coach was sensitive to students' feelings	.169	.628	.121	.151	.112	.000	-.005
53	Coach enhanced athletic experience	.297	.495	.125	.185	.353	.097	.220
12	Coach presented experience in a positive fashion	.323	.495	-.001	.170	.332	.106	.081
63	Coach behaved professionally	.145	.488	.022	.227	.310	.275	.111
<b>Factor 3: Coaches' skills as a coach</b>								
61	Coach failed to increase my understanding of the sport	.172	.066	.627	.164	-.082	-.046	-.005
10	Coach not concerned with skill mastery	.115	.033	.616	.132	-.123	.122	.032
16	Coach was not available	-.080	.135	.599	.028	-.053	.067	-.088
50	Coach did not seem interested in coaching	.105	.117	.597	.136	.180	.140	-.065
43	Coach failed to provide discipline	.091	-.078	.607	.216	.037	.003	.088
46	Coach failed to scout opponents	-.009	-.021	.632	-.018	.128	-.033	.081
36	I did not respect the coach	.217	.214	.533	.399	-.028	.204	-.035
24	Coach failed to provide feedback	-.007	.099	.534	.251	.013	-.131	.098
56	Coach failed to provide constructive criticism	.014	.078	.502	.296	.038	-.002	.014
32	The athletic experience was not worthwhile	.359	.041	.493	.307	-.036	.142	.062
<b>Factor 4: Coaches Behavior</b>								
55	Coach humiliated student-athletes	.001	.246	.223	.675	.035	.023	-.009
37	Coach intimidated me or other student-athletes	-.014	.131	.139	.692	-.056	.124	.003
34	Coach played favorites	.160	.017	.223	.620	-.013	-.002	-.004
57	Coach emphasized winning or losing	-.052	.009	.195	.613	-.003	-.072	.004
39	Coach embarrassed student-athletes	-.038	.140	.262	.614	.109	.016	-.015
<b>Factor 5: Coaches Knowledge</b>								
44	Coach was familiar with the rules of the sport	.094	.105	-.039	-.023	.729	.042	.082
6	Coach has good knowledge of the sport	.309	.150	-.108	.043	.651	.139	.020
7	Coach clarified concepts	.360	.197	.115	-.036	.576	.081	.013
<b>Factor 6: Student-Athletes' overall satisfaction</b>								
28	I am satisfied with the team's performance	.206	.054	.006	.010	-.029	.113	.794
20	I can take pride in the team's performance	.334	.078	.066	.015	.148	.032	.693
62	The team accomplished objectives	.108	.158	.023	-.045	.112	.085	.733
<b>Percent of Variance (46.7)</b>		<b>10.2</b>	<b>23.3</b>	<b>4.9</b>	<b>3.7</b>	<b>3.4</b>	<b>2.5</b>	<b>2.8</b>

### Recalculated Reliability

Cronbach's alpha was used to determine the reliability of the seven extracted factors. The use of Cronbach's alpha determined that six of the seven factors demonstrated adequate internal consistency with alpha coefficients greater than .70

(Nunnally, 1978). Consequently, the items for each factor were averaged to obtain a composite score. As stated earlier, the previously labeled factor six (Coaches' professional development) earned a reliability coefficient of .66, consequently, this factor is not reliable, was removed and factor seven (Students-athletes' overall satisfaction) has been numbered as factor six. Factor scale reliabilities using Cronbach's (1951) coefficient alpha were: Factor 1, .87; Factor 2, .89; Factor 3, .82; Factor 4, .75; Factor 5, .78, and Factor 6, .77. These alpha coefficients are identical to those of their respective factors from the initial factor analysis.

#### Recalculated Descriptive Statistics

Descriptive statistics were calculated for the six interpretable and reliable factors. The means and standard deviations were identical to the previous descriptive statistics for the initial analysis (Table 1).

#### Additional Items Not Contributing

In the second factor analysis one item was complex and the remaining two were not reliable. Item 54 loaded on a factor but was complex. Items 40 and 49 did not achieve a satisfactory alpha coefficient (.70). Subsequently all three items were removed from the analysis.

#### Final Factor Analysis

Following the removal of factor six which included complex and unreliable items, a third and final factor analysis was conducted. The third factor analysis

produced six interpretable factors for the evaluation of a coach, and explained for 49.7 % of the common variance in the items. Each factor achieved the required .70 alpha coefficient scores for reliability. Just as in the second factor analysis, the alpha coefficients were identical to the first factor analysis. The means and standard deviations for the six factors were, identical to the means and standard deviations in the first two analyses.

## Chapter V

### Discussion Conclusions Recommendations

The purpose of this chapter is to discuss the conclusions and recommendations of the study. Specifically, each extracted factor, statistical vs. theoretical factors, as well as the second and third factor analyses will be discussed. The factors identified in this study will be compared to previous literature. Conclusions regarding the study of validity and reliability of the SAAF will be presented. Recommendations for further study as a result of this investigation will be suggested.

### **Discussion**

#### Factor 1: Athlete Enjoyment

This factor contains eight questions regarding the amount of satisfaction the student-athletes derived during the season. The literature suggests that students are the primary beneficiaries of athletics and their enjoyment is of utmost importance (Leland, 1988; MacLean & Zakrajsek, 1994; MacLean & Zakrajsek, 1996; Martin et. al. 1986; Pflug, 1980; Stier, 1993; Stier & Humm, 1987). Two questions relating to the selection of starters and the appropriateness of coaches' decisions during contests had significantly high loadings of .493 and .451, respectively. These questions may not be indicative of athlete satisfaction on their own, but the student-athlete's

enjoyment is based, to a degree upon the coaches' actions regarding these items. In instances where extrinsic rewards, such as championship trophies are not earned, intrinsic rewards, such as student enjoyment, play an important role in recruiting and retaining student-athletes. Most of the questions in the student-athlete enjoyment factor loaded on the factor called students' perception. It should be emphasized that every question in the SAAF is indicative of the student's perception, given that they are answering the questions. In this case, the questions are based on the student-athletes' perception of the enjoyment they experienced while participating in the sport.

#### Factor 2: Coach Communication Style

The Coach Communication factor contained ten questions regarding the communication style (verbal and non-verbal) of the coach. Questions pertaining to communication evaluated the degree of interpersonal skills the coach possessed. Kuga (1993) and MacLean & Zakrajsek (1994, 1996), indicated that communication, one of the major components of an effective coach, should be evaluated. Rushall and Wiznuk (1985), devoted three questions to measure the student-athletes' perception of communication their coach possesses in their Coach Evaluation Questionnaire. Phillips, et al. (1985) devoted five questions to measure the student-athletes' perception of communication their coach possesses in their Coaching Evaluation Instrument. In this study, Communication Style was derived from Stier and Humm's (1988) factors named interpersonal relationships and coaching behavior and image. By answering the questions regarding the communication style of the coach, student-



would not have access to, provides valuable information regarding the skills an effective coach may possess.

#### Factor 4: The Coaches Behavior

The coaches' behavior factor pertains to how the coach's behavior was perceived by the student-athletes. Chelladurai and Riemer (1997) emphasized the importance of coaches' behavior both on and off the field. Rushall and Wiznuk (1985) devoted seven questions to the students' assessment of their coach's behavior in determining the effectiveness of the coach. Phillips et al. (1989) devoted five questions toward behavior assessment in their CEI. By determining the student's perceptions of the behaviors described in factor five, the overall behavior of the coach is assessed. The coaches behavior factor is comprised of questions from Stier and Humm's (1988) interpersonal factor and two questions relating to the treatment of athletes. It is important for athletic directors to know how a coach behaves. Coaches may possess great knowledge or coaching skills, however, poor behavior diminishes the experience for the athlete. Other questionnaires fail to recognize the importance of identifying negative coaching behaviors and their effects on athletic performance. When the athlete's perception of positive behavior on the part of the coach deviates from the student-athletes' preferences, satisfaction declines (Chelladurai, 1984).

#### Factor 5: Coaching Knowledge

The coaching knowledge factor contains eight questions pertaining to the student-athletes' perception of their coaches' knowledge of the sport. The importance

of sport knowledge includes; awareness of safety factors, appropriate skill development drills, effective game preparation, and incorporation of new developments in the sport. The importance of coaching knowledge can be found abundantly in the literature (Leland, 1988; MacLean & Zakrajsek 1994; Pflug, 1980; Stier, 1987). Rushall and Wiznuk (1985) devoted seven, and Phillips et al. (1985) five questions, to the students' perception of their coaches' sport knowledge. Questions from Stier and Humm's (1988) coaching knowledge factor were the primary source for this factor. Thus, student-athletes can provide feedback to the athletic director by subjectively examining the knowledge a coach possesses. Generally, students arrive at college with extensive knowledge of their sport, which should be enhanced as they continue with their sport. If coaches do not enhance the student-athletes knowledge, the coaches evaluations may be negatively affected.

#### Factor 6: Student-Athletes Overall Satisfaction

The overall satisfaction factor represents how the student-athlete perceived the season as a whole. Whittal and Orlick (1978) devoted an entire 84-item survey to assess six facets of satisfaction in sport, of which one is overall satisfaction as it relates to the coach. Factor six (overall satisfaction) provided insight as to the overall opinion of the student-athlete regarding their coach. Questions from Stier and Humm's (1988) student perception factor relating to overall satisfaction loaded on this factor. This factor provides an opportunity to determine if the coach is helping to create a satisfactory experience for the athletes. A low numerical mean score

indicated a positive rating of the coach. In this study the mean for factor seven was 2.1.

### Statistical versus Theoretical Sub-scales

As described earlier, the seven theoretical factors that were developed concurrently with the SAAF by Stier and Humm (1988), were not replicated by the statistical analysis conducted in this study. However, elements of each were statistically similar (Appendix D). Statistical analysis extracted six factors whereas Stier and Humm (1987) developed seven theoretical factors (scales). Although some of the statistical factor analysis loadings differed from Stier and Humm's initial theoretical factors, the similarities described are abundant.

### Comparisons to Literature

Compared to previous literature on coaching effectiveness, the SAAF revealed many similarities. The literature suggests for example that coaches should have extensive knowledge and exemplary teaching techniques in their sports. Factor 3 (coaching skills), and factor 5 of the SAAF contain 13 items assessing these components of coaching effectiveness. The literature also suggests that coaches should have excellent interpersonal and public relation skills. Factor 4 (coaches behavior) and factor 2 (coaches communication) contain 14 questions assessing these components of coaching effectiveness. In addition, factor 1 (student-athlete enjoyment) and factor 7 (overall satisfaction) contain a total of 11 questions assessing the students enjoyment and overall satisfaction of the season. These items reflect

items found in the literature, suggesting that the student-athlete is the primary beneficiary and responsibility of the athletic department (Rice, 1990; Chelladurai, 1997).

### **Conclusions**

The literature suggests that student-athletes are the most important commodities in athletics and should therefore be utilized in the evaluation of their coaches (Leland, 1988; MacLean & Zakrajsek, 1994; MacLean & Zakrajsek, 1996; Martin et. al. 1986; Pflug, 1980; Stier, 1993; Stier & Humm, 1987). This can be accomplished by using a valid and reliable instrument to measure student-athletes perceptions of both positive and negative aspects of the coach.

The SAAF was determined to be valid and reliable. Eliminating 33 questions will result in a valuable 46-item questionnaire, a tool for student assessment of coaching effectiveness. This revised instrument provides an opportunity for student-athletes to give feedback to athletic directors and coaches regarding the performance of their coach. The goal of such actions is to enhance the experience for everyone involved, coaches, athletic directors, and students.

### **Recommendations**

In future investigations, analysis of gender and sport differences should be conducted. The resulting information would be valuable to understand the student-

athlete's perception of coaching performance. In utilizing the form for practical purposes, the demographic questions can provide useful information for analysis. Items such as how the student-athlete's year in school, "starter status" or years of participation in the sport may affect their evaluation of the coach. Tracking student-athletes responses on the questionnaire during participation in the sport year after year may provide an interesting area of analysis, providing anonymity was assured.

It is the conclusions of this research that student analysis of coaching behavior is a worthwhile area to investigate. Thirty-three questions should be eliminated from the SAAF. The new form should be utilized for several seasons, after which, this study should be replicated. Confirmatory and exploratory factor analyses will provide further validity for the questionnaire. With the recommended changes to the SAAF, a valid and reliable instrument for evaluating coaching effectiveness may provide important information about the athletic experience.

Appendix A  
Student Athlete Assessment Form

# Student-Athlete Assessment Form (SAAF)

by:

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and

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*An Instrument to assess the total athletic experience  
as perceived by the student-athletes involved.*

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*An Instrument to assess the total athletic experience  
as perceived by the student-athlete involved.*

Please place responses to the following questions on the accompanying computer score sheet, using a #2 pencil.

## I. Student Background

1. 1 = freshman                      3 = junior                      5 = fifth year or graduate student  
2 = sophomore                      4 = senior
2. I transferred from another college prior to coming to this institution.  
1 = yes      2 = no
3. Number of seasons I have participated in this sport at this institution.  
1      2      3      4
4. Number of seasons I have earned a *varsity certificate* or *letter* in this sport at this institution.  
1      2      3      4
5. How frequently were you a starter this season?  
1 = Never      2 = Occasionally      3 = Often      4 = All the time

## II. Assessment of Athletic Experience

For each of the following statements, rate on the accompanying computer score sheet, using a #2 pencil, the degree with which you either agree or disagree by using the scale of:

- 1 = strongly agree
- 2 = agree
- 3 = neutral position
- 4 = disagree
- 5 = strongly disagree

Note: Questions which deal with the "coach" refer to the *head* coach only.

6. The coach has a good knowledge of the sport.
7. The coach clarified concepts by use of examples and illustrations.
8. This past year's athletic experience was interesting and challenging to me.
9. I did enjoy the practices.
0. The coach did not seem concerned that student-athletes mastered skills and increased knowledge in the sport.
1. The athletic experience was well-organized.
2. The coach presented the athletic experience in a positive fashion.
3. The coach made timely and appropriate coaching decisions during athletic contests.
4. The coach's selection of starters was fair and adequate.
5. I would like to be coached by this individual again.
6. The coach was not available to me outside of the formal practice sessions.
7. The athletes attended practices on time.
8. The travel arrangements for the team were well-organized and managed properly.
9. I found this season's athletic experience enjoyable.
0. I was able to take pride in the team's performance this season.
1. Knowing now what I know about this past athletic season, I would come out for the team once again and participate throughout the entire season.

Comments: Place comments on accompanying sheet.

2. I have become more proficient in this sport activity as a result of my experience this season.
3. The coach was inconsistent in his/her treatment of all athletes.
4. The coach failed to provide adequate feedback and input into my athletic performance (strengths and weaknesses).
5. The coach was aware of safety factors in practices and actual contests.

1 = strongly agree

2 = agree

3 = neutral position

4 = disagree

5 = strongly disagree

---

26. I did enjoy the actual contests.
27. I missed too many classes due to my athletic involvement this past season.
28. I was satisfied with the team's overall performance.
29. I had insufficient opportunities to display my athletic talent to the coaching staff in practices and game situations.
30. I felt comfortable speaking with the coach outside of the practice/game situations.
31. The uniforms provided for this sport were adequate.
32. I did not feel this athletic experience was a worthwhile experience.
33. I view the total athletic program at this institution to be adequate.
34. The coach played favorites.
35. The coach respected students.
36. I did not respect the coach.
37. The coach intimidated me and/or other students.
38. The coach appeared to be sensitive to students' feelings and problems.
39. The coach's behavior, mannerisms, and/or language embarrassed me at times.
40. The coach provided an adequate physical training program.
41. The coach enforced team rules and regulations fairly and consistently.
42. The coach demonstrated competency and knowledge, and follow-up in sports medicine.
43. The coach failed to provide for adequate discipline within the athletic program/team/squad.
44. The coach was familiar with the rules and regulations of the sport.
45. The coach appropriately utilized audio-video and teaching aids.
46. The coach failed to adequately scout opponents.

---

The coach had reasonable fund-raising activities (if any).

The coach established reasonable team rules.

The coach demonstrated competency and knowledge in the conditioning aspects of the sport and team.

The coach does not seem to be interested in coaching.

I was satisfied with my individual performance if the season is viewed as a whole.

The coach presented a positive image as a coach.

The coach's mannerisms contributed to a successful athletic experience for the students.

The coach seemed to be abreast of the newest developments in this sport.

The coach humiliated athletes.

The coach failed to provide constructive criticism for athletes.

The coach placed too much emphasis on winning and losing.

I like the coach.

The coach was able to communicate with the athletes.

The coach showed concern and enthusiasm for the sport.

The coach failed to increase my understanding and skill level in this sport significantly.

The team accomplished many of the objectives which should have been realized in light of available talent and existing circumstances.

During the season the coach behaved as a professional, in all respects.

The pre-season experience (if any) was appropriately conducted.

I felt comfortable speaking with the coach during and/or after practice sessions.

Comments: Place comments on accompanying sheets.

66. The practices were well-organized.
67. The home site facilities were adequate.
- Comments: Place comments on accompanying sheets.
68. The Sports Information Office's efforts (news releases) were adequate.
69. I knew what was expected of me as a student-athlete.
70. The coach treated officials with respect and dignity.
71. The food arrangements on away trips were satisfactory.
72. The sports medicine (athletic training) staff and facilities added to the athletic experience rather than detracting from it. **Please provide a narrative response on the accompanying sheets.**
73. What could this coach do to become an even better coach? **Please provide a narrative response on the accompanying sheets.**
74. What were the strengths/weaknesses which you brought to the squad this season? **Please provide a narrative response on the accompanying sheets.**
75. What weaknesses (if any) did you find in your athletic experience this season, and what suggestions do you have for eliminating these apparent weaknesses? **Please provide a narrative response on the accompanying sheets.**
76. What strengths or positive aspects (if any) do you find in this athletic experience as it currently exists? **Please provide a narrative response on the accompanying sheets.**
77. What strengths do you find in the coach - both as a person and as a coach? **Please provide a narrative response on the accompanying sheets.**
78. How could you improve your contributions to the team/squad? **Please provide a narrative response on the accompanying sheets.**
79. Please list or describe what you felt that you actually learned, improved upon or mastered as a result of your experience during the current season in terms of *strategies used in the sport; conditioning activities; social aspect of the activity; understanding of the rules and regulations pertaining to the sport; working with your peers and with the athletic coaches and administrators; making sacrifices; managing time and priorities in terms of academics, athletics and social activities, etc.?* **Please provide a narrative response on the accompanying sheets.**

## Appendix B

## Questions not loading on factors

- 1 Year in school (1 Freshman-5 Graduate)
- 2 Transfer from another college (Yes or No)
- 3 Season participated in this sport, this institution (1-4)
- 4 Number of varsity certificate or letter (1-4)
- 5 How frequently were you a starter this season (1, Never- 4, All the time)
- 15 I would like to be coached by this individual again
- 17 Athletes attended practices on time
- 18 Travel arrangements were well-organized
- 23 Coach was inconsistent in the treatment of athletes
- 25 Coach was aware of safety factors
- 26 I enjoyed the actual contests
- 27 I missed too many classes due to my athletic involvement
- 29 I had insufficient opportunities to display my athletic talent
- 31 Uniforms provided for this sport were adequate
- 33 I view the athletic program to be adequate
- 41 Coach enforced the team rules fairly and consistently
- 42 Coach demonstrated competency and knowledge in Sports Medicine
- 45 Coach utilized audio-video and teaching aids
- 47 Coach had reasonable fundraising
- 48 Coach established reasonable team rules
- 51 I was satisfied with my individual performance
- 58 I like the coach
- 60 Coach showed concern and enthusiasm for the sport
- 64 The pre-season experience was appropriately conducted
- 66 The practices were well organized
- 67 Home site facilities were adequate
- 68 Sports information office's efforts were adequate
- 69 I knew what was expected of me.
- 70 Coach treated officials with respect and dignity
- 71 Food arrangements on away trips were satisfactory

## Appendix C

## Follow-up Factor Analysis Questions

- 6 Coach has good knowledge of the sport
- 7 Coach clarified concepts
- 8 Experience was interesting and challenging
- 9 I enjoyed practice
- 10 Coach not concerned with skill mastery
- 11 Coach was organized
- 12 Coach presented experience in a positive fashion
- 13 During contests, decisions were appropriate
- 14 Selections of starters was fair
- 16 Coach was not available
- 19 Athletic experience was enjoyable
- 20 I can take pride in the team's performance
- 21 I would come out for the team again
- 22 I have become more proficient in this sport
- 24 Coach failed to provide feedback
- 28 I am satisfied with the team's performance
- 30 Felt comfortable speaking with coach outside practice
- 32 The athletic experience was not worthwhile
- 34 Coach played favorites
- 35 Coach respected players
- 36 I did not respect the coach
- 37 Coach intimidated me or other student-athletes
- 38 Coach was sensitive to students' feelings
- 39 Coach embarrassed student-athletes
- 40 Coach provided adequate physical training
- 43 Coach failed to provide discipline
- 44 Coach was familiar with the rules of the sport
- 46 Coach failed to scout opponents
- 49 Coach had knowledge of sport conditioning
- 50 Coach did not seem interested in coaching
- 52 Coach represented a positive image
- 53 Coach enhanced athletic experience
- 54 Coach was abreast of new developments in the sport
- 55 Coach humiliated student-athletes
- 56 Coach failed to provide constructive criticism
- 57 Coach emphasized winning or losing
- 59 Coach communicated with athletes
- 61 Coach failed to increase my understanding of the sport
- 62 The team accomplished objectives
- 63 Coach behaved professionally
- 65 Felt comfortable speaking with coach

## Appendix D

Extracted Factors Factor	Extracted vs Theoretical Factors Question number and topic	Theoretical
Background Info	1 Year in school (1Freshman-5 Graduate)	Background Info
Background Info	2 Transfer from another college (Yes or No)	Background Info
Background Info	3 Season participated in this sport.	Background Info
Background Info	4 Number of varsity certificate or letter (1-4)	Background Info
Background Info	5 How frequently were you a starter.	Background Info
Coaches' Knowledge	6 Coach has good knowledge of the sport	Coach's Skills and Knowledge
Coaches' Knowledge	7 Coach clarified concepts	Teaching/Coaching Techniques
Athlete Enjoyment	8 Experience was interesting and challenging	Student's Perceptions
Athlete Enjoyment	9 I enjoyed practice	Student's Perceptions
Coaches' Skills as a Coach	10 Coach not concerned with skill mastery	Interpersonal Relationships
Athlete Enjoyment	11 Coach presented experience in a positively	Administrative Skills
Coach Communication Style	12 Coach presented in a positive fashion	Administrative Skills
Athlete Enjoyment	13 Decisions during contests were appropriate	Teaching/Coaching Techniques
Athlete Enjoyment	14 Selections of starters was fair	Teaching/Coaching Techniques
Did Not Load	15 I would play for this coach again	Student's Perceptions
Coaches' Skills as a Coach	16 Coach was not available	Interpersonal Relationships
Did Not Load	17 Athletes attended practices on time	Administrative Skills
Did Not Load	18 Travel arrangements were well-organized	Administrative Skills
Athlete Enjoyment	19 Athletic experience was enjoyable	Student's Perceptions
Athlete's overall Satisfaction	20 I can take pride in the team's performance	Student's Perceptions
Athlete Enjoyment	21 I would come out for the team again	Student's Perceptions
Athlete Enjoyment	22 I have become more proficient in this sport	Teaching/Coaching Techniques
Did Not Load	23 Coach treated athletes inconsistently	Interpersonal Relationships
Coaches' Skills as a Coach	24 Coach failed to provide feedback	Teaching/Coaching Techniques
Did Not Load	25 Coach was aware of safety factors	Coach's Skills and Knowledge
Did Not Load	26 I enjoyed the actual contests	Student's Perceptions
Did Not Load	27 I missed too many classes due athletics	Administrative Skills
Athlete's overall Satisfaction	28 I am satisfied with the team's performance	Student's Perceptions
Did not Load	29 I had insufficient chances to display talent	Teaching/Coaching Techniques
Coach Communication Style	30 Coach available outside practices	Interpersonal Relationships
Did Not Load	31 Uniforms for this sport were adequate	Conditions and Resources
Coaches' Skills as a Coach	32 This athletic experience was not worthwhile	Student's Perceptions
Did Not Load	33 I view the athletic program to be adequate	Student's Perceptions
Coaches' Behavior	34 Coach played favorites	Interpersonal Relationships
Coach Communication Style	35 Coach respected students	Interpersonal Relationships
Coaches' Skills as a Coach	36 I did not respect the coach	Interpersonal Relationships
Coaches' Behavior	37 Coach intimidated me and/or other athletes	Interpersonal Relationships
Coach Communication Style	38 Coach sensitive to students feelings	Interpersonal Relationships
Coaches' Behavior	39 Coach's embarrassed athletes	Coach's Behavior & Image
Did Not Load	40 Coach provided adequate physical training	Coach's Skills and Knowledge
Did Not Load	41 Coach enforced the team rules consistently	Administrative Skills
Did Not Load	42 Coach knew sports medicine	Coach's Skills and Knowledge
Coaches' Skills as a Coach	43 Coach failed to provide discipline	Administrative Skills
Coaches' Knowledge	44 Coach was familiar with the rules of the sport	Coach's Skills and Knowledge
Did Not Load	45 Coach utilized audio-video teaching aids	Teaching/Coaching Techniques
Coaches' Skills as a Coach	46 Coach failed to scout opponents	Teaching/Coaching Techniques
Did Not Load	47 Coach had reasonable fundraising	Administrative Skills
Did Not Load	48 Coach established reasonable team rules	Administrative Skills
Did Not Load	49 Coach had knowledge of conditioning	Coach's Skills and Knowledge

## Appendix D (con't)

## Extracted vs. Theoretical Factors

<b>Extracted Factors Factor</b>	<b>Question number and topic</b>	<b>Theoretical</b>
Coaches' Skills as a Coach	50 Coach did not seem interested in coaching	Interpersonal Relationships
Did Not Load	51 I was satisfied with my individual performance	Student's Perceptions
Coach Communication Style	52 Coach represented a positive image	Coach's Behavior & Image
Coach Communication Style	53 Coach enhanced athletic experience	Coach's Behavior & Image
Did Not Load	54 Coach seemed abreast of new developments	Coach's Skills and Knowledge
Coaches' Behavior	55 Coach humiliated athletes	Interpersonal Relationships
Coaches' Skills as a Coach	56 Coach failed to provide constructive criticism	Teaching/Coaching Techniques
Coaches' Behavior	57 Coach emphasized wining or losing	Teaching/Coaching Techniques
Coach Communication Style	58 I like the coach	Interpersonal Relationships
Coach Communication Style	59 Coach communicated with athletes	Interpersonal Relationships
Did Not Load	60 Coach showed enthusiasm for the sport	Interpersonal Relationships
Coaches' Skills as a Coach	61 Coach failed to increase understanding	Teaching/Coaching Techniques
Athlete's overall Satisfaction	62 The team accomplished objectives	Student's Perceptions
Coach Communication Style	63 Coach behaved professionally	Coach's Behavior & Image
Did Not Load	64 Pre-season was appropriately conducted	Administrative Skills
Coach Communication Style	65 Comfortable speaking with coach	Interpersonal Relationships
Did Not Load	66 The practices were well organized	Administrative Skills
Did Not Load	67 Home site facilities were adequate	Conditions and Resources
Did Not Load	68 Sports information was adequate	Conditions and Resources
Did Not Load	69 I knew what was expected of me.	Teaching/Coaching Techniques
Did Not Load	70 Coach treated officials with respect	Coach's Behavior & Image
Did Not Load	71 Food arrangements were satisfactory	Administrative Skills

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