

Examining the Influence of Coaching Competencies on Coach Leadership Styles: A Hierarchical Multiple Regression Approach

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Abstract

Numerous studies have demonstrated that coach leadership styles are vital for athletes' training success and game outcomes. Coaching leadership influences sports results, and previous research emphasizes the most effective coaching behaviors. Despite the acknowledged importance of coaching skills in effective sports leadership, little research has explored how coaching competencies relate to specific leadership styles. To address this gap, this study identifies key coaching competency factors linked to democratic and autocratic leadership. The research examines Ghanaian university (collegiate) athletes' perceptions of coaching skills and their coaches' behavioral traits. Data were collected from 308 athletes involved in college sports in Ghana. Findings showed that athletes regard motivation and game strategy as critical coaching competencies shaping their perceptions of their coaches' democratic and autocratic leadership. While technique competency was essential for democratic leadership, it was not for autocratic leadership. Character-building skills were not a significant factor for either style. Coaching education programs, such as those in college athletic departments, can use these insights to guide professional leadership development, enhance core competencies, and foster effective coaching leadership.

Keywords: coaching leadership, coaching competency, democratic leadership, autocratic leadership

Introduction

Coach leadership styles can influence the success of sports, and previous research has shown the most effective coaching behaviors (Jowett, 2017). Sports in the universities in Ghana are governed by the Ghana Universities Sports Association (GUSA). The relationship between university coaches and athletes in Ghana has continued to evolve. Coaches are more supportive of athletes' dual roles as students and sportspersons, helping them balance academic work with sports participation (University of Education, Winneba, 2025, January 23; University of Ghana, 2024). However, studies exploring Ghanaian university athletes' perceptions of coaching competency and their coaches' behavioral traits are scarce.

Many studies have found that coach leadership styles play a crucial role in athletes' training effectiveness and game outcomes (Becker & Wrisberg, 2008), psychological development and satisfaction (Weiss & Friedrichs, 1986), and team cohesion (Jowett & Chaundy, 2004). In sports settings, Chelladurai and Saleh (1980) developed the Multidimensional Model of Leadership, which includes five dimensions: democratic behavior, autocratic behavior, training and instruction, social support, and positive feedback. Among these five dimensions, democratic leadership and autocratic leadership are opposing traits. Therefore, this study compares democratic and autocratic leadership to prevent conflicts between athletes and coaches, since a coach's primary role is to adapt to the needs and desires of athletes (Kim et al., 2021).

Democratic leadership differs from autocratic leadership because it involves coaches sharing their authority with athletes and allowing them to take responsibility for team performance and skill development in specific areas. With democratic leadership, athletes have more influence in decision-making, such as how they train and complete tasks (Cruz & Kim, 2017). While a higher level of democratic leadership is linked to more positive and fewer negative psychological reactions in athletes, it can also cause conflicts, such as disrespect and disobedience (Foels et al., 2000).

While democratic leadership allows athletes to express their opinions and influence decisions, autocratic leadership expects athletes to accept the coach's decisions and opinions. Autocratic leadership usually features a hierarchical, top-down decision-making process, where coaches hold authority and control over all aspects of athletes, and athletes' feedback or comments are generally not accepted (Hoyle, 2012). It emphasizes a coach's authority and maintains distance from athletes (Chelladurai & Saleh, 1980). With autocratic leadership, the coach's decision-making dominates, and his or her personal power limits athletes' freedom of choice. This style may facilitate quick problem-solving and improve practice effectiveness, which are important in competitive sports (Jin et al., 2022; Yang & Jowett, 2010).

Castillo and Espinosa (2014) found that the autocratic leadership approach led to more effective improvement in dance skill performance because it enhanced students' concentration during learning. However, the autocratic coaching style can negatively impact athletes' intrinsic motivation because autocratic coaches often hinder athletes' psychological motivation (Hollembeak & Amorose, 2005; Mallett, 2005). Additionally, Price and Weiss (2000) observed that athletes reported higher levels of burnout and anxiety, and lower levels of enjoyment when subjected to higher levels of autocratic coaching leadership compared to lower levels.

In the sports context, examining coach leadership styles is especially important because sports are more complex and unique compared to other settings (Farh & Cheng, 2000). For example, if athletes prefer a high level of autonomy but their coach exerts assertive control over them, they may feel tension with their coach. This disparity can lead to poor performance and distrust between the coach and athletes (Jin et al., 2022). In this context, it is essential to avoid conflict between the coach's leadership style (e.g., democratic or autocratic) and the athletes' ability to achieve mutual functional goals (Yang & Jowett,

2010). Moreover, coach leadership fosters positive coach-athlete relationships through engagement, flexibility, and communication. Despite the acknowledged importance of coaching competence in effective sports leadership (Carroll et al., 2008), little research has explored how coaching skills relate to specific leadership styles. To address this gap, this study identifies key coaching competency factors associated with democratic and autocratic leadership among coaches.

To understand a coach's abilities, Myers et al. (2006) proposed a conceptual framework of coaching competency to explain athletes' perceptions of their coach's capabilities. Myers et al. (2006) defined coaching competency as the coach's evaluations that influence athletes' learning and performance, conceptualized as a combination of game strategy, motivation, technique, and character-building skills. Game strategy competency refers to assessing the coach's strategic ability during competition. Motivation competency relates to evaluating the coach's ability to impact athletes' psychological mood and skills. Technique competency involves athletes' assessment of the coach's instructions during practice, while character-building competency measures the coach's ability to foster a positive attitude and personal growth in athletes. Therefore, coaching competency reflects perceptions of a coach's capability to influence athletes' psychological behaviors, such as perceptions, beliefs, and attitudes (Myers et al., 2006).

Coaching competency can be seen as a form of proxy efficacy, as athletes depend on their coaches to reach their goals. Proxy agency explains how individuals seek safety, desired outcomes, and well-being through external proxy agents (Kao et al., 2021). According to social cognitive theory (Bandura, 1999), personal efficacy beliefs relate to personal agency, collective agency, and proxy agency. Specifically, proxy agency is closely linked to coaching competency (Kao & Tsai, 2016) because athletes turn to proxy agents when they have not achieved their goals. Athletes may believe that other agents, like coaches, can do this better. The coach also aims to proxy control over athletes' improvement and success by using their knowledge and experience (Lara-Bercial et al., 2022). Since the connection between a coach's behavior and athletes' attitudes depends on athletes' perceptions of the coach's actions (Horn, 2002), athletes' views of a coach's behavior are crucial for coaching effectiveness. Therefore, it is important to examine which coaching competency factors influence different coach leadership styles, such as democratic and autocratic leadership.

Much of the coach leadership research has focused on identifying which specific coach leadership styles influence successful performance or positive psychological outcomes for athletes (Horn, 2002). However, it should not be limited to determining which coaching competency is more important than others because coach leadership effectiveness depends on the circumstances and situations, such as athletes' ability levels, team conditions, or levels of sports. For example, a high school coach may need to be democratic, providing clear and specific guidance and instructions for student-athletes. Conversely, coaches at the professional level are more likely to exert control over athletes by using their authority and power. Terry and Howe (1984) found that coaching effectiveness closely relates to task dependence, explaining that athletes in team sports tend to favor autocratic leadership over democratic leadership. Price and Weiss (2000), on the other hand, revealed that athletes reported higher levels of burnout and anxiety with lower perceived competence under higher levels of autocratic coaching. Therefore, this study investigates how coaching competency links leadership styles in sports, with a focus on democratic and autocratic leadership. The following hypotheses are proposed for this study:

H1-a. Given that athletes' psychological aspects (e.g., intrinsic motivation) are crucial, there is a positive relationship between motivation competency and democratic leadership.

H1-b. Given that athletes' psychological aspects (e.g., intrinsic motivation) are crucial, there is a positive relationship between motivation competency and autocratic leadership.

H2-a. Given that game strategies are crucial, there is a positive relationship between game strategy competency and democratic leadership.

H2-b. Given that game strategies are crucial, there is a positive relationship between game strategy competency and autocratic leadership.

H3-a. Given that participants in this study are collegiate athletes, and they may freely express their opinions and decisions during practice and competition, there is a positive relationship between technique competency and democratic leadership.

H3-b. Given that participants in this study are collegiate athletes, and they may freely express their opinions and decisions during practice and competition, there is no relationship between technique competency and autocratic leadership.

H4-a. Given that character-building competency is related to a coach's ability to foster a positive attitude and personal growth in athletes, there is a positive relationship between character-building competency and democratic leadership.

H4-b. Given that character-building competency is related to a coach's ability to foster a positive attitude and personal growth in athletes, there is a positive relationship between character-building competency and autocratic leadership.

Methodology

The researchers sent letters to the Heads of Sports Directorates of the Universities for permission to conduct the study in their institutions. In addition to requesting permission to conduct the study in their institutions, the researchers requested the Heads of Sports Directorates of the Universities to notify their student athletes, through their respective coaches, about the research and that permission has been granted for the study to be conducted in their institutions. Only athletes who had participated in at least one GUSA competition were included in the study. Athletes who did not compete in a GUSA competition were excluded. The consent form for the participants indicated that the study was voluntary and that they could withdraw at any time by discontinuing completion of the questionnaire.

The study utilized a purposive sampling technique to select 308 athletes from seven universities in Ghana. The estimated population size of university athletes in the country's 16 GUSA-affiliated universities eligible to participate in the GUSA Games was 4,400. However, the estimated number of athletes eligible in the seven universities purposively selected for the present study was 1,900. The researchers sent out 350 copies (50 copies to each institution) of the questionnaire to the seven universities. Out of the 350 copies, 314 of the questionnaires were completed and returned to the researchers. Data were collected from Summer through Fall 2024. However, data for six of the completed questionnaires were deleted during data analysis due to missing data. For more detailed information, please see Table 1 and Table 2.

Table 1

Frequencies and Percentages of Participants from the Universities (N = 308)

University	N (%)
University of Education, Winneba	49 (15.91%)

University of Cape Coast	45 (14.61%)
University of Ghana	47 (15.26%)
University of Health and Allied Sciences	44 (14.29%)
University of Energy and Natural Resources	34 (11.04%)
Kwame Nkrumah University of Science & Technology	46 (14.94%)
University for Development Studies	43 (13.95%)
Total	308 (100%)

Table 2

Frequencies and Percentages of Types of Sports (N = 308)

Sports	N (%)
Football	66 (21.40%)
Volleyball	38 (12.30%)
Hockey	16 (5.20%)
Basketball	15 (4.90%)
Tennis	11 (3.60%)
Table Tennis	10 (3.20%)
Cross Country	39 (12.70%)
Athletics (Track and Field)	102 (33.10%)
Pickleball	6 (1.90%)
Weightlifting	1 (0.30%)
Other	4 (1.30%)
Total	308 (100%)

Each participant completed a questionnaire divided into four sections. The coaching leadership style was examined using the scale developed by Chelladurai and Saleh (1980), which includes six items: three measuring democratic leadership (e.g., “Let his/her athletes share in decision-making”) and three items measuring autocratic leadership (e.g., “Works relatively independent of the athletes”). To assess coaching competency, participants rated twelve items across four variables (i.e., motivation, game strategy, technique, and character-building competency) based on Myers et al. (2006). Example items include: “My coach helps athletes maintain confidence in themselves” (motivation competency), “My coach understands competitive strategies” (game strategy competency), “My coach demonstrates the skills of his/her sport” (technique competency), and “My coach instills an attitude of good moral character” (character-building competency). All items were rated on a 7-point Likert scale (1=strongly disagree to 7=strongly agree). Finally, participants provided demographic information, including their sport, level of competition, gender, and place of residence.

After receiving Institutional Review Board approval at Southeast Missouri State University, data were collected from 308 athletes participating in collegiate sports in Ghana in 2024, including 185 males (60%) and 123 females (40%). Hierarchical regressions using the Statistical Package for the Social Sciences were conducted to examine the effect of coaching competency on democratic and autocratic leadership. The study employed a four-stage hierarchical approach, adding predictors in this order: motivation competency, game strategy competency, technique competency, and character-building competency.

Results

Before evaluating reliability and validity, data screening and assumption tests were conducted. First, normality was tested using absolute skewness and kurtosis scores. The absolute skewness values ranged from .30 (Autocratic) to 1.33 (Motivation), and the absolute kurtosis values ranged from .08 (Democratic) to 1.16 (Motivation). Therefore, the normality requirements based on criterion by Kline (2011) were satisfied. Second, multicollinearity was assessed. There was no evidence of problematic multicollinearity, as the variance inflation factor ranged from 2.09 (Motivation) to 2.56 (Game strategy), and tolerance ranged from .39 (Game strategy) to .48 (Motivation). The reliability results showed that all scales ranging from .75 – .86 were greater than the minimum criteria of Cronbach's alpha level of .70 (Hair et al., 2010).

A four-step hierarchical regression was conducted to test whether coaching competencies predict democratic leadership. First, the analysis entered motivation competency as a predictor. The model significantly predicted democratic leadership ($R^2 = .32$, Adj. $R^2 = .32$, $F(1,306) = 146.83$, $p < .001$). Motivation competency emerged as a highly significant predictor ($\beta = .57$, $p < .001$). Next, game strategy competency was added to the model. The model continued to predict significant democratic leadership ($R^2 = .41$, Adj. $R^2 = .41$, $F(1,305) = 43.44$, $p < .001$). Game strategy competency remained a robust predictor ($\beta = .39$, $p < .001$). In the third step, the technique competency was added to the model. The model continued to predict significantly democratic leadership ($R^2 = .42$, Adj. $R^2 = .41$, $F(1,304) = 4.05$, $p < .05$). Technique competency remained a modest predictor ($\beta = .13$, $p < .05$). In the last step, character-building competency was added. However, this step did not account for additional variance in democratic leadership ($R^2 = .42$, Adj. $R^2 = .41$, $F(1,303) = .11$, $p = .74$). Character-building competency was not a robust predictor ($\beta = .02$, $p = .74$). Table 3 shows the results.

Table 3

Results of Hierarchical Regression Predicting Democratic Leadership

Predictor	β	R^2	Adj. R^2	ΔR^2	F for ΔR^2	p
Step 1						
Motivation Competency	.57***	.32	.32	–	146.83	<.001
Step 2						
Motivation Competency	–					

Game Strategy Competency	.39***	.41	.41	.09***	43.44	<.001
Step 3						
Technique Competency	.13*	.42	.41	.01*	4.05	.045
Step 4						
Character-Building Competency	.02	.42	.41	.00	.11	.74

Note. $p < .05^*$; $p < .01^{**}$; $p < .001^{***}$.

β = standardized regression coefficient. ΔR^2 = R^2 change from the previous step.

A hierarchical regression was also assessed to examine significant predictors of autocratic leadership. First, game strategy competency significantly predicted autocratic leadership ($R^2 = .07$, Adj. $R^2 = .07$, $F(1,305) = 4.69$, $p < .05$). Game strategy competency remained a modest predictor ($\beta = .57$, $p < .001$). Next, motivation competency was added to the model, and the model continued to significantly predict autocratic leadership ($R^2 = .06$, Adj. $R^2 = .06$, $F(1,306) = 19.33$, $p < .001$). Motivation competency emerged as a highly significant predictor ($\beta = .24$, $p < .001$). However, technique Competency ($R^2 = .08$, Adj. $R^2 = .07$, $F(1,304) = .90$, $p = .34$) and character-building competency ($R^2 = .08$, Adj. $R^2 = .07$, $F(1,303) = .51$, $p = .48$) failed to predict autocratic leadership. Table 4 shows the results.

Table 4

Results of Hierarchical Regression Predicting Autocratic Leadership

Predictor	β	R^2	Adj. R^2	ΔR^2	F for ΔR^2	p
Step 1						
Game Strategy Competency	.57***	.07	.07	–	4.69	.031
Step 2						
Motivation Competency	.24***	.06	.06	-.01	19.33	<.001
Step 3						
Technique Competency	–	.08	.07	.02	.90	.34
Step 4						
Character-Building Competency	–	.08	.07	.00	.51	.48

Note. $p < .05^*$; $p < .01^{**}$; $p < .001^{***}$.

β = standardized regression coefficient. ΔR^2 = R^2 change from the previous step.

Discussion

This study explored how coaching competencies—such as game strategy, motivation, technique, and character-building skills—relate to democratic and autocratic leadership styles among Ghanaian collegiate athletes. It is hypothesized that these four coaching dimensions are positively linked to both leadership styles. Using hierarchical regression analyses, the hypotheses were supported. Results indicated that motivation and game strategy are essential factors for both leadership styles. These findings support the hypotheses.

The study adds to the literature on coaching competency and leadership, highlighting that motivation and game strategy are key elements for both democratic and autocratic leadership among Ghanaian collegiate athletes. Based on the findings, coaches' motivation and game strategy skills seem to be important signals for athletes when assessing their coaches, regardless of leadership style. The results also suggest that athletes regard motivation and game strategy as important factors influencing their perception of their coaches' leadership. Additionally, the findings extend the work of Myers et al. (2011), confirming a positive relationship between coaches' motivation competency and athlete satisfaction. Kao et al. (2017) examined four coaching competencies—motivation, game strategy, technique, and character-building—and found that athletes' trust significantly influenced motivation and game strategy in their coaches.

While technique competency was crucial for democratic leadership, it was not for autocratic leadership. Technique competency assessed the coach's ability to develop or demonstrate skills, such as 'My coach demonstrates the skills of his/her sport,' 'My coach coaches individual athletes on technique,' and 'My coach develops athletes' abilities.' This study shows that coaches' ability to develop or demonstrate individual athletes' skills is more closely related to democratic leadership, as democratic leaders are more likely to listen to athletes' opinions and provide clear, specific guidance and instructions. Conversely, technique competency was not associated with autocratic leadership, which generally does not explain its actions and refuses to compromise on issues. Thus, these findings support the hypotheses.

Interestingly, this study found that character-building competency is not a significant factor for either leadership style. The results suggest that while coaches may emphasize traits like fair play, good morals, sportsmanship, and respect for others, athletes do not view character-building as a key factor in how they exercise leadership. This finding contrasts with previous studies showing that athletes' moral behaviors are a primary element of effective coaching (Becker & Wrisberg, 2008). The difference could be because Ghanaian athletes might see character-building competency as a basic quality of their coaches rather than a distinctive trait of specific leadership styles. Another possibility is that athletes may prioritize involvement in communication and decision-making during practice and competition over ethical or moral instruction. Further research is needed to explore the relationship between character-building competency and leadership style, along with contextual factors such as sport type, level of competition, or age and gender groups.

This study offers practical insights. First, it sheds light on coaching education by analyzing how four coaching competencies influence leadership. When coaches show strong motivation or game strategy skills, they are more likely to effectively use democratic and autocratic leadership styles. Coaches should work on their ability to adapt motivational leadership and strategic decision-making to meet athletes' leadership needs. While technique competency was directly linked to democratic leadership, it did not influence autocratic leadership. Using various communication and decision-making methods can improve coaching competency, a crucial part of leadership. Interestingly, collegiate athletes did not view character-building as a vital component of their coach's leadership. Therefore, coaching education programs, such as those in college athletic departments, can use these findings to shape professional

leadership development efforts, which will enhance key competencies and foster effective coaching leadership. This study provides practical implications based on the results of this study. Coaching rules and leadership development programs for Ghanaian university sport should focus on the principles of democratic leadership as it relates to coaching competencies that result in athlete engagement and high athletic performance. In addition, motivation and game strategy competencies should be integral parts of university athletic programs as they predict effective leadership traits in coaches.

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