

ORIGINAL SCIENTIFIC PAPER

The Effect of Transactional and Transformational Leadership Behaviours on Factors Establishing Teams' Cultural Aspects to Promote Organizational Effectiveness

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Abstract

This study aimed to analyse the relationships between transactional leadership, transformational leadership, and organizational culture in university soccer teams. First, the study focused on the transactional and transformational leadership behaviours of soccer coaches in university soccer teams using Multifactor Leadership Questionnaire 5X (MLQ 5X) by Bass and Avolio (1990) as an instrument. Second, the cultural factors of the university soccer teams were measured using the Organizational Culture Assessment Questionnaire (OCAQ, Sashkin, 2001). Using random cluster sampling, 316 players in university soccer teams participated in the study. The study results showed that both transactional and transformational leadership had a positive effect on organizational team culture, but the effect of transactional leadership behaviour appeared more extensive than transformational leadership behaviour did in the present study. In a Korean context, it remains undeniable that strong transactional leadership behaviours exist, and they exert significant influence on university soccer team culture, but the effect of transformation leadership behaviours was also obvious on team culture. It could be concluded that the combination of transactional and transformational leadership is likely to be a key factor in the successful development of organizational effectiveness.

Keywords: transactional leadership, transformational leadership, organizational culture, MLQ 5X, OCAQ, university soccer teams

Introduction

Needs and purpose of the study

As the popularity of soccer grows, interests in it become more detailed. Fans have come to be concerned about not only what is seen superficially but also what is happening behind the games, such as personal interest stories about soccer players, game style, game strategies, coaches, and similar. Since Guus Hiddink, the head coach of South Korea's national team in the 2002 World Cup, gained huge popularity nationwide, interest in leadership and team culture fostered

by the leader drew increased attention (Jung & You, 2020). Previously, Korean soccer fans' major interest was in who the competent players on the team are and in which region of the country the team is based. With the appearance of Hiddink, soccer fans came to consider the role of a coach in the soccer game and realized the entertaining factors that a coach can make. In other words, the concept of "leadership" manifested itself in Korean soccer fans' perception. Leaders can help shape and maintain the desired or ideal organizational culture, according to Weese (1995), and organization culture is



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one of the most important factors that may bring success to the team. This study examines what leadership behaviours of a coach predict team culture. Specifically, 1) how the transactional coach leadership behaviours predict the team culture and 2) how the transformational coach leadership behaviours predict the team culture.

Transactional leadership

According to Bass (2008), transactional leadership has been described as an exchange of requests or needs to be satisfied between the leader and the followers. This kind of leader works to clarify the roles and task requirements of followers recognizes the needs and desires of subordinates and make it clear that if they work to fulfil their job requirements, then those needs and desires will be met. Bass (2008) stated that a transactional leader operates within the existing system or culture, has a preference for risk avoidance, pays attention to time constraints and efficiency, and generally prefers process over substance as a means for maintaining control.

Transformational leadership

Many scholars contend that leadership cannot be simply explained as the notion of social exchange between leader and followers. Leadership must address the follower's sense of self-worth to have the follower truly committed and involved in the effort at hand (Bass & Riggio, 2006). Burns (1978) is often cited as the source of the concepts of this approach to leadership theory; he regarded transformational leadership as a contrast to transactional leadership. Cascio (1995) noted that as today's multicultural organizations are interrelated with each other, transformational leadership is even more necessary. Yukl (2006) reported that leaders with transformational leadership have a clear vision and communicate it to followers, act confidently and are optimistic, articulate confidence to followers, lead followers by example, use symbolic actions to emphasize key values, and take advantage of the empowerment of followers to achieve the vision. He also stated that transformational leaders communicate a clear vision of the potential and priority of an organization. The vision helps followers see what an organization can accomplish, helps followers understand their purpose in the organization, and helps guide followers' actions and decisions. Communicating the vision is not enough; the leader must also convince his followers of its feasibility and gain their agreement.

Leadership and organizational culture

Culture is a dynamic phenomenon and influenced by leader behaviour. Leaders are those who help shape the culture. Leadership and culture are two sides of the same coin. Cultural norms define how an organization will define leadership and leaders create and manage culture. Leadership and culture are conceptually intertwined with each other (Schein, 2004). MacIntosh and Doherty (2005) emphasized that organizational culture is a shared understanding and acceptance among staff members of what is valued and expected in an organization; thus, organizational culture cannot be determined from above; instead, it is directed. Therefore, cultural understanding is essential for all the organization members, especially for the leaders (Schein, 2004).

Many organizational cultures in sport researchers have acknowledged the valuable role of transformational leadership (Arthur, Wagstaff, & Hardy, 2017) and coaching (Turnnidge & Côté, 2018). You (2020) demonstrated the leadership of Park Hangseo coach in the Vietnamese National Soccer Team and emphasized that leaders with appropriate leadership help overcome difficulties that a sport team faces. This perspective concerns the management of meaning and emphasizes culture, and thus more attention to values and emotions. Organizational leaders actively cultivate the symbolic significance of shared meaning, a common history, a golden age, idiosyncratic leaders, and dramatic results. This is different from that of the transactional approaches, which focuses on behavioural typologies, coach-athlete relationships, and outcomes. Frontiera (2010) also uncovered leadership and organizational culture transformation in professional sport. He understood how leaders in professional sport changed culture, and leaders were aware of different elements of organizational culture.

Methods

Participants and data collection

The population of this study was all of the 2600 players of 72 university soccer teams in the U-league in Korea. With the use of random sampling, a total of 350 questionnaires were distributed, of which 332 were collected. Among those collected, 16 had incomplete answers. After eliminating the 16 incomplete questionnaires, 316 questionnaires were retained for the study for subsequent analysis. As there were 32 items in MLQ and 24 in OCAQ, the sample size of 316 was adequate to meet the criteria. Therefore, responses of 316 players from 2600 players of university soccer teams were used in this research.

Instrument

To assess the leadership behaviour and organizational culture, MLQ and OCAQ were chosen for the study. Both were developed in English originally, so the researcher adapted Song's (2002) Korean version to administer appropriately to the Korean university setting for the present study.

The survey instrument used to identify leadership style is Multifactor Leadership Questionnaire 5X developed by Bass and Avolio (1990), and it came to be an industry standard in education and the private sector during the 1990s (Avolio, Bass, & Jung, 1999). It suggests the most validated and efficient measure of a full range of leadership behaviour in comparison to the original MLQ in 1985 with 90 items. MLQ 5X consists of 45 items, including the twelve Full Range Leadership styles, rater, and leader forms. The survey relies on Likert-scale responses ranging from frequently, if not always (5), fairly often (4), sometimes (3), once in a while (2), to not at all (1).

The questions of MLQ 5X measure four components: employees' perceptions of transformational leadership factors, transactional leadership factors, laissez-faire leadership factors and outcomes of leadership. Transformational leadership measures five components: idealized influence (attributed), idealized influence (behaviour), inspirational motivation, intellectual stimulation, and individualized consideration. Transactional leadership measures three components: contingent rewards, management by exception (active) and management by exception (passive). As this study focused on transactional and transformational leadership style, the researcher removed questions about the laissez-faire leadership

and outcomes scale, so the total number of survey questions was reduced from 45 to 32.

Sashkin (2001) developed an instrument called the Organizational Culture Assessment Questionnaire (OCAQ) in order to identify and quantitatively measure the type and strength of the culture within an organization based on a framework and theory of action in social systems by Parsons (1960). OCAQ is composed of five factors with six items; each item is scored on a five-point Likert scale ranging from 5 "completely true", 4 "mostly true", 3 "partly true", 2 "slightly true", to 1 "not true." As was the same with MLQ 5X, questions in OCAQ decreased from 30 to 24, following the removal of six questions in the customer orientation factor because university students are not generally regarded as the customer of a coach in the Korean context.

Data analysis

The data were analysed using SPSS 23.0. Multiple regressions were used to analyse the research questions. Independent variables were transactional leadership behaviours and transformational leadership behaviours. The dependent variables were the five cultural factors. Exploratory factor analysis (EFA) was performed to determine how well

the measured variables presented a unidimensional construct. Also, Cronbach's alpha was used to assess reliability. All the statistical significance tests were performed at an alpha level of .05.

Results

Exploratory factor analyses and the reliability of the survey instruments

An EFA of the MLQ for preferred and actual leadership behaviour was also performed. Thirty-one items for each were chosen to be tested. Like an EFA of OCAQ, principal component analysis with VARIMAX rotation was conducted, and the results revealed seven factors for each MLQ, which supports the proposed model of the study. The Bartlett Test of Sphericity showed that the result of the EFA was statistically significant, indicating that the correlation matrix had significant correlations among variables. Additionally, the Kaiser-Meyer-Olkin score of MLQ for preferred leadership behaviour came out as .864, and for actual leadership behaviour, it was .887, which is considered valid. The construct seemed reliable as Cronbach's alpha for all factors were over .7. Table 1 summarizes the results of the EFA.

Table 1. Exploratory Factor Analysis of MLQ 5X for Leadership Behaviours

Attributes		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
	Q19	.865	.162	.108	.138	015	.142	.052
	Q3	.852	.114	.058	.133	042	.170	.083
_	Q21	.838	.215	.020	.126	.005	.040	.037
Factor 1: Charisma	Q30	.836	.164	.085	.117	015	.146	.086
	Q16	.828	.166	.145	.075	063	.144	.100
	Q5	.826	.158	.141	.133	019	.100	.077
	Q12	.523	132	.031	.064	.006	.094	.052
Factor 2:	Q14	.181	.864	.058	.112	075	.278	.062
Contingent	Q9	.110	.857	.049	.110	052	.156	.056
Reward	Q1	.186	.854	.062	.127	046	.146	.063
	Q31	.160	.844	.031	.137	035	.239	.046
	Q32	.122	.028	.906	.024	.054	.085	.043
Factor 3:	Q7	.127	.048	.894	.005	.067	.106	.101
Inspirational Motivation	Q24	.079	.071	.889	.073	.053	.069	.079
	Q11	.121	.035	.889	.032	.007	.082	.053
Factor 4:	Q26	.212	.128	.025	.903	174	.158	.078
Individualized Consideration	Q17	.149	.122	.055	.877	098	.145	.060
	Q13	.154	.103	009	.877	077	.114	.077
	Q28	.186	.138	.084	.823	188	.160	.036
Factor 5:	Q3	027	022	.050	145	.911	018	018
Management- by-Exception Passive	Q15	018	034	.014	111	.906	086	.044
	Q10	004	034	.036	067	.883	048	.061
	Q18	046	092	.077	130	.879	001	.009
Factor 6: Intellectual Stimulation	Q29	.202	.188	.115	.171	068	.849	.087
	Q2	.187	.238	.146	.122	057	.826	.156
	Q27	.168	.225	.073	.148	068	.812	.067
	Q6	.215	.189	.074	.154	.007	.770	020

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Attributes		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Factor 7: Management-by- Exception Active	Q20	.123	.012	.036	.015	.008	.092	.886
	Q22	.036	020	.090	.079	.044	.112	.857
	Q4	.101	.077	.036	.083	.085	.107	.829
	Q25	.082	.097	.076	.029	031	061	.599
KMO					.887			
Bartlett's Test of Sphericity					.000 (sig)			
Initial Eigen Value		4.985	3.381	3.358	3.350	3.335	3.110	2.695
Variance (%) 16.081		16.081	10.905	10.834	10.808	10.757	10.031	8.694
CumulativeVariance (%) 16.081		16.081	26.987	37.820	48.628	59.385	69.416	78.110
Cronbach's Alpha .7		.793	.929	.891	.940	.926	.908	.745

An EFA of OCAQ was performed to verify whether all measured variables were related to each factor-by-factor loading estimates as well as whether each measured variable was loaded highly on only one factor and had a smaller loading on

the other factor. Twenty-four items were chosen to be tested. Principle component analysis with VARIMAX rotation was conducted, and the results revealed four factors that support OCAQ used for the study.

Table 2. Exploratory Factor Analysis of OCAQ

Attributes		Factor 1	Factor 2	Factor 3	Factor 4		
	Q18	.874	.248	.157	020		
	Q2	.865	.305	.221	.003		
Factor 1:	Q14	.851	.170	.081	.014		
Achieving Goals	Q22	.844	.250	.195	037		
	Q10	.822	.261	.137	005		
	Q6	.781	.140	.088	.023		
	Q21	.275	.867	.104	.057		
	Q13	.253	.863	.090	006		
Factor 2:	Q1	.288	.854	.222	.016		
Managing Change	Q9	.238	.850	.140	.055		
	Q5	.204	.783	.135	022		
	Q17	.106	.781	.180	.016		
	Q24	.177	.134	.857	045		
	Q4	.145	.110	.827	011		
Factor 3:	Q20	.053	.101	.825	.008		
Cultural Strength	Q8	.196	.188	.821	003		
	Q12	.089	.140	.818	.018		
	Q16	.123	.121	.763	079		
	Q23	008	041	005	.892		
	Q3	.036	.042	.003	.877		
Factor 4:	Q19	008	.039	024	.834		
Coordinated Teamwork	Q11	057	.065	.004	.808		
	Q7	.021	021	.072	.625		
	Q15	.003	.008	140	.570		
KMO		.907					
Bartlett's Test of Sphericity		.000 (sig)					
Initial Eigen Value		4.688	4.627	4.333	3.647		
Variance (%)		19.535	19.277	18.054	15.197		
Cumulative Variance (%)		19.535	38.812	56.866	72.063		
Cronbach's Alpha		.943	.938	.917	.858		

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To verify the degree of intercorrelations among the variables and the appropriateness of factor analysis, the Bartlett Test of Sphericity and the Kaiser-Meyer-Olkin were obtained. The Bartlett test of sphericity showed that the result of the EFA was statistically significant, indicating that the correlation matrix had significant correlations among variables. Additionally, the Kaiser-Meyer-Olkin (KMO) measured the degree to which each variable was predicted without error. A score of .80 or above is considered to be valid, and the result of KMO showed .907. Cronbach's alpha coefficients were used to assess the internal consistency of measurements for each construct. The construct seemed reliable as Cronbach's alpha for all factors were over .7. Table 2 summarizes the results of the EFA.

Influence of leadership behaviours on team culture

According to Table 3, all transactional leadership behaviours had statistically significant effects on Managing Change and Achieving Goals. Contingent Reward (β =.139)

and Active Management-by-Exception (ß=.111) had positive effects, but Passive Management-by-Exception (ß=-.154) had a negative effect on Managing Change, and 6.5% of the Managing Change team culture was explained by transactional leadership behaviours. Contingent Reward (ß=.180) and Active Management-by-Exception (ß=.113) had a positive effect, but Passive Management-by-Exception (ß=-.241) had a negative effect on Achieving Goals, and 11.9% of Achieving Goals team culture was explained by transactional leadership behaviours. Passive (ß=.218) and Active Management-by-Exception (ß=.119) had statistically significant on Coordinated Teamwork, and 6.4% of Coordinated Teamwork was explained by transactional leadership behaviours. Contingent reward had no statistically significant effect on Coordinated Teamwork. Transactional leadership had the least effect on Cultural Strength. Only Passive Management-by-Exception had a statistically significant effect on Cultural Strength (ß=-.119), and 1.7% of Cultural Strength was explained by transactional leadership behaviours.

Table 3. Influence of the Transactional Leadership Behaviours on Team Culture

	Dependent Variable					
	Managing Change	Achieving Goals	Coordinated Teamwork	Cultural Strength		
Contingent Reward	.139*	.180**	.034	.039		
Passive Management-by-Exception	154**	241***	.218***	119*		
Active Management-by-Exception	.111*	.113*	.119*	009		
R^2	.065	.119	.064	.017		

Legend: *p<.05, **p<.01, ***p<.001

To determine the influence of the transformational coach leadership behaviours on the team members' perceptions of their team culture, a multiple regression procedure was also used for analysis. Four transformational leadership behaviours (Charisma, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration) were regarded as predictors (independent variables), and the dependent variables were Managing Change, Achieving Goals, Coordinated Teamwork and Cultural Strength. Significance is determined at the level of .05.

According to Table 4, only some of the transformational leadership behaviours had a statistically significant effect on

cultural functions. Specifically, Individualized Consideration ($\beta=.305$) positively affected Managing Change, and 10.7% of the Managing Change team culture was explained by transformational leadership behaviours. Inspirational Motivation ($\beta=.126$) and Individualized Consideration ($\beta=.209$) had a significant influence on Achieving Goals, and 9.5% of Achieving Goals team culture was explained by transformational leadership behaviours. Charisma ($\beta=-.135$) had a negative effective on Coordinated Teamwork, and 2.6% of Charisma was explained by transformational leadership behaviours. Cultural Strength turned out not to be influenced by transformational leadership behaviours.

Table 4. Influence of the Transformational Leadership Behaviours on Team Culture

Independent Variable	Dependent Variable						
independent variable	Managing Change	Achieving Goals	Coordinated Teamwork	Cultural Strength			
Charisma	.049	.013	135*	.039			
Inspirational Motivation	.040	.040 .126*		.023			
Intellectual Stimulation	014	.083	.085	.014			
Individualized Consideration	.305**	.209**	081	.084			
R ²	.107	.095	.026	.014			

Discussion

In the present study, it turned out that not only transformational leadership behaviours but also transactional leadership behaviours influenced cultural functions in the university soccer teams in Korea. All transactional leadership behaviours, such as Contingent Reward, Passive Management-by-Exception, and Active Management-by-Exception, influenced Managing Change and Achieving

Goals. Passive and Active Management-by-Exception influenced Coordinated Teamwork. Among transformational leadership behaviours, Individual Consideration had a significant influence on Managing Change and Achieving Goals, Inspirational Motivation on Achieving Goals, and Charisma on Coordinated Teamwork. The results indicated that transactional leadership behaviours were more effective on cultural functions than transformational leadership behaviours were.

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Overall, both transactional and transformational leadership had a positive effect on organizational team culture, but the effect of transactional leadership behaviour appeared more extensive than transformational leadership behaviour in the present study. However, it was not obvious from the present study why transactional leadership behaviours were more influential on cultural functions in university soccer teams in Korea. This finding could be related to the fact that transactional leadership among coaches in Korea has been deeply rooted in both the societal and athletic cultures over the years. Consequently, because it can take a long time to change the culture in an organization and because leadership behaviours are not the only factors affecting cultural functions, it is premature to conclude that transactional leadership behaviours are better in building effective organizational culture in Korean university soccer. As was the case from Hiddink's leadership in 2002, transformational leadership behaviours gain more popularity and are favoured more in sport teams in Korea nowadays; therefore, examining the relationship between leadership behaviour and organizational culture in this context will require further quantitative and qualitative investigation.

Conclusion

This study investigated how transactional and transformational coach leadership behaviours predicted the organiza-

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Conflict of Interest

The authors declare that there is no conflict of interest.

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tional cultural functions of the university soccer teams. Scott (2000) emphasized the significance of culture management to leadership, stating that this may be the most challenging yet critical component of sport organizational leadership. He added that among a variety of leadership styles, transformational leadership makes a strong impact in the development of a positive organizational culture. Additionally, Weese (1995) indicated that transformational leaders in recreational organizations influence a culture of "excellence and continual improvement."

In the Korean context, it remains undeniable that strong transactional leadership behaviours exist, and they exert significant influence on university soccer team culture. However, it is impressive that the effect of transformation leadership behaviours was obvious on team culture as well as those of transactional leadership behaviours. Leaders of university soccer teams need to consider how to modify their leadership behaviour effectively and appropriately, as was mentioned by Hersey and Blanchard (1998), asserting situational leadership that emphasizes interplay among task behaviour, relationship behaviour and followers' readiness.

Finally, it could be summarized that "the combination of transactional and transformational leadership is likely to be a key factor in the successful development of organizational effectiveness" (Bass & Avolio, 1990).

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