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EVALUATION OF PERCEIVED QUALITY OF ELECTRONIC PRODUCTS UNDER WEB FOR KARATE: AN EMPIRICAL APPLICATION OF THE BARNES AND VIDGEN MODEL

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ABSTRACT
This research evaluates the usability, ease of use, visual appeal, and empathy of electronic products under web including training, researching, informative, ethnic, technical products. This paper also assesses the perceived quality of Karate clubs' websites using WebQual scale in Iran, England and Japan. The quality of 30 Karate clubs' websites examines through research-made questionnaire. Present survey findings were analyzed via one-way variance analysis, Bonferroni method and independent T by SPSS. The results of electronic products survey report that Iran poses the lowest status in the comparison with England and Japan in the educational, research, information and technical components but Japan but Iran status is higher than England in ethnical component. The results show that Iranian Karate clubs' websites h no significant differences with British and Japanese karate clubs' websites in the terms of electronic products but in terms of quality of websites according to WebQual scale have very low quality and only in the terms of ease of use have acceptable and desirable quality.

Keywords: Karate, Electronic Products, WebQual, Quality

INTRODUCTION
Karate is a martial art developed on the Ryukyu Islands in what is now Okinawa, Japan. It developed from the indigenous martial arts of Ryukyu Island, literally "hand" (tii in Okinawan) under the influence of Chinese martial arts, particularly Fujian White Crane (Morio, 1985). Karate is one the most prominent sport which develops the moral lessons contained in every episode. Karate focuses on a high moral code that should be followed in every situation, not just during karate training (Fenn and Miller, 2011). It is also one of the most popular sports in Asia that has many fans all around world. Looking forward to the Tokyo Olympics 2020, Japan Karatedo Federation, in coordination with the WKF, has been making every effort for the inclusion of Karate into the Olympics with the support of Nippon Budo-kan, Japan Budo Association, and the All-Party Parliamentary Group for the Promotion of the Tokyo Olympics 2020, which has been set up with more than 110 members from both Houses of Parliament. Now online signature-collecting campaign is going on together with JKF and WKF members and all karate fans. (British Karate Federation, 2015) Karate concomitantly embodies sports and competition, by generating a challenge for the practitioners' mind, body and spirit, a challenge that will strengthen their character and help them overcome their fears. It is the challenge that will finally model the performer's life (Healy, 2008).

This research evaluates quality of electronic products under web among Karate clubs. This study was conducted in Iran, England, and Japan in2015 with using Barnes and Vidgen Model (Web Qual) WebQual is a measure of Website Quality and this instrument evaluates website quality in 12 dimensions. A comparative study was carried out on effective characteristics and successful factors in Karate clubs' website in Iran, England and Japan.

In present study, electronic products possess a variety of indexes such as educational, informative, research, ethnic, and technical ones. This paper examines whether a significant correlation exists among the mentioned indexes of these electronic products under web in Karate clubs.

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Iranian Karate Status

Iran poses an outstanding status in the quality of competition in the world (World Karate Federation, 2014). Karate martial art entered Iran in 1963. In fact, the emergence of Karate in Iran is tied up with Kan zen Ryu style because initially Karate was entered Iran by Dr. Farhad Varasteh, the father of Iran's Karate who practiced this style. Among the very first practitioners of Karate in Iran the person who achieved black belt was Mr. Morteza Katouzian. In 1972, establishing Karate Academy was the year of booming Karate in Iran. Two year later in 1974, the Iran's Federation of Karate is established by the seriousness and pursuit of a number of pioneers and the sport organization delegated responsibility of the first Karate federation to Master Farhad Varasteh (Karate Federation of Islamic Republic of Iran). Master Varasteh who was the founder of Kan Zen Ryu karate in Iran has gathered a national team and brought them to karate world championship in France (Paris) even before the karate federation of Iran has been established and at the same event he has been selected as the vice president of World Union of Karate Federations (WKF) and during two periods that lasted until 1980 did many efforts for the recognition of Iran's karate in the world.

Master Varasteh was chosen in 1976 as the technical director of Asia and Pacific Karate Union and afterwards became a member of the Board of Association of Asia. Master Varasteh was the first Iranian who honored 10th Dan in Karate (Karate Federation, Iran, 2014).

In 2014, National Karate team participated in four international competitions and the karateka who attended 27 round of Bosporus Cup of Turkey won 8 medals. World Leagues of Indonesia, Japan, and Turkey were the other international arenas that Iran won first, second and third titles respectively. Participating in these campaigns was to prepare better for the World Cup and Asian Games. National Karate Team of Iran has gained great successes in 2014 including the World Cup title in men's team kumite in Germany for the first time. Iran's Karate in 2014 won 139 medals (54 gold, 39 silver and 14 bronze) in 12 world, Asian and international championships. World Cup title in Germany was such much important for the sport of Iran that high-ranking Iranian officials congratulated for the success in this field. Hassan Rowhani, the elected president of Iran, has also sent a message and congratulated the Karate championship in Germany.

Iran stood in sixth place in final ranking of the twenty-second World Championship in Germany winning a gold medal, 2 silver and 2 bronze medals (Ministry of Youth and Sports, 2014).

British Karate Status

Vernon Bell, a 3rd Dan Judo instructor who had been instructed by Kenshiro Abbe (Morgan and Ellis, 2006) introduced Karate to England in 1956, having attended classes in Henri Plee's Yoseikan dojo in Paris. Yoseikan had been founded by Minoru Mochizuki, a master of multiple Japanese martial arts, who had studied Karate with Gichin Funakoshi, thus the Yoseikan style was heavily influenced by Shotokan. Bell began teaching in the tennis courts of his parents' back garden in Ilford, Essex and his group was to become the British Karate Federation. On July 19, 1957, Vietnamese Hoang Nam 3rd Dan, billed as "Karate champion of Indo China", was invited to teach by Bell at Maybush Road, but the first instructor from Japan was Tetsuji Murakami (1927-1987) a 3rd Dan Yoseikan under Minoru Mochizuki and 1st Dan of the JKA, who arrived in England in July 1959. In 1959 Frederick Gille set up the Liverpool branch of the British Karate Federation, which was officially recognized in 1961. The Liverpool branch was based at Harold House Jewish Boys Club in Chatham Street before relocating to the YMCA in Everton where it became known as the Red Triangle. One of the early members of this branch was Andy Sherry who had previously studied Jujutsu with Jack Britten. In 1961 Edward Ainsworth, another black belt Judoka, set up the first Karate study group in Ayrshire, Scotland having attended Bell's third 'Karate Summer School' in 1961.Outside of Bell's organization, Charles Mack traveled to Japan and studied under Masatoshi Nakayama of the Japan Karate Association who graded Mack to 1st Dan Shotokan on March 4, 1962 in Japan. Shotokai Karate was introduced to England in 1963 by another of Gichin Funakoshi's students, Mitsusuke Harada. Outside of the Shotokan stable of karate styles, Wado Ryu Karate was also an early adopted style in the UK, introduced by Tatsuo Suzuki, a 6th Dan at the time in 1964. Despite the early adoption of Shotokan in the UK, it was not until 1964 that JKA Shotokan

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officially came to the UK. Bell had been corresponding with the JKA in Tokyo asking for his grades to be ratified in Shotokan having apparently learnt that Murakami was not a designated representative of the JKA. The JKA obliged, and without enforcing a grading on Bell, ratified his black belt on February 5, 1964, though he had to relinquish his Yoseikan grade. Bell requested a visitation from JKA instructors and the next year Taiji Kase, Hirokazu Kanazawa, Keinosuke Enoeda and Hiroshi Shirai gave the first JKA demo at Kensington Town Hall on April 21, 1965. Hirokazu Kanazawa and Keinosuke Enoeda stayed and Murakami left (later re-emerging as a 5th Dan Shotokai under Harada). In 1966, members of the former British Karate Federation established the Karate Union of Great Britain (KUGB) under Hirokazu Kanazawa as chief instructor (IASK, 2015) Keinosuke Enoeda came to England at the same time as Kanazawa, teaching at a dojo in Liverpool. Kanazawa left the UK after 3 years and Enoeda took over. After Enoeda's death in 2003, the KUGB elected Andy Sherry as Chief Instructor. Shortly after this, a new association split off from KUGB, JKA England. An earlier significant split from the KUGB took place in 1991 when a group led by KUGB senior instructor Steve Cattle formed the English Shotokan Academy (ESA). The aim of this group was to follow the teachings of Taiji Kase, formerly the JKA chief instructor in Europe, who along with Hiroshi Shirai created the World Shotokan Karate-do Academy (WKSA), in 1989 in order to pursue the teaching of "Budo" karate as opposed to what he viewed as "sport karate". Kase sought to return the practice of Shotokan Karate to its martial roots, reintroducing amongst other things open hand and throwing techniques that had been side lined as the result of competition rules introduced by the JKA. Both the ESA and the WKSA (renamed the Kase-Ha Shotokan-Ryu Karate-do Academy (KSKA) after Kase's death in 2004) continue following this path today. In 1975 Great Britain became the first team ever to take the World male team title from Japan after being defeated the previous year in the final.

Japanese Karate Current Status

The Japanese Karate Association (JKA) Leaps forward into the 21st Century (2000 to present). With its legal status restored by court rulings, the JKA leapt into the 21st Century. It restructured its internal organization, and also reorganized its financial base. In December 2000, it purchased land and established a brand new headquarters and dojo in the center of Tokyo. This was the first time the JKA had owned its own land and building. The grand opening ceremony was held in May 2001, attended by numerous dignitaries and many members from other karate organizations. With renewed vigor, the JKA repositioned itself, clearly defining itself as 'The Keeper of Karate's Highest Tradition.' In 2004, it launched a new official website, through which it continues, as always, to promote true karate around the world.

The Japan Karate Association (JKA) was originally established in 1948 as a not-for-profit organization. Based on its significant contribution to society through a number of activities, the Japanese Ministry of Education recognized JKA as SHADAN HOJIN (incorporated association) in 1957. Through continuous contribution and its commitment to society, JKA was further recognized by the government of Japan as KOEKI SHADAN HOJIN (public interest incorporated association) on March 21, 2012. JKA is the only Japanese martial arts associations to date to be given such recognition by its government. The mandate of JKA is to contribute to world peace through 1) conducting research and providing instruction of Karate-Do, 2) influencing children and adolescents to improve their physical and mental health as well as cultivating the spirit of martial arts, and 3) wide distribution of the concept of Japanese martial art which emphasizes manners and respect. JKA members endeavor to develop their characters and contribute to society on a daily basis; this is the objective of JKA and is the truth value of Karate-Do as a martial art. JKA takes this responsibility seriously and always endeavor to contribute to society through various activities (JKA, 2015).

Users around the world uses Internet for their information needs and thus use this information source for getting information about clubs and in general sports is on the rise. Gaining updated information in the least possible time can be considered as the most obvious feature of this information environment. The Internet has changed the approach to information seeking behavior and information needs of the users (Ibarra, 2008). This matter has more emergences especially in the realm of sports. The Internet with

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unique features has provided a new type of interaction between clubs and athletes, as well as the public, a way that in recent years the relationship between clubs and athletes has changed from its traditional form (Winker, 2000).

In such this way, many people and organizations took advantage of it to offer their products and services. Cronin and McKim (1996) suggested that web has become an important media in the scientific environment. The growth of the Internet is faster than all other forms of electronic technology and communicative media (Burton, 2006). The number of Internet users is great that it can be safely called the media of mass communication (Schneider, 1997). Currently, the Internet has become the most extensive and complex communication medium in the world. This huge collection of documents and web pages provided access to a wide range of documents and information, products and services (Dioton, 2005). In January 2010, Royal Pingdom reported that the Internet is including 234 million Web sites and has 1.8 billion users. Also a number of sports researchers have predicted that the use of the World Wide Web as a medium for commerce would become a new revenue-generating avenue for sports organizations (e.g. Evans & Smith, 2004; Mahony & Howard, 2001; Zhang *et al.,* 2006).

World Wide Web domain gives an opportunity to sports organizations to communicate with the beneficiaries and therefore it leads to lesser expenses on advertising (Lukimides, 2010). Clubs uses the Internet as a marketing tool through which they can communicate with fans and sell their products and services (Kerimidos, 2010).

Internet not only provides information, but also it is a mechanism for communication, environment for trading, and possibly provides a channel to offer products or services to consumers. Some opportunities are offered by the Internet in various aspects of the marketing for clubs as follows: a) creating a distribution channel b) communication tools c) exchange tools d) marketing research tools e) Market Segmentation and Target Market tool: Internet is an important tool for segmenting and identifying the target market. To create a database with marketing information is easy for football managers; because the fans are eager to show their preference. Clubs can develop marketing mix on the sectors and match themselves in order to reach the fans to their priorities purposefully (Kiang, 2000). The importance of the Web itself as a medium of communication and a huge collection of various resources, articles, and magazines to announcements and promotional and time pass is obvious. On the other hand, the production of user-friendly and standard web pages to display, information is one of the requirements which must be the considered by designers of Web sites.

This matter receives more importance while talking about sports websites. In general, centers or websites such as universities, information centers, sports centers and also clubs that today play a role as telecommunications spots have a more important and distinct role. Therefore, it can be stated that the design of such websites considering the importance of their role can be studied from various aspects. Content of a web site is consists of elements and information in various forms. For example, a web site can include information in forms of simple text, images, multimedia and etc. (Azad, 2001). Different users are also entered website with various intentions and derive their needed information. For example, the user of an academic website can be a student that uses website to inform about ones' educational status or it can be a professor who uses the website for entering students' marks (Kargar, 2011).

MATERIALS AND METHODS
The study was conducted among Iranian, British and Japanese Karate clubs' websites in 2014- 2015. Data were collected through website surveys and browsing to complete a research-made and WebQual questionnaires. In research-made, the items are identified from the literature review helped in the construction of the survey instrument.
Sample
In the light of the objectives of the study, the survey population was identified as Karate clubs' website in 3 countries i.e. Iran as a noticeable developing power in various aspects (e.g. exporting coaches, players and referees) England as best intentional tournament holder and active in Europe and Japan as pioneer in karate. A convenience sample of 30 karate Clubs' websites was drawn using systematic sampling.

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Confirmatory factor analysis including 23 variables requires a minimum sample size of 230. The researchers collected the data through questionnaires.

Regarding the nature of the subject, methodology is a survey analysis and applied type in the terms of aims and objectives.

Population sample of this research is websites of clubs in Iranian, English and Japanese karate leagues. Official websites of 10 karate clubs are selected from Iranian karate league and then these selected websites are compared with ten selected websites from England and Japan.

Avay-e-Razm, Karate committee of Tehran province, karate committee of Fars province, karate committee of Semnan province, Persian Gulf, Martyrs of Bostanabad, Azerbaijan, Azar Khodro Novin of Ghom, Shirzhal of Qom, Tabriz municipality and Sepahan Mobarakeh Steel are selected as population sample and compared to websites of English karate clubs (Northumberland, Ashington, Rossendale, Cullompton, Garston, Aaisatsu, Brixham, Newcastle Sendai, Shotokan karate Academy, and Stock Shotokan karate) and Japanese karate clubs (Nakahara, Ambition Karate school, Mita, Nakakoma, Osawano, Shotojuku, Nagatsuta, Funabashi, Jump karate club, and Sagamihara).

Survey Instrument

Present study contained two questionnaires: research-made and WebQual. The 5 sections identified for research-made questionnaire from the literature review were used to compare web status as well as using WebQual.

WebQual was used as an instrument for assessing the usability, information, and service interaction quality of Internet web-sites, particularly those offering e-commerce facilities. This instrument is being developed by the Management Schools at the University of Bath and the University of East Anglia by Stuart Barnes and Richard Vidgen.

In May 2005 they combined comment analysis with the traditional quantitative analysis of WebQual to give data triangulation and a deeper insight into the dimensions of Web site quality.

The findings of this study are gathered in two forms of characteristics of successful Web site based on Koval web index (Barnes and Wigan, 2001) and electronic products of Karate Clubs that were collected by questionnaire.

By visiting the Web sites of karate clubs in January 2014, these websites were analyzed in terms of electronic products and this information are compared with the information available on the official websites of Karate clubs in UK and Japan. Electronic products had the following features:

1- Textual products 2- Visual products 3- Audial Products 4-Photo products, which carry the educational, research, informative, moral and technical elements.

Analysis Procedures

Firstly, the researchers attempted to browse official website of Karate Federations then select 10 teams from each country randomly.
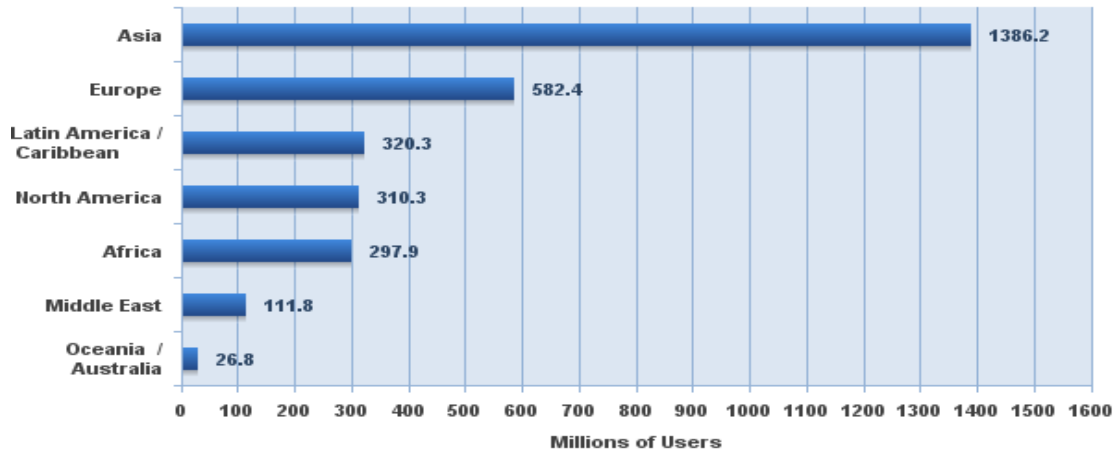
Next, providing and applying questionnaires were done by the researchers. The quality of websites was evaluated by reach-made questionnaire. On other side, the features of a successful website on the basis of WebQual were identified and determined.

RESULTS AND DISCUSSION
Internet Users of Websites
Today, the number of Internet users is increasing worldwide; although, world penetration rate is different significantly in each geographical regions. Asia received the highest rate of Internet users in the world. (Internet Word Stat, 2014) (Figure 1).
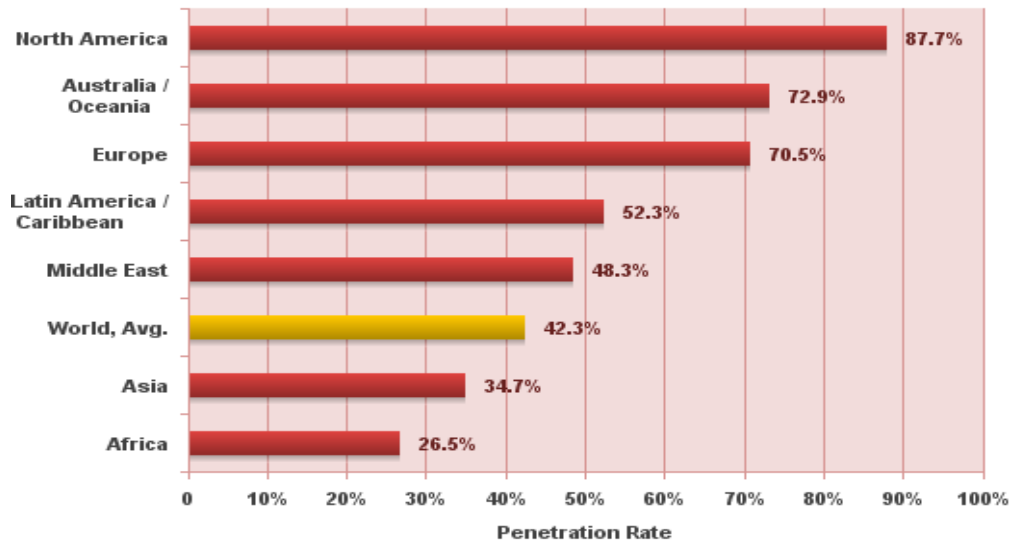
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Figure 1: Internet Users in 2014

Although, Asia is one of the lowest the Internet penetration rate and North America is the highest one but Asian users is the highest (Figure 2). It shows internet users increases regardless internet accessibility barriers.

Figure 2: World Internet Penetration (2014)

The sample size employed was within the acceptable limits for data analysis, for three countries (see Table 1). The ratio of respondent to observed major variables (2) for 30 karate clubs in 3 countries with 5 indexes for electronic products,

Electronic Products survey shows that in the educational component with the mean and standard deviation ($\dot{X} = 2/54 \pm 0/42$), the research component ($\dot{X} = 2/33 \pm 0/59$), information component ($\dot{X} = 2 / 87 \pm 0/32$) and technical component ($\dot{X} = 2/20 \pm 0/30$), Iran has the lower status in the comparison with England and Japan but Iran status is higher than England in ethnical component (see Table 1).

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Table 1: The findings of the evaluation of the products karate Club Website

Maximum	Minimum	Upper bound	Lower bound	Std.error	Std.deviation	Mean	N	Country	Factors	Variables
3/16	2/20	2/99	2/09	0/17	0/42	2/54	6	Iran	Educational	Electronic products
2/90	2/20	2/72	2/40	0/07	0/22	2/56	10	England		
3/28	2/20	3/02	2/45	0/12	0/40	2/73	10	Japan		
3/16	1/90	3/07	1/58	0/26	0/59	2/33	5	Iran	Research	
2/75	2/51	2/80	2/41	0/06	0/12	2/60	4	England		
2/51	2/20	4/26	0/44	0/15	0/21	2/35	2	Japan		
3/20	2/20	3/11	2/64	0/10	0/32	2/87	10	Iran	Information	
3/38	2/68	3/21	2/84	0/07	0/23	3/03	9	England		
3/23	2/71	3/12	2/86	0/56	0/18	2/99	10	Japan		
2/51	1/51	2/40	1/63	0/14	0/36	2/01	6	Iran	Ethical	
0	0	0	0	0	0	0	0	England		
2/81	1/90	2/97	1/73	0/19	0/38	2/35	4	Japan		
2/51	1/90	2/57	1/83	0/13	0/30	2/20	5	Iran	Technical	
2/68	2/20	2/63	2/08	0/09	0/22	2/35	5	England		
2/68	1/90	2/62	2/05	0/11	0/31	2/34	7	Japan		

Quality karate club website shows that the beneficial components of the mean and standard deviation ($\dot{X} = 0/48 \pm 0/10$) Ease of use ($\dot{X} = 0/51 \pm 0/11$) attractiveness ($\dot{X} = 0 / 32 \pm 0/17$) and friendly relations ($\dot{X} = 0/31 \pm 0/13$), which shows Iran than England and Japan, the status of is lower quality websites (Table 2).

Table 2 Findings of the evaluation of the quality of websites karate Club

Maximum	Minimum	Upper bound	Lower bound	Std.error	Std.deviation	Mean	N	Country	Factors	Name variable
0/64	0/34	0/56	0/41	0/03	0/10	0/48	10	Iran	Utility	Website Quality
0/68	0/53	0/65	0/57	0/01	0/05	0/61	10	England		
0/70	0/48	0/67	0/56	0/02	0/07	0/61	10	Japan		
0/65	0/30	0/59	0/44	0/03	0/11	0/51	10	Iran	Ease of use	
0/70	0/48	0/64	0/53	0/02	0/08	0/59	10	England		
0/70	0/48	0/62	0/51	0/02	0/07	0/57	10	Japan		
0/67	0/12	0/45	0/20	0/05	0/17	0/32	10	Iran	Attractiveness	
0/70	0/56	0/68	0/62	0/01	0/04	0/65	10	England		
0/70	0/56	0/70	0/62	0/01	0/05	0/66	10	Japan		
0/48	0/12	0/41	0/22	0/04	0/13	0/31	10	Iran	Friendly relations	
0/64	0/52	0/63	0/56	0/01	0/04	0/59	10	England		
0/64	0/48	0/64	0/57	0/01	0/05	0/61	10	Japan		

Table 3: The findings of the evaluation of electronic products using ANOVA

Sig	F	Mean Squares	Df	Sum of Squares		Factors	Name variable
0/45	0/81	0/09	2	0/19	Between Groups	Educational	Electronic products
		0/12	23	2/81	Within Groups		
0/62	0/49	0/09	2	0/19	Between Groups	Research	
		0/19	8	1/53	Within Groups		
0/40	0/94	0/06	2	0/12	Between Groups	Information	
		0/06	26	1/71	Within Groups		
0/64	0/45	0/03	2	0/07	Between Groups	Technical	
		0/08	14	1/14	Within Groups		

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Comparison of electronic products in the components of education, research, information and technical clubs Iran, Britain and Japan showed that the mentioned countries in terms of addressing the elements, there is no significant difference between these components (Table 3).

Quality comparison website components utility, attractiveness and friendly relations are not statistically significant. Ease of use is a significant relationship in the component (Table 4).

Table 4: Findings of the evaluation of the quality of websites using ANOVA

Sig	F	Mean Squares	Df	Sum of Squares		Factors	Name variable
0/002	8/19	0/055	2	0/11	Between Groups	Utility	Website Quality
		0/007	27	0/18	Within Groups		
0/210	1/56	0/014	2	0/027	Between Groups	Ease of use	
		0/008	27	0/222	Within Groups		
0/001	31/24	0/36	2	0/72	Between Groups	Attractiveness	
		0/01	27	0/31	Within Groups		
0/001	35/82	0/27	2	0/552	Between Groups	Friendly relations	
		0/008	27	0/208	Within Groups		

Quality comparison website using Tukey test shows that the factors utility, attractiveness and friendly relations, there is no significant difference (Table 5).

Table 5: Tukey test

Upper bound	Lower bound	Sig	Std. Error	Mean Difference		Country	Factors	Name variable
-0/03	-0/21	0/006	0/03	-0/12	England	IRAN	Utility	Website Quality
-0/04	-0/22	0/003	0/03	-0/13	Japan			
-0/20	-0/44	0/001	0/04	-0/32	England	IRAN	Attractiveness	
-0/21	-0/45	0/001	0/04	-0/33	Japan			
-0/18	-0/37	0/001	0/03	-0/28	England	IRAN	Friendly relations	
-0/19	-0/39	0/001	0/03	-0/29	Japan			

Comparison of electronic products in moral element using Tukey test shows that Iran is lower than Japan's status (Table 6).

Table 6: Ethical Factor

Std. Error diffrence	Mean defference	Sig.(2-taile)	Df	T	Sig	F	Std. Error Mean	Std. deviation	Mean	N	Country	Factors	Name variable
0/24	-0/33	0/215	/286	-1/37	/890	/020	0/14 0/19	0/36 0/38	2/01 2/35	6 4	IRAN JAPAN	Ethical	Electronic products

Kriemadis (2010) stated that the club directors should have deliberate consideration to the concepts and opportunities which the Internet has provided. These directors should plan each step before entering the

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world of Internet and analyse all concepts and opportunities that the Internet offers and provides an acceptable respond to the following questions: How internet can be used to obtain more benefits? How the internet can be considered as value added for the present activities of the club? How the club can achieve a competitive advantage among the competitors? How can we increase the website traffic? How can the consent of the fans be achieved? And how can be increased interactions within club's website and its attractiveness? The main challenge for managers is to understand the concepts of Internet marketing in order to obtain its benefits (Keriemadis, 2010). In the present study, the researchers evaluate competition advantages, website traffic and attraction of subject among all these mentioned concepts and opportunities as evaluation criteria.

As shown in figure 3, Yo and Jin (2004) introduced twelve characteristics of an ideal website design.
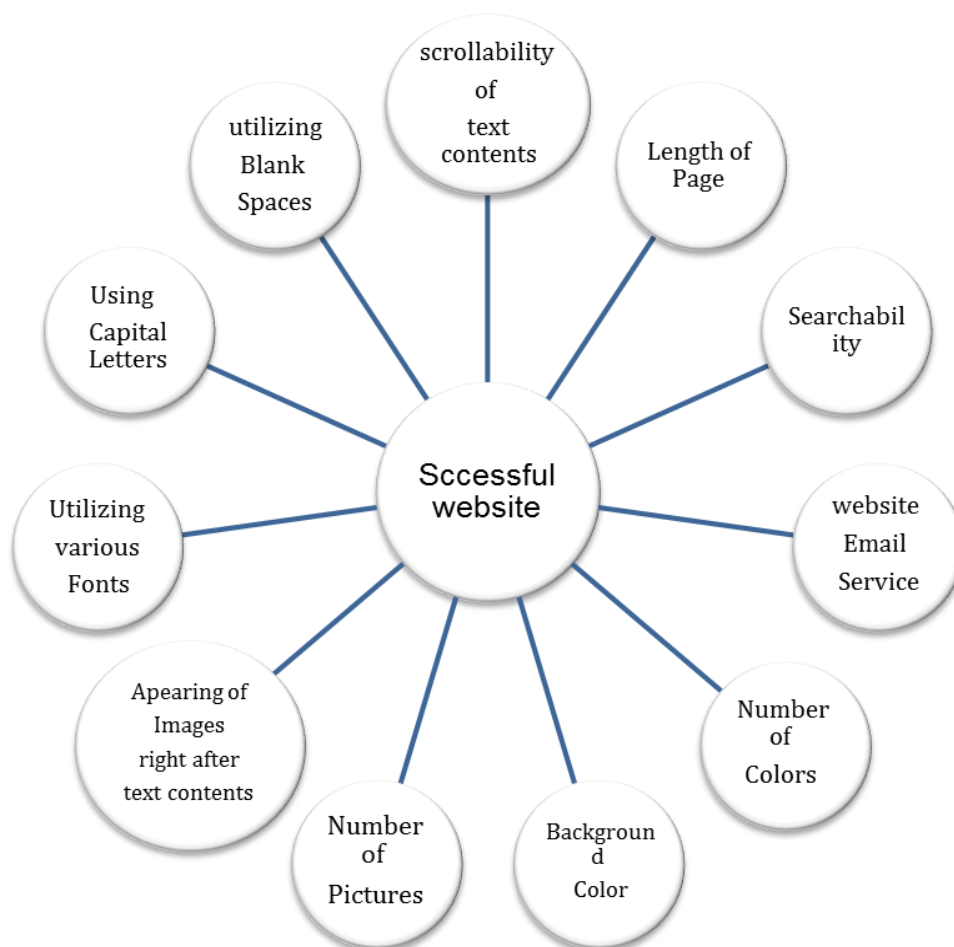

Figure 3: Key characteristics for an ideal Website

Janatian *et al.,* (2013) evaluated the quality of Persian language websites with a focus on depression based on WebQual scale; they concluded that these websites in the terms of depression field have low quality. In the present study, two effective factors on the quality of websites i.e. attractiveness and friendly relations were introduced and assessed. The results show that the Iranian websites are placed in the lowest rank compared to British and Japanese websites. Utilizing WebQUAL scale, Fathifar *et al.,* (2007) e quality of information provided in health and medical websites in Persian as undesirable which has also mentioned in the present study that the quality of Iranian karate clubs' websites is not desirable status. Rahimzadeh *et al.,* (2012) compared Online Marketing and Interaction with Fans through Official Website of Football Clubs in Iran, Asia and Europe. They concludes providing media contents through

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club website was a prelude to marketing merchandises and services of club and obtaining financial benefits.

Ghyamirad (2006) in an international research study conducted in cooperation with Karate Federation of Islamic Republic of Iran and Karate Federation of Japan present a comparative study of marketing methods of karate sport in Iran and Japan. Results of this study stressed on the necessity of establishing a marketing section in Karate Federation of Iran and evaluated operation of this section with functions such as advertisement, financial supporters, private sector investors, utilizing sport tourism, and public media in developing and promoting karate as very important (Ghyamirad, 2006). The results of Ghyamirad (2006) show the findings are insufficient and there is a necessity of more emphasis on the role of internet marketing regarding advancement of technology and globalization. Hence, present study considered the effectiveness and impact of factors affecting the quality of sports websites important.

Loakimidis (2010) in a study about presented media contents in websites of English Premier League clubs, National Football League of America (NFL), National Hockey League of America (NHL), and Rugby Super League of America selected 12 websites randomly among professional clubs of in four high level leagues (hockey, football, soccer, and rugby) in North America and Europe and investigate them. Results showed that the sports clubs of United States in fields of media and interactions with fans opportunities utilizing internet in sport marketing have surpassed the others Loakimidis (2010); thus, it is notable in this present study also and it has been mentioned that clubs which have more interactions with fans through internet are more successful than the others. Ghyamirad (2006) investigated on modern methods of Marketing Karate Sport filed in Iran" meanwhile surveying marketing approaches for promoting and developing karate in Iran, has introduced utilizing of advertisement, financial supporters, public media especially television, and sport tourism as sport marketing factors in order to increase Revenue of Karate Federation of Iran.

Ghyamirad (2006) while introduced modern Karate sport marketing in Iran has missed internet marketing and the role of sport websites; whereas, this kind of marketing and websites can be considered very effective in increasing interactions and income of clubs. Chatrooms and e-tour presented in high quality websites can be revenue making channels for club. Also regarding online marketing, a study conducted by Yousefi *et al.,* (2007) for surveying sport marketing through internet in Iran with emphasizing on 4P factors which its results showed that from scholars and marketers' viewpoint internet can have an enormous effect on sport marketing trends, but currently portion of this effect in Iran is very insignificant and intangible. Present study is also confirmed these results hence, results obtained from study of karate club's websites of Iran, UK, and Japan showed that Iran rank is the lowest compared to the other two countries.

Lack of English version of Iranian and Japanese karate clubs' websites to interact with international audiences and being not up to date of some of the Iranian websites can be considered as some of the limitations of this study.

Conclusion

Findings of present study confirm that Iranian Karate clubs' websites have no significant differences with British and Japanese karate clubs' websites in the terms of electronic products but in terms of quality of websites according to WebQual scale have very low quality and only in the terms of ease of use have acceptable and desirable quality. Therefore, it can be deduced that from infrastructures website quality viewpoint, karate clubs of Iran have some weaknesses. Comparing findings of this study with other studies of Persian language websites showed that most cases derived from results are consistent.

Users tend to obtain their required information in the lowest possible time so that the designers of information systems should notice this issue more. Digitalizing information and virtualizing communication in the current era made world wide web an appropriate place for interaction and transferring information and knowledge. On the other hand, the emergence of various governmental and private sector companies for controlling the artery of information transmission on internet has increase competition on the quality and quantity of information carriers. While, websites as main carriers of information and doing processes of interaction with customers are important; hence, websites can play an

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important role in introducing karate clubs and other sport places and can be considered as an effective path to attract athletes and karate fans.

In designing a sport website, in the background page light colours along with primary colours such as red, orange, green, purple, blue and pink with shine and glamour should be used as much as possible. Studies showed that background colour is effective on remembering website dramatically; but template and menu colours in most of the world's known brands such as McDonalds are chosen darker colours. British websites have also used the same format for their website design along with pictures of their national international champions of karate for attracting and promoting audiences.

Findings of this study might help the administrators of studied websites to facilitate quality improvement of their websites regarding obtained points and determining weakness points of their websites.

Considering findings of this study, Researchers provide the following suggestions to improve the quality of karate clubs' websites:

1- To determine global quality standards for efficient global federations to increase the quality of federations websites globally and equally

2- To rank karate federations and clubs' websites by international Karate Federation

3- To use professional designers of sport websites

4- To create a section for suggestions and critics in sports websites

5- To conduct similar studies in other sport fields

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