

Original Article: Achieving Advancement Factors of Martial Arts Teachers and Trainers

Gholam Reza Goderzi*, Hamzeh Isazadeh

PhD in Sport Management, Tehran University, Tehran, Iran

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ABSTRACT

This article was aimed to achieve the factors of progress of martial arts teachers and trainers, and a qualitative method was used in the research method. The statistical population of the research was martial arts professors and university informants. The sampling method in the qualitative section was initially purposeful and judgmental, and then snowball sampling was used to collect information. In this research, theoretical saturation was reached by interviewing 21 people from the target samples. The tools of data collection were interviews and documents, and after coding and identifying the themes, the Dematel method was used to design and validate the model. Data analysis was done using related theme analysis methods, and then the data obtained from twenty-one interviews were coded and analyzed using the theorizing method of theme analysis. The results of theme analysis showed that grouping of codes has fifteen components and has three parts, including capacity building in trainers and previous learning as well as situation analysis, and competitors, etc. This research can be used as a basis for the advancement of martial arts teachers and trainers. In the environment of combat sports, the coach is considered as one of the main figures, thus the identification of the effective factors in the progress of teachers and coaches were extracted and confirmed, and the research framework was drawn and its suitability was confirmed. Sports managers are advised to pay attention to the coach as one of the most important success factors in combat sports.

Introduction

One of the important factors in the success of any organization is choosing the right people for the jobs of that organization. Coaches are also one of the important factors in the success and failure of sports teams. The selection of elite coaches requires the criteria and characteristics of coaching to select the most suitable person to guide and lead the

team. Experts have presented various materials about the coaching profession and its features. In the sports environment, the coach is responsible for providing opportunities to increase the abilities and skills of the athletes in various technical, physical, and moral fields.

Coaching includes guiding and leading athletes in learning and training technical, tactical and life skills, including coordinating and guiding athletes in the implementation of these skills. The coach is the most key person in the

relationship with the athletes. Coaches need skills, techniques, and tactics to teach their athletes. Therefore, it is necessary for coaches to acquire a sufficient amount of sports knowledge. Sports coaches should continuously update their knowledge and skills to overcome complex developments and the ever-changing environment of sports.

Coaches should provide moral training and help and encourage athletes to achieve their full potential, have a supportive role, and help build and strengthen athletes' self-confidence. Coaches should have the ability to organize, implement, evaluate short-term and long-term strategies, lead training sessions, and support athletes during training and competition, as well as have the ability to manage and coordinate human resources.

Having the ability to help athletes in developing and designing a distinctive training program, helping athletes to develop new skills, establishing effective communication with athletes, using and designing evaluation tests to monitor the progress and training process, and predict sports performance, for a team coach is needed. Therefore, sports coaches should have various skills to be successful in coaching. Today, coaches play a pivotal role in helping athletes reach their highest potential and realize the goals of sports teams and clubs. Coaches are one of the most important factors influencing the success of athletes. Coaches should use emotional and emotional skills along with technical skills to have a greater impact on athletes. Coaches should use management tools to make fundamental changes in athletes' behavior and attitudes because the proper performance of the coach makes the athlete successful. Becoming a coach requires skill and ability in a particular sport along with knowledge, wisdom, and insight towards oneself and others, and also requires commitment and emotional attachment to the sport.

Having proper communication not only with the athletes, but also with the sports managers of the university, team supervisors, and all the administrative and executive departments related to the sports teams can work for the

success of team and coach. This relationship makes others serve the team's goals with more interest and motivation. One of the activities that coach should have in this direction is to explain the plans of the sports team for different departments and introduce them to the activities of the sports team. The trainer should have as much technical knowledge as possible. In this dimension, factors such as the development of the technical skills of the athletes, the development of physical and mental capabilities, the accurate understanding of the athlete's capacities, the application of the coach's knowledge in training and competition, and the selection of appropriate strategies and tactics are important for team.

One of the factors that can evaluate a coach's technical knowledge is having coaching qualifications and updating the coach's knowledge. One of the problems that exist in sports coaches is the feeling of not needing to learn and acquire knowledge, which causes the technical knowledge of coaches to remain old and not keep up with the times. In addition, the ability to implement techniques and skills by the coach can make athletes learn faster and trust the coach's skills. Specialized scientific features and sports features related to the coach's technical knowledge are considered important factors needed by the coach. Directing and leading training sessions is one of the most important criteria for evaluating the performance of sports coaches [1].

Technical skill is the coach's ability to make the right decisions at the right time in the competition. Having technical knowledge is another criterion for making the right decision by the coach, which ultimately leads to the success of the sports team and is one of the essential skills of the coach. Planning and setting goals in various team affairs, such as training, preparatory matches, nutrition, physical fitness and health, transportation, matches, etc. are important duties of a coach. Likewise, controlling and evaluating the results of team, recognizing the weaknesses, and trying to correct them are among management skills of the coach.

Financial skills are further among the issues that explain the performance of coaches. Lack of funds and financial problems have been prominent in sports for several years due to the sanctions that the country is facing. In fact, coaches can also set goals for financial affairs in team planning and design ways to achieve this goal, and finally, evaluate the amount of work done and make the necessary corrections. A coach can attract supporters due to the presence of that coach in the sports team with his strong presence in different media and proper communication. Similarly, popular coaches have their own fans, and many fans become interested in supporting a sports team because of the coach's personality [2-4].

In martial arts, tactical skills are very valuable. Athletes must read their opponent's intentions and thoughts to avoid being hit by body language signs and the coach's instructions and experiences from different competitions because, when the opponent starts an attack, the time required for The defender is short to execute a movement. Therefore, prediction is crucial and important. Expert athletes were more accurate than their less skilled counterparts in predicting effective actions to prevent the opponent's shots from proving. In addition, professional athletes have the necessary ability to anticipate the opponent's attack at the start of the movement, professional martial artists tended to maintain vision in the central areas of the opponent's body, while simultaneously using peripheral vision to obtain information from the hands or feet. They used to attack.

Over the past decade, an increasing number of studies have shown that anticipatory skills can be improved with perceptual-motor training programs based on film simulation. The effectiveness of perceptual-motor training to improve decision-making time or its accuracy has been shown in a wide range of individual and collective sports. Thus, the benefits of motor-perceptual training can be turned into sports success. It also transferred learning from video-based training to actual game performance. During video-based perceptual training, to encourage an explicit learning

mode, the video sequence (e.g., game sequence) is usually shown a second time.

Therefore, the complete game sequence is played so that the learner can judge the correctness of his decision. In addition, between each video sequence, the coach can help the athlete make connections between the information gathered from observing the action and the outcome of that action. This action pursues the athlete's success in the competition. For example, the coach can show the position of the teammates or the opponent's positions to the player, and thus lead him to relate to each position, sequence of play or rules.

The purpose of this type of education is to increase the amount of knowledge so that they can more easily understand the meaning of the information taken from the environment. The results show that explicit instructions are acceptable in the acquisition of conscious and verbal knowledge. During video-based perceptual training, to encourage an implicit learning mode, the researchers removed verbal instructions and only prompted the participants. to focus their attention on potential areas of interest that may predict the outcome of situations. Decision-making performance under anxiety-inducing conditions is stronger when participants use implicit perceptual training compared with an explicit learning method. Using a method, athletes use different perceptual training skills to improve prediction [5].

The implicit approach can be especially recommended for skilled athletes who are often exposed to high-pressure situations. During learning, explicit processes use working memory to detect and correct errors to store only relevant information. Implicit processes allow to encode new information without the intervention of verbal working memory. Findings have shown that only explicit motor perceptual training program leads to changes in eye movements, novice players spend more time searching in the direction of information-rich areas that are consistent with the instructions given in the acquisition phase.

Implicit learning intervention leads to changes in eye movement behavior of expert players.

Professional athletes are required to make decisions and react to different attacks in different scenarios against an expert fighter. As in martial arts, a quadruple position that includes two different moves by the opponent (i.e. a right move and a left move), two decoy moves (for example, a body leg and a leg kick), and six attacks are based on six different moves. Martial techniques, either aimed at the body or face of the participants, were selected in advance and executed by the opponent with special skills. In particular, six attacks were made from three sides, two attacks were made to the body and one of them was made to the head. There were further three hits, one of them to the body and two targets to the head.

It seems that experts can increase the storage capacity and the use of information processing in short-term working memory by creating retrieval structures in a specific memory structure, the so-called long-term working memory.

By observing the behavior of others in a particular situation, a person obtains information about that situation and the consequences of certain actions in that situation. Skilled athletes use more effective visual strategies (reduced search speed) to make accurate decisions (2).

In the research conducted by Goderzi *et al.* (2016) on the effect of martial arts (Taekwondo, Karate, and Judo) in creating a fighting spirit against attackers, they stated that performing martial arts using open skill is

In simpler words, for the successful implementation of such a skill, the performer must act in accordance with the movement of attacking person, because the environment is variable in terms of time and space, and for the optimal implementation of fighting techniques, the defender should adjust the time of the start of the movement so that slow to match the attacker's movement and make corrections in his movement. In the open skill, it is suddenly attacked and the defender should be able to use the learned skill well, and the coaches

emphasize the use of the open skill by the students.

Methodology

This research aims to find out the factors of progress of martial arts teachers and trainers. Therefore, it requires the use of qualitative research method. The professors and trainers of martial arts are the statistical population of the research, but the first step for the interviewees is to identify informed people, given the qualitative nature of the research, purposeful and snowball sampling methods were used. In this research, theoretical saturation was reached with 21 interviews.

Six stages of theme analysis were carried out with the approach provided by Clark and Brun (2006), which include:

- 1- Getting to know the data,
- 2- The second step is creating primary codes,
- 3- Searching for themes,
- 4- Forming sub-themes,
- 5- Defining and naming the main themes, and
- 6- Preparing a report

For the validity of current research, the techniques of comparing the evidence with the existing literature, using multiple sources, rich description of the data set during its collection, defining the boundaries of the research and having a key draft, as well as studying the documents to increase the validity of the data, the results have been used. Validity is in all seven stages in topic selection, design, interview, copying, analysis, and confirmation, which were considered in this research.

Harvest

Among the factors to achieve the factors of advancement of martial arts professors and trainers are the following items:

- Use of mentally strong athletes.

- Emphasis on the use of tactical skills by athletes.
- Emphasis on using the skills of body language signs to predict the opponent's attacks.
- Video-based training of actual game performance and opponent positions.

Gold *et al.* (1999) in their research entitled: "Evaluating strategies affecting sports performance", found that coaches are one of the most important success factors.

Researches have shown that the role of coaches in sports is diverse. From a teacher, professor, and friend to a consultant, coach, organizer, motivator, leader, planner, decision-maker, and also the main source of all knowledge related to sports and training. Coaches should provide moral training and help and encourage athletes to achieve their full potential, and have a supportive role and help build and strengthen athletes' self-confidence. [3].

Table 1: Codes taken from interviews in martial arts coaching

Category	Concept	Code	Row
Successful coaching	Capacity building in coaches	Training coaches of domestic teams	1
		Rainers use the highest technical indicators in education	2
		Structuring of trainers at the country level	3
		Creating conditions for the participation of trainers in different global classes	4
		Observational assessment of students by the instructor	5
		Paying attention to basic trainers in martial arts	6
		Increasing the teacher's science and knowledge	7
		Use of bodybuilders	8
		Fatherly and sincere behavior of teachers and head teachers with students	9
		Measuring the coach's ability to analyze athletes	10
	Previous learning	considering the athlete's competition experience	11
		Using the experiences of trainers	12
	Analysis of the situation. Competitors and so on	Recruiting foreign coaches as analysts	13
		Using athlete analyzer in teams	14
		Kinetic and mechanical analyzes	15

Summary of identification of achievement factors for martial arts professors and trainers

The following table refers to the results of the available documents regarding the achievement of advancement factors of sports teachers and coaches, and the contents are fully presented in

a short, concise, and useful manner. The factors of achieving the progress of martial arts teachers and trainers include: training of domestic team trainers, use of the highest technical indicators by trainers in training, structuring of trainers at the country level,

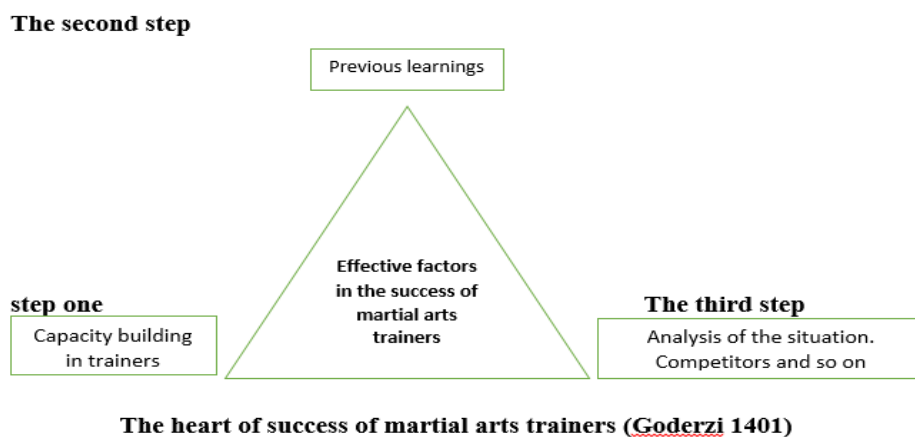
creation of conditions for trainers to participate in different international classes, observation evaluation students by the coach, paying attention to basic coaches, increasing the coach's science and knowledge, using bodybuilding coaches, paternal and sincere behavior of coaches and head coaches with

students, measuring the coach's ability to analyze athletes, taking into account the athlete's competition experience, and using one of the coaches' experiences is recruiting foreign coaches as analysts and using athlete analyzers in teams as well as movement and mechanical analyses [6].

Table 2: Final stages and frequency obtained from the interviews

Percentage	Confirmation based on the final codes obtained from the interview	Statistics of experts in the interview	The main steps	Row
100	21	21	Capacity building in trainers	1
90	19	21	Previous learnings	2
85	18	21	Analysis (analysis) of the situation, competitors, etc.	3

A model is a small part of a large object that is functionally identical to the real object [4-6].



According to the table of the main steps obtained from all the interviews, the ranking was done and proved.

Application of Dematel

Dematels technique has the ability to rank and determine the importance of components and is able to identify the influence on the behavior of other components.

Table 3: Method of answering questions and scoring pattern

Very high effect	High effect	Low effect	Very low effect	No effect
4	3	2	1	0

The pattern of relationships between variables

To reflect the interrelationships between the main criteria, Dematels technique has been used. Primarily, 11 experts were asked to use their knowledge to express the effect of the items on each other.

In general, the sample size in multi-criteria decision-making methods is suggested to be between 5 and 30 people (Habibi et al., 2014).

Sampling: Dematel's method requires that information be received and analyzed from experts and specialists to select a team of experts, since the purpose of generalizing the

$$X = \begin{bmatrix} 0 & \dots & x_{n1} \\ \vdots & \ddots & \vdots \\ x_{1n} & \dots & 0 \end{bmatrix}$$

$$k = \max \left\{ \max \sum_{j=1}^n x_{ij}, \sum_{i=1}^n x_{ij} \right\}; N = \frac{1}{k} * X$$

$$T = N * (I - N)^{-1}$$

results was not mentioned, a purposeful sampling method was used. The selection criteria of experts are theoretical mastery, practical experience, willingness, and ability to participate in research and access. Given that these criteria, finally the number of experts with whom the research process was carried out reached 11 people.

The calculation formula of Dimatal's technique

In the first step, the main codes were named in the table.

Table 4: Symbols of research criteria

Criterion	Symbol
C1	Capacity building in trainers
C2	Previous learning
C3	Analysis of the situation and competitors, etc.

The data related to the average matrix of experts' opinions or direct correlation matrix is entered in the following table.

Calculation of direct correlation matrix

Table 5: Matrix

Towards	C1	C2	C3
C1	0	3.94	3.11
C2	2.85	0	2.91
C3	2.77	2.83	0

In the direct relationship matrix, several experts' points of view are used and we form the direct relationship matrix with a simple arithmetic average.

Calculate α

According to the formula, the α value is obtained and multiplied by the matrix items to

obtain the N matrix and normalize the M matrix.

Normalizing factor

0.141843972

Let the following matrix be the influence matrix of unscaled direct relationships of matrix D.

Table 6: The effect matrix of unscaled direct relationships of matrix D

Towards	C1	C2	C3
C1	0	0.558865248	0.441134752
C2	0.404255319	0	0.412765957
C3	0.392907801	0.40141844	0

The above matrix shows the effect of unscaled direct relationships. In this step, direct relationship matrices (works) are prepared.

Table 7: I-M matrix

Towards	C1	C2	C3
C1	1	-0.558865248	-0.441134752
C2	-0.404255319	1	-0.412765957
C3	-0.392907801	-0.40141844	1

The following matrix is called the inverse of the I-M matrix.

Table 8: Inverse matrix

Towards	C1	C2	C3
C1	3.057899176	2.697378975	2.462331809
C2	2.076690189	3.029921233	2.166483869
C3	2.034853326	2.276087496	2.837135952

The following matrix is called the total relationship matrix, the T matrix, and the total direct effects matrix.

Table 9: Total direct effects matrix

Towards	C ₁	C ₂	C ₃
C1	2.057899176	2.697378975	2.462331809
C2	2.076090189	2.029921233	2.166483869
C3	2.034853326	2.276087496	1.837135952

Table 10: Indirect matrix

Towards	C ₁	C ₂	C ₃
C1	2.057899176	2.138513726	2.021197057
C2	1.671834869	2.029921233	1.753717911
C3	1.0641945525	1.874669057	1.837135952

Calculation of influence indicators and effectiveness of the main criteria

Table 11: Analysis of Dematel indicators

Analysis of Dematels indicators				
	Di-Ri	Di+Ri	Ri	Di
C1	1.048767268	13.38645265	6.168842691	7.217609959
C2	-0.73089241	13.27588299	7.003387704	6.27249529
C3	-0.31787485	12.6140284	6.465951629	6.148076774

According to Table (11), of the analysis of Dematel indicators, the measure of capacity building in trainers has the most influence and the previous learning is in the next stage.

Threshold limit value

2.1820202

Table 12: Data according to the threshold limit

Towards	C1	C2	C3
C1	0	1	1
C2	0	0	0
C3	0	1	0

According to the results of the above table, it can be determined which factors have a significant effect on the other factors. The threshold value can be determined based on the opinions of experts, the studied organization, or research literature. We define the significance

threshold only those relationships that are significant and their value is greater than the threshold value

According to the relationship pattern, a causal diagram can be drawn based on Table 13.

Graphical chart

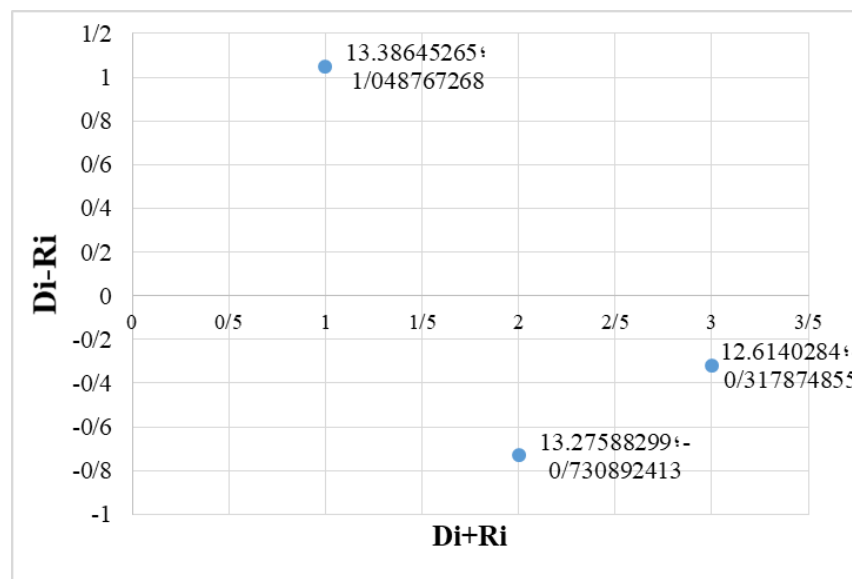


Figure 2: Cartesian Dematel coordinates

Capacity building in trainers is based on Cartesian Dematel coordinates, above the horizontal line. The indicators placed above the horizontal line are classified under the title of causal, driving, or influencing indicators, as well as the indicators placed below the horizontal line, the intensity of their net effect is negative and are grouped under the title of dependent indicators. The previous learnings and the situation analysis are used. Competitors are located at the bottom of horizontal line and their degree of influence is higher. Based on the results, it was found that the most effective component is the capacity building index.

Conclusion

This research was done to achieve the factors of progress of martial arts teachers and trainers. In this regard, histograms and graphs were drawn with Dematel technique. The cases extracted from Dematel's technique showed that capacity building in trainers is the most effective criterion and the most effective criterion is previous learning and analysis of the situation. competitors.

Hardman *et al.* (2010) believed that coaches should provide moral training and help and encourage athletes to achieve their full potential, and play a supportive role and help build and strengthen athletes' self-confidence. also. Moen and Federici, 2013. They believe that coaches should have the ability to organize, implement and evaluate short-term and long-term strategies, lead training sessions and support athletes during training and competition, and also have the ability to manage and coordinate human resources. Having the ability to help athletes in developing and designing a distinctive training program, helping athletes to develop new skills, establishing effective communication with athletes, using and designing assessment tests to monitor progress and the training process and predict sports performance for a coach. The team is needed.

The steps of this model include these levels as capacity building in trainers, previous learning, and situation analysis. In fact, the first step of capacity building in trainers has a special place

in the model of key factors of success in combat sports and includes the use of trainers of the highest technical indicators in training, structuring of trainers at the country level, creating conditions for trainers to participate in class, various world events, observational assessment of students by the coach, attention to basic and basic coaches in martial sports, increasing the coach's knowledge, using bodybuilding coaches, paternal and sincere behavior of coaches and head coaches of martial sports with students, measuring the coach's ability is in the analysis of athletes.

The results of this research can be considered practical. Finally, the proposals presented were classified based on the Cartesian coordinate diagram of Dematels technique.

Suggestions

- Capacity building in trainers can be separately researched.
- Managers can take advantage of the coaches' success model to plan.

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