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## **ASSESSMENT: Coaching Efficacy As Indicators Of Coach Education Program Needs**

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### **ABSTRACT**

The purpose of the study was to identify the level of coaching efficacy among a group of high school coaches so as to gain an insight for planning future coach preparation programs. In this study, the Coaching Efficacy Scale was used to assess the efficacy of high school coaches in four dimensions: Motivating Athletes, Strategy Use, Coaching Techniques, and Character Building. Results indicated that the dimension in which the participating coaches felt most efficacious was Character Building whereas the dimension in which they felt the least efficacious was Strategy Use. The application of this finding to coach preparation programs was discussed.

### **Introduction**

The concept of self-efficacy as put forward by Albert Bandura in the late 1970s has received extensive empirical treatment in various disciplines. The continual interest to study efficacy is perhaps related to the positive link between level of efficacy and task performance (Sandri and Robertson, 1993; Treasure, Monson, & Lox, 1996; Moritz, Feltz, Fahbach, & Mack, 2000) and task persistence (Schunk, 1995). In more recent literature, the term "efficacy" when used together with a behavior, would denote strength of confidence in acting out that behavior with competence such that "swimming efficacy" is a person's belief about his/her competence in swimming (Starek & McCullagh, 1999), "teaching efficacy" is the belief of teachers that they can teach effectively (Ashton & Webb, 1986), and "coaching efficacy" is the belief of coaches that they can successfully carry out the duties expected of coaches (Feltz, Chase, Moritz, & Sullivan, 1999). The purpose of this study was to assess the coaching efficacy of a group of high school coaches attending a school coach certification program.

Coaching efficacy is the extent to which coaches believe that they have the ability to enact behaviors and fulfill tasks expected of coaches. Feltz et. al (1999) suggested that coaching behaviors and tasks could be grouped into four dimensions: motivating athletes, strategy use, coaching technique, and character-building skills. In recognition of the complexity of coaching tasks, they developed a multidimensional scale, the Coaching Efficacy Scale (CES) and tested it on a sample of coaches. Subsequent psychometric analysis supported the hypothesized four-factor structure. Fung (in press) re-examined the psychometric properties of the CES while assessing the efficacy status of coaches with varying level of experience. She also found the internal consistency of the scale meeting the requirements suggested by Nunnally and Berstein (1994).

This study aimed to put the CES to further use. By identifying coaches' sense of efficacy prior to attending any formal coach preparation programs, an insight into coaching dimensions needing attention could be gained. This information could serve as a template to evaluate the present coach preparation program and as a reference for planning future programs. The rationale is that if the four dimensions are important for coaching, then deficit in any aspect would have debilitating effects on the quality of coaching and warrants serious attention from those who work in coach preparation and coach development programs.

In Hong Kong, high school physical education teachers used to be the only individuals working with athletes of their schools. With the increase in the number of high schools and the growth of inter-school competitions, the number of teams in each high school has increased. In order to provide coaching to all school teams, some high schools began to recruit their classroom teachers to serve as coaches. Whereas some classroom teachers may have had some exposure to the sport either as an athlete or a coach, some may have only been recreational players. In view of this growing trend, a school coach certification program was designed and offered on an annual basis for the purpose of providing high school coaches with an opportunity to equip themselves with current coaching knowledge and practices. As this program is now into its third year of operation, it would be of interest to examine whether the curriculum of the program meets the needs of the high school coaches. As an alternate approach to assessing content adequacy, the theoretical framework of coaching efficacy was applied to identify the tasks which high school coaches have the least and most confidence in accomplishing so as to determine future curriculum focus.

## **Method**

### **Participants**

Participants who volunteered for the study were high school coaches attending a school coach certification program offered by an official body responsible for a territory-wide coach accreditation system in Hong Kong. The requisites for enrollment in the school coach certification program are: the applicants must be working as a basketball, badminton, or team handball coach to a high school team at the time of application, have not received any formal coach preparation or physical education preparation, and would be coaching in the coming school year. The sport-specific requirement was included because different sport-types were offered on a rotational basis. As a result of these requirements, the participants of the study were mostly

classroom teachers and all of them had at least one year of experience working with high school athletes.

Before starting the program, participants were briefed on the purpose of the study. Once consent to participate was obtained, they were given the CES and a demographic questionnaire to complete. Of the 90 questionnaires distributed, 74 were returned fully completed and were used for data analysis. This constituted a rate of 82.2%.

Of the 74 participants, 49 were males and 25 were females. The mean age of these coaches was 30.10 ( $SD = 7.03$ ) and their coaching experience ranged from 10 - 480 hours per year ( $M = 107.31$ ,  $SD = 90.70$ ). This wide distribution of coaching hours was due to the fact that some of the high school coaches had to work with both the boys' and the girls' school teams, thus making their coaching load heavier.

### **Instrument**

The instrument used for assessing coaching efficacy was the CES developed by Fletz et al. (1999). The Scale contains 24 items scored on a 10-point scale with 0 indicating "not at all" and 9 indicating "extremely confident". The 24 items could be grouped into four dimensions. Sample items for each dimension are as follows, Motivating Athletes: "Maintain confidence in athletes", and "Mentally prepare athletes for competition"; Strategy Use: "Make critical decisions during competitions", and "Maximize own athletes' strength during competition"; Coaching Technique: "Detect skill errors", and "Teach the skill of the sport"; Character Building: "Instill an attitude of fair play among athletes", and "Promote good sportsmanship". When the internal consistency of the Scale was examined, the Cronbach alphas obtained were: .90, .91, .91, and .92 for Motivating Athletes, Strategy Use, Coaching Technique, and Character Building respectively. The alpha coefficient for the total scale was .85. The levels of these coefficients suggested that the Scale was acceptable for use (Nunnally & Berstein, 1994).

### **Results**

The means and standard deviations of each dimension are presented in Table 1. Among the four dimensions of coaching efficacy, the dimension of Strategy Use had the lowest mean value. This suggested that high school coaches in Hong Kong were less confident in analyzing the strengths and weaknesses of opposing teams, making decisions on the type of game strategy to employ, and maximizing athletes' strength in competitions than in tasks such as motivating their athletes, developing their athletes' character or the carrying out the instructional aspects of coaching.

Table 1. Means and standard deviations of coaching efficacy scores		
Scores	<i>M</i>	<i>SD</i>
Motivating athletes	6.68	.89
Strategy use	6.42	.92
Coaching technique	6.83	1.01
Character building	7.14	1.07
Total efficacy	6.72	.87

To further determine whether the dimension means were significantly different from each other, a dummy code was created for each dimension so that the One-way Analysis of Variance could be applied. A significant F ratio was obtained thus suggesting differences between the dimensions ( $F = 6.91, p < .01$ ). In order to determine which dimension mean actually contributed to the significant overall F-ratio, the Bonferroni post-hoc analysis was used. The dimension of Character Building was found to differ significantly from the dimensions of Motivating Athletes and Strategy Use but not with Coaching Technique.

Considering that findings from this study would be used as evidence for advising program needs, and as the coaching experience of the sample was not homogenous (reported duration of coaching hours in a year ranged from 10 - 480 hours), there is a need to understand whether coaching experience impacts coaching efficacy. Hence, the Pearson Product Moment Correlation coefficient was calculated between number of hours involved in coaching per year and total coaching efficacy score (CEF). The resulting value of the coefficient suggested that there was no relationship between coaching experience and coaching efficacy ( $r = .05$ ).

## **Discussion**

The purpose of the study was to identify the level of coaching efficacy among a group of high school coaches so as to gain an insight for planning future coach preparation programs. The CES developed by Feltz et. al (1999) was used on a group of school coaches to assess their efficacy in carrying the four dimensions of coaching tasks. By the rank-order of means in each dimension, the one in which Hong Kong high coaches felt least confident about was Strategy Use. This means that, as compared to other dimensions, they lacked confidence in having to detect the strengths and weaknesses of the opposing teams, understand competitive strategies and adapt to different competitive situations, maximize athletes' strength during competition, and make critical decisions during competitions. To enhance coaches' confidence in these tasks, lecture-type teaching needs to be supplemented with small group, workshop type experiences such as discussions following video viewing and on-site game visits. Working along a master coach would also provide invaluable opportunity for the high school coaches to experience the

application of theory to practice. Perhaps a direction that coach educators in Hong Kong could consider is to establish a mentorship program such that trainee coaches showing high levels of commitment to the profession could be provided with opportunities to learn while working along side full-time master coaches.

The dimension in which the high school coaches had the highest confidence in was Character Building. In fact, the mean score for this dimension differed significantly from two other dimensions (Motivating Athletes and Strategy Use). This means that they were most efficacious in carrying tasks such as instilling an attitude of fair play among athletes, instilling an attitude of respect for others, promoting good sportsmanship, demonstrating the skills of the sport, and instilling an attitude of good moral character. One possible explanation for this is that the high school coaches participating in this study were first and foremost trained teachers, so they were able to transfer knowledge on nurturing the character of students acquired from their teacher preparation experience to the coaching context. However, even if high school coaches felt that they were more efficacious in performing tasks related to Character Building, we must bear in mind that the ranking of efficacy in the dimensions was on a relative basis. In fact, when the mean score for Character Building of this study was compared to values obtained by Feltz et. al (1999) and Melete and Feltz (2000), they were found to be much lower (Hong Kong: 7.13, Feltz et. al: 8.19, Malete and Feltz: 8.50). Perhaps the American sports system and culture is more conducive to developing stronger coach-athlete relationships such that American coaches would feel more efficacious about influencing the characters of their athletes. In contrast, the sporting culture in Hong Kong is not well established, and youngsters rarely select athletes or coaches as role models. The Hong Kong coaches may be well aware of this and therefore have more doubts in their own capabilities in influencing their athletes.

The number of hours a coach spent coaching did not affect their sense of efficacy. This result echoes findings by Feltz et al. (1999). They studied the coaching efficacy of basketball coaches and concluded that coaching hours per week was not related to coaching efficacy. Bandura (1986) pointed out that strength of efficacy increases with positive experiences, thus quantity of experience alone would not affect strength of efficacy if the experience had not been particularly rewarding, informative, and positive. Perhaps this has been the case with the high school coaches participating in this study.

In offering in-service or continuing education programs, there is always a struggle to balance time with content. Findings from this study could provide some insight to coach education planners. For example, it was found that high school coaches were least confident in applying their coaching knowledge to interpreting and making decisions about game strategies. As this area of knowledge and skill is sport-specific, attention and effort must be paid to strengthen this component even at the expense of some other areas where they have greater confidence. Alternately, the tasks that high school coaches had the most confidence in performing were related to the dimension of Character Building. Therefore, when there is a need to curtail the duration of a coach preparation program, or when there is a need to re-focus the content areas, knowledge related to the dimension of Character Building offers a way out.

There are a few limitations on this study that warrant noting. First, the sample of the study was small and findings may not be representative of all high school coaches. Second, coaching efficacy was assessed by means of a self-reporting questionnaire and may not reflect actual on-site coaching behavior, let alone the performance effectiveness on the tasks that coaches rated themselves as highly efficacious. Therefore, caution must be made when considering its use in planning school coach preparation programs. Even with these limitations, the usefulness of the CES as a reliable tool for assessing coaching efficacy is supported in a culture different from its original place of development and its practical application strengthened. Furthermore, this study should pave the way for further research in this area. For example, it would be interesting to identify factors that influence coach efficacy and to find out how might it be changed. On a cross-cultural perspective, it would also be interesting to compare coach efficacy and try to understand it better in light of sports system and culture. In sum, the study of coach efficacy is still in its infancy and much work is needed in order to fully understand this complex construct.

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