

Student-athletes' Evaluation of Coaches' Coaching Competencies and Their Sport Achievement Motivation

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Abstract

The primary concerns of this study is whether universities' sport coaches possess good coaching competency skills in bringing up potential athletes for the country. What are coaches' coaching competency levels? Do their competencies capability able to contribute significantly to sport achievement motivation of student-athletes? Thus, this study was designed to evaluate the competency level of coaches and student-athletes' achievement motivation at the Higher Educational Institutions (HEI) in sports competitions. A total of 322 student-athletes were participated in the questionnaire survey. Researchers have adapted the Coaching Competency Scale to measure four different dimensions of coaching competency and Sport Orientation Questionnaire to measure achievement motivation of student-athletes. Validity and reliability of the instrument were found to be satisfactory. The results of this study indicate that the coaches' competency levels at the HEI were not differ significantly by gender and performance of student-athletes, but it was differed significantly by type of sport, between team and individual sports. In addition, this study showed that there was a moderate relationship between the competencies of sport coaches and achievement motivation among student-athletes. However, among the coaches' coaching competencies, motivation competency of coaches was found to be significant contributor to student-athletes sport achievement motivation. The study provides important insights from the perspective of sport development programme at the related organizations which can be valuable in identifying and recruiting suitable coaches; and helping coaches to some extent in planning strategies for coaching athletes to ensure the effectiveness of its role as a coach.

Keywords: achievement motivation, coaching competency, sport coach, student-athlete

1. Introduction

Coaching is a complex task and required the use of different strategies and behaviours to fulfill many expectations. So sports coaches must have good knowledge, need to develop competencies or skills and high motivation in carrying out responsibilities to produce quality athletes (Fouss & Troppmann, 1981). It has been proven that behaviour of a coach may determine his competency in designing effective training hence influence excellent achievement among his athletes (Kuga, 1993; Myers, Wolfe, Maier, Felt, & Reckase, 2006) As a matter of fact, a competent coach that gives high satisfaction to his athletes may motivate them to perform confidently in their games. Therefore, a competent coach should possess some skills in choosing the right approach, technique and tune of language when approaching their athletes.

The concerns on coaching competency among sports coaches are common in high achievable sports country such as Germany, United States and Australia. In Asia countries, China, Japan and South Korea are good exemplary due to accelerate performance in world class tournaments. Interestingly, these countries have minimum dependencies on foreigners' experts in producing world class athletes. Malaysia possesses some world class athletes especially in badminton, squash and cycling but they face some difficulties to maintain such reputable position due to (a) lack of replacement athletes, (b) incompetence coaches and (c) internal issues arose in the sports body. Some local studies have reported that the quality of coaching or training in Malaysia is less encouraging (Rahim Harun, 1992; Khoo, 1991a; Khoo, 1991b; Khoo, 1994; Khoo, 1995). Former coach for

hockey national team, Terry Walsh (1988), claimed that Malaysia is left behind in promoting scientific knowledge in sports thus unable to provide new techniques in coaching systems (Walsh, 1988). Furthermore, Han Peter Thumm commented in local news, *Berita Harian* on 28 December 1990, that local coaches are incompetent to train sportsmen at states and country level (Mokhtar, 1990). The notion was further supported by Sieh Kok Chi, the Olympic Council of Malaysia secretary, by stressing that the shortcomings of Malaysian sports was partly due to incompetent coaches, and thus, Malaysia should start with training the respective coaches first to bring back the sports culture in Malaysia (The Star, 2004).

To react with such comments, students' involvement in sports has been given serious attention in Malaysia where this commitment is counted in getting a place in local higher educational institutions (HEI) (Lim, 2009). In fact, annual sports tournaments among HEI are organized to support in supplying talented athletes for the country. As such, every HEI has a pool of sports coaches to prepare institution's team for the tournaments. The issue here is, whether universities' coaches possess good coaching competency in bringing up potential athletes for the country?

While the coach is constantly making evaluations about his/her athletes, athletes are also formulating assessments about their coach's personality and behavior. These perceptions of coaching competency could alter the performance of the student-athletes and could offer important insights into valuable information needed to improve this relationship (Cratty, 1989). In addition, it seems appropriate to consider the perspectives of athletes when evaluating coaching performance. Particularly important is the notion of conducting a broad comprehensive evaluation which will elicit an accurate profile of an individual's performance (Adams, 1979).

Coaches have many responsibilities both on and off the field. Generally coaches are required to plan practice, check equipment, serve as an athletic trainer and manage the well-being of all of the athletes on the team. The most important task for coaches is trying to figure out how to motivate their players. There is no simple solution, as each player and each team will need different types of motivational behaviours to be exhibited by the coaches. According to Marten (2004), one of the hardest parts of coaching is motivating athletes to practice and try to perform in the competition. At the same time coaches must try to develop a winning attitude by helping athletes setting achievable goals. Thus, motivation is simply a mean to an end. If coaches provide exposure to positive ideas over a long period of time, then he or she will produce a successfully motivated athlete (Marten, 1987, 2004). In addition, to date, sport psychologists have discussed competitiveness, achievement orientation and achievement behavior as a prolific research area (Gill & Deeter, 1988), but sport achievement motivation of student-athletes has received little attention.

Nevertheless, a part of a coach's job is to impact his or her players; yet, it is often overlooked just how much coaches can impact their athletes. People often assume that coaches impact every aspects of sports from performances in games to the way the player wear their attires. While it is agreed that coaches do impact their athletes, the exact things they influence and the amount of influence they have is unclear. In regards to the issues, this study was designed to obtain some empirical evidence about competencies capability of coaches and student-athletes' achievement motivation in the HEI in Malaysia. Specifically, it focused on student-athletes' perceptions of the competencies of coaches and their relationships to sport achievement motivation levels among student-athletes in the HEI sports competition.

1.1 Research Questions

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

- 1) What are coaches' coaching competency levels as perceived by student-athletes in the HEI sports competition?
- 2) What are student-athletes' sport achievement motivation levels in the HEI sports competition?
- 3) Do the relationships exist between coaches' coaching competencies and sport achievement motivation of student-athletes?
- 4) Do coaches' coaching competencies contribute significantly to sport achievement motivation of student- athletes?

2. Literature Review

The literature review is divided into three sections as follows:

2.1 Coach's Coaching Competency

The role of coaching in sports is important in order to ensure quality athletes in competition. Philips (2007) and Paling (2004) concluded that coaches play various roles in their profession. For example, coaches are asked to be teachers, organizers, motivators, leaders, and counselor. William, Jerome, Kenow, Roger & Sartin (2003)

stressed that coaches ensure quality and the effectiveness of any sports program. According to Bompa (1999) and Martens (1987, 2004), the most important successful factor of a coach is to help athletes to improve their athletic skill in a wide range of tasks from sequential development and mastery of basic skills for beginners, to the more specialized physical, technical, tactical, and psychological preparation of elite athletes. These functions that displayed by the coach can have a significant effect on the performance and psychological well-being of the athletes (Horn, 1992, 2008).

Coaching competencies are a source of competitive advantage in any sports. It is a complex task that needs specific strategies and behavior to fulfill certain expectations. Coaching competencies consist of various variables. According to Franken (1994), it is skill, ability, capacity, proficiency, or fitness. Meanwhile, Fouss and Troppmann (1992) specified that in order to be effective, a coach need to develop competencies or skills of at least four types: technical skills, conceptual skills, managerial or administrative skills, and interpersonal or human skills. Indeed, past researchers have identified the importance of coaching efficacy in relation to athlete's achievement (Manning, 2007). Coaching efficacy can be regarded as the extent of beliefs among coaches on how it will affect learning and performance of athletes. Coaches need to have the ability and confident in aligning game strategies and athlete's strength with the aim of coordinating the team's strategy with the opponent's strengths and weaknesses. Four dimensions have been elaborated by Fung (2002) regarding coaching efficacy. They are motivation, strategy, technique and personality building.

As far as coaching competency is concerned, Myers et al. (2006) stated that there were three competency domains that were in the National Standards for Athletic Coaches (National Association for Sport and Physical Education, 1995) but were left out of the Coaching Behaviour Questionnaire. These competencies were listed as (a) growth, development and learning of athlete, (b) psychological aspects of coaching, and (c) skills, tactics, and strategies. Thus, Myers et al. (2006) designed The Coaching Competency Scale (CCS) based upon these competencies. The specific competencies measured by the CCS included: character building competency (CBC), game strategy competency (GSC), motivation competency (MC), and technique competency (TC). The CCS had been validated and tested for reliability in their research on athletes' evaluation of their head coach's coaching competency and found to be psychometrically sound (Myers et al., 2006).

By using the CCS developed by Myers et al. (2006), Phillips (2007) conducted a study to compare the perceptions of athletes and coaches concerning the coaching performances of head men's basketball coaches at the Division II level in the National Christian Collegiate Athletic Association. The findings of the study indicate significant differences of coaching competencies as perceived by players based on their academic grade level, starter or non-starter status, and team captain or non-team captain. Thus, according to Phillips (2007), this insight studied from the perceptions of the student-athletes could result in improved experience for all parties as well as develop player potential and could result in a deeper connection between the coach and the player.

Previous studies pertaining to athletes' preference towards coaching behaviours were varied based on their involvement in different types of sports (closed-sport vs. open-sport, dependent sport vs. independent sport, individual sport vs. team sport) (Chelladurai & Saleh, 1978, 1990; Terry & Howe, 1984). Furthermore, past studies have also showed that there was significant difference in terms of athlete's expectations towards coaches' behavior based on gender. Male athletes expect coaches to portray autocratic and social support types of behavior compared to female athletes (Chelladurai & Saleh, 1978, 1980; Terry, 1984; Lim, 1995). Female athletes, on the other hand, expect coaches to possess decision making skills (Chelladurai & Arnot, 1985; Chelladurai & Saleh, 1978). Likewise, the age of the athletes has also been shown to affect their expectations of the coach. Mature athletes want more social support than novice athletes do, and expectations concerning training and instruction decrease by age (Chelladurai & Carron, 1983).

2.2 Athlete's Achievement Motivation

Achievement motivation can be examined in terms of achievement behavior in competitive sport (Gill, 1993, 2000; Gill & Deeter, 1988; Gill & Dziewaltowski, 1988). Using the theoretical underpinnings advanced by Spence and Helmreich (1978) and Helmreich and Spence (1983), achievement motivation has been conceptualized as multidimensional, with mastery, work, and competitiveness dimensions. This implies that some people approach achievement situations with the desire to strive for excellence, others emphasize competition, and still others desire to outperform other people (Gill & Williams, 2008). According to Gill and Williams (2008), achievement behavior is central to sport and exercise endeavors, and understanding individual differences in motivation orientation is a key to understanding achievement.

Achievement behavior, and specifically competitive achievement behavior, is one of the most prominent features of sports and exercise activities (Gill & Deeter, 1988). However, many explanations for individual differences in

achievement behavior exist. Some emphasize personality and others stress perceptions and interpretations, but nearly all stem from the classic work of Atkinson (1964) and Atkinson (1974). According to Atkinson (1964) and Atkinson (1974), the tendency to approach success is a function of the person's motive to approach success as well as the situational factors. High achievers are most likely to strive to achieve when their motive for success is high and there is a 50% chance of success, which would make the victory the most rewarding. People with a strong motive to avoid failure tend to avoid these situations. When forced into an achievement situation, a low achiever will choose either very easy or very difficult tasks (Gill & Williams, 2008; Weiss & Chaumeton, 1992).

Competitiveness reflects enjoyment of competition and desire to strive for success in competitive situations. Gill (1993) identified three competitive orientations in sport: win, goal, and ego. A win orientation reflects an emphasis on interpersonal comparison and winning. A goal orientation emphasizes personal performance standards. In ego orientation the competitive situations however, provide the opportunity to demonstrate superiority. However, in sport, competitive behavior actually refers to achievement motivation (Helmreich & Spence, 1983; Gill & Deeter, 1988). A general achievement motivation is widely recognized as a capacity to experience pride in accomplishment or a disposition to strive for success across varied achievement situations and standards (Atkinson, 1964; Atkinson 1974). Thus, another important component of achievement in the physical domain involves competition.

Research in this area has focused on comparing the competitive orientations of different groups, including groups based on gender, athlete status, and disability status (e.g. Gill, Dziewaltowski & Deeter, 1988; Kang, Gill, Acevedo & Deeter, 1990; Skorkilis, 2003). Overall, the results are fairly consistent. Although males are more competitive and win oriented and females are more goal oriented, these differences seem to be related to the competitive experience (Gill, 1988, 1993). Additionally, athletes tend to be more competitive than non-athletes; however, athletes are more likely than non-athletes to endorse performance goals and less likely to emphasize winning outcomes. Gill (1993) concluded that although athletes generally score higher on both general and sport-specific achievement motivation, the orientation that best distinguishes athletes from non-athletes is sport-specific competitiveness. Interestingly, athletes do not uniformly emphasize a win orientation; they put greater emphasis on performance than on outcome. Hence, to understand achievement behavior, we must consider individual differences. As such, continued research may provide a greater understanding of individual differences and contextual factors in people's motivation in sport and exercise settings.

2.3 Coaching Competency and Sport Achievement Motivation

The coach-athlete relationship is one of the most important influences on athletes' motivation and subsequent performance (Mageau & Vallerand, 2003). Mageau and Vallerand (2003) focused on presenting a motivational model of the coach-athlete relationship that describe how coaches influence athletes' motivation. In line with the motivational model by Mageau and Vallerand (2003), Kish and Woodard (2003) revealed that coaches that exhibit positive actions impact player achievement because they have impacted the athlete's motivation which in turn leads to higher levels of performance.

However, much of the previous research done on this area has focused on the positive impact coaches can make on athletes, but it is also just as possible that coaches can negatively impact their athletes. Alfermann, Lee and Wurth (2005) conducted two studies with adolescent athletes in which coach behaviour and motivation climate was investigated. The purpose of their study was to determine the impact of coach behaviour on athletic motivation. Based on the findings, Alfermann, Lee and Wurth (2005) concluded in their studies as follows:

“There is no doubt that coaches have an enormous impact on athletes' physical and psychological welfare and their motivation. Coaches have been shown to influence young people's sports involvement, enjoyment and withdrawal, athletes' perceived competence and skills and self-esteem. Interviews with elite level athletes reveal the tremendous positive, but sometimes even destructive influence coaches may have on the athletes' sport career and their physical and psychological welfare” (p. 15).

Meanwhile, Bortoli, Robazza and Giabardo (1995) pointed out that the coaches behaviours, attitudes and communications skills strongly influence the sport experience in athletes. They had stated that ‘a good coach-athlete interaction tends to enhance motivation, induce pleasant emotions, and create satisfactory and positive climate’ (Bortoli, Robazza, & Giabarda, 1995, p. 1217). These statements are especially true in competitive sport environments where the coaches play a significant role in athletes' life and off the field/court. As Officer and Rosenfeld (1985) postulated that this coach-athlete relationship is very unique in that the coach is part teacher, part friend, part counselor, and part parent while the athlete plays the roles of student, friend, client and offspring.

Additionally, the coach-athlete-interaction, especially the leadership behaviour of coaches, plays a crucial role in the development of athletes' sport performance. Previous studies revealed that the coaches' leadership style is an important factor affecting the performance of athletes (Chelladurai, 1980, 1980; Carron & Chelladurai, 1978; Horne & Carron, 1985; Weiss & Frieddrich, 1986). According to the multidimensional model of leadership behaviour in coaching, there are three areas of leader behaviour namely, required behaviour, actual behaviour and preferred behaviour (Chelladurai, 1990). These areas should be congruent for the athletes to be satisfied and perform well. The model has been empirically confirmed (Chelladurai, 1984; Chelladurai & Carron 1983; Weiss & Friedrich, 1986; Schliesman, 1987).

In the related study by Black and Weiss (1992) found significant relationships for male and female between perceived coaching behaviors and motivation in competitive swimmers. The findings also indicated that variables contributing most importantly to the relationships differed depending upon gender and age groups. They concluded that young athletes' self-perceptions and motivation are significantly related to the quantity and quality of coaching feedback they receive for performance successes and errors. Likewise, Lim's (1995) study in the local contexts in Malaysia found that rewarding and democratic behavior of coaches contribute significantly to athletes' satisfaction and achievement motivation. Thus, in regard to the findings, it seems to support the notion by Gordon (1986), which disclosed that coaches who exhibit technical competence, positive feedback in a direct but supportive and friendly manner are more likely to be regarded 'effective' by athletes.

However, a study by Omar and Abd Majid (2004) regarding the relationship between coaches' profile and athletes' performance shown that coaches' skills will not only help athletes in enhancing their physical, technical and psychological ability, but may educate athletes in their social and spiritual life. A qualitative approach (interview, document analysis and observation) was employed to compile data on coaches' profile, training program and athlete's achievement. The outcomes of the study revealed that experience and qualification in coaching is imperative as determining factor towards athletes' performance either in individual or team sports. Thus, coaching style should be tailored based on situational factor in order to secure success in sports. Coaches' individual philosophy, work ethics and professionalism with proper communication style will contribute significantly to the success in any sports and competition (Martens, 1987, 2004).

3. Method

3.1 Subjects

A total of 322 respondents from four universities were participated in the survey. The student-athletes chosen to participate in this study were identified by an athletic administrator at their respective universities located at the northern Peninsular of Malaysia. Student-athletes from various sports, including team and individual sports who were representing their respective universities in the HEI sports competition were randomly chosen to participate in this study.

3.2 Instrumentation

The Coaching Competency Scale (CCS) developed by Myers et al. (2006) was selected for this study. Competency is defined by Myers et al. (2006) as, "athletes' evaluations of their coach's ability to affect athletes' learning and performance" (p.452). The 24-item questionnaire in CCS was designed to measure four different dimensions. The four categories included motivation competency (MC), game strategy competency (GSC), techniques competency (TC), and character building competency (CBC). The definition of each dimension is given in Table 1. All items are measured using a *Likert* scale of 10 points where (1) indicates "not at all competent" and (10) indicates "extremely competent".

Table 1. Definition of four dimensions of coaches' coaching competency

Dimension of competency	Definition
Motivation competency	Coaches' ability to affect mood psychology and skills of athletes.
Game strategy competency	Coaches' ability to lead athletes during competition.
Techniques competency	Coaches' ability to make some diagnostics and giving instructions to athletes.
Character building competency	Coaches' ability to influence athletes' personal development and positive attitude towards sports.

Meanwhile, in order to measure achievement motivation, Sport Orientation Questionnaire (SOQ) was used in this study. The SOQ is a multidimensional inventory consists of 25 items with three factors, namely,

competitiveness, goal, and win orientation. Competitiveness is defined as the desire to enter and strive for success in sport competition, goal orientation refers to the desire to reach personal goals in sport, and win orientation refers to the desire to win in interpersonal competition in sport. Each item is rated on a 5-point scale from strongly agree to strongly disagree. For each of the subscales is calculated by summing the respondents' ratings for each of the associated items.

The questionnaire was prepared in Malay (Malaysia national language) hence translation processes of CCS and SOQ which originally in English were performed via back translation (Brislin, 1971). Then, we conduct a pilot test on the designed questionnaire to 290 respondents to evaluate reliability of the questionnaire. The results of this pilot test show that the measured reliability based on Cronbach's Alpha is adequate as compares to the ones reported by Myers et al. (2006) and Gill and Deeter (1988) (see Table 2). Thus, such findings allow us to use the translated questionnaire for actual study.

Table 2. Internal consistency of CCS and SOQ

Dimension of Coaching Competency	Cronbach's Alpha Value	
	Pilot study ($n = 290$)	Past literature
Motivation	0.9565	Myers et al.(2006): Range from 0.82 to 0.92 for each dimension of competency
Games strategy	0.9467	
Techniques	0.9419	
Character building	0.9149	
Total Coaching Competency	0.9844	
Dimension of Achievement Motivation		Gill & Deeter (1988):
Competitiveness	0.9266	0.94 - 0.95
Win	0.8190	0.85 - 0.86
Goal	0.8679	0.79 - 0.82
Total Achievement Motivation	0.9539	

3.3 Procedures

Permission to collect data with student-athletes was received from selected university administrators. A quantitative approach by using self-completed questionnaires were administered by two trained research assistants as well as via the sport officer from respective universities to some chosen student-athletes who were participating and representing their university during the higher education institution sports competitions. Considering too many universities nationwide are costly hence we limited the sample to the four universities located in northern peninsular of Malaysia namely Perlis, Kedah and Penang. The subjects were asked to complete a survey questionnaire. The respondents were informed concerning the purpose of the study and general instructions were provided and help was offered when needed. The responses were confidential.

3.4 Data Analysis

The questionnaires collected were processed and analysed with the SPSS/PC 16.0 statistical software package. The descriptive analyses were used to examine the means and standard deviations of each dimension of coaching competency and sport achievement motivation according to gender, type of sports, and performance. *T*-test was performed to compare means differences between each group. Pearson correlations and regression analyses were conducted to determine the relationships between coaches' coaching competency and sport achievement motivation.

4. Results

4.1 Background of Sample

The analysis on 322 samples of student-athletes showed that 57.20% were males and 42.80% were females. Of the total 60.25% of them involved in team sports, which comprises of at least two players in a team, and the remaining were in individual sports such as swimming, archery and golf. Since the study is conducted among student-athletes in universities, therefore 59.25% of our samples have their experience at most 12 months with their respective coaches. The obtained samples also indicate that 55% of them won the games that they had participated (winner, first runner up or second runner up) and 45% were those who had defeated in the competition.

4.2 Coaches' Coaching Competency

Descriptive statistics were used to quantify each student-athletes' responses to the CCS. The mean values for each dimension according to each category are presented in Tables 3, 4, and 5. The investigation computed the average of total score of competency factors and compared the groups of each factor statistically. The summarisations of the results are also tabulated in Tables 3, 4 and 5.

Table 3. Means and t test on coaching competency in terms of gender

Dimension of competency	Gender				t statistic
	Male		Female		
	M	SD	M	SD	
Motivation	55.89	10.44	56.83	10.27	t = -0.796 (p = 0.427)
Games strategy	55.71	10.54	55.51	8.54	t = 0.182 (p = 0.856)
Techniques	48.06	9.04	47.82	7.30	t = 0.247 (p = 0.805)
Character building	31.93	6.12	32.47	4.62	t = -0.847 (p = 0.397)
Total coaching competency	192.410	35.138	192.258	28.198	t = 0.041 (p = 0.967)

*Significant value ($p < 0.05$)

Table 4. Means and t test on coaching competency in terms of performance (Win-Lose)

Dimension of Competency	Performance in the competitions				t statistic
	Winner		Loser		
	M	SD	M	SD	
Motivation	56.47	10.03	55.90	10.91	t = 0.481 (p = 0.631)
Games strategy	56.06	10.44	54.93	9.00	t = 1.022 (p = 0.308)
Techniques	48.25	8.92	47.44	7.78	t = 0.844 (p = 0.400)
Character building	32.36	5.69	31.83	5.46	t = 0.844 (p = 0.399)

*Significant value ($p < 0.05$)

Table 5. Means and t test on coaching competency in terms of sports types

Dimension of Competency	Types of sports				t statistic
	Individual		Team		
	M	SD	M	SD	
Motivation	57.11	8.76	54.80	12.52	t = 1.930 (p = 0.55)
Games strategy	56.73	9.11	53.73	10.58	t = 2.680** (p = 0.008)
Techniques	48.74	7.62	46.54	9.40	t = 2.269* (p = 0.024)
Character building	32.61	5.21	31.35	6.05	t = 1.977* (p = 0.049)
Total coaching competency	195.287	29.788	186.941	36.175	t = 2.198* (p = 0.029)

*Significant value ($p < 0.05$)

As shown in Table 3, the results indicate that there is no significant difference between male and female student-athletes' perceptions on the coaches' coaching competency. All categories of coaching competency found to be no significant differences between male and female student-athletes. Likewise, the results of *t*-test in Table 4 also showed no significant differences between winners and losers perceptions on all categories of coaching competency. However, in terms of types of sports, the results in Table 5 indicated that there were significant differences between individual and team sports student-athletes perceptions on overall coaching competency ($t = 2.198, p < .029$) and three categories of coaching competency namely, games strategy ($t = 2.681, p < .008$), techniques ($t = 2.269, p < .024$) and character building ($t = 1.977, p < .049$).

4.3 Student-Athletes' Achievement Motivation

The results in Table 6 show that there is significant difference between male and female perceptions on the overall sport achievement motivation except for the competitiveness orientation dimension ($t = 2.022, p < .044$). Although the results indicated that males obtained higher mean scores than females in all dimensions of sport achievement orientation, there was only a significant difference on competitiveness orientation.

Table 6. Means and *t*-test on sport achievement motivation by gender

Dimension of Sport Orientation	Males		Females		<i>t</i> -Statistic
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Competitiveness	56.71	6.99	55.06	7.13	2.022* ($p = 0.044$)
Win	25.29	3.84	24.89	3.92	0.880 ($p = 0.379$)
Goal	26.06	3.55	25.60	3.23	1.155 ($p = 0.249$)
Achievement motivation	108.20	13.49	105.59	13.33	1.671 ($p = 0.096$)

*Significant value ($p < 0.05$)

Table 7 and Table 8 displayed the results of sport achievement motivation differences among student-athletes in terms of types of sports and their win-lose performance. The findings showed that there were significant differences in all dimensions between student-athletes from team sports and individual sports as well as between student-athletes who won (1st, 2nd, and 3rd placing) in the competition and those who failed to achieve any position in the competition. The results also indicate a significant difference between between team sports and individual sports student-athletes for overall sport achievement motivation ($t = 5.321, p < .0001$).

The results in Table 8 show that there is significant difference between winners and losers on student-athletes' sport achievement motivation ($t = 2.986, p < .003$). The results also indicated that there were significant differences in all dimension of sport achievement motivation between the winners and the losers.

Table 7. Means and *t*-test on sport achievement motivation by types of sports

Dimension of Sport Orientation	Team		Individual		<i>t</i> -Statistic
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Competitiveness	57.65	6.09	53.59	7.71	4.928** ($p < 0.001$)
Win	26.17	3.41	23.59	4.00	5.895** ($p < 0.001$)
Goal	26.48	3.01	24.92	3.75	3.886** ($p < 0.001$)
Achievement motivation	110.32	12.01	102.32	13.99	5.321** ($p < 0.001$)

**Significant value ($p < 0.001$)

Table 8. Means and *t*-test on sport achievement motivation by performance (won-loss)

Dimension of Sport Orientation	Winner	Loser	<i>t</i> -Statistic
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	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Competitiveness	57.14	7.08	54.66	6.84	3.108* ($p = 0.002$)
Win	25.54	3.83	24.61	3.86	2.216* ($p = 0.034$)
Goal	26.44	3.27	25.15	3.45	3.406** ($p = 0.001$)
Achievement motivation	109.12	13.28	104.55	13.20	2.986** ($p = 0.003$)

*Significant value ($p < 0.5$)

4.4 Relationship between Coaches' Coaching Competencies and Student Athletes' Achievement Motivation

The results of the Pearson correlation analyses in Table 9 reveal that correlation coefficients among dimensions of coaching competencies and achievement motivation of student-athletes were found to be positively significant. The values of correlation coefficients were within the range of $r = 0.315$ and $r = 0.356$, $p < 0.01$. Thus, the correlations between each of dimensions of coaching competencies and achievement motivation were found to be moderate. However, from the findings, it is likely that the higher the scores of each dimensions of coaching competencies perceived, the higher will be the scores of each dimensions of achievement motivation among students-athletes in HEI.

Table 9. Correlation coefficient among dimensions of coaching competencies and sports achievement motivation

Dimension of competency	Competitiveness	Win	Goal	Achievement motivation
Motivation	0.292**	0.343**	0.318**	0.370**
Games strategy	0.324**	0.324**	0.324**	0.349**
Techniques	0.341**	0.333**	0.331**	0.360**
Character building	0.334**	0.356**	0.329**	0.365**
Total coaching	0.330**	0.345**	0.338**	0.366**

**Significant value ($p < 0.001$)

The stepwise multiple regression analyses were conducted to determine to what extent does the contribution of each independent variables (motivation competency, game strategy competency, techniques competency, and character building competency) on the dependent variable (sport achievement motivation). The results of stepwise regression in Table 10 show that coaches' motivation competency was found to be significant predictor of student-athletes' sport achievement motivation ($F(1, 288) = 45.517$, $p = .0001$). An examination of the beta weight value indicates that motivation competency of coaches was the only significant contributor ($\beta = .369$, $t(289) = 6.747$, $p = .0001$) to student-athletes' sport achievement motivation. In addition, coaches' motivation competency explained 13.6% ($R^2 = .136$) of the variance in student-athletes' sport achievement motivation.

Table 10. Stepwise Multiple Regression Analysis: Motivation competency, game strategy competency, techniques competency, and character building competency on sport achievement motivation

Variables	Beta	<i>t</i>	<i>p</i>
Motivation Competency	.369	6.747*	.0001
Game Strategy Competency	-.061	-.382	.703
Techniques Competency	.117	.788	.431
Character Building Competency	.111	.788	.432

*Significant value ($p < .05$); ($n = 289$); $R = .369$; $R^2 = .136$; Adjusted $R^2 = .133$;

Std. Error of the Estimate = 12.633; $F = 45.517$; $P = .0001$

5. Discussion and Conclusions

The results of this study indicate that the coaches' competency levels at the HEI were not differ significantly by

gender and performance of student-athletes, but it was differed significantly by types of sports, between team and individual sports. Competencies of coaches from gender point of views show that both male and female athletes rated their coaches with average total score close to the maximum score. This implies that the athletes find their coaches as possessing adequate level of knowledge, skills and experience in motivating, planning for strategy, imposing good techniques and building good characters for them. Although the result on each dimension shows that there is no significantly different of perceptions between males and females, hence gender is not a criterion that can distinguish level of competency among coaches. Based on these findings, we can also justify that coaches are not showing any signs of gender biased in training their athletes. They perhaps provide appropriate training and coaching that suitable for athletes' capability.

Additionally, in comparison of the perceptions between winners and losers, the results revealed that there was no significant difference on each of the dimensions of coaching competency. The mean scores of both groups are just indicated a small differences. Thus, this could be implied that regardless of whether they won or loss in the competition, the student-athletes perceived the competencies of the coaches portrayed of equal level in coaching. It can also explain that our local coaches in the local universities are seemed to portray of almost the same level in terms of their capability in coaching the athletes.

Furthermore, the analysis in terms of types of sports, this study shows that those athletes from team sports rated higher score of their coaches competencies than those from individual sports in all dimensions. Such results indicate that coaches for team sports are more competent in playing their roles for motivating, deciding game strategy, introducing good coaching techniques and successfully building characters among athletes. Such findings can be described by the fact that a coach for a team sports needs more skills in managing, guiding and monitoring many athletes in the team.

Meanwhile, gender differences are often assumed to underlie differences in sport achievement orientation especially differences in competitiveness (Gill, 1988; Spence & Helmreich, 1983). Thus, the findings of this study could be implied that male student-athletes are more desire to participate in sport competition and have more drive to strive for success as well when compare to females. Nevertheless, this study revealed that there was no significant difference between male and female student athletes on their overall achievement motivation. The findings of this study are consistent with previous studies (e.g., Gill, 1988; Spence & Helmreich, 1983) which portrayed that male consistently scored higher on competitiveness and win orientation than female did and reported more competitive activities.

This study also suggests that team sports' student athletes portrayed higher achievement motivation than individual sports' student-athletes. They have a higher desire to compete and strive for success, to win in interpersonal competition, and tendency to achieve their personal goals in sport. Likewise, those student athletes who won in the competition also demonstrate higher achievement motivation to strive for success, to win in the competition, and to achieve their personal goal in the competition.

On the relationship between coaching competency and achievement motivation, this study revealed that there was a moderate relationship between the competencies of sport coaches and achievement motivation among student-athletes. However, among the coaches' coaching competencies, motivation competency of coaches was found to be significant contributor to student-athletes sport achievement motivation. Thus, from the findings of this study it can be implied that coaches who have an ability to affect mood psychology and skills of athletes likelihood to produce athletes with high achievement motivation pertaining to their competitiveness, win and goal orientation. Even so, this result cannot be simply judged that coaches for team sports are more superior to coaches for individual sports. This study seems to support the previous findings by Alfermann, Lee and Wurth (2005), Horn (1992), Myers et al. (2006), Phillips (2007), Kish and Woodard (2003), and Mageau and Vallerand (2003).

5.1 Implications

Results from this study have several important implications. This study has successfully demonstrated some levels of competency displayed by the coaches in public universities. Coaches' coaching competencies showed different approaches and styles of coaching to their athletes by using motivation, game's strategy, athletes' character building, and implement effective techniques in sports training. Thus, given this knowledge, the coaches can use the important structures in the coaching competencies as a guide to act or behave as necessary in appropriate circumstances. This is because the behavior of coaches that do not suit the needs of athletes and organizations, if adopted would bring adverse implications on the development and progress of the athletes and the teams.

In addition, the knowledge gained from this study can provide valuable input to the establishment of coaching

development program to the universities, the Ministry of Higher Education, the National Sports Council, and sports bodies. The results of this study can also provide meaningful information in planning the structure of the sports coaching education program to be more complete and systematic. This study to some extent can contribute in the selection procedures of an effective coach in preparing an excellent sports team and sound athlete. When athletes 'see' what they 'want' in terms of coaching behavior they are more likely to report satisfaction with the coach. Coaches would be well advised therefore, to assess and periodically check their verbal and non-verbal coaching behavior and communication.

5.2 Limitations

Some limitations of this study need to be considered. The current study occurred in a public university setting which was limited to student-athletes from four universities and focused only on student-athletes participating in HEI sports competition. Therefore, the results of this study cannot be used to generalize to all university student-athletes in Malaysia. Another limitation of this study is the fact that quantitative data was taken through self-report measures; therefore, there is ample chance that participants chose answers which were not their true experience (Creswell, 2009).

5.3 Recommendations for Further Study

Several directions for future research can be offered to advance both theory and practice in this area. The present study should be replicated utilizing student-athletes from other higher institutions both from public and private as population samples. It is also recommended that future studies on the coaches' coaching competency should take into account on other demographic and psychographic variables such as athletes' past experience, level of competition, self-efficacy, attitude towards sports, and family backgrounds that may have influenced on the perceptions of student-athletes. Besides, this study also suggests that future studies should also utilize qualitative methods as well to acquire more objective data. It is hoped that there are other researchers interested in conducting studies pertaining to this issues in providing meaningful contribution to the discipline of sports, especially in sport and physical education as well as sport sciences in the country.

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