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The Correlation Between Coaching Style and Smartphone usage on Students Satisfaction

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Abstract: The aim of this study is to determine the effect of coaching style and smartphone usage among student satisfaction towards co-curriculum activities. A total of 350 university students successfully completed survey questionnaire. Descriptive data analysis and hierarchical regression conducted by using Statistical Package of Social Science (SPSS Version 20.0). First, there is correlation between coaching style and student's satisfaction. Second, smartphone usage affected between coaching style and student's satisfaction. This study proposes a new technology in teaching and learning co-curriculum courses to strengthen the generic skills of students in the 4th of industrial revolution era.

Key words: Industrial revolution, information technology, coaching style, smartphone, sport information, satisfaction

INTRODUCTION

This competitive environment, coaches need to consider using technology changes such as smartphone. The usage of technology in sports is considered as a challenge to coaches and students athlete to enhance sport performance. The usefulness of information searching appears to partially affect consumer behavior (Park and Eun-Jeong, 2017). The sport technology important successful to help students to improve their mastery of basic skills and sport information preparation. Successful coaching style is ability to treat students respectfully. Student have varied talents and each deserves respect for their uniqueness.

Coaches who exhibited more on training and instruction, giving recognition, rewards and positive feedback and socially supportive behaviors produced more satisfied athletes (Ignacio *et al*., 2017). However, the study not mentioned the influence of smartphone towards student satisfaction.

The application of technology has revolutionized sports in general. Recently, advances in information technology have made it possible to augment and improve the feedback university athletes receive during training and competition. The concurrent validity of a smartphone Global Positioning System (GPS) 'app' and a sport-specific GPS device with to measure physical activity. The smartphone application (App.) trialed could be considered as an accessible alternative to provide high-quality contextualized data to enable ubiquitous monitoring and modification of training programs. Three mobile content such as dimensions information, service and interaction have great potential as a physical activity promotion and assessment tool among a variety of individuals (Kang, 2015; Monroe *et al*., 2015). However, there are limited study of coaching style and smartphone usage among university student on co-curriculum course.

The model leadership for sport (Zhang *et al*., 1997), adapted unified theory of acceptance and use of technology 2 and model of athlete satisfaction (Chelladurai and Saleh, 1980) as the conceptual study of student's satisfaction to participate co-curriculum activities at university campus. There are limitations in model leadership for sport (Chelladurai and Saleh, 1980) did not mention the using technology such as smartphone usage which is coaching style affect university student's satisfaction. Specifically, this study is to determine the correlation of coaching styles and using smartphone towards student's satisfaction. Secondly, this study is to investigate the variance of using smartphone as the predictors to change the relationship between coaching style and student's co-curriculum satisfaction.

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MATERIALS AND METHODS

This study used survey method to seek for student perceived on coach leadership style, using mobile phone and satisfaction for their co-curriculum course, namely sports activities. The location of the study was at university campus namely University Technical Malaysia Melaka (UTeM). The reason for selecting this area is the fact that UTeM as institutional active support to integration of engineering and instructional technologies towards teaching and learning for co-curriculum. The instruments that were used are leadership scale for sport (Chelladurai and Saleh, 1980), adapted unified theory of acceptance and use of technology and Athlete Satisfaction Questionnaire (Riemer and Chelladurai, 1997) items were back translated into Malay and English by an expert of language and experience in sports. Reliability analyses for each of the items show by Cronbach's alpha coefficients is 0.90.

Respondents were asked to indicate their age and number of years participation in sport. This instrument LSS (Coaching Leadership Scale for Sport) consisted of 65 questions; 5 items performance expectancy of UTAT with 5-point Likert scale (absolutely disagree), (disagree), (undecided), (agree) and (absolutely agree). The third instruments ASQ Athlete Satisfaction Questionnaire contained of 57 items with 5-point Likert scale: (not at all unsatisfied), (unsatisfied), (undecided), (satisfied) and (extremely satisfied). Hierarchical regression analysis was used to identify the relationship between variables and to specify the predictor of coaching leadership styles and using smartphone towards athlete satisfaction. The result of the pilot test has shown that alpha item of the instrument between 0.80 and 0.90.

The respondents volunteered to complete the questionnaire at university sports co-curriculum venue. The majority of the respondents age ranged 20 years and 22 years (30%) between 22 and 24 years (52%), 24 and 26 years (15%) and only 3% were 26 years and over. The 75% of these student's co-curriculum had sports participation experience which were 5 years above and 25% <5 years have activities background in the sport club activities. A total of 350 students in sport co-curriculum course successfully completed survey questionnaires.

RESULTS AND DISCUSSION

- H_{o1}: there is no significant correlation between coach leadership and towards student's satisfaction in sports co-curriculum course

Pearson correlation analysis is used to test the first hypothesis (H_{o1}). The value R^2 coefficient is used to explain the percentage of moderator variable in predicting criteria variables (students satisfaction). Table 1 shows that Pearson correlation analysis shown that there is a significant relationship between coaching style (r = 0.707; p = 0.01) and students satisfaction. Thus, the H_{o1} is rejected. This result shows that there is a significant positive strong relationship between coaching styles among student's satisfaction.

Table 1: Pearson correlation analysis for coaching style and student's satisfaction in sport co-curriculum course

Variables	Correlation	Significant
Coaching style	0.707	0.001

p<0.05

Table 2: Linear regression analysis for coaching style and students satisfaction

Models	Variables	Correlation	Significant
1	Training and instruction	0.625	p = 0.001
2	Positive feedback	0.417	
3	Social consideration	0.349	
4	Social support	0.442	
5	Democratic	0.348	
6	Autocratic	0.250	

p<0.05

Table 2 shows linear regression analysis for coaching style and students satisfaction in sports co-curriculum course. Linear regression analysis is performed to explain the correlation between factors satisfaction of students in sports co-curriculum course. Table 2 shows that linear regression analysis shown that there is a relationship between training and instruction style (r = 0.625, p = 0.001), positive feedback style (r = 0.417, p = 0.001), social consideration style (r = 0.349, p = 0.001), social support style (r = 0.442, p = 0.001), democratic style (r = 0.348, p = 0.001) and autocratic style (r = 0.250, p = 0.001) towards student's satisfaction.

Based on the statistical test for hypothesis null first (H_{o1}). There was no correlation more than r = 0.90 between independents variables and criteria variables. Linear regression analysis shows no multicollinearity between independents variables and criterion variables. Therefore, analysis of multiple regression hierarchical is fulfilled.

Multiple regression analysis procedures for analyzing null hypothesis (H_{o2}): The hierarchical multiple regression analysis procedure is performed before testing second null hypothesis (H_{o2}). Linear regression analysis of predictor variables to ensure multicollinearity does not occur. Firstly, researchers have analyzed the relationship between using smartphone moderator variables towards satisfaction through multiple regression hierarchical is fulfilled.

Table 3 shows that linear regression analysis shown that there is moderate correlation between training and instruction style (r = 0.625, p = 0.00) and positive feedback style (r = 0.419, p = 0.01) towards student's satisfaction.

Table 3: Linear regression analysis leadership style, smartphone usage and students satisfaction

Models	Variables	Correlation
1	Training and instruction	0.625
2	Positive feedback	0.419
3	Social consideration	0.349
4	Social support	0.340
5	Democratic	0.290
6	Autocratic	0.250
7	Smartphone usage	0.650

$p<0.05$

There is low correlation between social consideration style (r = 0.349, p = 0.00), social support style (r = 0.340, p = 0.00), democratic style (r = 0.290, p = 0.00) and autocratic style (r = 0.250, p = 0.00) on student's satisfaction. While the moderator variable smartphone usage shows high correlation towards student's satisfaction. Linear regression analysis shown there is significant correlation between coaching style and smartphone usage towards student's satisfaction.

Hence, this analysis procedure is carried out explain the influence of high variable smartphone usage towards the correlation between coaching style and satisfaction among university student sports co-curriculum course. The procedure of hierarchical regression analysis is done in three blocks. The first step to test the second hypothesis (H_{02}) of smartphone usage variables in first block, coaching style second block and third block student's satisfaction (Greenwell *et al*., 2002: Riemer and Chelladurai, 1995):

- H_{02}: there is no significant effect of smartphone usage on the correlation between coaching style and student's satisfaction on student's sports co-curriculum course

The hierarchical multiple regression analysis shows that the first model smartphone usage predicted for 38% variance and followed by the second model is coaching style the R^2 change at 19% variance among student's satisfaction. ANOVA test shows, coaching style and smartphone usage were significant ($p<0.01$; F (5, 350) = 53.550). The result shows that using smartphone moderator variable influence the correlation between coaching leadership style and athlete satisfaction. Thus, H_{02} is rejected. Coefficient regression shows that smartphone usage predicts the most influence (Beta = 0.493, t = 10.073) and coaching style (Beta = 0.162, t = 2.181, p = 0.01). The coaching style which is the autocratic style (Beta = -0.198, t = -3.639, p = 0.01) shows a negative affect that towards athlete satisfaction. This revealed that smartphone usage effect the correlation between coaching style and student's satisfaction. The findings revealed that adjusted $R^2 = 0.524$ (F (5.350) = 53.550) at significant level ($p<0.01$). This shows 52% variance of change on student's satisfaction is explained by the use of smartphone and coaching styles and 48% variance is explained by other variables not included in this equation. Durbin Watson's test shows that there is no independent error with the value of 1.913 (Table 4).

Table 4: Hierarchical regression analysis for smartphone usage towards correlation coaching style and students satisfaction

Models	Variables	R^2	Change R^2	F-change
1	Smartphone usage	0.380	0.380	244.167
2	Smartphone usage	0.524	0.190	130.344
	Training and instruction			
	Positive feedback			
	Social consideration			
	Social support			
	Democratic			
	Autocratic			

$R = 757$; $R^2 = 0.524$; Adjusted $R^2 = 0.530$; F (5.350) = 53.550 $p<0.01$

CONCLUSION

The coaching style has related with the satisfaction and desire of students to follow co-curriculum such sports program. Furthermore, this study shows that coaching style namely training and instruction, positive feedback, social consideration, social support, democratic or autocratic significantly predicted that influences student satisfaction to participate university sport co-curriculum course. This result is consistent that revealed there was a relationship between coaching behaviors such as positive feedback and socially supportive behaviors produced more satisfied student's and athlete's level of satisfaction (Chelladurai and Saleh, 1980; Ignacio *et al*., 2017). This means that the higher level of coach coaching style the higher level of student's satisfaction of involvement in sports co-curriculum activities.

The result shows that smartphone usage moderator variable influence the correlation between coaching style and student's satisfaction. The smartphone usage predicts the most influence (Beta = 0.493) and follow by coach leadership style (Beta = 0.162). This means when the level of student's satisfaction increases by one stage, the student satisfaction will have increased by 0.49. The smartphone usage provides high-quality data to enable ubiquitous monitoring and modification of sports activities (Benson *et al*., 2015). This means smartphone usage has significant relation on student's satisfaction who participate sports co-curriculum course. Meanwhile, coaching style influence students, satisfaction increases by one stage, the student's satisfaction will have increased by 0.162. This finding shows 52% variance of change in student's satisfaction is explained by smartphones usage and coaching styles towards student's satisfaction in sports co-curriculum course (Hynes *et al*., 2013; Pilus *et al*., 2017; Wu *et al*., 2014).

RECOMMENDATIONS

Therefore, future studies should utilize controlled group research designs and smallest sample sizes to explore the specific sports co-curriculum measurement and intervention capabilities of technology namely smartphones, coaching styles and universtity students behaviour. In other words, there is a need for culturally appropriate, tailored sports training messages to increase performance such as technical skill and soft skill. Specifics sports skills promotion messages that are culturally tailored for a group address the unique needs of individual student's and increase their cohesion motivation involvement in extra-curricular activities in line with the fourth of industrial revelution.

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