

The Relationship between the Coaching Knowledge of the Taekwondo Instructors and Satisfaction and Loyalty of the Trainees

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Abstract

Objectives: To analyze the structural model of the coaching knowledge of the Taekwondo instructors and satisfaction and loyalty of the trainees. **Methods/Statistical Analysis:** The research selected the trainees of the Taekwondo studios located in Seoul and Gyeonggi area as the parent population of research subjects and took the samples of a total of 193 trainees using the convenience sampling method. The research was conducted using the questionnaire and the credibility of total variables was .648~.913. The data was analyzed using the CFA, correlation analysis and SEM analysis. **Findings:** First, it was identified that the coaching knowledge of the Taekwondo instructors had positive impacts on satisfaction of the trainees. The Taekwondo instructors are required to provide various programs and teaching methods to teach the trainees so that they can get interested and have fun. Second, it was identified that the coaching knowledge of the Taekwondo instructors had positive impacts on loyalty. This means that the higher coaching knowledge the instructors have the higher loyalty the trainees can have. Third, satisfaction of the Taekwondo trainees was identified not to have significant impacts on loyalty. This is the opposite to the advanced researches that higher satisfaction has positive impacts on loyalty. **Improvements/Applications:** Instructors are required to make active efforts of participating and completing the education on various teaching methodologies in sports education, program development and implementation, understanding and evaluation of the learners to cultivate the coaching knowledge.

Keywords: Coaching Knowledge, Loyalty of the Trainees, Satisfaction of the Trainees, Taekwondo, Taekwondo Instructors

1. Introduction

Instructors are the most important factor in sports education. This is because instructors are those who teach the sports. In addition, the development of exercise performance ability, attitude and capacities on various fields is depending on the teaching methods of the instructors. Therefore, there have been researches on the leadership, philosophy and expertise of the instructors from various perspectives.

Good instructors are required to have highly specialized knowledge on their fields, which can be practically applied through interactions with the learners^{1,2}. In other words, the key factor to be identified in this research is the coaching knowledge. The coaching knowledge means all kinds of knowledge that specifically systemized various functions regarding each sport learned and experienced by the sports instructors for a long time, and effectively deliver the functions to the learners.

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When it comes to teaching the learners, abundant knowledge of the instructors means that there are a lot to teach and apply to education. Therefore, it is expected that the instructors with high coaching knowledge can teach better and more satisfy the learners. In³ reported that high coaching knowledge will have positive impacts on exercise motivation, confidence, satisfaction as well as performance of the learners³. Some advanced researches⁴ also reported that high satisfaction leads to high loyalty.

In this regard, a research to identify the relationship between the coaching knowledge of the instructors and satisfaction and loyalty of the learners is considered to hold significance. In particular, this research aimed to target the Taekwondo instructors who made contributions to designating Taekwondo as one of the top three cultural brands representing South Korea as the national sports of the country. This research was conducted because the instructors have played a pivotal role in realizing the educational functions and values and distribution of the sport⁵ and the advanced researches^{1,3,6,7} only identified the relationship among diverse variables depending on the coaching knowledge of the professional sports instructors but no researches have considered the coaching knowledge of the recreational sports instructors as the key variable. Therefore, this research was aimed at analyzing the relationship model between the coaching knowledge of the instructors and satisfaction and loyalty of the trainees of Taekwondo.

2. Research Method

2.1 Research Subject

The research selected the trainees of the Taekwondo studios located in Seoul and Gyeonggi area as the parent population of research subjects and took the samples of a total of 200 trainees using the convenience sampling method. Among the collected questionnaires, 193 questionnaires were used in the research by excluding 7 insincerely written questionnaires including those without answers, with consistent scores or with double marks. In terms of the general characteristics of the research subjects, the subjects were composed of 160 boys (82.9%) and 33 girls (17.1%) by gender, 46 fourth graders (23.8%), 70 fifth graders (36.3%) and 77 sixth graders (39.9%) by school year and 103 trainees who trained for under 2 years (53.4%) and 90 trainees who trained for over 2 years (46.6%) by training period. The general characteristics of the research subjects are shown in Table 1.

Table 1. General feature of subject of study

Variable	Category	No. of People	Frequency (%)
Gender	Male	160	82.9
	Female	33	17.1
School Year	4th Grader	46	23.8
	5th Grader	70	36.3
	6th Grader	77	39.9
Training Period	Under 2 Years	103	53.4
	Over 2 Years	90	46.6

2.2 Measurement Tool

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2.2.1 Coaching Knowledge

Tables 2, 3 used the questionnaire organized and conceptualized by³ used by⁸ after revision to be suitable for the trainees of the Taekwondo studies. Although the questionnaire is composed of five sub-factors of the knowledge on training methods, knowledge on coaching theories, knowledge on training process, knowledge on understanding of players and knowledge on game strategies, this research organized the questionnaire with a total of 27 question items under four sub-factors, except for the knowledge on game strategies that refers to the coaching behavior³ to analyze the opposite team or plan the strategies and not to miss the timing to change strategies at games.

Table 2. The goodness fit of CFA

Concept	χ^2	df	p	RMR
Coaching Knowledge	549.793	269	.001	.033
Satisfaction of the Trainee	66.057	24	.001	.040
Loyalty	36.642	17	.001	.023
Criteria for the Goodness of Fit	$p > .05$			under .05

Table 3. Correlation analysis between variables

Variable	M(SD)	1	2	3	4	5	6	7	8	9	10
Knowledge on Training Methods(1)	3.80(.70)	1									
Knowledge on Coaching Theories(2)	3.89(.63)	.723***	1								
Knowledge on Training Process(3)	3.75(.67)	.753***	.786***	1							
Knowledge on Understanding of Players(4)	3.89(.66)	.622***	.675***	.670***	1						
Psychological Satisfaction(5)	3.66(.70)	.433***	.477***	.472***	.491***	1					
Social Satisfaction(6)	3.37(.83)	.382***	.329***	.423***	.339***	.592***	1				
Physiological Satisfaction(7)	3.52(.67)	.558***	.519***	.600***	.492***	.616***	.558***	1			
Behavioral Dimension(8)	3.86(.72)	.644***	.736***	.754***	.554***	.475***	.289***	.562***	1		
Attitudinal Dimension(9)	3.85(.73)	.572***	.638***	.630***	.717***	.469***	.337***	.560***	.636***	1	
Cognitive Dimension(10)	3.80(.71)	.655***	.665***	.717***	.598***	.411***	.362***	.586***	.721***	.663***	1

*** $p < .001$

2.2.2 Satisfaction of Trainees

In terms of satisfaction of the trainees, the research used the revised and complemented questionnaire, developed by⁹, adapted to the case of Korea by¹⁰. The questionnaire is composed of a total of 15 question items under three sub-factors of psychological, social and physiological satisfaction.

2.2.3 Loyalty

This research used the revised and complemented questionnaire used by¹¹ and¹². It is composed of a total of 8 question items under three sub-factors of behavioral, attitudinal and cognitive dimensions.

2.3 Validity and Credibility of Measurement Tools

The research conducted a confirmatory factor analysis to verify validity of the measurement tools and the Cronbach's α value was calculated for credibility. Specifically, the estimation method of the confirmatory

factor analysis applied the Maximum Likelihood (ML). The χ^2 test, RMR, CFI (comparative fit index), TLI (Tucker-Lewis index), RMSEA (root mean square error of approximation) index were used for the goodness of fit^{13,14}.

According to the confirmatory factor analysis, two question items for coaching knowledge were deleted after confirming the standardized coefficient and SMC value with RMR=.040, CFI=.890, TLI=.878 and RMSEA=.080. After the deletion, the goodness of fit of the measurement model was identified to satisfy for the criteria for the goodness of fit, except for the χ^2 test, with $\chi^2=549.793(df=269, p=.001)$, RMR=.033, CFI=.916, TLI=.906 and RMSEA=.074. Six question items for satisfaction of the trainees were deleted after confirming the standardized coefficient and SMC value with RMR=.058, CFI=.860, TLI=.831 and RMSEA=.106. After the deletion, the goodness of fit of the measurement model was identified to satisfy for the criteria for the goodness of fit, except for the χ^2 test, with $\chi^2=66.057(df=24, p=.001)$, RMR=.040, CFI=.944, TLI=.917, RMSEA=.096. The

loyalty was identified to satisfy for the criteria for the goodness of fit, except for the χ^2 test, with $\chi^2=36.642$ ($df=17$, $p=.001$), RMR=.023, CFI=.981, TLI=.968 and RMSEA=.078. Credibility is regarded to be at a reliable level with .848~.913 for coaching knowledge, .648~.833 for satisfaction of the trainees and .757~.900 for loyalty.

2.4 Data Collection and Processing

For data collection, the researcher explained to a Taekwondo studio instructor in acquaintance the purpose of the research and asked for consent to a survey and visited the Taekwondo studio in person on an available date and conducted a survey. The researcher gave an enough explanation on the purpose of the research before distributing the questionnaire and asked the subjects to fill out the questionnaire using the self-administration and collected the written questionnaire on the spot. The collected data was processed as follows using the SPSS WIN Version. 23.0 and AMOS 23.0 programs. The research conducted a frequency analysis to identify the general characteristics of the research subjects. Second, it conducted a confirmatory factor analysis and calculated the Cronbach's α coefficient to verify validity and credibility. Third, the research conducted a correlation analysis and a structural equation modeling (SEM) analysis to figure out the relationship among the variables.

3. Research Results

3.1 Correlation Analysis

According to the correlation analysis between the variables, the sub-factors of coaching knowledge and satisfaction and loyalty of the trainees were all in positive correlations ($p<.001$). With .289~.786 of correlation coefficient, it was identified that there was no problem of multicollinearity.

3.2 Verification of Goodness of Fit of Structural Model

The verification result of the goodness of fit of the structural model as shown in Table 4. The model was identified to satisfy the criteria for the goodness of fit, except for the χ^2 test and RMSEA index, with $\chi^2=95.078$ ($df=32$, $p=.001$), RMR=.023, CFI=.954, TLI=.935 and RMSEA=.101.

Table 4. The goodness of fit of SEM

Goodness of Fit Index	χ^2	df	p	RMR	CFI	TLI	RMSEA
Structural Model	95.078	32	.001	.023	.954	.935	.101

3.3 Hypothesis Verification

The result of the structural equation modeling analysis to verify the research hypothesis as shown in Table 5. First, it was identified the coaching knowledge of the Taekwondo instructors had statistically positive impacts on satisfaction of the trainees ($srw=.730$, $t=8.092$, $p=.001$). Second, the coaching knowledge of the Taekwondo instructors had statistically positive impacts on loyalty of the trainees ($srw=.861$, $t=9.110$, $p=.001$). Third, it was discovered that satisfaction of the Taekwondo trainees did not have statistically positive impacts on loyalty.

4. Discussion

This research aimed to analyze the structural relationship between the coaching knowledge of the Taekwondo instructors and satisfaction and loyalty of the trainees. The discussions on the research findings are as follows:

First, it was identified that the coaching knowledge of the Taekwondo instructors had positive impacts on satisfaction of the trainees. The Taekwondo instructors are

Table 5. Hypothesis testing

Path	Standardized Coefficient			
	Path Coefficient	SE	t-Value (p)	Result
Coaching Knowledge $\rightarrow$ Satisfaction of the Trainees	.763(.730)	.094	8.092(.001)	Adopted
Coaching Knowledge $\rightarrow$ Loyalty	1.043(.861)	.114	9.110(.001)	Adopted
Satisfaction of the Trainees $\rightarrow$ Loyalty	.138(.119)	.088	1.572(.116)	Dismissed

required to provide various programs and teaching methods to teach the trainees so that they can get interested and have fun. Otherwise, they might fail to satisfy the trainees and make them quit training the sport. Therefore, the Taekwondo instructors participate in various seminars to learn various programs and teaching methods as much as possible rather than taking a rest over the weekend. The instructors can encourage the trainees to understand and learn necessary functions and knowledge in an easier and faster way depending on how to teach what in what way¹⁵. Therefore, this can be considered as a behavior that recognized the fact that satisfaction of the trainees can change depending on the coaching knowledge with which the instructors can efficiently and effectively teach the trainees.

Given the result that the coaching knowledge of the Taekwondo instructors has positive impacts on the trainees who are receiving the education service, it is expected that the higher coaching knowledge the instructors have, the higher satisfaction the trainees can get. Therefore, the instructors are required to have a lot of coaching knowledge including teaching theory, teaching method and understanding of the trainees. Based on the importance, there have recently been active researches by professor researchers based on cognitive psychology in pedagogy on developing 'teacher knowledge model' by recognizing the importance of the 'knowledge' of the teachers in class³. Therefore, the practical instructors are required to organize and suggest various programs every day to encourage the trainees have academic interests into and focus on the training and recognize the importance of the coaching knowledge that can be the source of the knowledge to effectively teach the programs.

In¹⁶ argued that satisfaction of the students for learning based on the mutual trust between the instructors and the students¹⁶. This can be interpreted that the trust on the coaching knowledge, the source of the knowledge of the instructors, can lead to satisfaction of the trainees. In addition, Nam and Choi argued that professional theory and practice of the instructors can make positive effects⁸. Developing the coaching knowledge of the instructors was identified as an essential and important factor to teaching the players, which are in line with the findings of this research. Therefore, it is considered that the Taekwondo instructors are necessary to first recognize the importance of learning and improvement of systematic coaching knowledge and make continuous efforts to practice learning and improvement.

Second, it was identified that the coaching knowledge of the Taekwondo instructors had positive impacts on loyalty. This means that the higher coaching knowledge the instructors have the higher loyalty the trainees can have. In other words, it is considered that the coaching knowledge of the instructors perceived by the trainees when the instructors effectively teach them under the program organized and suggested by the instructors made the trainees to trust the instructors, which led to high loyalty. The research by Nam and Cho mentioned that the coaching knowledge of the instructors encouraged the trainees to trust the instructors and focus on the exercise⁶. Concentrating on the exercise means that the trainees have high credibility on the content and method of training by the instructor, which can be interpreted as high loyalty.

In particular, the research by¹⁷, titled 'Recognition Analysis on Operation of Taekwondo Studio by the Taekwondo Instructors', recognized the training program as an important factor for operating the Taekwondo studio and reported that the instructors were obtaining the source for the training programs from 'internet and books' and 'consulting companies'. This confirmed that obtaining and expanding coaching knowledge for preparing for the training programs is the most important task for the instructors. Because the training programs where anyone can access to the expertise of the Taekwondo instructors, that is (the source of) the coaching knowledge of the instructors perceived by the trainees or the programs created by consulting companies that cannot deliver the philosophies or belief of the instructors cannot improve loyalty of the trainees. For example, if the instructors set the purposes and objectives of the training based on their teaching philosophies and belief and teach the trainees in interaction through the steps to plan, organize, implement and evaluate the programs under the purposes and objectives, it is possible to reconstruct the goals and content by analyzing the requirements of the trainees and reasonably operate the programs. Such a process enables an effective training of the trainees through appropriate goal-setting, expecting loyalty of the trainees.

Therefore, the instructors are required to have interests in various fields and learn new information to obtain necessary coaching knowledge for education. This is because the recreational sports instructors develop expertise as an instructor through various on-site experiences and self-development¹⁸. In addition, it is thought to be necessary to cultivate the knowledge on business management as

well as education. Now, it is no longer guaranteed that the Taekwondo studios can secure the trainees as long as they are open and it is not easy to retain the existing trainees and attract new trainees¹⁹. The number of the trainees is decreasing and the studios are in poor management due to the factors of the instructors including unsuitable programs and teaching methods for the level of the trainees and negligent management of the trainees¹⁵. In particular, the cost of attracting new trainees is six times higher than the cost of retaining the existing trainees²⁰ and the Taekwondo studio can be maintained mainly by re-registration of the existing trainees, in other words, retention, rather than attracting new trainees¹⁵.

Loyalty is an attitude that consumers intend to use the satisfied products or services in a continued and repeated way²¹. Since securing the trainees with high loyalty can be interpreted as the increase of revenue, it is important to improve loyalty of the existing trainees²². In addition, according to²³, the behaviors of loyalty can be explained with cognitive-affective-conative-action steps. Therefore, it is expected to be able to improve loyalty of the trainees if the cognitive part on the coaching knowledge of the Taekwondo instructors is enhanced. This is because the cognitive step of the trainees on the coaching knowledge of the instructors can be regarded as a start to improve loyalty. In particular, according to the report by²⁴ that 5% of increase rate of customer maintenance or loyalty can have impacts on the gross profit up to 95% in various service industries, the coaching knowledge of the instructors that improves loyalty is considered to be an important factor.

Third, satisfaction of the Taekwondo trainees was identified not to have significant impacts on loyalty. This is the opposite to the advanced researches^{4,25-27} that higher satisfaction has positive impacts on loyalty. In the research by⁴, high satisfaction was an important factor to promote the continuous training of the trainees so that the studios can retain the existing trainees and create positive word-of-mouth effects and effectively attract new trainees. This implicated that it is required to have different interpretations on the relationship between satisfaction and loyalty of the trainees after comparing the result of the previous research that high satisfaction can serve as a factor to strengthen loyalty of the trainees to the studios and the result of this research.

In other words, the fact that satisfaction of the trainees did not affect loyalty means that it is hard to expect that

high satisfaction leads to high loyalty to the Taekwondo studios. It meant that loyalty of the trainees to the Taekwondo studios can be influenced by the social and cultural backgrounds that it is natural to learn Taekwondo before attending the elementary schools¹⁹ and various factors including the geological attribute that the studios are located in the moving line from school to home, the shopping district or surrounding environments and the attribute to select the Taekwondo studios where friends go to and the interactive relationship between the instructors and the trainees²⁸.

According to²⁹ and³⁰, it was reported that satisfaction is the key precedent variable to loyalty and the customers satisfied for certain products or services have favorable attitudes to the services so that reuse and word-of-mouth intention can be increased. This showed that it is required to seek for other methods to improve practical factors that can enhance loyalty rather than just improving satisfaction of the trainees, strengthening loyalty and expecting re-purchase or continuing the training. Since the parents mainly select the Taekwondo studios to their children in South Korea, the Taekwondo instructors need to be concerned about the trend and come up with the measures. For example, the Taekwondo instructors can have a chance to deeply understand the parents by finding out their requirements by talking to them over the phone on the conditions of the trainees and training-related matters to strengthen the relationship with the parents. The guidance and management satisfying the requirements is considered to improve loyalty. In addition, it is considered to be the starting point to improve loyalty if the instructors elicit positive changes of mind of the parents by planning and implementing events that can touch the parents and arouse their sympathy.

5. Conclusions

This research aimed to analyze the structural model of the coaching knowledge of the Taekwondo instructors and satisfaction and loyalty of the trainees. The conclusions are as follows: First, it was identified that the coaching knowledge of the Taekwondo instructors had positive impacts on satisfaction of the trainees. Second, it was discovered that the coaching knowledge of the Taekwondo instructors had positive impacts on loyalty. Third, it was identified that satisfaction of the trainees did not have impacts on loyalty. In conclusion, it was identified that the

coaching knowledge of the instructors is the key variable to improving satisfaction and loyalty of the Taekwondo trainees. Therefore, the instructors are required to make active efforts of participating and completing the education on various teaching methodologies in sports education, program development and implementation, understanding and evaluation of the learners and planning, marketing, strategy establishment and promotion of the sports industry and business administration to cultivate the coaching knowledge.

The recommendations for the follow-up research based on the research findings are as follows: First, the standard of the coaching knowledge used in this research may be somewhat unsuitable to measure the recreational sports instructors of the Taekwondo studios since it was developed for the sports coaches. This is why one of the sub-factors of the coaching knowledge, the knowledge on game strategy, was removed in advance but it is still needed to prepare the tools to measure the coaching knowledge of the recreational sports instructors since the coaching knowledge of the professional sports instructors and the recreational sports instructors may be different depending on their works and roles. Second, the result that was opposite to the hypothesis set in the relationship between satisfaction and loyalty indicated that it is necessary to take approaches from different perspectives. Therefore, it is necessary to conduct researches that can explore the structure and study the relative importance of the factors to improve loyalty.

6. References

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