

# **ACKNOWLEDGEMENTS**

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**Matthew 5:3:**  
**“You’re blessed when you’re at the end of your rope. With less of you there is more of God and his rule.**

# **DECLARATION**

The co-authors of the two articles, which form part of this dissertation, Mr. Pieter van den Berg (Supervisor), Dr. Ankebé Kruger (Co-supervisor) and Dr. Suria Ellis (co-author: contribution to statistics of article 2), hereby give permission to the candidate, Mr. Retief Broodryk to include the two articles as part of a Masters dissertation. The contribution with regards to advisement and support of the co-authors were kept within reasonable limits, therefore enabling the candidate to submit this dissertation for examination purposes. This dissertation, therefore, serves as partial fulfillment of the requirements for the Magister of Arts degree in Sport Science within the School of Biokinetics, Recreation and Sport Science in the faculty of Health Sciences at the North-West University Potchefstroom campus.

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# **SUMMARY**

Sport participation is continually rising nationally and internationally emphasizing the need for effective coaches. Literature regarding coaching in sport is also increasing yearly leading to an ample amount of studies available. Despite the available results, there is still a lot more to understand concerning the complex nature of coaching. Although the majority of the studies focused on coaching behaviours, only limited results exist measuring the perceptions of coaches and players to determine whether the behaviours are effective. More scientific research in the area of coaching effectiveness is therefore needed, especially in South Africa. The objectives of this study were firstly to determine the difference between players' perceptions of coaching effectiveness between larger and smaller secondary schools and secondly, to determine the difference between the players and the coaches' perceptions of coaching effectiveness at university/club level.

Twenty high schools ( $n = 20$ ) and four hundred and seventy-six ( $n = 476$ ) male rugby union players (15-19 years) participated in the first part of the study. Players were asked to fill in the adapted version of the Coaching Efficacy Scale (CES). To determine the validity of the sample size a power calculation was done followed by Chronbach alpha values to determine the reliability of the questionnaire on the specific group. Discriptive statistics, followed by independant t-test were done to measure statistically differences between large and small schools with regard to the 4 constructs measured. Cohen's effect sizes were then used to determine practical significantly differences.

The sample size was found to be valid ( $> 0.9$ ) together with high Cronbach alpha values ( $> 0.7$ ) indicating that the questionnaire is reliable for the specific sample. It was found that no practically significant differences exist between coaches from large schools compared to coaches from smaller schools. It was therefore concluded that the players from high schools that participated in the study perceive their coaches' effectiveness with regard to the constructs measured similarly, irrespective of the size (number of learners) of the school.

One hundred and forty-two ( $n = 142$ ) male rugby union players (age: 18-15) and thirteen ( $n = 13$ ) coaches (age: 23-55) from the Puk Rugby Institute (PRI) participated in the second part of this study. All the players completed the adapted version of the CES and the coaches completed the

CES. Confirmatory factor analysis (CFA) was done to determine the factor structure of the adapted version of the CES. The CFA of the CES was not done due to the small number (13) of coaches that participated in the study. Regression estimates were set at  $p < 0.05$ . Cronbach alpha values were measured to determine the reliability of the questionnaires. To adapt for interdependency, mixed models (set at 5%) were used to measure perception differences between coaches and players.

All the regression estimates were found to be significant ( $p < 0.05$ ). High Cronbach alpha values were found ( $>0.70$ ). Statistically significant differences between coaches and players' perceptions were found with regard to the four constructs measured where coaches' perception values were higher than those of the players. Although it is not important to practice, the findings should not be ignored. For total coaching effectiveness values, the majority of the coaches (8 out of 13) rated their own coaching effectiveness more positive than did their respective players. It was therefore concluded that researchers should be aware of the perception differences that exist when measuring coaching effectiveness. These results complement the existing literature with regard to sport coaching and the complexity thereof.

**Keywords:** Coaching effectiveness, coaching efficacy, coaching competency, coaching perceptions, sport coaching.

# OPSOMMING

Sportdeelname neem toe nasionaal en internasionaal wat dan lei tot die tekortkoming van effektiewe afrigters. Literatuur rakende sportafrigting is konstant besig om te groei wat meebring dat daar 'n magdom studies beskikbaar is. Ongeag die hoeveelheid beskikbare resultate is daar steeds baie om te verstaan met betrekking tot die komplekse aard van afrigting. Die meerderheid beskikbare studies fokus op die afrigter se gedrag, terwyl beperkte resultate bestaan wat op die afrigters en spelers se persepsies fokus om te bepaal of die gedrag effektief is al dan nie. Meer navorsing wat spesifiek op afrigtingseffektiwiteit fokus, is dus nodig. Gesien uit 'n Suid-Afrikaanse perspektief is baie min studies beskikbaar waarin spesifiek gefokus word op die effektiwiteit van afrigters in Suid-Afrika. Die doelwitte van hierdie studie was eerstens om te bepaal wat die verskil is met betrekking tot die persepsies van spelers aangaande hul afrigters se afrigtingseffektiwiteit tussen groot en klein hoër skole, en tweedens, om die verskil tussen die spelers en afrigters se persepsies rakende afrigtingseffektiwiteit op universiteits-/klubvlak te bepaal.

'n Totaal van 20 skole ( $n = 20$ ) met vierhonderd ses en sewentig ( $n = 476$ ) manlike rugby-uniespelers (15-19 jaar) het aan die studie deelgeneem. Spelers het die aangepaste weergawe van die Afrigtingseffektiwiteit-skaal (CES) ingevul. Geldigheid van die populasiegrootte is verkry deur middel van 'n *power calculation*, gevolg deur *Cronbach alpha* berekeninge om sodoende die betroubaarheid van die vraelys op die spesifieke groep te bepaal. Beskrywende statistiek is bereken gevolg deur 'n onafhanklike *t*-toets wat die statisties betekenisvolle verskille tussen groot en klein skole rakende die 4 afrigtingseffektiwiteit-konstrukte gemeet het. *Cohen* se effekgroottes is gebruik om prakties betekenisvolle verskille aan te dui.

Daar is gevind dat die populasiegrootte geldig ( $> 0.9$ ) was, gepaard met 'n hoë *Cronbach alpha* waarde ( $> 0.7$ ) wat bewys lewer daarvan dat die vraelys betroubaar is vir die spesifieke populasie. Geen prakties betekenisvolle verskil is tussen afrigters van groot skole en afrigters van klein skole ten opsigte van die afrigters se afrigtingseffektiwiteit gevind nie. Samevattend kan dus gestel word dat die spelers wat deelgeneem het, hul onderskeie afrigters se effektiwiteit ooreenstemmend evalueer, ongeag of hulle van 'n groot of klein skool afkomstig is.

Vir die tweede doel van hierdie studie het 'n totaal van eenhonderd twee en veertig ( $n = 142$ ) manlike rugby-uniespelers (18-25 jaar) en dertien ( $n = 13$ ) afrigters (23-55 jaar) van die Puk

Rugby Instituut (PRI) die betrokke vraelyste ingevul. Al die spelers het die aangepaste weergawe van die CES ingevul, en die afrigters die CES. *Confirmatory factor analysis* (CFA) was gedoen om die interne struktuur van die aangepaste weergawe van CES te bepaal. Die CFA van die CES is nie vir hierdie studie benut nie weens die klein aantal afrigters (13) wat aan die studie deelgeneem het. Regressieskattings is op  $p < 0.05$  gestel. *Cronbach alpha*-waardes was bereken om die betroubaarheid van die vraelyste te bepaal. Om voorsiening te maak vir interafhanklikheid is gemengde modelle (gestel op 5%) gebruik om sodoende die persepsieverskille wat tussen afrigters en spelers bestaan, te meet.

Alle regressieskattings is gevind betekenisvol te wees ( $p < 0.05$ ). Hoë *Cronbach alpha*-waardes is verkry ( $> 0.7$ ). Statisties betekenisvolle verskille is gevind tussen die afrigters en spelers se persepsies ten opsigte van die vier konstrunkte wat gemeet is. Afrigters se persepsie was hoër as die spelers se persepsies rakende afrigtingseffektiwiteit. Alhoewel dit nie belangrik geag word in praktyk nie, kan die resultate nie geïgnoreer word nie. Die meerderheid afrigters (8 uit 13) se persepsie rakende hul eie afrigtingseffektiwiteit was meer positief as dié van hul spelers met betrekking tot totale afrigtingseffektiwiteit. Navorsers moet dus notisie neem van die persepsieverskille wat bestaan tussen spelers en afrigters wanneer afrigtingseffektiwiteit gemeet word. Die resultate van hierdie studie komplementeer die bestaande literatuur aangaande sportafrigting en die kompleksiteit daaraan verbonde.

**Sleutelwoorde:** Afrigtingseffektiwiteit, afrigtingswerkzaamheid, afrigtingsbevoegdheid, persepsie van afrigting, sport afrigting.

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# **LIST OF ABBREVIATIONS**

<b>APCCS II- HST</b>	Athletes' Perceptions of Coaching Competency Scale II High School Teams
<b>CBAS</b>	Coaching Behaviour Assessment System
<b>CBQ</b>	Coaching Behaviour Questionnaire
<b>CBS-S</b>	Coaching Behaviour Scale for Sport
<b>CCS</b>	Coaching Competency Scale
<b>CES</b>	Coaching Efficacy Scale
<b>CFA</b>	Confirmatory Factor Analysis
<b>CFI</b>	Confirmatory Fit Index
<b>CMIN/DF</b>	Minimum Sample Discrepancy divided by Degree of Freedom
<b>EFA</b>	Exploratory Factor Analysis
<b>ES</b>	Effect Size
<b>LSS</b>	Leadership Scale for Sport
<b>LTCDD</b>	Long Term Coach Development
<b>NASPE</b>	National Association for Sport and Physical Education
<b>NWU</b>	North-West University
<b>PRI</b>	Puk Rugby Institute
<b>RMSEA</b>	Root Mean Square Error of Approximation
<b>SASCOC</b>	South African Sport Confederation and Olympic Committee

# **CHAPTER 1:**

## **INTRODUCTION**

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### **1.1 PROBLEM STATEMENT**

In the last two decades youth are being introduced to competitive sport at an increasingly young age (Bloemhof, 2008:282), which implies that they are exposed to a coach-athlete relationship at an earlier age. Jowett and Ntoumanis (2004:245) defined the coach-athlete relationship as: “the situation in which coaches’ and athletes’ emotions, thoughts, and behaviors are mutually and casually interconnected”. The introduction to sport is not only occurring at an earlier age, but an increasing number of young children are also participating in competitive sport (Bloemhof 2008:283; Coakley 2005:1746). This increase in sport participation has consequently led to a shortage of coaches, which resulted in teachers and society members acting as voluntary coaches (Fung, 2003:13).

Adults with no formal training who fulfil a coaching role may negatively affect the lives of the young athletes due to the influential role coaches play (Horn, 2002:309). Adding to this, Boardley *et al.* (2008:282) stated that the quality of an athletes’ experience are significantly affected by the behaviour of the relevant coach. Hence it is understandable why Kowalski *et al.* (2007:1) pleads for the monitoring of the quality of coaches. Feltz *et al.* (2009:24) and also identified a growing need to determine coaching effectiveness among individuals who act as voluntary coaches in youth sport to thereby evaluate their skill levels and capability to act as coaches.

The working model describing coaching effectiveness, proposed by Horn (2002:313), indicated that coaches exhibit various coaching behaviours to acquire the desirable outcomes. Although these coaching behaviours have an impact on coaching effectiveness (Feltz *et al.*, 1999:767), Horn (2002:326) asserts that the perception a player forms of the coach's behaviour plays a greater role than the coaching behaviour itself.

Horn (2002:327) found a positive correlation between the influence of the coach's behaviour on the athlete's performance and the athlete's perception of the coaching effectiveness. The importance of players' perceptions of their coaches' capabilities to be effective has also been recognised (Boardley *et al.*, 2008:285; Myers *et al.*, 2006:461). Vargas-Tonsing *et al.* (2004:409) determined that coaches' perceptions were incongruent with the players' perceptions, relating to the frequency at which the coaches exhibit techniques advancing effectiveness. Kavussanu *et al.* (2008:399) established that a significant difference exists between coaches' and players' perceptions of coaching effectiveness, with the coaches' evaluating their coaching effectiveness more positively than do their players. Several different methods are used to determine coaching effectiveness. However, the only method used to determine coaching effectiveness regarding perception is the Coaching Efficacy Scale (CES) questionnaire (Feltz *et al.*, 2009:27).

During the development of the CES, Feltz *et al.* (1999:774) found a significantly positive correlation between winning percentage and a greater instance of praise and encouragement, greater player satisfaction and a higher perception of their own coaching effectiveness. According to Watson *et al.* (2001:1066), players that perceived their coach to be a confident leader were more self-confident, while Campbell and Sullivan (2005:38) found that coaching confidence could be increased through coaching education. Various studies also found a direct correlation between coaching effectiveness, team effectiveness, satisfaction with the coach, as well as team performance in athletes (Feltz *et al.*, 1999:775; Myers *et al.*, 2005:139; Vargas-Tonsing *et al.*, 2003:402).

No studies could be traced that have investigated the perception of coaching effectiveness among school level rugby union players in South Africa. A study done in Britain, on club level (ages 18-35) rugby players' perceptions of their coaches' effectiveness, revealed a high coaching effectiveness value for all four constructs of the CES (Boardley *et al.*, 2008:278). Kavussanu *et al.* (2008:399) found a significant difference in the perception of coaching effectiveness between

experienced players and their coaches, suggesting that players that had been exposed to different coaches had a better reference point from which to make an evaluation. Football players' age and level of playing experience appear to also influence coach leadership behaviour preferences (Høigaard *et al.*, 2008:248). Fung (2003:13) found no relationship between coaching experience and effectiveness among high school coaches of basketball, badminton and team handball.

In understanding the paucity and importance of effective coaches and the impact they have on the perceptions of the youth, schools find it necessary to obtain the services of quality coaches. Traditionally, larger schools can usually afford to offer their respective coaches better remuneration, due to the high income base generated from a large number of learners, and consequently provide better coaches to their athletes.

In light of this background the following research questions are posed: a) Is there a significant difference between rugby players' perceptions of coaching effectiveness between larger and smaller secondary schools? b) Do significant differences exist between university level rugby players' and coaches' perceptions of coaching effectiveness?

The results of the study will determine and clarify whether volunteer coaches in secondary schools are effective, according to their rugby players' perceptions. The findings will also indicate whether coaches from larger secondary schools test better with regards to coaching effectiveness, than those from smaller secondary schools. In addition, the results of this study will reveal whether there is a difference in the respective coaching effectiveness perceptions between the players and their respective coaches at university club level. These results would enable schools, universities and clubs in South Africa to evaluate their own coaches and implement or to improve the weaknesses identified.

## **1.2 OBJECTIVES**

**The objectives of this study are to:**

- 1.2.1 determine the difference in rugby players' perceptions of coaching effectiveness between larger and smaller secondary schools; and
- 1.2.2 determine the difference between university rugby players' and the coaches' perceptions of coaching effectiveness.

### 1.3 HYPOTHESES

**The study is based on the following hypotheses:**

- 1.3.1 The perceptions of players' at larger secondary schools will indicate a significantly higher coaching effectiveness value, compared to players' from smaller secondary schools.
- 1.3.2 There will be a significantly practical difference between the perceptions of the players and the coaches regarding coaching effectiveness, at university level.

### 1.4 STRUCTURE OF THE DISSERTATION

**Chapter 1:** Introduction. A list of references is provided at the end of the chapter according to the Harvard guidelines adapted by the North-West University.

**Chapter 2:** Literature overview: Coaching effectiveness and coaching efficacy in sport. A list of references is provided at the end of the chapter according to the Harvard guidelines adapted by the North-West University.

**Chapter 3:** Research Article 1: *High school rugby players' perceptions of coaching effectiveness*. This article has been published in the US-China Education Review.

**Chapter 4:** Research Article 2: Comparing club level rugby coaches and players' perceptions of coaching effectiveness. This article has been provisionally accepted for publication in the: *African Journal for Physical Education, Recreation and Dance*.

**Chapter 5:** Summary, conclusions, shortcomings and recommendations.

## REFERENCES

- Bloemhof, H.J. 2008. Key principles in primary school sport programs. *African journal for physical, health education, recreation and dance*, 14(3):282-298.
- Boardley, I.D., Kavussanu, M. & Ring, C. 2008. Athletes' perception of coaching effectiveness and athlete-related outcomes in rugby union: an investigation based on the coaching efficacy model. *The sport psychologist*, 22:269-287.
- Campbell, T. & Sullivan, P. 2005. The effect of a standardized coaching education program on the efficacy of novice coaches. *Gender and coaching education*, 11(1):38-45.
- Coakley, J. 2005. Youth sports. (*In Berkshire encyclopedia of world sport*, 4:1744-1750.)
- Feltz, D.L., Chase, M.A., Moritz, S.E. & Sullivan, P.J. 1999. A conceptual model of coaching efficacy: preliminary investigation and instrument development. *Journal of educational psychology*, 91(4):765-776.
- Feltz, D.L., Hepler, T.J. & Roman, N. 2009. Coaching efficacy and volunteer youth sport coaches. *The sport psychologist*, 23:24-41.
- Fung, L. 2003. Coaching efficacy as indicators of coach education program needs. *Athletic insight: The online journal of sport psychology*, 5(1):12-18, Mar.
- Høigaard, R., Jones, G.W. & Peters, D.M. 2008. Preferred coach leadership behaviour in elite soccer in relation to success and failure. *International journal of sport science and coaching*, 3(2):241-250.
- Horn, T.S. 2002. Coaching effectiveness in the sports domain. (*In Horn T.S., ed. Advances in sport psychology*. Champaign, IL: Human Kinetics. p. 309-354.)
- Jowett, S. & Ntoumanis, N. 2004. The Coach-athlete Relationship Questionnaire (CART-Q): development and initial validation. *Scandinavian journal of medicine and science in sport*, 14:245-257.

Kavussanu, M., Boardley, I.D., Jutkiewicz, N., Vincent, S. & Ring, C. 2008. Coaching efficacy and coaching effectiveness: examining their predictors and comparing coaches' and athletes' reports. *The sport psychologist*, 22:383-404.

Kowalski, C.L., Edginton, C.R., Lankford, S.V., Waldron, J.J., Roberts-Dobie, S.R. & Nielsen, L. 2007. Coaching efficacy and volunteer youth soccer coaches. *Asian journal of exercise and sport science*, 4(1):1-5.

Myers, N.D., Feltz, D.L., Maier, K.S., Wolfe, E.W. & Reckase, M.D. 2006. Athletes' evaluations of their head coaches' coaching competency. *Research quarterly for exercise and sport*, 77:451-563.

Myers, N.D., Vargas-Tonsing, T.M. & Feltz, D.L. 2005. Coaching efficacy in intercollegiate coaches: sources, coaching behavior, and team variables. *Psychology of sport and exercise*, 6:129-143.

Vargas-Tonsing, T.M., Myers, N.D. & Feltz, D.L. 2004. Coaches' and athletes' perceptions on efficacy-enhancing techniques. *The sport psychologist*, 18:397-414.

Vargas-Tonsing, T.M., Warners, A.L. & Feltz, D.L. 2003. The predictability of coaching efficacy on team efficacy and player efficacy in volleyball. *Journal of sport behavior*, 26(4):396-407.

Watson, C.B., Chemers, M.M. & Preiser, N. 2001. Collective efficacy: a multilevel analysis of collective efficacy. *Personality and social psychology bulletin*, 27(8):1057-1068.

# CHAPTER 2:

## Literature overview: Perceptions of coaching effectiveness among coaches and players' in sport.

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## **2.1 Introduction**

Sport is the most popular leisure activity among the youth (Hansen & Larson, 2007:366) and, according to Bloemhof (2008:282), youth are being introduced to sport at earlier ages during the last two decades. Consequently the increase in sport participation increases the need for effective coaches. In South Africa the need for full-time coaches is estimated to be 12 000 by the year 2015 (SASCOC, 2011:12). Literature regarding coaching in sport is continually on the rise (Gilbert & Rangeon, 2011; Gilbert & Trudel 2004). The underlying question for many of the studies is to define or recognize coaching effectiveness which might improve the quality of coaches and coach-athlete relationships accordingly (Gilbert & Rangeon, 2011:219).

The coach-athlete relationship can be defined as: “the situation in which coaches’ and athletes’ emotions, thoughts, and behaviors are mutually and casually interconnected” (Jowett & Ntoumanis, 2004:245). Performance development, satisfaction and motivation of both the coach and the athlete are influenced by the coach-athlete relationship (Mageau & Vallerand, 2003:884; Phillips & Jubenville, 2009:39), while the quality of this relationship also influences the athlete’s well-being (Lafrenière *et al.*, 2011:151). Vella *et al.* (2010:432) explain that the coach-athlete relationship acts as a mediating variable between the behaviours of coaches and the outcome of their athletes’ performances.

One needs to realize that the influences coaches have on their athletes are not limited to the performance and behaviours of their athletes alone, but also areas such as: psychological and emotional well-being, self-esteem, development of moral values, character building and self-efficacy, to name but a few (Baker *et al.*, 2003:226; Boardley *et al.*, 2008:283; Danish *et al.*, 2008:412; Horn, 2008:240). Becker (2009:93) also concurs in this regard that apart from winning, the coach is also responsible for the development of mental, physical, technical and tactical abilities of the players. Sport can therefore be used as the foundation for the development and facilitation of various life skills in youth participants with the potential of transferring these skills to life situations outside the sport milieu, for example goal setting, emotional control, self-esteem and a hard working ethic (Gould *et al.*, 2006:29). Mallet and Côté (2006:213) emphasized the importance of coaches irrespective their coaching orientation.

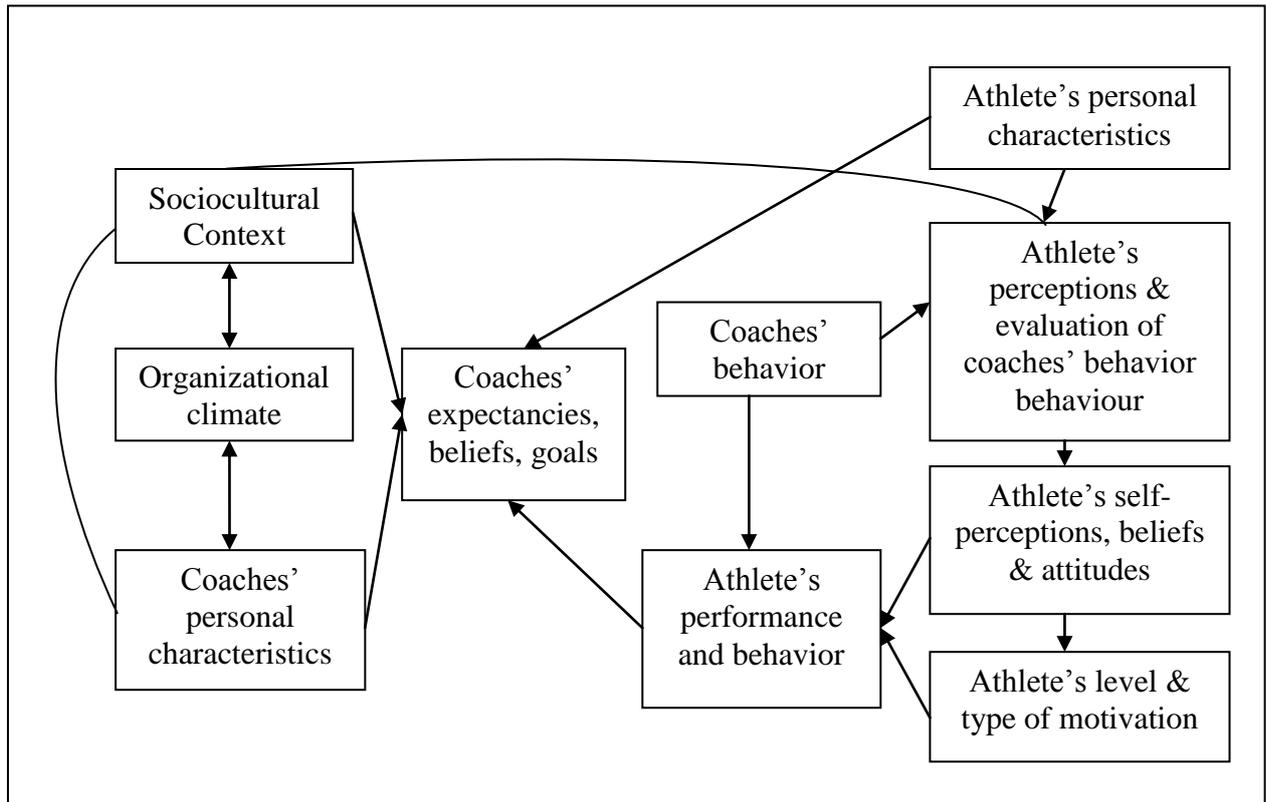
From the discussion above, it is clear that effective coaching plays an important role in sport. To ensure that coaching is effective, coaching effectiveness should be measured. Although a vast majority of studies, models and questionnaires are available regarding the measurement of coaching effectiveness (Chelladurai & Selah, 1980; Côté *et al.*, 1999; Feltz *et al.*, 1999; Kavussanu *et al.*, 2008; Myers *et al.*, 2006a; Smith *et al.*, 1977; Williams *et al.*, 2003:16), more results specifically on coaching effectiveness are needed (Gilbert & Rangeon, 2011:220). This chapter therefore aims to complement the existing literature regarding the measurement of coaching effectiveness.

Subsequently an in-depth look into the existing literature regarding perceptions of coaching effectiveness will follow. Firstly, more information regarding coaching effectiveness will be reviewed, followed by various existing coaching effectiveness tools. Attention will then be given to specific definitions to prevent any indistinctness. More information will be presented

with regard to the development of tools based on coaches and players' perceptions together with previous study findings. Before the chapter is concluded by means of a conclusion, light will be shed on the current coaching situation in South Africa.

## **2.2 Measurement of coaching effectiveness**

An ideal model or definition for effective coaching is still looming, despite the large amount of available coaching literature (Côté & Gilbert, 2009:307). Lyle (2002:252) concurred that effective coaching cannot solely be restricted to performance; it also includes contexts such as training and preparation. Cross and Lyle (1999:61) stated that it is extremely difficult to construct a definition for coaching effectiveness which embraces all coaching situations. Clearly the coaching process is complex due to the constraints, which explains why the measurement of coaching effectiveness is seen as intricate (Lyle, 2002:259) and is supported by the working model of coaching effectiveness proposed by Horn (2002:313) as displayed in Figure 1.



**Figure 1:** Horn's working model of coaching effectiveness (Horn 2002:313).

From Figure 1 it is clear that the behaviours exhibited by the coach and then perceived by the athletes are the result of antecedent factors such as expectancies, beliefs and goals. These antecedent factors are indirectly influenced by the socio-cultural context, organizational climate and the coach's personal characteristics. Due to the antecedent factors influencing the coaching behaviour it is clear why coaching behaviours are varying. Considering the varying coaching behaviours one can better understand why coaching effectiveness is seen as complex. Côté and Gilbert (2009) performed an integrative study on the definition of coaching effectiveness and expertise. Three common variables were identified that affect the coach, namely a) coach's knowledge, b) athlete's outcomes and c) the coaching contexts (Côté & Gilbert, 2009:309). Consequently the definition for coaching effectiveness was proposed by Côté and Gilbert (2009:309) as "[t]he consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific contexts". More information regarding instruments which measure forms of coaching effectiveness such as leadership, behaviours, efficacy and competency will follow in the next section.

### **2.2.1 Tools for measuring coaching behaviours and effectiveness**

Several instruments currently exist for measuring effective coaching regarding leadership, characteristics and behaviours (Chelladurai & Selah, 1980; Côté *et al.*, 1999; Feltz *et al.*, 1999; Kavussanu *et al.*, 2008; Myers *et al.*, 2006a; Smith *et al.*, 1977; Williams *et al.*, 2003). Following in Table 1 the most prominent existing measuring scales are presented in a chronological order from old to new.

**Table 1: Popular measuring tools regarding, coaching behaviours, leadership, efficacy, competency and effectiveness**

Measuring tool & Author	Measuring	Completed by	Constructs	Validity	Reliability
Coach behaviour assessment system (CBAS ) Smith <i>et al.</i> (1977)	12 coaching behaviours divided by 2 classes: reactive behaviours(8) and spontaneous behaviours (4	Observers who underwent training in order to assess behaviours similarly.	<p><b><u>1. Reactive behaviours</u></b></p> <p><u>A. Desirable performance:</u></p> <p>1.Positive reinforcement (R)</p> <p>2.Nonreinforcement (NR)</p> <p><u>B. Mistakes/errors</u></p> <p>3.Mistake-contingent encouragement (EM)</p> <p>4.Mistake-contingement technical instruction (TIM)</p> <p>5.Punishment (P)</p> <p>6.Punitive TIM (TIM+P)</p> <p>7.Ignoring mistakes (IM)</p> <p><u>C. Misbehaviour</u></p> <p>8.Keeping control (KC)</p> <p><b><u>2. Spontaneous behaviours</u></b></p> <p><u>A. Game related</u></p> <p>9.General technical instruction (TIG)</p> <p>10.General encouragement (GE)</p> <p>11.Organization (O)</p> <p><u>B. Game irrelevant</u></p> <p>12.General communication (GC)</p>		<p>Interrater reliability coefficient mean 0.88.</p> <p>Correlation coefficient ranged from 0.77 to 0.99.</p>

**Table 1: Popular measuring tools regarding, coaching behaviours, leadership, efficacy, competency and effectiveness**

Measuring tool & Author	Measuring	Completed by	Constructs	Validity	Reliability	
Leadership Scale for Sports (LSS) Chelladurai & Selah (1980).	Five constructs with 40 items of coaching behaviour dimensions	Athletes	<u>Constructs:</u> 1. Training and instruction (13 items) 2. Democratic behaviour (9 items) 3. Autocratic behaviour (5 items) 4. Social support (8 items) 5. Positive feedback (5 items)	Factorial validity  Factor structure remain stable over 3 samples	Cronbach alpha values: 0.76 0.77 0.66 0.72 0.79  Test-retest reliability ranged from 0.71 to 0.82	
Coaching behaviour questionnaire (CBQ) Kenow & Williams (1992)	28 items	Athletes or coaches	Due to the multi component nature of the items, the total score were used rather than subscales.		Cronbach alpha value: 0.90	
Coaching behaviour scale for sport (CBS-S) Côté <i>et al.</i> (1999).	37 items measuring 6 constructs	Athletes assess coaching behaviours	<u>Constructs:</u> 1. Physical training and planning (8items) 2. Technical (8 items) 3. Personal rapport (7 items) 4. Goal setting (6 items) 5. Mental preparation (5 items) 6. Negative rapport (3 items)	High item loadings indicating strong factor validity	Cronbach alpha 0.94 0.95 0.95 0.97 0.95 0.85	Test-retest reliability 0.80 0.68 0.90 0.68 0.80 0.49

**Table 1: Popular measuring tools regarding, coaching behaviours, leadership, efficacy, competency and effectiveness**

Measuring tool & Author	Measuring	Completed by	Constructs	Validity	Reliability	
Coaching efficacy scale (CES) Feltz <i>et al.</i> (1999).	24 items measuring 4 constructs	Coaches assess their own efficacy according to their own perceptions	<u>Constructs:</u> 1. Motivation (7 items) 2. Game strategy (7 items) 3. Technique (6 items) 4. Character building (4 items) 5. Total	Validity  CFA were significant = $p < 0.05$	Cronbach alpha 0.91 0.88 0.89 0.88 0.95	Test re-test reliability 0.83 0.84 0.78 0.77 0.82
Coaching competence scale (CCS) Myers <i>et al.</i> (2006a).	24 items measuring 4 constructs	Players assess coaches' competency	<u>Constructs:</u> 1. Motivation (7 items) 2. Game strategy (7 items) 3. Technique (6 items) 4. Character building (4 items)		Cronbach alpha 0.90 0.87 0.85 0.82	
Adapted coaching efficacy scale (adapted CES) Kavussanu <i>et al.</i> (2008).	24 items measuring 4 constructs	Players assess coaching effectiveness according to their own perceptions	<u>Constructs:</u> 1. Motivation (7 items) 2. Game strategy (7 items) 3. Technique (6 items) 4. Character building (4 items) 5. Total		Cronbach alpha 0.92 0.81 0.76 0.77 0.90	

Although all the measuring scales determine coaching-related aspects, various differences exist between the questionnaires which will be briefly explained. The CBAS is administered to trained personnel for direct observation of coaching sessions. The LSS, CBQ, CBS-S, CCS and adapted CES are questionnaires to be completed by the players regarding the coaches' leadership, coaching behaviours, coaching competencies and coaching effectiveness. The CES is the only questionnaire to be completed by the coach regarding his own coaching efficacy. With the CBAS and the LSS more directed at youth and adults respectively the CBS-S claims to be an instrument representing behaviours in various sports and at different age levels (Côté *et al.*, 1999:90). The CES, CCS and adapted CES can also be used in various sports across different age levels but as indicated in Table 1, measure constructs of coaching (motivation, technique, character building, game strategy) rather than behaviours (reactive, spontaneous, autocratic, democratic and goal setting). The CES (coaches' perception), CCS and the adapted CES (athlete's perception) are based on the same four constructs (motivation, technique, game strategy, character building) making it popular for researchers to measure the perceptions of either the coach or the player regarding a coaches' coaching effectiveness (Feltz *et al.*, 1999:766; Kavussanu *et al.*, 2008:385). Therefore the CES, CCS and the adapted CES will be further discussed for purposes of this chapter which focuses on the perceptions of coaches and players. Subsequently more elucidation regarding the definitions of coaching efficacy, coaching competence and coaching effectiveness will follow. Therefore the development of the CES, CCS and the adapted CES will be explained, accompanied by summarizing tables representing previous studies that had used these questionnaires.

## 2.3 Definitions

To prevent any misunderstanding regarding the CES, CCS and adapted CES it is important to clarify the terms coaching efficacy, -competency and -effectiveness. Firstly, with the development of the CES, Feltz *et al.* (1999:765) defined coaching efficacy as: "the extent to which coaches believe they have the capacity to affect the learning and performance of their athletes". Coaching efficacy therefore refers to the coach's perception regarding his/her coaching skills. Coaching competency was defined by Myers *et al.* (2006a:113) as: "athletes' evaluations of their head coach's ability to affect their learning and performance". Therefore coaching competence reflects the perception the athlete has regarding his/her respective coach's coaching competence. Furthermore, Boardley and co-workers (2008) adapted the CES in order

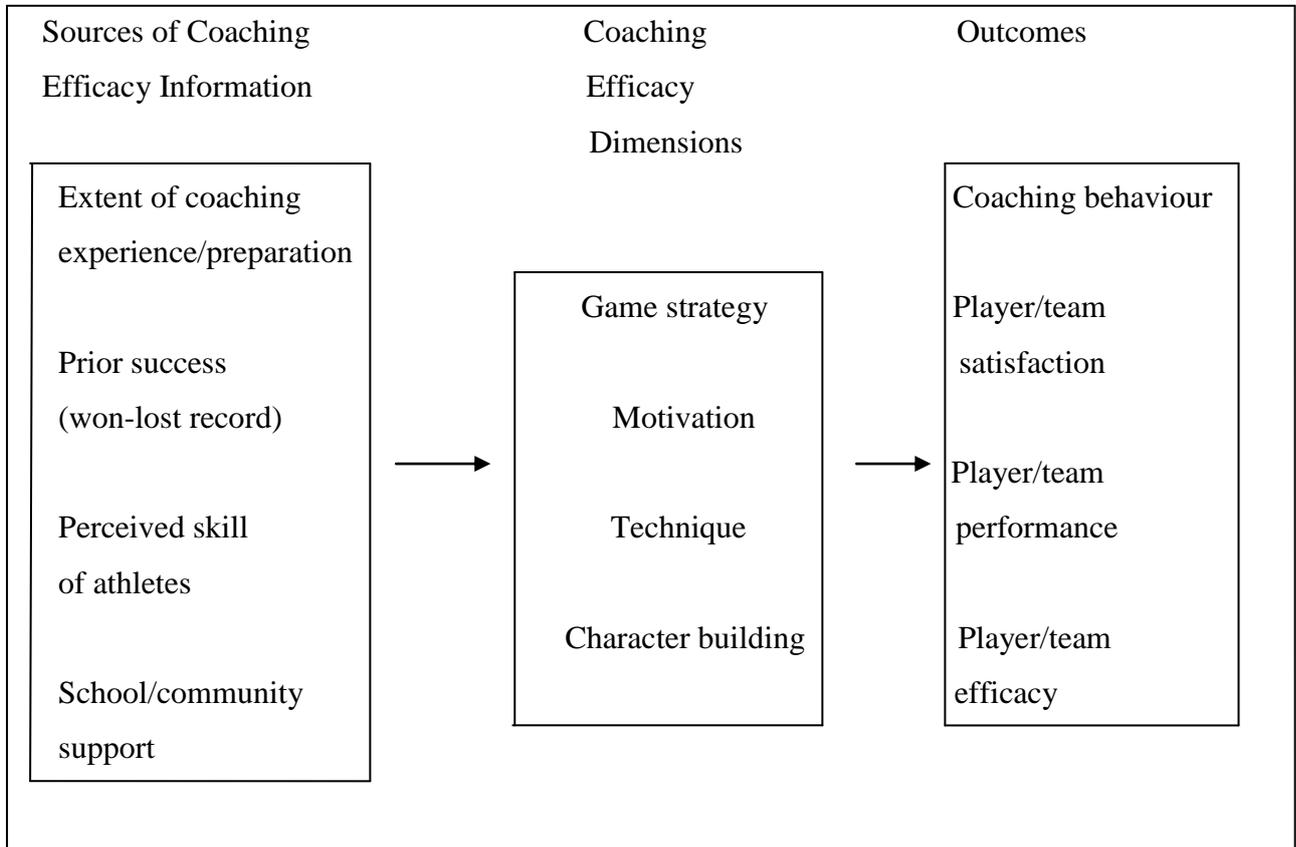
to measure coaching effectiveness. Coaching effectiveness was defined as the extent to which coaches can implement their knowledge and skills to positively affect the learning and performance of their athletes (Boardley *et al.*, 2008:271). Similar to competence, effectiveness is measured by means of the player's perception regarding his/her coach's coaching effectiveness. Kavussanu *et al.* (2008:385) also prefers to measure effectiveness rather than competence and explained that from an applied perspective, coaching effectiveness (results or outcomes) produced by the coach have more essential implications on the players' experience than being perceived as having the competence (skills) to do so. Kavussanu *et al.* (2008:386) mentioned that in order for a coach to produce positive outcomes, the necessary skills are required, meaning that the perceived effective coach will also be perceived as competent. In the literature one might find that some studies refer to the CES although the CCS or adapted CES was used.

Important to bear in mind is that the CES, CCS and adapted CES all consist of the same 24 items which measure the same four constructs. For example, the stem question for the CES will be: "How confident are you in your ability to..." (Feltz *et al.*, 1999:767). The stem question for the CCS will read: "How competent is your head coach in his or her ability to..." (Myers *et al.*, 2006a:121). Lastly the stem question of the adapted CES will read: "How effective is your coach in his/her ability to..." (Kavusannu *et al.*, 2008:389). Except for the adaptation in the stem question, all items were indistinguishable. Subsequently a discussion regarding the development of the CES, CCS and adapted CES will follow, accompanied by previous results of each tool respectively.

## 2.4 Development of the CES

In 1999 Feltz and co-workers identified the need for developing a sport-orientated framework adapted from general psychological theories and related literature and logically formulated in order to study sport-specific issues in education such as the self-efficacy of coaches. Consequently this resulted in the development of the Coaching Efficacy Scale (CES). The models used for the development of the CES were: the multidimensional model of teacher efficacy by Denham and Michael (1981), Bandura's (1977, 1986) conceptualization of self-efficacy and Park's (1992) initial measure of coaching confidence. Based on these models Feltz *et al.* (1999:766) proposed a model of coaching efficacy including coaching-specific sources of

efficacy information as well as the effects or outcomes of coaching efficacy. The proposed model is illustrated in Figure 2.



**Figure 2:** Conceptual model of coaching efficacy (Feltz *et al.*, 1999:766)

The model comprises four dimensions, namely game strategy, motivation, teaching technique and character building identified from the results of a five-week seminar that involved graduate students in sport psychology together with 11 experienced coaches across a diverse level of coaching. The National standards for athletic coaches and the exploratory factor analysis, proposed by Park (1992) on coaching competence served as the basis for discussions regarding key components in coaching efficacy. These discussions were followed by an additional review of the available literature on coaching education. Feltz *et al.* (1999:766) identified repeated emphasis on coaching competency in various dimensions such as teaching, discipline, tactics and strategies, training and conditioning, motivation, character development and communication. A discussion with the 11 coaches followed, reducing the key dimensions to the following four constructs: game strategy, motivation, teaching technique and character building.

The proposed conceptual model of coaching efficacy as in Figure 2 clearly indicates that coaching experience/preparation, prior success, athletes' perceived skill and support from the community will influence the four identified coaching efficacy dimensions. These dimensions will in turn influence the behaviour of the coach and the player or team's satisfaction, performance and efficacy. It is also mentioned that existing outcomes might not be included in the model as the model is seen as preliminary, providing a preliminary point for future research (Feltz *et al.*, 1999:767).

The development of the CES consisted of 2 phases. Phase 1 included a preliminary scale development and internal factor structure while phase 2 included the sources and outcomes of coaching efficacy. In phase 1 the Coaching Confidence Scale (Park, 1992) with its three relabelled factors (teaching technique, motivation and game strategy) was used as a base while the accumulation of extra items expanded the scale, together with character building as an additional fourth factor. The new scale, labelled the CES with 41 items was reviewed by nine collegiate and scholastic coaches to evaluate the content validity on a rating scale ranging from 1 (essential) to 3 (not necessary). The two independent samples consisted of 517 high school head coaches. Sample one was used to do the exploratory factor analysis (EFA), which resulted in the 24-item scale after 17 items had been eliminated due to factor loadings smaller than 0.50. Sample two was used for the confirmatory factor analysis (CFA). Coefficient alpha and test-retest were used for reliability and the results ( $r=0.82$ ) indicated that the CES is reliable (Feltz *et al.*, 1999:770).

Furthermore, phase 2 was divided into two sections. The first section included sources of coaching efficacy while the second section included outcomes of coaching efficacy. Firstly, 69 high school basketball coaches completed the questionnaires containing the 24-item CES, the coach's personal data questionnaire (demographic data, race, age, and educational background), perceived social support questionnaire (perception of support from students, athletic director) and a team ability perception questionnaire. Secondly, trained researchers observed two practices for the 15 highest scored coaches and the 14 lowest scored coaches using the Coaching Behavior Assessment System (CBAS). The respective players also completed a questionnaire regarding their high school basketball experience. The results were then analysed to compare high efficacy coaches with low efficacy coaches. The results indicated that high efficacy

coaches applied more praise and encouragement and positive reinforcement while the low efficacy coaches applied more instructional and organizational behaviour (Feltz *et al.*, 1999:774). In addition to this, the high efficacy coaches also had higher winning percentages compared to their low efficacy counterparts (Feltz *et al.*, 1999:766). Various studies made use of the CES and subsequently a summary will be presented in Table 2 regarding the title and author of the study, the participants as well as the results.

### **2.4.1 Previous studies that used the Coaching Efficacy Scale**

Previous studies and findings regarding the CES are presented in Table 2 in a chronological order from old to new.

**Table 2: Title, author, participants and results obtained from previous studies that used the CES.**

Title & Author	Participants	Results
Coaching efficacy as a predictor of University coaches' commitment (Kent & Sullivan, 2003).	Coaches N=224, age 22-62 years.	<ul style="list-style-type: none"> <li>Coaching efficacy significantly predicts affective and normative commitment.</li> </ul>
Coaching efficacy as indicator of coach education program needs (Fung, 2003).	Coaches N=74, age $M=30.10 \pm 7.03$	<ul style="list-style-type: none"> <li>Dimension for game strategy was the lowest and character building the highest regarding the needs of a coach education program.</li> </ul>
The predictability of coaching efficacy on team efficacy and player efficacy in volleyball (Vargas-Tonsing <i>et al.</i> , 2003).	Coaches N=12	<ul style="list-style-type: none"> <li>Coaching efficacy predicts team efficacy;</li> <li>Motivation and character building were the strongest predictors of team efficacy.</li> </ul>
Coaching efficacy as predictor of leadership style in intercollegiate athletics (Sullivan & Kent, 2003).	Coaches N= 223 (165 male, 58 female)	<ul style="list-style-type: none"> <li>Training and instruction, and positive feedback were predicted by both motivation efficacy and technique efficacy.</li> </ul>
Coaches' assessment of their coaching efficacy compared to athletes' perceptions (Short & Short, 2004)	Coaches n= 9, age $M=32.4 SD=5.2$ years Athletes n= 76, age $M=20.1 SD=1.5$ years	<ul style="list-style-type: none"> <li>Majority of the coaches' ratings were higher than the ratings of the athletes.</li> </ul>
The effect of a standardized coaching education program on the efficacy of novice coaches (Campbell & Sullivan, 2005).	Coaches N=213, age 15-65 years.	<ul style="list-style-type: none"> <li>Females were more confident than males on motivation and character building.</li> </ul>

**Table 2: Title, author, participants and results obtained from previous studies that used the CES.**

Title & Author	Participants	Results
Coaching efficacy in intercollegiate coaches: sources, coaching behavior, and team variables (Myers <i>et al.</i> , 2005).	Coaches, time 1 (beginning of season) n=135, Coaches, time 2 (third quarter of season) n=101, age 24-67 years.	<ul style="list-style-type: none"> <li>• Total coaching efficacy predicted coaching behaviour, team satisfaction, and winning percentages among men's teams;</li> <li>• Total coaching efficacy only predicted coaching behaviour among women's teams.</li> </ul>
Coaching efficacy and volunteer youth soccer coaches (Kowalski <i>et al.</i> , 2007).	Coaches N=69, age 31-57 years.	<ul style="list-style-type: none"> <li>• Volunteer coaches attending clinics tend to be younger and have previous experience.</li> <li>• The combination of five independent variables (age, gender, coaching experience, playing experience and attendance of coaching clinics) do not predict overall coaching efficacy.</li> </ul>
Coaching efficacy and coaching effectiveness: Examining their predictors and comparing coaches and athletes' reports (Kavussanu <i>et al.</i> , 2008).	Coaches n=26, age 19-66 and Athletes n=291, age 19-29.	<ul style="list-style-type: none"> <li>• On average, coaching efficacy (coaches' ratings) was significantly higher than coaching effectiveness (athletes' ratings) on all four constructs.</li> </ul>
Examining relationships between emotional intelligence and coaching efficacy (Thelwell <i>et al.</i> , 2008).	Coaches N=99 (74 male, 25 female)	<ul style="list-style-type: none"> <li>• Motivation efficacy associated significantly with regulation and social skills.</li> <li>• Technique efficacy associated significantly with appraisal of own emotions.</li> <li>• Character building associated significantly with optimism.</li> </ul>

**Table 2: Title, author, participants and results obtained from previous studies that used the CES.**

Title & Author	Participants	Results
The effect of different coaching education content on the efficacy of coaches (Sullivan & Gee, 2008).	Coaches N=175 (108 male, 67 female) Ages 15-65	<ul style="list-style-type: none"> <li>• A theoretical course greatly improved the motivation and character building efficacy constructs.</li> </ul>
Individual, Team and Coach Predictors of players' Likelihood to Aggress in Youth Soccer (Chow <i>et al.</i> , 2009).	Coaches N=23, age 22-61 years.	<ul style="list-style-type: none"> <li>• Game strategy efficacy positively predicts athletes' self-likelihood to aggress.</li> </ul>
Coaching efficacy and volunteer youth sport coaches (Feltz <i>et al.</i> , 2009).	Coaches N=492, age 15-65 years.	<p>Confident coaches:</p> <ul style="list-style-type: none"> <li>• are more experienced in playing and coaching;</li> <li>• improved players over a season;</li> <li>• perceived more support.</li> </ul>
Sources of coaching efficacy in coaches in Botswana (Malete & Sullivan, 2009).	Coaches N=181, age 20-53 years.	<ul style="list-style-type: none"> <li>• Playing and coaching experience predicted motivation, technique and game strategy efficacy.</li> <li>• Certified coaches tested higher on the technique construct.</li> </ul>
Emotional intelligence and coaching efficacy in coaches (Afkhami <i>et al.</i> , 2011).	Coaches N=120 (60 male, 60 female)	<ul style="list-style-type: none"> <li>• A positive relationship exists between coaching efficacy and emotional intelligence.</li> </ul>
Emotional intelligence and coaching efficacy in female coaches (Afkhami <i>et al.</i> , 2012).	Coaches N=60	<ul style="list-style-type: none"> <li>• A direct correlation exists between emotional intelligence and coaching efficacy.</li> </ul>

**Table 2: Title, author, participants and results obtained from previous studies that used the CES.**

Title & Author	Participants	Results
The relation of coaching context and coach education to coaching efficacy and perceived leadership behaviors in youth sport (Sullivan <i>et al.</i> , 2012).	Coaches N=172 (131 male, 39 female, 2 unidentified) Ages 16-70	<ul style="list-style-type: none"> <li>• Coaching efficacy predicted the following perceived leadership behaviours: training and instruction, positive feedback, social support and situational consideration.</li> <li>• Coaching efficacy is directly affected by coach education.</li> <li>• Coaching efficacy values were significantly higher among male coaches than among female coaches.</li> </ul>
Emotional intelligence in coaching: Mediation effect of coaching efficacy on the relationship between emotional intelligence and leadership style (Hwang <i>et al.</i> , 2013).	Coaches N= 323 (280 males, 42 females and 1 unidentified) Age 22-68 years	<ul style="list-style-type: none"> <li>• Both coaching efficacy and emotional intelligence significantly predict leadership style.</li> <li>• Emotional intelligence significantly predicts coaching efficacy.</li> </ul>
Collective efficacy based on the coaching efficacy in female professional basketball teams (Rad & Gharehgozli, 2013).	Coaches N=12 Ages 41 ± 9 years	<ul style="list-style-type: none"> <li>• A significant negative relationship exists between character building and effort, persistence, unity and overall collective efficacy.</li> <li>• Character building efficacy and motivation efficacy significantly predict collective efficacy.</li> </ul>

From Table 2 it is clear that several studies followed since the inception of the CES, emphasizing the need for more research regarding coaching efficacy. Evidently the CES is still popular with the latest studies available in 2012 and 2013 respectively. With both male and female participants on varying age levels (15 - 70 years) taking part in respective studies it is clear that the CES is not limited to a specific gender or age level and consequently increases the coaching efficacy literature. Irrespective of the number of available studies, Feltz *et al.* (2009:39) suggest that more results are needed to better understand coaching efficacy at various levels (youth, high school, senior). In spite of the ample amount of results available regarding coaching efficacy, it is still important to acknowledge that coaching efficacy is measured by the coaches' own perception or belief and does not represent the players' perception. With Horn (2002:326) stating that the players' perception regarding the coach plays an immense role, one can understand why researchers developed tools such as the CCS and adapted CES which adhere to the players' perception.

## **2.5 The development of the CCS**

In 2006 Myers and co-workers referred to the coaching effectiveness working model of Horn (2002) and highlighted that the players' evaluations of their coach's behaviour crucially influence coaching effectiveness, and in order to improve coaching effectiveness models, a tool for measuring players' perceptions is essential (Myers *et al.*, 2006a:111). The constructs measured by the CES purposely overlap with the three competency domains specified in the National Standards for Athletic Coaches (National Association for Sport and Physical Education [NASPE], 1995); therefore Myers *et al.* (2006a:113) preferred to include the same four constructs present in the CES to measure the players' perceptions regarding their coaches' coaching competence.

The participants used for the latter study were all from lower division intercollegiate soccer and hockey teams with a total of 590 players (soccer = 407, hockey = 183) including different races and genders with ages ranging between 18 and 23 years (Myers *et al.*, 2006a:114). The CCS was initially validated and proven reliable as a multidimensional model with Cronbach values of 0.90 (Motivation competency), 0.87 (Game Strategy competency), 0.85 (Technique competency) and 0.82 (Character Building competency) all indicating accepted internal consistency (Myers *et al.*, 2006a:117). The CCS expands the coaching effectiveness literature due to its beneficial

ability to measure relationships posited in coaching effectiveness models, which in turn will continually lead to improved coaching (Myers *et al.*, 2006a:118). Although the CCS has potential, Myers and co-workers (2006a:118) mention that it should not be seen as a rival for tools which measure other aspects of coaching. More information regarding previous results concerning the CCS will subsequently be summarized in Table 3.

### **2.5.1 Previous studies that used the Coaching Competency Scale**

Since the inception of the CCS, more studies followed which are presented in Table 3 in a chronological order from old to new.

**Table 3: Title, author, participants and results of studies that used the CCS in a chronological order.**

Title & Author	Participants	Results
Athletes' evaluations of their head coach's coaching competence (Myers <i>et al.</i> , 2006a).	585 male and female players from intercollegiate soccer and hockey teams. Ages ranged from 13 to 25 years.	<ul style="list-style-type: none"> <li>• A multidimensional model was retained regarding the four constructs predicting coaching competence within teams.</li> <li>• Internal reliability values of very good to excellent were found.</li> </ul>
Extending validity evidence for multidimensional measures of coaching competency (Myers <i>et al.</i> , 2006b).	585 male and female players from intercollegiate soccer and hockey teams. Ages ranged from 13 to 25 years.	<ul style="list-style-type: none"> <li>• Validity evidence was found using a condensed post hoc rating scale.</li> <li>• The strong relationship between coach satisfaction within teams and the coach's coaching competence were predicted by the motivation construct.</li> </ul>
Relationship among team collective efficacy, cohesion, and coaching competency in sports (Manning, 2007).	163 collegiate athletes in 8 sports	<ul style="list-style-type: none"> <li>• A positive relationship exists between collective efficacy, cohesion and coaching competency;</li> <li>• Collective efficacy significantly predicted win/loss percentages.</li> </ul>
Student-athletes' perceptions of men's basketball head coaches' competencies at 15 selected NCCAA division II Christian Colleges (Phillips & Jubenville, 2009)	138 basketball student-athletes from 15 selected colleges and universities.	<ul style="list-style-type: none"> <li>• Player-related factors such as: starter, non-starter, captain, non-team captain and academic level did not significantly predict coaching competence.</li> </ul>
The influence of social variables and moral disengagement on prosocial and antisocial behaviours in field hockey and netball (Boardley & Kavussanu, 2009).	Field hockey (n=200), netball (n=179). Ages ranged from 15 to 64 years.	<ul style="list-style-type: none"> <li>• Character building competency positively influenced prosocial behaviour towards opponents.</li> <li>• Character building competency negatively influenced antisocial behaviour towards team mates or opponents.</li> </ul>

**Table 3: Title, author, participants and results of studies that used the CCS in a chronological order.**

Title & Author	Participants	Results
Athletes' perceptions of coaching competency scale II-High school teams (Myers <i>et al.</i> , 2010).	748 athletes (male=427, female=321). Ages ranged from 12 to 18 years. Majority of races were Caucasian (n=606) and black (n=60).	<ul style="list-style-type: none"> <li>• Validity evidence was found for the APCCS II-HST as a multilevel model.</li> </ul>
Athletes' use of reputation and gender information when forming initial expectancies of coaches (Manley <i>et al.</i> , 2010).	152 male and 152 female participants Mean=21.31 ±SD=3.31.	<ul style="list-style-type: none"> <li>• Athletes expect successful coaches to be more significantly competent than unsuccessful coaches;</li> <li>• Male coaches were expected to be statistically more competent with regard to their game strategy and technique competencies.</li> </ul>
Coaching competency and satisfaction with the coach: A multi-level structural equation model (Myers <i>et al.</i> , 2011).	748 athletes (male=427, female= 21). Ages ranged from 12 to 18 years. Majority of races were Caucasian (n=606) and black (n=60).	<ul style="list-style-type: none"> <li>• Motivation and technique competency largely affect the athletes' satisfaction regarding the head coach.</li> <li>• Team-level coaching competency influences team satisfaction.</li> <li>• For specified populations (head coaches at high school level) the APCCS II- HST should be used rather than the CCS.</li> </ul>
Athletes' perceptions of role ambiguity and coaching competency in sport teams: A multilevel analysis (Bosselut <i>et al.</i> , 2012).	A total of 243 players (male=200, female=43). Ages ranged from 16 to 39 years	<ul style="list-style-type: none"> <li>• A negative relationship exists between role ambiguity and coaching competence at both individual and group level.</li> <li>• Athletes that perceive greater ambiguity were more critical regarding their coach's technique and game strategy competence.</li> </ul>

**Table 3: Title, author, participants and results of studies that used the CCS in a chronological order.**

Title & Author	Participants	Results
Student-Athletes' perceptions of coaching competency at the Malaysian public institution of higher learning (Chiu <i>et al.</i> , 2013).	183 male student-athletes and 137 female student-athletes	<ul style="list-style-type: none"> <li>• No differences exist in coaching competencies regarding the gender or performance of the athletes.</li> <li>• Athletes rated team sport coaches significantly higher than the individual sport coaches regarding coaching competency.</li> </ul>
Can reputation biases influence the outcome and process of making competence judgments of a coach? (Thelwell <i>et al.</i> , 2013).	326 students (Mean age=20.8 years, SD=3.1) Male = 170 Female = 156	<ul style="list-style-type: none"> <li>• The reputation of the coach significantly influences the players' perception of the coach's coaching competency</li> </ul>

From Table 3 it is evident that validity and reliability for the CCS as a multidimensional model was found by Myers *et al.* (2006a:116). Phillips and Jubenville (2009:47) indicate that player factors such as starter, non-starter, captain, non-team captain and the academic level of the players will not necessarily predict coaching competency. Worthy to note is that no significant differences exist between the players' perceptions regarding coaching competency, meaning that whether a player is a starter, non-starter, captain or non-team captain, his perception is not inevitably influenced (Phillips & Jubenville, 2009:48). Boardley and Kavussanu (2009:852) found that motivation competency positively predicted prosocial behaviour towards opponents and non-team mates, while a negative relationship exists between motivation competence and antisocial behaviours towards opponents or team mates. If players perceive their coach to be competent regarding the motivation construct, moral disengagement also tends to be less (Boardley & Kavussanu, 2009:852).

In 2010 Myers and co-workers revised the CCS in order to provide a tool which might improve the measurement of coaching competency which consequently led to the establishment of the APCCS II-HST (athletes' perceptions of coaching competency scale II-high school teams). Reliability and validity was found for the APCCS II-HST (Myers *et al.*, 2010:487). The APCCS II-HST positively predict athlete satisfaction with the coach which is why Myers *et al.* (2011:419) recommended that the APCCS II-HST tool should be used if the population consists of players evaluating head coaches' competence at high school level.

More studies using the CCS followed which found that players that perceived greater role ambiguity were more critical regarding their coach's technique and game strategy competence and athletes' rated team sport coaches significantly higher than the individual sport coaches regarding coaching competency (Bosselut *et al.*, 2012:359; Chiu *et al.*, 2013:19).

Important to note is that another tool exists which aims to measure players' perceptions on the same four constructs as the CES and CCS (Boardley *et al.*, 2008). Similar to Myers *et al.* (2006a) both Kavussanu *et al.* (2008) and Boardley *et al.* (2008) also preferred to use players' perceptions regarding coaching effectiveness and in turn developed the adapted CES. Subsequently a detailed discussion regarding the development of the adapted CES follows.

## **2.6 Development of the adapted CES**

Whereas the CCS (Myers *et al.*, 2006a) measured coaching competency, Kavussanu *et al.* (2008:385) preferred to measure coaching effectiveness; therefore adapting the CES accordingly. Coaching competency was defined as “athletes’ evaluations of their head coach’s ability to affect their learning and performance” (Myers *et al.*, 2006a:113). Coaching effectiveness on the other hand was defined as the extent to which coaches can implement their knowledge and skills to positively affect the learning and performance of their athletes (Boardley *et al.*, 2008:271). Kavussanu *et al.* (2008:385) explain that concerning coaching effectiveness, the outcomes or results produced by the coach will more positively influence the players’ experience than the coach with competent skills. Kavussanu *et al.* (2008:386) mention that in order for a coach to produce outcomes the necessary skills are required, meaning that the coach that is perceived to be effective will also be perceived as competent. In the literature one might find that studies refer to the CES although the CCS or adapted CES was used. Subsequently a summary will be presented regarding the title and author of the study, the participants as well as the results of studies that used the adapted CES.

### **2.6.1 Previous studies that used the adapted CES**

Only three studies could be traced that have used the adapted CES, which are presented in Table 4.

**Table 4: Title, author, participants and results of studies that used the adapted CES in chronological order from old to new.**

Title & Author	Participants	Results
Athletes' Perceptions of Coaching Effectiveness and Athlete-Related Outcomes in Rugby Union: An Investigation based on the Coaching Efficacy model (Boardley <i>et al.</i> , 2008).	166 Rugby union players, aged 18 to 35 years.	<ul style="list-style-type: none"> <li>• Coaching effectiveness on the four constructs is influenced by the coach's ability to motivate, provide instruction and instil an attitude of fair play;</li> <li>• Motivation effectiveness positively predicted effort, commitment, sport enjoyment and self-efficacy;</li> <li>• Technique effectiveness positively predicted athletes' self-efficacy;</li> <li>• Game strategy effectiveness positively predicted self-efficacy;</li> <li>• Character building effectiveness positively predicted pro-social behaviour.</li> </ul>
Coaching efficacy and coaching effectiveness: Examining their predictors and comparing coaches and athletes' reports (Kavussanu <i>et al.</i> , 2008).	26 Coaches, aged 19 to 66 and 291 Athletes, aged 19 - 29.	<ul style="list-style-type: none"> <li>• On average coaching efficacy (coaches' ratings) was significantly higher than coaching effectiveness (athletes' ratings) on all four constructs.</li> </ul>
High school rugby players' perception of coaching effectiveness (Broodryk & Van den Berg, 2011).	20 Coaches 431 Athletes	<ul style="list-style-type: none"> <li>• Low coaching effectiveness scores were found for all constructs.</li> <li>• No practical significant differences exist between coaching effectiveness values between big and small schools.</li> </ul>

According to the literature indicated above, it is clear that the perceptions of the players regarding their coaches' effectiveness are important. Høigaard *et al.* (2008:242) also suggested that congruence between coaching behaviour and preferred behaviour might increase performance. Despite the significance of the players' perceptions regarding coaching effectiveness only a few studies could be found. Worthy to note is that Kavussanu *et al.* (2008:397) found that the perceptions of the coaches compared to those of the players were higher on all four constructs regarding coaching effectiveness. This in turn raises the question as to whether the coaches' perception or the players' perception should be measured, but due to a lack of similar studies the answer is not obtainable. Hence, the crucial need for studies comparing the players and coaches' perceptions regarding coaching effectiveness. More results regarding the above-mentioned question will add to the enormous amount of coaching effectiveness literature internationally. Specifically for South-Africa only one study could be found regarding coaching effectiveness perceptions; therefore more information regarding coaching in South-Africa follows.

## **2.7 Coaching in South-Africa**

The importance of coaching effectiveness in South Africa has been recognized by SASCOC (South African Sport Confederation and Olympic Committee) following the development of a Long-Term Coach Development model (LTCD) as a major plan to improve the quality of sport and coaching in South Africa (SASCOC, 2011:16). The LTCD model developed specifically for South Africa is testimony to the importance of coaching and has also been identified as an essential feature of the South African coaching framework (SASCOC, 2011:16). The need for full-time coaches in South Africa is estimated to be 12 000 by the year 2015 (SASCOC, 2011:12). The SASCOC consultation document emphasizes the need for more research regarding the coaching workforce in South Africa. The SASCOC consultation document also projected that coaches should be integrated in schools following early consultations indicating that school sport should be prioritized (SASCOC, 2011:13).

One of the core building blocks of the LTCD is to supply coaches during any development stage with the necessary skills that are in concurrence with the needs of the respective players across all age levels (SASCOC, 2011:2). To the researcher's knowledge limited results exist regarding

coaching in South Africa and the specific needs of coaches and players. More research is therefore needed to determine the perceptions players have regarding their coach's coaching effectiveness. Following the prioritizing of coaching in school sport, it can therefore be accepted as the preferable starting point to measure players' perceptions regarding coaching effectiveness. Except for the challenges in the coaching process identified by Lyle (2002:259), coaching in high schools has its own challenges (Gould *et al.*, 2006:35). Gould *et al.* (2006:35) found that problems most frequently perceived by coaches include athletes' failure to take personal responsibility, lack of motivation/work ethic among athletes, poor communication/listening skills, athletes having problems with parents and poor grades. One also needs to realize that each school is unique regarding the socio-cultural context (values, beliefs) and the organizational climate (salaries, resources) which influence coaching effectiveness (Horn, 2002:313).

Important to bear in mind is that generally one can assume that larger schools with more pupils means a higher financial income that can be used to improve sport programs by means of better facilities, equipment and coaches. To determine whether this assumption bears any weight, research is required in terms of coaching effectiveness, facilities and resources in larger and smaller schools. Determining whether perception differences exist regarding coaching effectiveness between players from large schools compared to the players from small schools will benefit the expansion of coaching effectiveness literature. To differentiate between large and small schools, the White paper (SA, 2008:68) can be used which classifies large schools in South Africa as schools with a minimum capacity of 720 learners while small and medium schools are classified as schools with a maximum capacity of 719 learners.

## **2.8 Conclusion**

It is concluded that the need for coaches is growing nationally and internationally. Regarding the international studies available, it is clear that the importance of coaching has been recognized. Gilbert and Trudel (2004:393) reviewed the existing coaching literature in English journals and found that over 600 articles have been published in 161 different journals from 1970-2001. Yearly 33 articles were published from 1998-2002 (Gilbert & Trudel, 2004:391) and according to more recent reviews in 2007 and 2008 the mean has grown to 70 published articles annually (Rangeon *et al.*, 2011). Regarding the CES, CCS and adapted CES only 33 articles could be found. Although the importance of coaching in South Africa has also been recognized,

limited results are available regarding coaching effectiveness with only one study that has used the adapted CES. More research regarding coaching effectiveness will aid the LTCD plan and in turn improve coaching effectiveness in South Africa. Important to bear in mind is the complexity of the coaching process, which affects the measurement of coaching effectiveness. The coach's perceptions and the athlete's perceptions need to be used to determine coaching effectiveness. To date, studies indicate that the perceptions of the athletes compared to the coach's perceptions regarding coaching effectiveness differ significantly. With coaching models indicating that the athlete's needs should be met by the coach's skills it is assumed that the perception difference should be small between that of the coach and that of the player. Research should therefore measure coaching effectiveness perceptions of both the coach and player in order to compare results. Results might indicate whether perceptions serve as an accurate approach for measuring coaching effectiveness. This will make it possible for institutions to accurately measure coaching effectiveness. More studies will also expand the literature regarding the complex concept *coaching*, especially *coaching effectiveness*.

## References

- Afkhami, E., Mokhtari, P., Tojjari, F., Bashiri, M. & Salehian, M.H. 2011. Relationship between emotional intelligence and coaching efficacy in coaches. *Annals of biological research*, 2(4):469-475.
- Afkhami, E., Shirmohammadzadeh, M., Moghaddam, J.B., Aghdam, L.A. & Salehian, M.H. 2012. Relationship between emotional intelligence and coaching efficacy in female coaches. *Annals of biological research*, 3(3):1236-1241.
- Baker, J., Yardley, J. & Côté, J. 2003. Coach behaviors and athlete satisfaction in team and individual sports. *International journal of sport psychology*, 34:226-239.
- Becker, A.J. 2009. It's not what they do, it's how they do it: Athlete experiences of great coaching. *International journal of sport science & coaching*, 4(1):93-119.
- Bandura, A. 1977. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological review*, 84:191-215.
- Bandura, A. 1986. Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.
- Bloemhof, H.J. 2008. Key principles in primary school sport programs. *African journal for physical, health education, recreation and dance*, 14 (3):282-298.
- Boardley, I.D., Kavussanu, M. & Ring, C. 2008. Athletes' perception of coaching effectiveness and athlete-related outcomes in rugby union: an investigation based on the coaching efficacy model. *The sport psychologist*, 22:269-287.
- Boardley, I.D. & Kavussanu, M. 2009. The influence of social variables and moral disengagement on prosocial and antisocial behaviours in field hockey and netball. *Journal of sport sciences*, 27(8):843-854, DOI: 10.1080/02640410902887283.

Bosselut, G., Heuzé, J., Eys, M.A., Fontayne, P. & Sarrazin, P. 2012. Athletes' perceptions of role ambiguity and coaching competency in sport teams: a multilevel analysis. *Journal of sport and exercise psychology*, 34:345-364.

Broodryk, R. & Van den Berg, P.H. 2011. High school rugby players' perception of coaching effectiveness. *US-China education review*, 7:1009-1014.

Campbell, T. & Sullivan, P. 2005. The effect of a standardized coaching education program on the efficacy of novice coaches. *Gender and coaching education*, 11(1):38-45.

Chelladurai, P & Selah, S.D. 1980. Dimensions of leader behavior in sports: Development of a leadership scale. *Journal of sport psychology*, 2:34-45.

Chow, G.M., Murray, K.E. & Feltz, D.L. 2009. Individual, team and coach predictors of players' likelihood to aggress in youth soccer. *Journal of sport and exercise psychology*, 31:425-443.

Chiu, L.K., Mahat, N.I., Hua, K.P. & Radzuwan, R.B. 2013. Student-Athletes perceptions of coaches' coaching competency at the Malaysian public institution of higher learning. *World journal of education*, 3(1):13-22.

Côté, J., Yardley, J., Sedgwick, W. & Baker, J. 1999. An exploratory examination of the coaching behavior scale for sport. *Avante*, 5(2):82-92.

Côté, J. & Gilbert, W. 2009. An integrative definition of coaching effectiveness and expertise. *International journal of sports science and coaching*, 4(3):307-323.

Cross, N. & Lyle, J. 1999. *The coaching process: Principles and Practice for sport*. Oxford: Butterworth-Heinemann.

Danish, S.J., Petitpas, A.J. & Bruce, D.H. 2008. Sport as context for developing competence. (In Horn, T.S., ed. *Advances in sport psychology*. Champaign, IL: Human Kinetics. p.412-422.)

Denham, C.H. & Michael, J.J. 1981. Teacher sense of efficacy: A definition of the construct and a model for further research. *Educational research quarterly*, 6(1):39-63.

Feltz, D.L., Chase, M.A., Moritz, S.E. & Sullivan, P.J. 1999. A conceptual model of coaching efficacy: preliminary investigation and instrument development. *Journal of educational psychology*, 91(4):765-776.

Feltz, D.L., Hepler, T.J. & Roman, N. 2009. Coaching efficacy and volunteer youth sport coaches. *The sport psychologist*, 23:24-41.

Fung, L. 2003. Coaching efficacy as indicators of coach education program needs. *Athletic insight: The online journal of sport psychology*, 5(1):12-18.

Gilbert, W.D. & Trudel, P. 2004. Analysis of coaching science research published from 1970-2001. *Research quarterly for exercise and sport*, 75(4):388-399.

Gilbert, W. & Rangeon, S. 2011. Current directions in coaching research. *Revista de iberoamericana de psicología del ejercicio y el deporte*, 6(2):217-235.

Gould, D., Chung, Y., Smith, P. & White, J. 2006. Future directions in coaching life skills: Understanding high school coaches' views and needs. *Athletic insight*, 8(3):28-38.

Hansen, D.M. & Larson, R.W. 2007. Amplifiers of developmental and negative experiences in organized activities: Dosage, motivation, lead roles, and adult-youth ratios. *Journal of applied developmental psychology*, 28:360-374.

Høigaard, R., Jones, G.W. & Peters, D.M. 2008. Preferred coach leadership behaviour in elite soccer in relation to success and failure. *International journal of sport science and coaching*, 3(2):241-250.

Horn, T.S. 2002. Coaching effectiveness in the sports domain. (In Horn, T.S., ed. *Advances in sport psychology*. Champaign, IL: Human Kinetics. p. 309-354.)

- Horn, T.S. 2008. Coaching effectiveness in the sports domain. (In Horn. T.S., ed. *Advances in sport psychology*. Champaign, IL.: Human Kinetics. p. 239-267.)
- Hwang, S., Feltz, D.L. & Lee, J. 2013. Emotional intelligence in coaching: Mediation effect of coaching efficacy on the relationship between emotional intelligence and leadership style. *International journal of sport and exercise psychology*, 11(3):292-306.
- Jowett, S. & Ntoumanis. M. 2004. The coach-athlete relationship questionnaire (CART-Q): development and initial validation. *Scandinavian journal of medicine & science in sports*, 14:245-257.
- Kavussanu, M., Boardley, I.D., Jutkiewicz, N., Vincent, S. & Ring, C. 2008. Coaching efficacy and coaching effectiveness: Examining their predictors and comparing coaches' and athletes' reports. *The sport psychologist*, 22:383-404.
- Kenow, L. J. & Williams, J. M. 1992. Relationship between anxiety, self-confidence, and the evaluation of coaching behaviors. *The sport psychologist*, 6(4):344-357.
- Kent, A. & Sullivan, P.J. 2003. Coaching efficacy as a predictor of university coaches' commitment. *International sports journal*, 7:78-87.
- Kowalski, C.L., Edginton, C.R., Lankford, S.V., Waldron, J.J., Roberts-Dobie, S.R. & Nielsen, L. 2007. Coaching efficacy and volunteer youth soccer coaches. *Asian journal of exercise & sport science*, 4(1):1-5.
- Lafrenière, M.K., Jowett, S., Vallerand. R.J. & Carbonneau. N. 2011. Passion for coaching and the quality of the coach-athlete relationship: The mediating role of coaching behaviors. *Psychology of sport and exercise*, 12:144-152.
- Lyle, J. 2002. Effective coaching and the effective coach (In Lyle, J., ed. *Sports coaching concepts*. London: Routledge. p. 251-272).

Mageau, G.A. & Vallerand, R.J. 2003. The coach-athlete relationship: a motivational model. *Journal of sport sciences*, 21:883-904.

Malete, L. & Sullivan, P. 2009. Sources of coaching efficacy in coaches in Botswana. *International journal of coaching science*, 3(1):17-27.

Mallet, C. & Côté, J. 2006. Beyond winning and losing: Guidelines for evaluating high performance coaches. *The sport psychologist*, 20:213-221.

Manley, A., Greenlees, I., Smith, M. & Thelwell, R. 2010. Athletes' use of reputation and gender information when forming initial expectancies of coaches. *International journal of sport science & coaching*, 5(4):517-532.

Manning, C.T. 2007. Relationship among team collective efficacy, cohesion, and coaching competency. Utah State University: US. (Dissertation – PhD).

Myers, N.D., Vargas-Tonsing, T.M. & Feltz, D.L. 2005. Coaching efficacy in intercollegiate coaches: sources, coaching behavior, and team variables. *Psychology of sport and exercise*, 6:129-143.

Myers, N.D., Feltz, D.L., Maier, K.S., Wolfe, E.W. & Reckase, M.D. 2006a. Athletes' evaluations of their head coaches' coaching competency. *Research quarterly for exercise and sport*, 77(1):111-121.

Myers, N.D., Wolfe, E.W., Maier, K.S., Feltz, D.L. & Reckase, M.D. 2006b. Extending validity evidence for multidimensional measures of coaching competency. *Research quarterly for exercise and sport*, 77(4):451-463.

Myers, N.D., Chase, M.A., Beauchamp, M.R. & Jackson, B. 2010. Athletes' perceptions of coaching competency scale II-High school teams. *Educational and psychological measurement*, 70(3):477-494.

Myers, N.D., Beauchamp, M.R. & Chase, M.A. 2011. Coaching competency and satisfaction with the coach: A multi-level structural equation model. *Journal of sport sciences*, 29(4):411-422.

National Association for Sport and Physical Education. 1995. Quality coaches, quality sports: National standard for athletic coaches. Dubuque, IA: Kendall/Hunt.

Park, J.K. 1992. Construction of coaching confidence scale. Unpublished doctoral dissertation. Michigan State University, East Lansing.

Phillips, M.B. & Jubenville, C.B. 2009. Student-athletes' perceptions of men's basketball head coaches' competencies at 15 selected NCAA division 2 Christian Colleges. *Journal of sport administration & supervision*, 1(1):39-51.

Rad, L. R. & Gharehgozli, S. 2013. Collective efficacy based on the coaching efficacy in female professional basketball teams. *European journal of experimental biology*, 13(2):469-475.

Rangeon, S., Gilbert, W. & Bruner, M. 2011. Mapping the world of coaching science: A citation network analysis. Paper presented at the AAHPERD 126th National Convention & Expo. San Diego, 31 March.

<http://aahperd.confex.com/aahperd/2011/webprogram/Paper15593.html> Date of access: 13 March. 2013.

SASCOC (South African Sport Confederation and Olympic Committee). 2011. South African coaching framework consultation document: Model for long-term coach development (LTCD). <http://hp.sascoc.co.za/the-south-african-coaching-framework/> date accessed 28 February. 2013.

Short, S.E & Short M.W. 2004. Coaches' assessment of their coaching efficacy compared to athletes' perceptions. *Perceptual and motor skills*, 99:729-736.

Smith, R.E., Smoll, F.L. & Hunt, E. 1977. A system for the behavioral assessment of athletic coaches. *The research quarterly*, 48(2):401-407.

South Africa. 2008. White paper on national minimum norms and standards for school infrastructure. *Government gazette*: 31616, 21 Nov.

Sullivan, P.J. & Kent, A. 2003. Coaching efficacy as a predictor of leadership style in intercollegiate athletics. *Journal of applied sport psychology*, 15(1):1-11.

Sullivan, P. & Gee, C. 2008. The effect of different coaching education content on the efficacy of coaches. *International journal of coaching science*, 2(2):59-66.

Sullivan, P., Paquette, K.J., Holt, N.L. & Bloom, G.A. 2012. The relation of coaching context and coach education to coaching efficacy and perceived leadership behaviors in youth sport. *The sport psychologist*, 26:122-134.

Thelwell, R.C., Lane, A.M., Weston, N.J.V. & Greenlees, I.A. 2008. Examining relationships between emotional intelligence and coaching efficacy. *International journal of sport and exercise psychology*, 6:224-235.

Thelwell, R.C., Page, J.L., Lush, A., Greenlees, I.A. & Manley, A.J. 2013. Can reputation biases influence the outcome and process of making competence judgments of a coach? *Scandinavian journal of medicine & science in sports*, 23:e65-e73.

Vargas-Tonsing, T.M., Warners, A.L. & Feltz, D.L. 2003. The predictability of coaching efficacy on team efficacy and player efficacy in volleyball. *Journal of sport behavior*, 26(4):396-407.

Vella, S.A., Oades, L.G. & Crowe, T.P. 2010. The application of coach leadership models to coaching practice: current state and future directions. *International journal of sport science and coaching*, 5(3):425-434.

Williams, J.M., Jerome, G.J., Kenow, L.J., Rogers, T., Sartain, T.A. & Darland, G. 2003. Factor structure of the coaching behavior questionnaire and its relationship to athlete variables. *Sport psychologist*, 17(1):16-34.

# CHAPTER 3

## HIGH SCHOOL RUGBY PLAYERS' PERCEPTIONS OF COACHING EFFECTIVENESS

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## **HIGH SCHOOL RUGBY PLAYERS' PERCEPTIONS OF COACHING EFFECTIVENESS.**

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## HIGH SCHOOL RUGBY PLAYERS' PERCEPTIONS OF COACHING EFFECTIVENESS

Broodryk, R. & van den Berg, P.

### Abstract

**Purpose:** The aims of this study were firstly to determine the players' perceptions of their respective coaches' coaching effectiveness and secondly, to determine the difference between large and small schools regarding the players' perceptions of their respective coaches' coaching effectiveness.

**Method & Materials:** Four hundred and seventy-six players from twenty schools were requested to complete the adapted version of the Coaching Efficacy Scale (Boardley *et al.*, 2008). The CES consists of four subscales measuring motivation (7 items), game strategy (7 items), technique (6 items) and character building (4 items). Each item was rated on a 9-point Likert scale from 0 (not at all effective) to 9 (extremely effective). The purpose of the questionnaire was thoroughly explained to the players and participants were repeatedly reminded of the anonymous nature of the questionnaires.

**Results:** According to the descriptive statistics, all the larger schools tested average for all the sub-scales (game strategy = 6.89, technique = 7.1 and character building = 6.98) except for motivation, which tested below average (5.85). The smaller schools, however, all tested below average for all four constructs (motivation = 4.77, game strategy = 5.86, technique = 4.68 and character building = 5.39). The results of the independent *t*-test indicated no practical significant differences between the perceptions of players of large and small schools with *d*-values of 0.016 for motivation, 0.021 for game strategy, 0.001 for technique and 0.075 for character building.

**Conclusion & Applications:** Players perceive their respective coaches to be performing below average on the four tested constructs. There are also no practically significant differences between the perceptions of large and small schools' players on the effectiveness of their respective coaches. The results of the study might determine and clarify whether volunteer coaches in high schools are effective, according to their players' perceptions and may also assist schools in evaluating their coaches and implementing programs to develop more effective coaches.

**Keywords:** Coaching effectiveness, coaching efficacy, players' perceptions, CES

## HIGH SCHOOL RUGBY PLAYERS' PERCEPTIONS OF COACHING EFFECTIVENESS

**R. Broodryk & P. van den Berg.**

### *Introduction*

The quality of coaches at school level has long been debated (Kowalski, Edginton, Lankford, Waldron, Roberts-Dobie, & Nielsen, 2007). There has been an increase in high school sport competitions and the importance of performance has been emphasized by media coverage of school sport competitions and the willingness of youth sports to progress to higher levels of achievement (Coakley, 2005; Bloemhof, 2008). This increase in school sport competitions have, however, led to a shortage of coaches which in turn led to teachers acting as voluntary coaches (Fung, 2003). Due to the fact that these coaches are considered to be influential individuals in the athletes' lives, Horn (2002) warns that their effectiveness should be monitored. Boardley, Kavussanu, and Ring (2008) concurred that the quality of the athlete's experience will be substantially affected by the respective coaches' behaviour. Athletes' performances will also be improved by the presence of effective coaching (Feltz, Hepler, & Roman, 2009). In contrast to the above statement, Vargas-Tonsing, Warners, and Feltz (2003) found in their study, which focused on volleyball players, that coaching efficacy can only be a predictor of team efficacy but not of individual efficacy. It is also important to note that Fung (2003) found no relationship between coaching experience and efficacy.

With the continuous increase in participation of youth sports and the importance of effective coaches, a growing need exist to determine who those individuals are that volunteer to coach youth sport and whether they have the capabilities of being effective coaches (Feltz et al., 2009).

Coaching effectiveness has been defined by Kavusannu, Boardley, Jutkiewicz, Vincent, and Ring (2008) as the extent to which the coaches can implement their knowledge and skills to positively affect the learning and performance of their athletes. Feltz, Chase, Moritz, and Sullivan (1999) are of the opinion that coaching efficacy can be defined as the extent to which coaches believe they have the capacity to influence the learning and performance of their athletes.

Kavussanu et al. (2008) suggested that coaching effectiveness should be determined by means of athletes' perceptions of their respective coaches' efficacy due to the fact that coaches are unable to evaluate it objectively. The importance of athletes' perceptions of their coaches' capabilities to be effective for athlete-related outcomes has been recognized by Myers, Feltz, Maier, Wolfe, & Reckase (2006). Watson, Chemers, and Preiser (2001) point out that athletes' who perceived their coach to be a confident leader were more confident in themselves, indicating the importance of athletes' perceptions. Horn (2002) stated that the influence of the coach's behavior on the athletes' performance will correlate with the athletes' perception with regard to coaching effectiveness.

Several different methods are used for determining the perception of the athletes concerning the effectiveness of coaches. Currently, the most commonly used method for determining the athletes' perception of coaching effectiveness is the adapted coaching efficacy scale (CES) questionnaire developed by Boardley et al. (2008). This was developed to measure the following four constructs: motivation, game strategy, technique and character building.

In understanding the paucity and importance of effective coaches one must realize that schools compete with one another to obtain the services of quality coaches. Traditionally the larger schools usually can afford to pay their respective coaches more money due to a larger income from their many learners, arguably supplying their players then with better coaches. According to the White paper (SA, 2008:68) large schools are classified as schools with a minimum capacity of 720 learners while small and medium schools are classified as schools with a maximum capacity of 719 learners.

The literature indicated above led the researchers to the following research questions: a) What are the players' perceptions of their respective coaches' coaching effectiveness? b) Is there a difference in the players' perceptions concerning the coaching effectiveness of their respective coaches between large and small schools?

The results of the study would determine and clarify the standard of coaching by volunteer coaches in high schools according to their athletes' perceptions. The results will also indicate whether coaches from larger schools are more effective than those in smaller schools. This would make it possible for schools to evaluate their coaches and implement programs to develop more effective coaching strategies.

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## ***Materials and Methods***

### *Research design*

#### *Subjects*

Four hundred and seventy-six players from twenty teams of various schools that participated in the PUK rugby festival 2009 took part in the study. All the participants were male and between ages 15 and 19 years. A total of four hundred and thirty-one questionnaires were correctly completed and used for the study. Small schools: (n=250) and large schools: (n=181).

#### *Procedures*

All participants took part on a voluntary basis with the option to withdraw at any stage. No coaches were present during the collection of the data. The purpose of the questionnaire was thoroughly and repeatedly explained to the players. The anonymous nature of the study was also emphasized. All players had the freedom to ask any questions during the completion of the questionnaire and words they did not understand were explained to them. Sufficient measures were taken to ensure that no language barriers would have had any effect on the outcome of the data. The players were then asked to complete the adapted version of the Coaching Efficacy Scale developed by Boardley et al. (2008). Ethical clearance was obtained from the Ethics committee of the North-West University (NWU-00008-12-S1).

#### *Questionnaire*

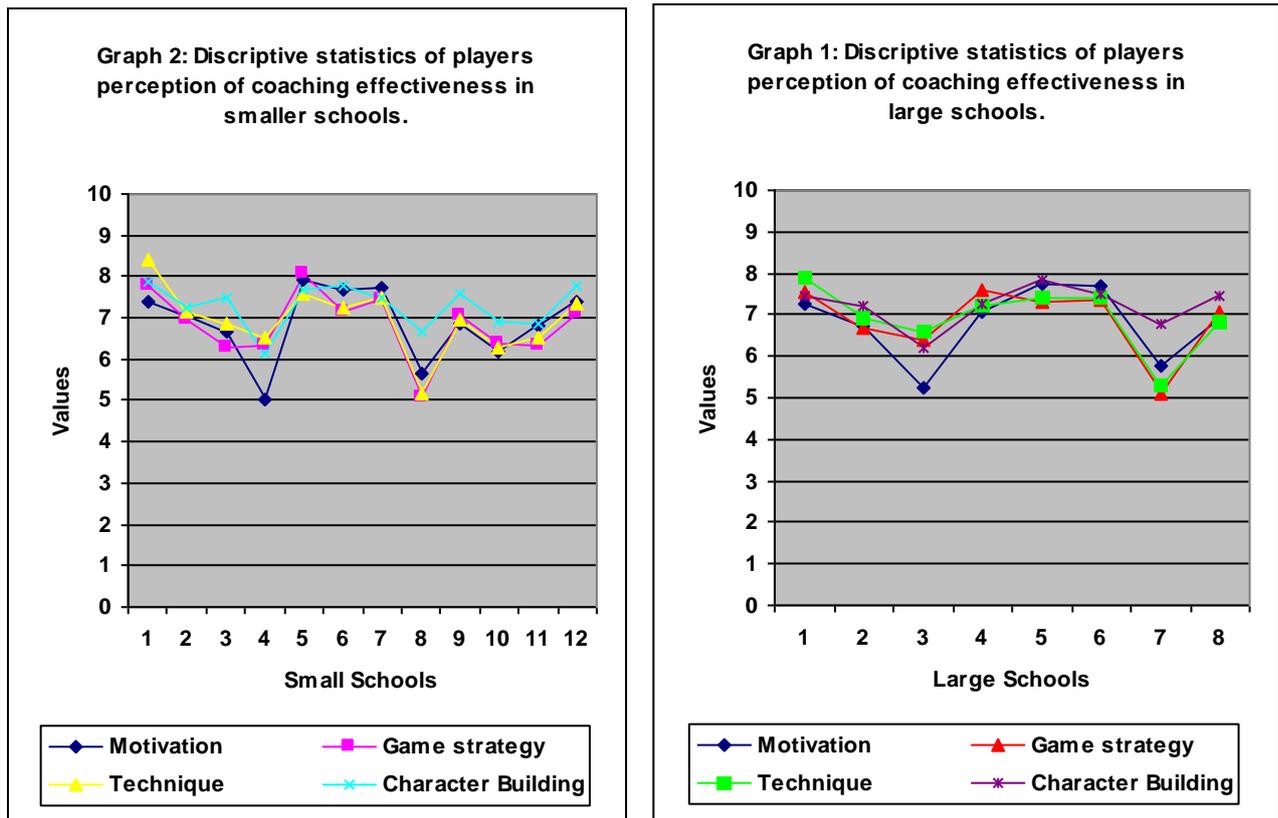
The Questionnaire tested the following four constructs: 1) Motivation, 2) Game strategy, 3) Technique 4) Character building, which has been proven reliable by Boardley et al. (2008). Following are the scales for the four constructs: Below average (< 6.86); Average (between 6.86 and 8.60) and above average (> 8.60) (Feltz et al., 1999). Maleté and Sullivan (2009) described motivation efficacy as the coaches' confidence in their ability to influence the psychological skills and states of the athletes. Game strategy efficacy was defined by Sullivan, Gee, and Feltz (2006) as the coaches' belief in their ability to coach and lead their team to a successful performance during competition. According to Myers, Vargas-Tonsing, and Feltz (2005), technique efficacy has been referred to as the coaches' beliefs regarding their instructional and diagnostic skills, while character building efficacy concerns the coaches' beliefs in their ability to influence their athletes' personal development and positive attitude towards sport. A 10-point Likert scale was used with anchors of 0 (not at all confident) and 9 (extremely confident) to plot the effectiveness of the coaches according to the mentioned constructs as their players perceived it to be.

### *Statistical procedures*

The Statistical Consultation Services of the North-West University determined the statistical methods and procedures for analysis of the research data. The Statistical Data Processing package, (StatSoft Inc., 2008) was used to process the data. Firstly, a power calculation was done to determine the validity of the sample size. The Cronbach alpha was then used to determine the reliability of the questionnaire on this specific group. According to Cortina (1993) a value of  $> 0.70$  for Cronbach alpha is considered an adequate value for reliability. The descriptive statistics of each construct for each coach were then calculated. This was followed by an independent  $t$ -test which indicated the statistically significant differences of the four coaching efficiency constructs between large and small schools. The  $p$ -value of  $< 0.5$  was not used to determine significant differences. Instead practical significance was determined by means of Cohen effect sizes (ES): an ES of 0.8 or greater have been interpreted as large, an ES between 0.79 and 0.21 as average and an ES of 0.2 or less as small (Thomas & Nelson, 2001).

### *Results and discussion*

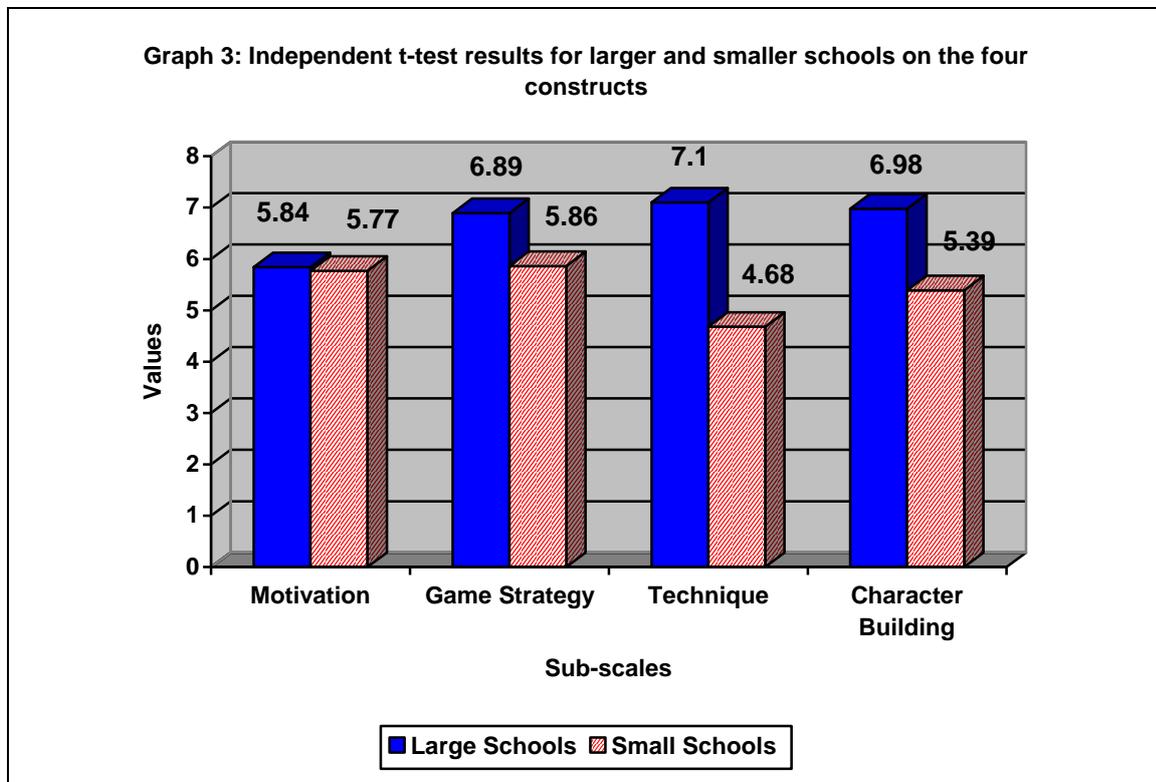
The results of the power calculation indicated a value of above 0.9 which, according to Open Epi-Info (2009), are considered to be very good. The Cronbach alpha values were respectively: motivation = 0.91; game strategy = 0.86; technique = 0.87; character building = 0.79. All values are to be considered high because they are above 0.70 (Cortina, 1993). For each respective coach the average score on each of the four constructs were determined by the results of all his respective players' perceptions. The eight respective coaches' results from larger schools on the four constructs are found in Graph 1. The twelve respective coaches' results from smaller schools on the same four constructs are represented in Graph 2.



It can be seen that the coaches from the larger schools tested average for all of the sub-scales (technique: 7.1 game strategy: 6.89 character building: 6.98) except for motivation (5.84) which was below average ( $< 6.86$ ). The smaller schools tested all below average for all of the four subscales (motivation = 5.77; technique = 4.68; game strategy = 5.86 and character building = 5.39).

A similar study was done by Fung (2003) who found that high school coaches (combination of team sports) tested low (average below 6.86) in making decisions on strategy, analysing other teams and motivating players and tested average (between 6.86 and 8.60) for developing players' character. In contrast to this, Boardley et al. (2008) have done a similar study on adult rugby players of varying standards between 18 and 35 years and the perception of those rugby players of their respective coaches indicated higher effectiveness levels for all four subscales with character building as the lowest on 6.85 and motivation the highest on 7.07. One explanation for the contrasting scores between the two studies could be that the coaches tested by Boardley et al. (2008) are more professional than the voluntary coaches in high schools.

The results for large and small schools on the four constructs: Motivation, Game Strategy, Technique and Character Building are displayed in the following graph.



It is noteworthy that technique as sub-scale indicates a considerable difference between large and small schools. However, none of the categories indicated any practical significance (motivation  $d=0.016$ , game strategy  $d=0.021$ , technique  $d=0.001$ , character building  $d=0.075$ ). The possible explanations for these results are that the players have insufficient knowledge and experience of quality coaching. They would therefore have no frame of reference that could influence their perceptions. Another explanation is that all of the coaches took the responsibility to let their team take part in the rugby clinic which means that all of the players on the clinic were exposed to similar coaching which might have led to the absence of any practically significant difference.

### ***Conclusion and Recommendations***

Indications were found that volunteer coaching at high school level might not be on standard, with most coaches testing below average for the relevant effectiveness constructs. There were also no practically significant differences found for coaching effectiveness between large and small schools due to the absence of any influential frame of reference and the similar coaching they received during the clinic.

It is suggested that further research be done on athletes from different schools the year after having been exposed to a professional coaching environment. Another suggestion is to include schools that did not partake in any form of rugby clinic or tour. A shortcoming of the study might be that the groups of participants were not equally divided into large and small groups. The results of the study might be used by schools when they evaluate and compare their own coaches and for developing better coaching strategies.

### **References**

- Bloemhof, H.J. (2008). Key principles in primary school sport programs. *African Journal for Physical, Health Education, Recreation and Dance*, 14(3), 282-298.
- Boardley, I.D., Kavussanu, M., & Ring, C. (2008). Athletes' perception of coaching effectiveness and athlete-related outcomes in rugby union: an investigation based on the coaching efficacy model. *The Sport Psychologist*, 22, 269-287.
- Coakley, J. (2005). Youth sports. (*In Berkshire encyclopedia of world sport*, 4:1744.).
- Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Feltz, D.L., Chase, M.A., Moritz, S.E., & Sullivan, P.J. (1999). A conceptual model of coaching efficacy: preliminary investigation and instrument development. *The Journal of Education Psychology*, 91(4), 765-776.
- Feltz, D.L., Hepler, T.J., & Roman, N. (2009). Coaching efficacy and volunteer youth sport coaches. *The Sport Psychologist*, 23, 24-41.
- Fung, L. (2003). Coaching efficacy as indicators of coach education program needs. *Athletic insight: The online Journal of Sport Psychology*, 5(1), 12-18.
- Horn, T.S. (2002). Coaching effectiveness in the sports domain. In T.S. Horn (Ed.), *Advances in Sport Psychology* (pp. 309-354). Champaign, IL.: Human Kinetics.

Kavussanu, M., Boardley, I.D., Jutkiewicz, N., Vincent, S., & Ring, C. (2008). Coaching efficacy and coaching effectiveness: examining their predictors and comparing coaches' and athletes' reports. *The Sport Psychologist*, 22, 383-404.

Kowalski, C.L., Edginton, C.R., Lankford, S.V., Waldron, J.J., Roberts-Dobie, S.R., & Nielsen, L. (2007). Coaching efficacy and volunteer youth soccer coaches. *Asian Journal of Exercise & Sport Science*, 4(1), 1-5.

Malete, L., & Sullivan, P. (2009). Sources of coaching efficacy in coaches in Botswana. *International Journal of Coaching Science*, 3(1), 17-27.

Myers, N.D., Vargas-Tonsing, T.M., & Feltz, D.L. (2005). Coaching efficacy in intercollegiate coaches: sources, coaching behavior, and team variables. *Psychology of Sport and Exercise*, 6, 129-143.

Myers, N.D., Feltz, D.L., Maier, K.S., Wolfe, E.W., & Reckase, M.D. (2006). Athletes' evaluations of their head coaches' coaching competency. *Research Quarterly for Exercise and Sport*, 77, 451-563.

OpenEpi-Info. 2009. [Web:] <http://www.OpenEpi-Info/> [Date of use: 18 Sep. 2009].

South Africa. Department of education. (2008). White paper on national minimum norms and standards for school infrastructure. *Government gazette*: 31616, 21 Nov.

Statsoft Inc. 2008. [Web:] <http://www.statsoft.com/> [Date of use: 24 Mar. 2009].

Sullivan, P.J., Gee, C.J., & Feltz, D.L. (2006). Playing experience: the content knowledge source of coaching efficacy beliefs. In A.V. Mitel (Ed.), *Trends in educational psychology* (pp. 185-194). Nova science publishers, inc.

Thomas, J.R., & Nelson, J.K. (2001). *Research Methods in Physical Activity* (4th ed.). Champaign, IL: Human Kinetics.

Vargas-Tonsing, T.M., Warners, A.L., & Feltz, D.L. (2003). The predictability of coaching efficacy on team efficacy and player efficacy in volleyball. *Journal of Sport Behavior*, 26(4), 396-407.

Watson, C.B., Chemers, M.M., & Preiser, N. (2001). Collective efficacy: A multilevel analysis of collective efficacy. *Personality and Social Psychology bulletin*, 27(8), 1057-1068.

# CHAPTER 4

## Comparing club level rugby coaches and players' perceptions of coaching effectiveness

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## **Comparing club level rugby coaches and players' perceptions of coaching effectiveness**

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Running title: Comparing perceptions of coaching effectiveness.

**Comparing club level rugby coaches and players' perceptions of coaching effectiveness****Abstract**

The aim of this study was to compare players' and coaches' perceptions on coaching effectiveness. A total of 155 participants from the Puk Rugby Institute (PRI) were available for this study (players  $n = 142$  and coaches  $n = 13$ ) (age: 18-55 years). Coaches completed the Coaching Efficacy Scale (CES) and players completed the adapted CES. The CES consists of 24 items measuring four constructs namely motivation, game strategy, technique and character building. Each item was rated on a 10 point Likert scale ranging from 0 (not at all effective) to 9 (extremely effective). High Cronbach alpha values were established for all four constructs on this specific population. Mixed models results indicated a statistical significant difference ( $p \leq 0.05$ ) on all four constructs measured when the perceptions of coaches and players were compared. A statistical significant difference exists between the coaches and players' perception regarding the respective coaches' total coaching effectiveness. In view of the inconsistent pattern found between the coaches and players perceptions on coaching effectiveness, coaches and clubs need to be more aware of the impact that players' perceptions have regarding the outcome of coaching effectiveness.

**Keywords:** Coaching effectiveness, players' perceptions, CES.

## **Introduction**

Effective coaching influence a variety of areas like sport performance, players' behaviour, well being, development of moral values and character building (Horn, 2002; Baker, Yardley & Côté, 2003; Danish, Petitpas, & Bruce, 2008). In addition with effective coaching, sport can also be used as an arena for the development and facilitation of various life skills among youth which could be applied to life situations outside the sport milieu for example, goal setting, emotional control, self-esteem and hard work ethic (Gould, Chung, Smith, & White, 2006). Although effective coaching is crucial, the measurement thereof can be seen as complex.

The complexity of sport and all the variables that exist as part of the coaching process was identified as the biggest challenges to determine effective coaching (Lyle, 2002). To add to the complication of determining effective coaching, one also needs to understand that coaches' motivation for coaching may be performance-or participation orientated (Vella, Oades, & Crowe, 2010). Regardless of the difference in coaching orientation, Mallet and Côté (2006) stressed that all forms of coaching should be equally valued and respected; therefore measuring coaching effectiveness is imperative.

For the purpose of this study it is important to understand coaching efficacy and coaching effectiveness as two different concepts. Coaching efficacy is defined as "the extent to which coaches believe that they have the capacity to influence the learning and performance of their athletes" (Feltz, Chase, Moritz, & Sullivan, 1999:765). Coaching effectiveness on the other hand is defined as "the extent to which coaches can implement their knowledge and skills to positively affect the learning and performance of their players" (Boardley, Kavussanu, & Ring, 2008: 271). Efficacy therefore has a direct perception orientated connection with the assessment of coaching where effectiveness refers to the implementation of coaching skills, influencing the players' perceptions. In other words, the coach's perception refers to coaching efficacy while the players' perceptions refer to coaching effectiveness.

Researchers suggested that the Coaching Efficacy Scale (CES) should be used as measuring tool to determine the coach's perception of his/her own coaching efficacy (Fung, 2003; Vargas-Tonsing, Warners, & Feltz, 2003; Campbell & Sullivan, 2005; Boardley et al., 2008; Kavusannu, Boardley, Jutkiewicz, Vincent, & Ring, 2008; Feltz, Hepler, & Roman, 2009; Maleté & Sullivan, 2009). Results of previous studies that used the CES indicated that the coaches' perceptions positively influence diverse areas such as the coaches' affective and normative commitment

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(Kent & Sullivan, 2003), coaching behaviour, team satisfaction, winning percentages (Myers, Vargas-Tonsing, & Feltz, 2005) and team efficacy (Vargas-Tonsing et al., 2003). The importance of players' perception on coaching effectiveness has also been recognized (Horn, 2002; Short & Short, 2004; Myers, Feltz, Maier, Wolfe, & Reckase, 2006; Boardley et al., 2008). Boardley et al. (2008) for instance found that players' commitment, enjoyment, effort and self-efficacy relates to the players' perceptions. Irrespective of the importance of players' perceptions, only a few studies have used the newly adapted CES to measure players' perceptions regarding perceived coaching effectiveness (Boardley et al., 2008; Kavusannu et al., 2008; Broodryk & Van den Berg, 2011).

Despite the importance of both the coaches and players' perceptions, one need to realize that perception on coaching effectiveness differs among coaches and players (Short & Short, 2004; Kavussanu et al., 2008). Short and Short (2004) investigated 9 intercollegiate male football coaches who completed the CES and compared their results with the athletes' values on how confident they perceived their coach to be. The majority of the coaches (78%) rated themselves higher than their athletes did. Using the adapted version of the CES, Kavussanu et al. (2008) found that the perceptions of the players' compared to the perceptions of the coaches regarding overall coaching effectiveness were statistical significantly lower. The coaches' perception values were also significantly higher than the players' perception values on all four constructs measured (Kavussanu et al. 2008). Kenow and Williams (1999) investigated the perception differences between coaches and players regarding effective coaching behaviours and found that coaches rated their behaviours more positive than their athletes do. Similarly, Vargas-Tonsing, Myers, and Feltz (2004) investigated the use of efficacy enhancing techniques regarding the frequency and effectiveness thereof. It was found that an incongruency exist between the players' and coaches' perceptions concerning the frequency and effectiveness of the efficacy enhancing techniques. Previous evidence therefore indicates that coaches and players' perceptions on coaching effectiveness differ. Kavussanu et al. (2008) identified the need for more research that compares the perceptions of the coach and his/her respective players on the four constructs of the CES.

The aim of the study was therefore to compare the players and coaches' perceptions with regard to the coaches' coaching effectiveness in order to determine if the same pattern will present itself where coaches rate themselves more positive than their players perceive them to be (Kavussanu et al., 2008).

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These results extend the literature on coaching effectiveness and coaching efficacy to determine if any perception differences exist between a coach and his/her players with regard to coaching effectiveness. The comparison between coaches and players' perceptions on coaching effectiveness might also give an indication of the coaching effectiveness that exists amongst university and club level coaches. The results may reflect the value of the players' perception regarding their relative coaches coaching effectiveness. The results may provide clubs, institutions, coaches and professionals who are involved in sports a means to evaluate coaching effectiveness and compare their results with the results from this study. It will also aid researchers in the development of coaching models, processes and methods to scrutinize coaching effectiveness.

## **Research methodology**

### ***Participants***

This was an availability study and one hundred and forty two players (n=142) and thirteen coaches (n=13) from the North-West University, Puk Rugby Institute (PRI) in Potchefstroom, South Africa took part in the study. All the participants were males. The coaches' age ranged from 23-55 years and the players' ages ranged between 18-25 years. A total of one hundred and thirty three questionnaires were correctly filled in by the players, while all thirteen coaches' questionnaires were correctly filled in (players n=133, coaches n=13).

### ***Procedures***

All participants took part on a voluntary basis with the option to withdraw at any time. None of the teams' respective coaches were present during the collection of the data from the players and the anonymous nature of the study was emphasized. The purpose of the questionnaires was thoroughly explained to the players and coaches. Participants had the freedom to ask any questions during the completion of the questionnaire and words or questions which they did not understand were explained to them. A sport psychological consultant was present during the completion of the questionnaires in order to provide assistance to participants regarding any questions, or to explain terminology where needed.

### ***Questionnaire***

The coaches completed the CES developed by Feltz et al. (1999), while the players were asked to fill in the adapted version of the CES (Kavussanu et al., 2008). The study was approved by the Ethics committee of the North-West University (NWU-00008-12-S1). Both the CES and the

adapted CES tested the following four constructs: 1) motivation, 2) game strategy, 3) technique and 4) character building (Feltz et al. 1999). Important to note is that the 24 items of both questionnaires are the same, while only the stem differed. The stem question for the CES was: "How confident are you in your ability to..." (Feltz *et al.*, 1999:767) and the stem question for the adapted CES was: "How effective is your coach in his/her ability to..." (Kavusannu *et al.*, 2008:389). Feltz et al. (1999) defined the constructs as follows: motivation is the coaches' confidence in their ability to influence the psychological skills and states of the players; game strategy as the coaches' belief in their ability to coach and lead their team to a successful performance during competition; technique has been referred to as the coaches' beliefs regarding their instructional and diagnostic skills and abilities, while character building concerns the coaches' beliefs in their ability to influence their players' personal development and positive attitude towards sport. A 10-point Likert scale was used with anchors of 0 (not at all confident) and 9 (extremely confident) to determine the perception of coaching effectiveness.

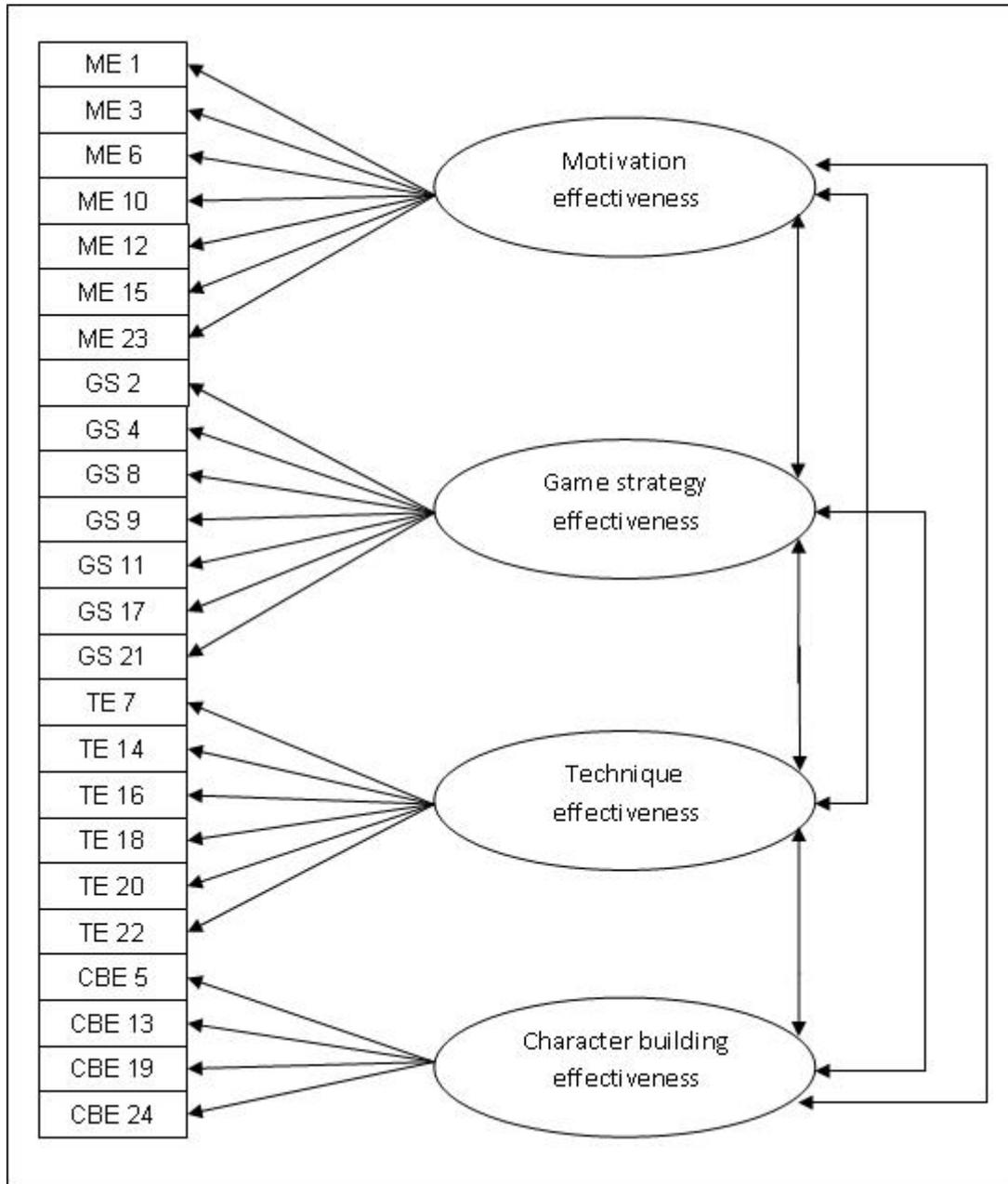
### ***Statistical procedures***

The Statistical Consultation Service of the North-West University performed the statistical analysis of the research data. SPSS software (version 21.0, Armonk, NY: IBM corp.) statistical package was used to process the data. Using AMOS 21.0, Confirmatory factor analysis (CFA) was used for the examination of the adapted scale's factor structure as illustrated in figure 1, indicating construct validity for this population. No CFA was performed for the CES due to the small (13) number of coaches that participated in the study. All regression estimates were found statistically significant at  $p < 0.05$  implying that the respective items loaded significantly on the specified constructs with standardized regression weights of between 0.67 and 0.91, indicating convergent validity. The chi-square test has the power to detect trivial deviations from the proposed model and it is viewed by researchers as an overly strict indicator of model fit (Hancock & Mueller, 2010). The chi-square statistics were therefore divided by the degrees of freedom as suggested by Mueller (1996). The four-factor model yielded a Minimum Sample Discrepancy divided by Degrees of Freedom (CMIN/DF) value of 2.135, which represents a satisfactory model fit as the value is  $< 3$  (Mueller, 1996). Reporting multiple fit indices from three broad classes is considered as good practice (Hancock & Mueller, 2010). Comparative fit index (CFI) with values of 0.909 indicated a good overall fit (Mueller, 1996). The Root Mean Square Error of Approximation (RMSEA) of 0.088 together with 90% confidence interval of [0.078:0.099] is acceptable (Blunch, 2008). Blunch (2008) stated that models with RMSEA values of  $\geq 0.10$  should not be accepted. The Cronbach alpha was used to determine the

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reliability of the questionnaire for the specific groups. According to Cortina (1993) a value of  $> 0.70$  for Cronbach alpha are considered an adequate value for reliability. Sufficiently high Cronbach alpha values were computed: motivation = 0.94; game strategy = 0.91; technique = 0.90; character building = 0.86 (Cortina, 1993) to ensure validity. All items had correlations of larger than 0.65 with their respective construct totals, indicating that the items are all discriminating with regard to the construct.

Understanding that dependency exists among the players and their respective coaches it is important to adjust for inter-dependency between these players being coached by the same coach. In order to adjust for non independency, hierarchical linear models (mixed models) were used to compare the difference between the coaches and players' perception on coaching effectiveness with the level of significance set at 5%. Descriptive statistics of each construct was also calculated to compare the individual difference between the respective coaches' and their team's perception on coaching effectiveness.



**Figure 1:** Multidimensional model of the adapted Coaching Efficacy Scale (Boardley et al., 2008).

### Results and Discussion

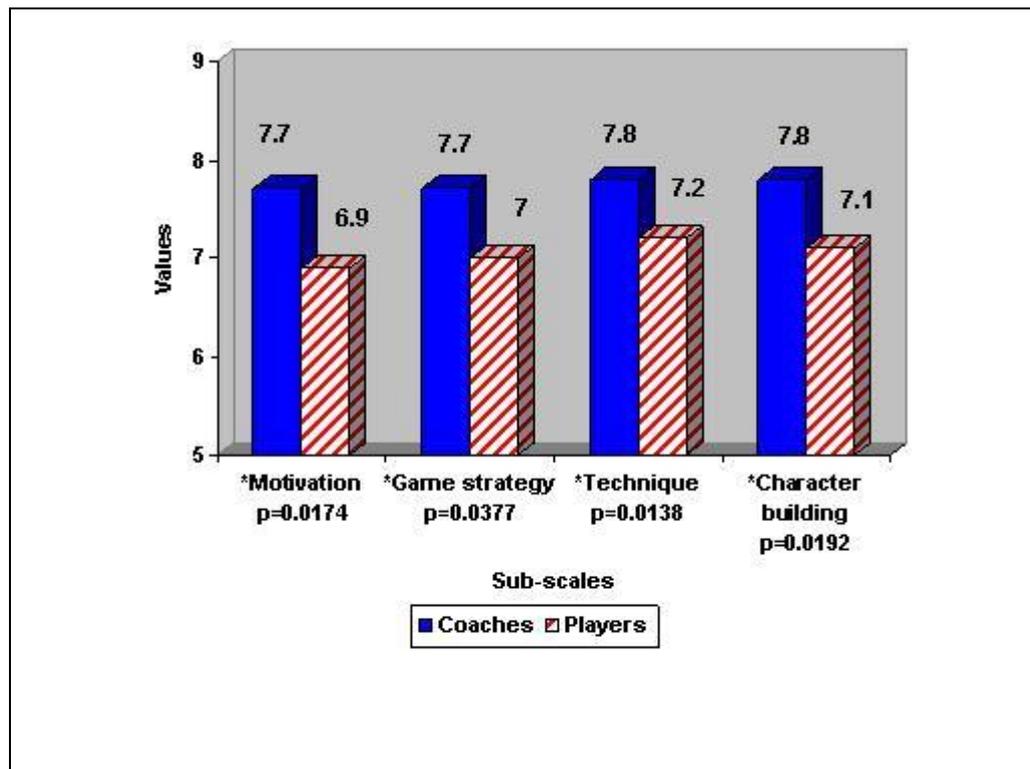
The correlations between the four subscales were statistically significantly interrelated with high correlations as indicated in Table 1 which is consistent with previous research (Boardley et al., 2008). The highest correlation was found between the constructs: technique and game strategy, while the lowest correlation was found between the game strategy and motivation constructs.

**Table 1:** Correlations between constructs among players.

Constructs	1	2	3
1. Motivation efficacy			
2. Game strategy efficacy	.82*		
3. Technique efficacy	.87*	.95*	
4. Character building efficacy	.92*	.84*	.92*

*Note.* \* $p < 0.05$ .

Because of the interdependence of players with regard to their respective coaches, hierarchical linear models were used to take this into account. Proc Mixed in SAS 9.3 compared the results for the total group on the 4 different constructs measured and is illustrated in Figure 2. The players' perceptions compared with the coaches' perceptions regarding the respective coaches' effectiveness on motivation, game strategy, technique and character building all yielded statistical significant differences. Cohen's d-values were calculated as an effect size to determine the importance of this in practice. Low d values (motivation: 0.21, game strategy: 0.18, technique: 0.22, character building: 0.21) were found for all 4 constructs implying that none of these differences were important in practice.



Note. \* $p \leq 0.05$ .

**Figure 2:** Mean values for coaches' perception on coaching efficacy compared to players' perceptions of perceived coaching effectiveness.

It is clear that on all four constructs, the mean of the coaches' perceptions are higher than the mean of the players' perceptions for the whole group. The biggest mean difference of 0.8 between players and coaches perceptions was found on the motivation construct and the smallest mean difference was found for the technique construct with a value of 0.6. The game strategy and character building constructs both yielded mean differences of 0.7. Short and Short (2004) found similar results when 9 basketball coaches' perceptions were compared with their respective players' perceptions regarding coaching effectiveness. The majority (7) of the coaches rated themselves more positive compared to their players (Short & Short, 2004). Kavussanu et al. (2008) also compared the perceptions of players and coaches from 7 individual and 8 team sports and reported that the coaches' perceptions regarding their own coaching effectiveness were significantly higher than their players' perceptions on all four constructs.

The significant perception difference ( $p=0.017$ ) found for the motivation construct is a point of concern when keeping in mind that motivation as perceived by the players has a direct influence on the players' effort, commitment and sport enjoyment (Boardley et al., 2008). A positive

relationship also exists between motivation and self-efficacy which in turn might lead to more self-confidence among the players (Boardley et al., 2008). Similarly Kavusannu et al. (2008) found in their study that 42% of the coaches rated themselves higher regarding the motivation construct. Understanding the value of this dimension the ideal would be if the perception difference between coaches and their players are small or if the players' perceptions concerning perceived motivation are higher. Large differences amongst the coach and his players' perceptions on motivation may lead to negative effects such as frustration and loss of self-confidence amongst the players (Kenow & Williams, 1999).

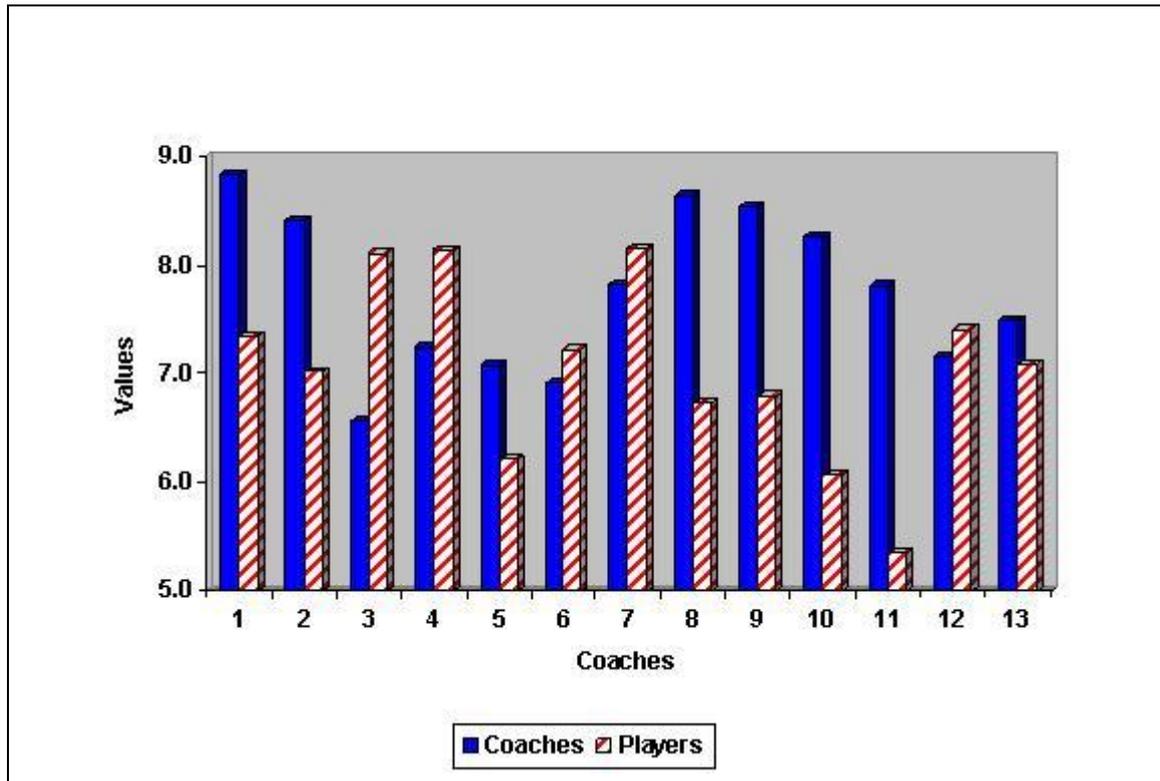
Regarding game strategy, the results ( $p=0.038$ ) is also congruent with the results of Kavusannu et al. (2008) who reported that the coaches rated themselves more positive regarding the whole group, although respectively 50% of the coaches' perceptions were similar to their players' perceptions. Chu and Tingzon (2009) stressed the importance of perceived game strategy effectiveness when they found that game strategy directly affected the players' self-efficacy.

The same blueprint can be seen for the technique construct where coaches' perceptions are significantly higher ( $p=0.014$ ) than the players' perceptions, which again is in line with the findings of Kavusannu et al. (2008) who indicated that 58% of the coaches' perceptions regarding technique were higher than their players' perceptions. According to Boardley et al. (2008) a coach who is able to model a certain skill will positively influence the players' self-efficacy and self-confidence which in turn might benefit the coach-player compatibility.

Another important construct is character building, where the coaches' perception values were significantly higher ( $p=0.019$ ) than the players' perceptions, supporting the findings of Kavusannu et al. (2008). Similarly to the construct game strategy, Kavusannu et al. (2008) found that the majority (54%) of the coaches and players' perceptions were similar. Pro-social behaviours such as respect for others, good sportsmanship and fair play (Boardley et al., 2008) together with self-efficacy are associated with perceiving the coach to be effective regarding character building.

Overall values of the coaches' perceptions compared to the overall values of their respective players' perceptions are reported in Figure 3. Worthy to note from Figure 3 is that perception inconsistencies exist between each coach and their respective players regarding total coaching effectiveness.

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**Figure 3:** A comparison between the coaches' and their respective players' perceptions regarding coaching effectiveness

It is clear that the majority (8 out of 13) of the coaches' perceptions regarding their own coaching effectiveness are higher than those of their players' perceptions. The results correspond to the study undertaken by Short and Short (2004) which found that with regard to the preponderance of the coaches, seven out of the nine, rated themselves higher compared to their players. Furthermore in this regard Kavusannu et al. (2008) concurred that more than 50% of the coaches had higher perception values compared to perception values of their players. The results in Figure 3 clearly show that although the majority of the coaches' perceptions were higher, the margin sizes by which the differences occur are evident. For instance the margin for group 11 is 2,4 comparing to group 12 where the margin is 0,2.

It is also interesting to note that the three highest player perception values were all for coaches with lower self perception values. The five highest perception values were all from coaches' perceptions, while the three lowest values were from players' perceptions. The reported inconsistencies signals warning lights when keeping in mind that Høigaard, Jones, and Peters (2008) stated that for performance, the actual coaching behaviour and the preferred coaching behaviour should correlate. This is supported by Kenow and Williams (1999) suggesting that

consistency of goals and beliefs among the coaches and their players are crucial in order to promote satisfactory interaction.

### **Conclusion**

The results of the study support the findings of previous studies, which states that coaches' perceptions on their own coaching effectiveness are more positive than the players' perceptions regarding their respective coaches coaching effectiveness (Short & Short, 2004; Kavussanu et al., 2008). Understanding the importance of players' input (Horn, 2002; Short & Short, 2004; Myers et al., 2006; Kavussanu et al., 2008) it is therefore concluded that when coaching effectiveness is measured, the perception of the player is a necessity. Understanding that both the coach and player form part of the relationship, the coaches' perception should not be ignored.

### **Limitations and Recommendations**

It is recommended by the researchers that coaching effectiveness should be monitored more regularly throughout the season using both players' and coach's perceptions. This might indicate whether performance outcomes such as win/loss record or satisfaction outcomes such as player-coach compatibility will influence the perceptions of both the coach and player and to what extent. This might shed light on whether the players and coaches perceptions are consistent throughout the season regardless of the outcomes. A limitation regarding this specific study is that all participants were male and from the same sport code, which limits the generalization of these results. We therefore suggest that further research should be done on different team sports and genders. Individual sport codes should also be investigated due to more individual time spent between coach and athlete to determine if the results will repeat themselves in a similar way. Clarity on the effect that outcomes have on perceptions will also benefit researchers in their quest to simplify the complexity of identifying effective coaching behaviours, techniques and characteristics. Ultimately this might also aid in the training and development of coaches.

**References**

- Baker, J., Yardley, J. & Côté, J. (2003). Coach behaviors and athlete satisfaction in team and individual sports. *International Journal of Sport Psychology*, 34, 226-239.
- Blunch, N.J. (2008). *Introduction to structural equation modelling using SPSS and AMOS*. London: Sage.
- Boardley, I.D., Kavussanu, M. & Ring, C. (2008). Athletes' perception of coaching effectiveness and athlete-related outcomes in rugby union: an investigation based on the coaching efficacy model. *The Sport Psychologist*, 22, 269-287.
- Broodryk, R. & Van den Berg, P.H. (2011). High school rugby players' perception of coaching effectiveness. *US-China Education Review*, 7, 1009-1014.
- Campbell, T. & Sullivan, P. (2005). The effect of a standardized coaching education program on the efficacy of novice coaches. *Gender and Coaching Education*, 11(1), 38-45.
- Chu, R.D. & Tingzon, C.J. (2009). The relationship of coaching competency on the athlete's self efficacy and hope. *The International Journal of Research and Review*, 1, 84-99.
- Cortina, J.M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, 78(1), 98-104.
- Danish, S.J., Petitpas, A.J. & Bruce, D.H. (2008). Sport as context for developing competence. In T.S. Horn (Ed.), *Advances in Sport Psychology* (pp.412-422). Champaign, IL: Human Kinetics.
- Feltz, D.L., Chase, M.A., Moritz, S.E., & Sullivan, P.J. (1999). A conceptual model of coaching efficacy: preliminary investigation and instrument development. *The Journal of Education Psychology*, 91(4), 765-776.
- Feltz, D.L., Hepler, T.J. & Roman, N. (2009). Coaching efficacy and volunteer youth sport coaches. *The Sport Psychologist*, 23(1), 24-41.

Fung, L. (2003). Coaching efficacy as indicators of coach education program needs. *Athletic Insight: the Online Journal of Sport Psychology*, 5(1), 12-18.

Gould, D., Chung, Y., Smith, P. & White, J. (2006). Future directions in coaching life skills: Understanding high school coaches' views and needs. *Athletic Insight*, 8(3), 28-38.

Hancock, G.R., & Mueller, R.O. (2010). *The reviewer's guide to quantitative methods in the social sciences*. New York, NY: Routledge.

Høigaard, R., Jones, G.W. & Peters, D.M. (2008). Preferred coach leadership behaviour in elite soccer in relation to success and failure. *International Journal of Sport Science & Coaching*, 3(2), 241-250.

Horn, T.S. (2002). Coaching effectiveness in the sports domain. In T.S. Horn (Ed.), *Advances in Sport Psychology* (pp. 309-354). Champaign, IL: Human Kinetics.

IBM Corp. Released 2012. *IBM SPSS Statistics for Windows, Version 21.0*. Armonk, NY: IBM Corp.

Kavussanu, M., Boardley, I.D., Jutkiewicz, N., Vincent, S. & Ring, C. (2008). Coaching efficacy and coaching effectiveness: examining their predictors and comparing coaches' and athletes' reports. *The Sport Psychologist*, 22(4), 383-404.

Kenow, J. & Williams, J.M. (1999). Coach-athlete compatibility and athletes' perception of coaching behaviors. *Journal of Sport Behavior*, 22, 251-259.

Kent, A. & Sullivan, P.J. (2003). Coaching efficacy as a predictor of university coaches' commitment. *International Sports Journal*, 15(1), 78-87.

Lyle, J. (2002). Effective coaching and the effective coach. In J. Lyle (Ed.), *Sports Coaching Concepts* (pp. 251-272). London: Routledge.

Malete, L. & Sullivan, P. (2009). Sources of coaching efficacy in coaches in Botswana. *International Journal of Coaching Science*, 3(1), 17-27.

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Mallet, C. & Côté, J. (2006). Beyond winning and losing: Guidelines for evaluating high performance coaches. *The Sport Psychologist*, 20(2), 213-221.

Mueller, R.O. (1996). *Basic principles of structural equation modeling: an introduction to LISREL and EQS*. New York, NY: Springer.

Myers, N.D., Vargas-Tonsing, T.M. & Feltz, D.L. (2005). Coaching efficacy in intercollegiate coaches: sources, coaching behavior, and team variables. *Psychology of Sport and Exercise*, 6(1), 129-143.

Myers, N.D., Feltz, D.L., Maier, K.S., Wolfe, E.W. & Reckase, M.D. (2006). Athletes' evaluations of their head coaches' coaching competency. *Research Quarterly for Exercise and Sport*, 77(1), 451-563.

Short, S.E & Short, M.W. (2004). Coaches assessment of their coaching efficacy compared to athletes' perceptions. *Perceptual and Motor Skills*, 99(2), 729-736.

Vargas-Tonsing, T.M., Myers, N.D. & Feltz, D.L. (2004). Coaches' and athletes' perceptions on efficacy-enhancing techniques. *The Sport Psychologist*, 18(4), 397-414.

Vargas-Tonsing, T.M., Warners, A.L. & Feltz, D.L. (2003). The predictability of coaching efficacy on team efficacy and player efficacy in volleyball. *Journal of Sport Behavior*, 26(4), 396-407.

Vella, S.A., Oades, L.G. & Crowe, T.P. (2010). The application of coach leadership models to coaching practice: current state and future directions. *International Journal of Sport Science and Coaching*, 5(3), 425-434.

# CHAPTER 5

## SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

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### 1. SUMMARY

The purposes of this dissertation were firstly, to determine the difference in rugby players' perceptions of coaching effectiveness between larger and smaller high schools and secondly, to determine the difference between university rugby players and coaches' perceptions of coaching effectiveness. The problem statement, research questions, objectives and hypotheses of the study were presented in Chapter 1, as well as the structure of the dissertation.

Chapter 2 comprised a literature overview titled "Perceptions of coaching effectiveness among coaches and players in sport". The chapter commences with a brief introduction identifying the need for quality coaches as youth sport is growing continually. Furthermore, the importance of effective coaching and the influence thereof for both the coach and the athlete are discussed. More insight regarding the complexity of the coaching process is gained, followed by popular tools that have been used in literature for measuring coaching behaviours, characteristics and effectiveness in sport.

Three questionnaires were selected from literature for purposes of this study, namely the Coaching Efficacy Scale (CES), the Coaching Competency Scale (CCS) and the adapted Coaching Efficacy Scale. More information regarding the development of each respective questionnaire was discussed, together with a summary of previous studies in which the specific questionnaires were applied. Thereafter a motivation followed for the selection of these

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questionnaires in the context of determining coaching efficacy and coaching effectiveness. To prevent any ambiguity, specific definitions with regard to coaching efficacy, coaching competency and coaching effectiveness were defined prior to the discussion of each questionnaire.

It was found that the majority (19) of the studies made use of the CES in view of coaching efficacy. Since the inception of the CES in 1999, various studies followed on populations that covered a broad age range (15-70 years) including both genders. Although studies can be found from 1999 up unto 2013, more results are needed to better understand coaching efficacy. 12 studies performed since the development of the CCS in 2006 could be traced that preferred the use of the CCS regarding the measurement of coaching competency perceived by the players. Participants were also from a wide age range (13-64 years) and both genders. The adapted CES, also developed for measuring the coaching effectiveness perceived by the players, were less popular, with only three studies that could be found. A major concern was that only one study could be found where one of the above-mentioned tools was used on a South-African population.

In Chapter 3, the first article was presented and titled “High School rugby players’ perception of coaching effectiveness” and has been published in the US-China Education Review and compiled in accordance with the guidelines of the above-mentioned journal. The aims of this article were firstly, to determine coaching effectiveness perceived by the high school rugby players and secondly, to determine the difference between perceived coaching effectiveness from players in larger schools compared to the perceptions of players from smaller schools in South Africa. No practically significant differences were observed between large and small schools regarding perceived coaching effectiveness. This can be due to the players’ limited frame of reference regarding quality coaching. Worthy to note is that not one of the constructs measured indicated an above average value, meaning that not even one coach was perceived by their respective players as above average. Consequently it was concluded that voluntary coaches at high school level might not be up to standard.

Chapter 4 contained the second article, titled “Coaches and players’ perceptions on coaching effectiveness in club level rugby union: A comparative study”. The second article was compiled in accordance with the guidelines of the African Journal for Physical, Health Education, Recreation and Dance. The aim of the study was to compare the perception of the coach regarding his/her coaching effectiveness with the players’ perceptions regarding the perceived

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coaching effectiveness. The coaches' perception regarding their own coaching effectiveness was measured using the CES. The players' perception of how effective they perceive their respective coaches to be was measured using the adapted version of the CES. Mixed model results indicated that significant differences exist regarding the perceptions of the coaches compared to the perceptions of the players. For all four constructs measured the coaches' perceptions were statistically significantly higher than the players' perceptions. Thus, the coaches rated themselves more positive than did their players. Understanding the value of the players' perception regarding perceived coaching effectiveness, clubs and institutions should not be ignorant about players' input. Therefore, when coaching effectiveness is measured, the players' contributions are imperative. Observing the total coaching effectiveness values, it is found that 8 of the 13 coaches rated themselves overall higher than did their respective players. Only 5 coaches' rated themselves lower than did their players. Interesting enough is that 3 coaches that were perceived to be highly effective according to their players had lower self-perceptions than other coaches. The highest perception values were from coaches rating their own coaching effectiveness. Margin differences with regard to the players and coaches' perceptions ranged between 0,2 and 2,4, indicating that large perception differences exist between some coaches and their respective players, whereas small differences also exist which might be a more accurate measurement of coaching effectiveness. Literature proposed that the players' needs should be met by what the coach has to offer. Therefore one can assume that the smaller the margin difference, the more accurate the values of both the coach and the player might be.

## 2. CONCLUSIONS

The conclusions drawn from this research results are presented in accordance with the set hypotheses found in Chapter 1.

**Hypothesis 1:** *The perceptions of players at larger secondary schools will indicate a significantly higher coaching effectiveness value than that of the players from smaller secondary schools.*

Hypothesis 1 is rejected as the results indicate that no practically significant differences between players' perceptions from large schools and players' perceptions from smaller schools with regard to the perceived coaching effectiveness. It is therefore concluded that according to the players' perceptions, coaches from larger schools are not necessarily better perceived by players than the coaches from smaller schools. Low total coaching effectiveness values were observed,

meaning that voluntary coaches at high school level might not necessarily be up to standard. Similarly low values were found concerning the four constructs measured for all coaches.

**Hypothesis 2:** *There will be a significantly practical difference between the perceptions of the players and the coaches regarding coaching effectiveness at university level.*

Hypothesis 2 is rejected based on the findings that no significantly practical differences existed when the perceptions of the players were compared with those of the coaches with regard to the four coaching effectiveness constructs measured. However, statistically significant differences were found for all four constructs measured although it is not important in practice. The total coaching effectiveness scores indicate that the majority of the coaches' ratings were higher than those of their players. Previous literature indicated the same trend, namely that coaches favoured their own coaching effectiveness more than did their players. Clearly coaches tend to rate themselves higher than do their players, although not necessarily significantly.

In both studies, low coaching effectiveness values were observed among players. This does not necessarily indicate ineffective coaching abilities, due to the inconsistent pattern between the players and coaches' perceptions. It is therefore concluded that the coaches as well as players' perceptions are crucial when measuring coaching effectiveness, whether it is at high school or university level.

### **3. LIMITATIONS AND RECOMMENDATIONS**

Although similar studies exist, this study was the first of its kind on a South African population. It was observed that voluntary coaches at high school level might not be up to standard and that no significant differences exist between perceived coaching effectiveness regarding larger schools compared to smaller school. Perception differences were observed between coaches and players regarding coaching effectiveness, indicating that when coaching effectiveness is measured the coaches as well as the players' perceptions are important. However, it is still important to consider the shortcomings of this study when the results are interpreted:

- 3.1 Group participants for large and small schools were not equally divided; meaning that for comparative purposes researchers should attempt to include equal numbers.

- 3.2 Variables such as performance outcomes or satisfaction outcomes have not been accounted for, which is why it is recommended that perceptions of coaching effectiveness should be measured more regularly throughout the season in order to determine whether these variables affect perceptions.
- 3.3 Participants were all from a team sport; therefore it is advisable that participants of individual sport codes should be included to determine whether the pattern will repeat itself with regard to the perceptions of coaching effectiveness between coaches and players.

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# APPENDICES

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# APPENDIX A

## GENERAL INFORMATION, INFORMED CONSENT FORM.

Geagte Puk Rugby Instituut en afrigters

Dit is vir my 'n voorreg om van hierdie geleentheid gebruik maak om 'n navorsing studie aan u voor te stel. Hierdie studie is van groot waarde om sodoende my M-graad te voltooi. Die studie hou ook waarde in vir die PRI en die afrigters. Graag vra ek vir u bereidwilligheid om aan die studie deel te neem.

Die doel van die navorsing is om data te verkry deur gebruik te maak van die CES (coaching efficacy scale). Die spelers vul elkeen 'n aparte vraelys in sowel as die betrokke afrigter. Dit is reeds op Hoërskool vlak uitgevoer.

Die CES bestaan uit 24 vrae en meet die volgende 4 komponente  
Tegniek, wedstryd strategie, karakterbou en motivering

Dit is belangrik om in ag te neem dat die navorsing anoniem is. Ook word niemand se vermoëns hierdeur bepaal nie, maar slegs die persepsies van beide die spelers en afrigters.

Indien die afrigter wel terugvoer verlang kan die navorser terugvoer verskaf met inagneming dat dit steeds anoniem is.

Hiermee gee ek as afrigter van die Puk Rugby Instituut gedurende 2011 seisoen toestemming dat ek sowel as my spelers aan die studie sal deelneem.

Byvoorbaat dank

Retief Broodryk

Dear Puk Rugby Institute and coaches

It is a great honor for me to use this opportunity and present my research study to you. This study is of great value to obtain my Masters-degree as well as for the PRI and coaches. Therefore I sincerely ask for your willingness to participate in this study.

The aim of this research is to obtain data by making use of the CES (Coaching Efficacy Scale). The players and the coaches involved will fill in a separate questionnaire. This is already executed on a High school level.

The CES consists of 24 questions and measures the following 4 components:  
Technique, Game strategy, Character building and Motivation.

It is important to take into consideration that the research would stay anonymous. Nor will anybody's abilities or skills be determined by means of this questionnaire, but only the perceptions of both the players and the coaches.

If the coach would require the feedback, the researcher may provide it taking into consideration that it would stay anonymous.

Hereby I as a coach of the Puk Rugby Institute during the 2011 season give permission that my players and I will participate in this study.

Yours sincere  
Retief Broodryk



NORTH-WEST UNIVERSITY  
YUNIBESITI YA BOKONE-BOPHIRIMA  
NOORDWES-UNIVERSITEIT  
POTCHEFSTROOMKAMPUS

**Informed consent:**

Player's name: \_\_\_\_\_

Birth date: \_\_\_\_\_

**PLEASE READ THE FOLLOWING CAREFULLY:**

**1. AIMS OF THE STUDY**

- Determine the players' perceptions of coaching efficacy
- Compare coaching efficacy between large and small schools

**2. CONFIDENTIALITY**

The Questionnaires are strictly confidential and only the researcher will have access to the results. Results will be published anonymously.

**I hereby declare that:**

- I give my written consent to the NWU researcher, to conduct the questionnaire, which form part of the program.
- I indemnify the University researchers against any injury, death or damage, which might stem from my participation in the program.

Player's signature \_\_\_\_\_

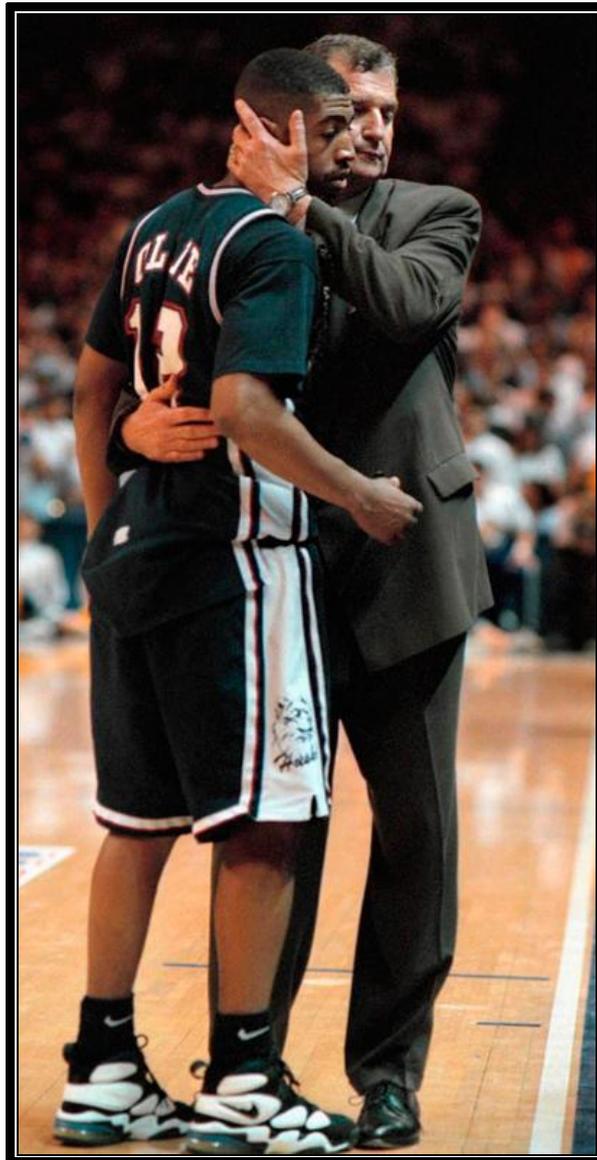
Date: \_\_\_\_\_

Parent's signature \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX B

COACHING EFFICACY SCALE (ENGLISH AND AFRIKAANS),  
ADAPTED VERSION OF THE COACHING EFFICACY SCALE  
(ENGLISH AND AFRIKAANS)



**The CES (Coaches efficacy scale)**

**Coach (Name and surname):** \_\_\_\_\_

**Team (eg. u/19 A 2):** \_\_\_\_\_

Read each question and circle the most appropriate number to the right of the question on a scale from 0 (not at all effective) to 9 (extremely effective). Answer each question honestly (answers will be confidential).

<b>In your opinion how effective are you as a coach in your ability to:</b>	0 – not at all effective 9 – extremely effective
1) help players maintain confidence in themselves?	0 1 2 3 4 5 6 7 8 9
2) recognize opposing teams strengths during competition?	0 1 2 3 4 5 6 7 8 9
3) mentally prepare his players for game strategies?	0 1 2 3 4 5 6 7 8 9
4) understand competitive strategies?	0 1 2 3 4 5 6 7 8 9
5) instill an attitude of good moral character?	0 1 2 3 4 5 6 7 8 9
6) build the self-esteem of his players?	0 1 2 3 4 5 6 7 8 9
7) demonstrate the skills of his sport?	0 1 2 3 4 5 6 7 8 9
8) adapt to different game situations?	0 1 2 3 4 5 6 7 8 9
9) recognize opposing teams weaknesses during competition?	0 1 2 3 4 5 6 7 8 9
10) motivates his players?	0 1 2 3 4 5 6 7 8 9
11) make critical decisions during competition?	0 1 2 3 4 5 6 7 8 9
12) build team cohesion?	0 1 2 3 4 5 6 7 8 9
13) instill an attitude of fair play among his/her players?	0 1 2 3 4 5 6 7 8 9
14) coach individual players on technique?	0 1 2 3 4 5 6 7 8 9
15) build the self-confidence of his/her players?	0 1 2 3 4 5 6 7 8 9
16) develop players abilities?	0 1 2 3 4 5 6 7 8 9
17) maximize his/her team's strengths during competition?	0 1 2 3 4 5 6 7 8 9
18) recognize talent in players?	0 1 2 3 4 5 6 7 8 9
19) promote good sportsmanship?	0 1 2 3 4 5 6 7 8 9
20) detect skill errors?	0 1 2 3 4 5 6 7 8 9
21) adjust his/her game strategy to fit the team's talent?	0 1 2 3 4 5 6 7 8 9
22) teach the skills of his/her sport?	0 1 2 3 4 5 6 7 8 9
23) build team confidence?	0 1 2 3 4 5 6 7 8 9
24) instill an attitude of respect for others?	0 1 2 3 4 5 6 7 8 9

**Die CES (Coaches efficacy scale)**

**Afrigter (Naam en van):** \_\_\_\_\_

**Span (bv. 0/19 A2):** \_\_\_\_\_

Lees elke vraag aandagtig deur en omkring die mees gepaste nommer op 'n skaal van 0 (glad nie effektief) tot 9 (baie effektief). Daar is geen regte of verkeerde antwoord nie. Beantwoord elke vraag eerlik (antwoorde sal konfidensieel gehou word).

<b>In jou opinie hoe effektief is jy as afrigter in jou vermoë om:</b>	0 – glad nie effektief 9 – baie effektief
1) Spelers te help om hul selfvertroue te onderhou	0 1 2 3 4 5 6 7 8 9
2) Opponente se sterkpunte te identifiseer tydens 'n wedstryd	0 1 2 3 4 5 6 7 8 9
3) Spelers psigies voor te berei vir wedstryd strategieë	0 1 2 3 4 5 6 7 8 9
4) Kompetierende strategieë te verstaan	0 1 2 3 4 5 6 7 8 9
5) Gesindheid te skep van goeie morele karakter	0 1 2 3 4 5 6 7 8 9
6) Selfbeeld van sy spelers te bou	0 1 2 3 4 5 6 7 8 9
7) Die vaardighede van sport te demonstreer	0 1 2 3 4 5 6 7 8 9
8) Aan te pas by verskillende wedstryd situasies	0 1 2 3 4 5 6 7 8 9
9) Opponente se swakpunte tydens 'n wedstryd te identifiseer	0 1 2 3 4 5 6 7 8 9
10) Sy spelers te motiveer	0 1 2 3 4 5 6 7 8 9
11) Kritieke besluite te neem tydens kompetisie	0 1 2 3 4 5 6 7 8 9
12) Span kohesie te bou	0 1 2 3 4 5 6 7 8 9
13) 'n Gesindheid van regverdige spel tussen atlete te skep	0 1 2 3 4 5 6 7 8 9
14) Individuele tegnieke af te rig	0 1 2 3 4 5 6 7 8 9
15) Om spelers se selfvertroue te bou	0 1 2 3 4 5 6 7 8 9
16) Spelers se vaardighede te ontwikkel	0 1 2 3 4 5 6 7 8 9
17) Span se krag te maksimaliseer	0 1 2 3 4 5 6 7 8 9
18) Talente van atlete te identifiseer	0 1 2 3 4 5 6 7 8 9
19) Goeie sportmanskap te bevorder	0 1 2 3 4 5 6 7 8 9
20) Vaardigheidsfoute te identifiseer	0 1 2 3 4 5 6 7 8 9
21) Wedstryd plan aan te pas sodat dit by die span se talente inpas	0 1 2 3 4 5 6 7 8 9
22) Die vaardighede van sport aan te leer	0 1 2 3 4 5 6 7 8 9
23) Span se vertroue te bou	0 1 2 3 4 5 6 7 8 9
24) Gesindheid van respek vir ander te skep	0 1 2 3 4 5 6 7 8 9

**The adapted CES (Coaches efficacy scale)**

**Coach (Name and surname):** \_\_\_\_\_

**Team (eg. lions):** \_\_\_\_\_

**Position (eg. forward):** \_\_\_\_\_

Read each question and circle the most appropriate number to the right of the question on a scale from 0 (not at all effective) to 9 (extremely effective). Answer each question honestly (answers will be confidential).

<b>In your opinion how effective is your coach in his ability to:</b>	0 – not at all effective 9 – extremely effective
1) help players maintain confidence in themselves?	0 1 2 3 4 5 6 7 8 9
2) recognize opposing teams strengths during competition?	0 1 2 3 4 5 6 7 8 9
3) mentally prepare his players for game strategies?	0 1 2 3 4 5 6 7 8 9
4) understand competitive strategies?	0 1 2 3 4 5 6 7 8 9
5) instill an attitude of good moral character?	0 1 2 3 4 5 6 7 8 9
6) build the self-esteem of his players?	0 1 2 3 4 5 6 7 8 9
7) demonstrate the skills of his sport?	0 1 2 3 4 5 6 7 8 9
8) adapt to different game situations?	0 1 2 3 4 5 6 7 8 9
9) recognize opposing teams weaknesses during competition?	0 1 2 3 4 5 6 7 8 9
10) motivates his players?	0 1 2 3 4 5 6 7 8 9
11) make critical decisions during competition?	0 1 2 3 4 5 6 7 8 9
12) build team cohesion?	0 1 2 3 4 5 6 7 8 9
13) instill an attitude of fair play among his/her players?	0 1 2 3 4 5 6 7 8 9
14) coach individual players on technique?	0 1 2 3 4 5 6 7 8 9
15) build the self-confidence of his/her players?	0 1 2 3 4 5 6 7 8 9
16) develop players abilities?	0 1 2 3 4 5 6 7 8 9
17) maximize his/her team's strengths during competition?	0 1 2 3 4 5 6 7 8 9
18) recognize talent in players?	0 1 2 3 4 5 6 7 8 9
19) promote good sportsmanship?	0 1 2 3 4 5 6 7 8 9
20) detect skill errors?	0 1 2 3 4 5 6 7 8 9
21) adjust his/her game strategy to fit the team's talent?	0 1 2 3 4 5 6 7 8 9
22) teach the skills of his/her sport?	0 1 2 3 4 5 6 7 8 9
23) build team confidence?	0 1 2 3 4 5 6 7 8 9
24) instill an attitude of respect for others?	0 1 2 3 4 5 6 7 8 9

**The adapted CES (Coaches efficacy scale)**

**Afrigter (Naam en van):** \_\_\_\_\_

**Provinsie (bv. leeus):** \_\_\_\_\_

**Posisie (bv. Voorspeler):** \_\_\_\_\_

Lees elke vraag aandagtig deur en omkring die mees gepaste nommer op 'n skaal van 0 (glad nie effektief) tot 9 (baie effektief). Daar is geen regte of verkeerde antwoord nie. Beantwoord elke vraag eerlik (antwoorde sal konfidensieel gehou word).

<b>In jou opinie hoe effektief is jou afrigter in sy vermoë om:</b>	0 – glad nie effektief 9 – baie effektief
1) Spelers te help om hul selfvertroue te onderhou	0 1 2 3 4 5 6 7 8 9
2) Opponente se sterkpunte te identifiseer tydens 'n wedstryd	0 1 2 3 4 5 6 7 8 9
3) Spelers psigies voor te berei vir wedstryd strategieë	0 1 2 3 4 5 6 7 8 9
4) Kompetierende strategieë te verstaan	0 1 2 3 4 5 6 7 8 9
5) Gesindheid te skep van goeie morele karakter	0 1 2 3 4 5 6 7 8 9
6) Selfbeeld van sy spelers te bou	0 1 2 3 4 5 6 7 8 9
7) Die vaardighede van sport te demonstreer	0 1 2 3 4 5 6 7 8 9
8) Aan te pas by verskillende wedstryd situasies	0 1 2 3 4 5 6 7 8 9
9) Opponente se swakpunte tydens 'n wedstryd te identifiseer	0 1 2 3 4 5 6 7 8 9
10) Sy spelers te motiveer	0 1 2 3 4 5 6 7 8 9
11) Kritieke besluite te neem tydens kompetisie	0 1 2 3 4 5 6 7 8 9
12) Span kohesie te bou	0 1 2 3 4 5 6 7 8 9
13) 'n Gesindheid van regverdige spel tussen atlete te skep	0 1 2 3 4 5 6 7 8 9
14) Individuele tegnieke af te rig	0 1 2 3 4 5 6 7 8 9
15) Om spelers se selfvertroue te bou	0 1 2 3 4 5 6 7 8 9
16) Spelers se vaardighede te ontwikkel	0 1 2 3 4 5 6 7 8 9
17) Span se krag te maksimaliseer	0 1 2 3 4 5 6 7 8 9
18) Talente van atlete te identifiseer	0 1 2 3 4 5 6 7 8 9
19) Goeie sportmanskap te bevorder	0 1 2 3 4 5 6 7 8 9
20) Vaardigheidsfoute te identifiseer	0 1 2 3 4 5 6 7 8 9
21) Wedstryd plan aan te pas sodat dit by die span se talente inpas	0 1 2 3 4 5 6 7 8 9
22) Die vaardighede van sport aan te leer	0 1 2 3 4 5 6 7 8 9
23) Span se vertroue te bou	0 1 2 3 4 5 6 7 8 9
24) Gesindheid van respek vir ander te skep	0 1 2 3 4 5 6 7 8 9

# APPENDIX C

## SUBMISSION GUIDELINES FOR AUTHORS: US-CHINA EDUCATION REVIEW.





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## Manuscript Submission Guidelines

*US-China Education Review A & B* encourage the submission of articles about the latest research in curriculum and instruction, educational policy and administration, educational philosophy, history and sociology of education, higher education, teacher education, comparative education vocational education, distance education and e-learning, educational technology, special education and early education psychology research and so on, across a range of education fields including educational reform and development, pedagogical theory and methods, community and universities, schools and families, the education for diverse social groups across gender and youth, urban and rural, mainstream and minorities, as well as the translations of the most important articles in the field. Submissions are accepted with the understanding that they will be subject to review and editorial revision and that they neither have been nor will be published elsewhere.

### Information for authors

The entire manuscript should include title, abstract (150-200 words), key words (3-8 words) biography, body, references, appendices, footnotes, tables, exhibits, maps, figures, and so on.

1. The manuscript should be original, and has not been published previously. Do not submit material that is currently being considered by another journal.
2. Manuscripts may be 3000-8000 words or longer if approved by the editor, including an abstract, texts, tables, footnotes, appendixes, and references. **All of these must be write in APA format.** The title should not be exceeding 15 words, and abstract should not be exceeding 400 words. 3-8 keywords or key phrases are required.
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4. Authors of the articles being accepted are required to sign the Transfer of Copyright Agreement form.
5. Author will receive one or two copies of the issue of the journal containing their article.

### Biography

Name: Full name, Should not be abbreviation, Chinese name in English: ZHANG Da-ming, ZHUGE Hua Academic title: such as Professor, Associate professor, Lecturer ...

Degree:

Affiliation(s): Research field: Post address:

Postcode:

### **Citations**

When referring to another work, give the author's name and year of publication in parentheses and without punctuation, unless page numbers are included. References are placed before marks of punctuation when possible.

(Smith, 2001), (Garrison, Anderson, & Archer, 2000), (Stewart et al., 2004), (Mason, 1998; Neuhauser, 2002), (Thomas, 1997, 1989b), (Jones, 1998: 69), Jones (2002) states . . .

### **Reference List**

Citations are keyed to a reference list at the end of the manuscript, which is arranged according to the Sequencing it appears. The year of publication follows the author's name. Title capitalization is used for journal titles, sentence capitalization for book and article titles. The basic reference list formats are:

Last name, Initials. (Year). Article title: Article subtitle. Journal Title Volume (issue): pages.

Last name, Initials, Initials Last name2, and Initials Last name3. (Year). Book title. City: Publisher, pages .

### **See examples below**

#### **Journal Articles:**

Collis, B., and J. Moonen. (2002). Flexible learning in a digital world. *Open Learning*, 17 (3), 217-230.

Muirhead, B. (2002). Research advice for today's online doctoral students. *U.S. Distance Learning Association Journal*, 16 (6). Retrieved date from [http://www.usdla.org/html/journal/JUN02\\_Issue/article03.html](http://www.usdla.org/html/journal/JUN02_Issue/article03.html)

#### **Books, One Author (or Editor):**

Khan, B. H., ed. (1997). *Web-based instruction*. Englewood Cliffs, NJ: Educational Technology Publications, 252.

#### **Books, Two or More Authors:**

Chute, A. G., M. M. Thompson, & B. W. Hancock. (1999). *The McGraw-Hill handbook of distance learning*. New York: McGraw-Hill, 586.

**Chapters in Books:**

Duffy, T. M. & J. R. Kirkley. (2004). Introduction: Theory and practicing distance education. In T. M. Duffy & J. R. Kirkley (Ed.), *Learner-centered theory and practice in distance education* (pp. 3-13). Mahwah, NJ: Lawrence Erlbaum Associates, Inc..

**Papers:**

Roblyer, M. (2002). A rubric to encourage and assess student engagement in online course conferences. Paper presented at *The Society for Information Technology in Teacher Education Annual Conference*, March, Nashville, TN.

**Dissertations:**

Bunker, E. L. (1998). *The ICCE/ICDE Conference Proceedings: A Forum Analysis of a Distance Education Discourse Community*. Ph.D. diss., The Pennsylvania State University, University Park, 102.

**Miscellaneous:**

ELRA Group, Inc. (1986). *Adoption of Telecourses: The Adoption and Utilization of Annenberg/CPB Project Telecourses*. Annenberg/CPB Project. Photocopy.

Marttunen, M. (1998). *Learning of argumentation in face-to-face and email environments*. ERIC, ED 422791.

McGrane, S. (2000). *Is the Web truly accessible to the disabled? CNET special reports*. Retrieved date from <http://www.cnet.com/specialreports/0-6014-7-1530073.html>.

## APPENDIX D

SUBMISSION GUIDELINES FOR AUTHORS: AFRICAN JOURNAL  
FOR PHYSICAL, HEALTH EDUCATION, RECREATION AND  
DANCE.



## **GUIDELINES FOR AUTHORS**

The African Journal for Physical, Health Education, Recreation and Dance (AJPHERD) is a peer-reviewed journal established to:

- i) provide a forum for physical educators, health educators, specialists in human movement studies and dance, as well as other sport-related professionals in Africa, the opportunity to report their research findings based on African settings and experiences, and also to exchange ideas among themselves.
- ii) afford the professionals and other interested individuals in these disciplines the opportunity to learn more about the practice of the disciplines in different parts of the continent.
- iii) create an awareness in the rest of the world about the professional practice in the disciplines in Africa.

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Manuscripts should be type written in fluent English (using 12-point Times New Roman font and 1½ line-spacing) on one side of white A4-sized paper justified fully with 3cm margin on all sides.

### Guidelines for Authors 317

In preparing manuscripts, MS-Word, Office 98 or Office 2000 for Windows should be used. Length of manuscripts should not normally exceed 12 printed pages (including tables, figures, references, etc.). For articles exceeding 10 typed pages US\$ 10.0 is charged per every extra page. Longer manuscripts may be accepted for publication as supplements or special research reviews. Authors will be requested to pay a publication charge of US\$ 350.0 to defray the very high cost of publication. The pages of manuscripts must be numbered sequentially beginning with the title page. The presentation format should be consistent with the guidelines in the publication format of the American Psychological Association (APA) (4th edition).

### Title page:

The title page of the manuscript should contain the following information:

Concise and informative title.

Author(s') name(s) with first and middle initials. Authors' highest qualifications and main area of research specialisation should be provided.

Author(s') institutional addresses, including telephone and fax numbers. Corresponding author's contact details, including e-mail address.

A short running title of not more than 6 words.

### Abstract

An abstract of 200-250 words is required with up to a maximum of 5 words provided below the abstract. Abstract must be typed on a separate page using single line spacing, with the purpose of the study, methods, major results and conclusions concisely presented. Abbreviations should either be defined or excluded.

### Text

Text should carry the following designated headings: Introduction, materials and methods, results, discussion, acknowledgement, references and appendices (if appropriate).

### ***Introduction***

The introduction should start on a new page and in addition to comprehensively giving the background of the study should clearly state the problem and purpose of the study. Authors should cite relevant references to support the basis of the study. A concise but informative and critical literature review is required.

### ***Materials and Methods***

This section should provide sufficient and relevant information regarding study participants, instrumentation, research design, validity and reliability estimates, data collection procedures, statistical methods and data analysis techniques used. Qualitative research techniques are also acceptable.

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Findings should be presented precisely and clearly. Tables and figures must be presented separately or at the end of the manuscript and their appropriate locations in the text indicated. The results section should not contain materials that are appropriate for presentation under the discussion section. Formulas, units and quantities should be expressed in the systeme

*internationale (SI)* units. Colour printing of figures and tables is expensive and could be done upon request authors' expense.

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The American Psychological Association (APA) format should be used for referencing. Only references cited in the text should be alphabetically listed in the reference section at the end of the article. References should not be numbered either in the text or in the reference list.

Authors are advised to consider the following examples in referencing:

Examples of citations in body of the text:-

For one or two authors; Kruger (2003) and Travill and Lloyd (1998). These references should be cited as follows when indicated at the end of a statement: (Kruger, 2003); (Travill & Lloyd, 1998).

For three or more authors cited for the first time in the text; Monyeki, Brits, Mantsena and Toriola (2002) or when cited at the end of a statement as in the preceding example; (Monyeki, Brits, Mantsena & Toriola, 2002). For subsequent citations of the same reference it suffices to cite this particular reference as: Monyeki et al. (2002).

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In compiling the reference list at the end of the text the following examples for journal references, chapter from a book, book publication and electronic citations should be considered:

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Journal references should include the surname and initials of the author(s), year of publication, title of paper, name of the journal in which the paper has been published, volume and number of journal issue and page numbers.

For one author: McDonald, A.K. (1999). Youth sports in Africa: A review of programmes in selected countries. *International Journal of Youth Sports*, 1(4), 102-117.

For two authors: Johnson, A.G. & O’Kefee, L.M. (2003). Analysis of performance factors in provincial table tennis players. *Journal of Sport Performance*, 2(3), 12-31.

For multiple authors: Kemper, G.A., McPherson, A.B., Toledo, I. & Abdullah, I.I. (1996). Kinematic analysis of forehand smash in badminton. *Science of Racket Sports*, 24(2), 99-112.

Examples of book references:

Book references should specify the surname and initials of the author(s), year of publication of the book, title, edition, page numbers written in brackets, city where book was published and name of publishers. Chapter references should include the name(s) of the editor(s) and other specific information provided in the third example below:

For authored references: Amusa, L.O. & Toriola, A.L. (2003). *Foundations of Sport Science* (1st ed.) (pp. 39-45). Mokopane, South Africa: Dynasty Printers.

For edited references: Amusa, L.O. and Toriola, A.L. (Eds.) (2003). *Contemporary Issues in Physical Education and Sports* (2nd ed.) (pp. 20-24). Mokopane, South Africa: Dynasty Printers.

For chapter references in a book: Adams, L.L. & Neveling, I.A. (2004). Body fat characteristics of sumo wrestlers. In J.K. Manny and F.O. Boyd (Eds.), *Advances in Kinanthropometry* (pp. 21-29). Johannesburg, South Africa: The Publishers Company Ltd.

Example of electronic references:

Electronic sources should be easily accessible. Details of Internet website links should also be provided fully. Consider the following example:

Wilson, G.A. (1997). Does sport sponsorship have a direct effect on product sales? The Cyber-Journal of Sport Marketing (online), October, 1(4), at <http://www.cad.gu.au/cjasm/wilson.html>. February 1997.

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# APPENDIX E

## ACADEMIC OUTPUT

Publication: Broodryk, R. & Van den Berg, P.H. 2011. High school rugby players' perception of coaching effectiveness. *US-China education review*, 7:1009-1014.

Conference paper delivered: Broodryk, R. Literature overview: Perceptions of coaching effectiveness among coaches and players' in sport. South African Sports Medicine Association, 15th Biennial International Congress, 24-27 October 2013, Wild Coast Sun, South Africa.

# APPENDIX F

31 Oktober 2013



Hiermee verklaar ek, me Cecilia van der Walt, dat ek die taalversorging van die studie van mnr Retief Broodryk, onder die opskrif *Coaches and players' perceptions of coaching effectiveness in rugby union* behartig het.

ME CECILIA VAN DER WALT

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